Harmony Udo Utchay

Convergence and Divergence
in Global Economy and Social Development

Global Perspectives on the Contents of Economic and Social Development Policy and its Effects on Rich and Poor Countries

Harmony Udo Utchay

Born in Arochukwu, Abia State, Nigeria, 1944.
Matriculation examination, 1977.
Bachelor of Arts (Education), the Faculty of Humanities, 1983.
Master of Social Science, the Faculty of Economics and Political science, 1984 and pivotal studies in Public Administration (second laudatur), the Faculty of Economics and Political Science Åbo Akademi University, 1985.
Licentiate in Social Sciences, the Faculty of Economics and Social Sciences, Åbo Akademi University, 1988.

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http://www.tibo.net

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I dedicate this to my children: Princewill, Nnennaya, David, William, Henry and Ndidi Utchay and to the genealogical descendants of my parents Mr. T. K. Utchay and Mrs. V. U. Utchay in Africa, Canada, Europe and the United States of America for their encouragement and support for so many years.

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ABSTRACT

The study of convergence and divergence in global economy and social development utilises comparative indicators to investigate the contents of economic and social development policy and their effects on the global samples that represent the rich industrial, semi-industrial and the poor developing nations. The study searches for answers to questions such as "what are the objectives of economic growth policies in globalisation under the imperatives of convergence and divergence, and how do these affect human well-being in consideration to the objectives of social policy in various nations?" The empirical verification of data utilises the concepts of the 'logic of industrialism' for comparative analysis that focuses mainly on identifying the levels of well-being in world nations after the Second World War.

The perspectives of convergence and divergence in global economy and social development critically examine the stages of early development processes in global economy, distinguish the differences between economy and social development, illustrate the contents of economic and social development policies, their effects on rich and poor countries, and the nature of convergence and divergence in propelling economic growth and unequal social development in world nations. The measurement of convergence and divergence in global economy and social development utilised both economic and social data that were combined into an index that measures the precise levels of the effects of economic and social development policies on human well-being in the rich and poor nations. The task of finding policy solutions to resolve the controversies are reviewed through empirical investigations and the analyses of trends indicated within economic and social indicators and data. These revealed how the adoption of social policy measures in translating the gains from economic growth, towards promoting education, public health, and equity, generate social progress and longer life expectancy, higher economic growth, and sustain more stable macro economy for the nations.

Social policy is concerned with the translation of benefits from objectives of global economic growth policies, to objectives of social development policy in nation states. Social policy, therefore, represents an open door whereby benefits of economic growth policies are linked with the broader objectives of social development policy, thereby enhancing the possibility of extending benefits from economic growth to all human being in every nation.

Key-words: economic policy, capital, technology, industry, competition, convergence, divergence, foreign direct investment, globalisation, economic growth, unequal development, poverty, social policy, translation of economic benefits, human well-being.

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1. INTRODUCTION

1.1. Theoretical frame of this development study

This study grew out of several years of academic investigations and research on concepts of development, in relation to the effects of economic policy and social development policy, on rich and poor countries. The study utilises the framework of convergence theories of Kerr et al (1960) along implied concepts of the 'Logic of industrialism' to investigate convergent and divergent policy effects of economic growth and social development on rich and poor countries around the globe. From this broad perspective which borrows from other disciplines, concepts of 'Logic of industrialism' hold that industrialisation creates industrial societies, and that all the industrialising societies face the task of organising their institutions alike, while the societies simultaneously develop persistent attitudes and expectations toward each other. Societies also develop identical rules and regulations in work places, while the communities themselves develop to govern complex relationships and interactions between workers, managers, and the state. These activities are formalised in an ideology within the concepts of 'logic of industrialism' (Kerr et al, 1960, 2). The industrial society stresses the ethics of hard work, which are technically based on constant repetitive aspects of modernising technology; and this option requires the competency of highly educated and skilled workers. The prime assumption of convergence theory is that development towards industrialism would naturally reach a convergent point where world countries become more similar to each other, presumably in affluence and perfection within the imperatives of logic of industrialism.

The concepts of convergence then hold the assumption that most world countries are moving relentlessly at different speeds and on different routs, but all aspire to arrive at the industrial society. This logic also implies the assumption that most societies began from different degrees of economic backwardness in the development processes of their economies, and that all have different characteristics and resources at their disposal, but that they all will develop along patterns inherent in the logic of industrialism. This view holds that the level at which the society enroutes industrialism, affects its level of economic development at the long run. Industrialisation characteristically redesigns and reshapes its human, as well as other raw material, no matter whatever the source. This would be another way of saying that industrialisation transforms its population towards convergence. Together, these mean that the processes of industrialisation taken as a whole, approximates its global dimension of unavoidable convergent course of all world nations, in their development processes of becoming industrialised societies.

Reflections on the promises of convergence theory and the logic of industrialism, have led to the observation that for over fifty years after the Second World War, most unfavourable post-war economic trends had disappeared or were replaced. In most world countries, powerful economic growth had become widespread. The industrial society has also been recognised as the main playing ground where the goals of logic

of industrialism are fulfilled. At the same time, the poor cannot afford good education, adequate medical care, access to worldwide information systems, and other necessities for active participation in global economy. The gap between the rich and poor is widening (Trent, 1990, 8-9), and is causing great disparities to exist globally between both individuals and the nations (Haq, 1995, 141-143) on all issues regarding the well-being of the human being. The existence of various kinds of disparities, in turn, give rise to uncertainties regarding the best direction to achieve global economic growth that would be responsive to human well-being and social development, as the world moves ahead in the twenty-first century and beyond.

The problems with most world countries (Midgley, 1995, 73-74) are not that there had been no economic development, but rather, that economic development has not been accompanied by equal improvement in the social sectors for the benefit of a majority of the poor human beings in those countries. Social policy had never been simultaneously linked hand in hand with the objectives of economic growth in most world countries. As the case with millions of poor workers in most developing nations under globalisation processes, how do we explain the issues of an African mother (Kefalas, 1980, 147), who receives $1 a day and having six children to feed at home? Economic policy often had given low priority to the objectives of eradicating poverty. Numerous patterns of economic and social problems that emerge globally from the processes of becoming industrial society raise critical questions on suitability of past and on-going economic and social policies that guide planned development actions. The present disarray between global economic growth policies and social development policy that would be responsive to human well-being, therefore call for empirical investigations and analysis, in order to ascertain the magnitude of the problems, and to determine as follow:

(a) How much convergence in economic and social development policy, under the promises of the logic of industrialism, has been fulfilled globally?

(b) Whether the industrial, the semi-industrial, and the developing nations of the world, are converging and/or diverging in similarity?

(c) How wide is the global poverty gap (if any) between the rich and poor countries?

(d) To what extent does the poverty gap between the rich industrialised nations and the poor developing nations around the globe, affect development within the social sectors in general, and human well-being in particular?

(e) What are the hopes for the future of mankind, and the ways ahead?

The adoption of the above theoretical frames allows the structure of investigations on convergent and divergent policy-effects of economic growth and social development on rich and poor countries, to be conducted within the paradigm of stated assumptions. In his introductory chapter to the structure of social science, Lessnoff (1974), stated as follow: “...some things have to be taken for granted in order that other things can be discussed...” (Quoted in Lessnoff 1974, 7). The assumption here is that economic

success in a nation has little value if it fails to translate its benefits to human well-being in the social sectors. There seem to be indivisible responsibility that is reciprocal between economic policy and social policy, which support shared objectives within both policy-areas in improving the lives and well-being of the human population in nations. The Second World War, undoubtedly left its world-wide legacy of losses and insecurity (OECD-New Orientations for Social Policy, 1994, 9-12), for which the post-war social protection systems must continually review and then develop into policies, in order to intervene and support all those at risk.

Today, the social policies of the post-war era are less responsive to new patterns of economic growth, persistent labour market difficulties, poverty, and increases in ageing population, increases in female labour force participation, growing rate of marital dissolution and lone-parent families, urban decay, disaffected youth, and many other changes in society. All these give rise to the need for rethinking whether the objectives of social policy are being met, the economic means of financing all public policies, and the need for re-examination of the role of social policy in the context of national economic and social development. Mainspring of modern social policy (Esping-Andersen, 1990, 35-38) relate to how the processes of human needs and labour power could became commodities, whereby subsidiary human well-being would also be dependent on relationships of transformed organisational cash nexus of modern capitalism. Towards the exploration of all these imperatives, knowledge would be gained from the re-assessment of positive and negative impacts of economic growth, in relation to the extent to which they benefited, or failed to benefit the human being directly. It is believed that in-depth empirical analysis of convergent and divergent economic and social development data would help in identifying the best direction for positive economic and social polices for the future.

1.1.1. An outline of objectives and a summary of aims

The study of convergence and divergence in the global economy involve industrial productions and related issues of national development, the national economy, and development of the social sectors. Perspectives of social policy research, like in other social research, borrow from already established body of knowledge and research methods across disciplines of social sciences (Swedner & Hessle, 1986, 16-17) such as anthropology, ecology, psychology, education, sociology, administration, economics, political science, law and history. I analyse global economic growth-effect on human population, since the Second World War. From these stances, the study will concentrate its in-depth analysis on the extent to which the impacts of global economic growth improved (or failed to improve) the human dimensions of development in various countries, since the Second World War period. Empirical studies will include measurement of convergence and divergence in global economy between 1980 and 1998, and will thus attempt to find out the extent to which the benefits of global economic activities improved human well-being of populations within our sample of thirty countries. The global sample of thirty countries for the study (see 2.4.) is chosen evenly from the industrialised, the semi-industrialised, and the developing countries of the world, in a representative manner.

It was believed that economic policy of nations would eventually manage growth surpluses satisfactorily, as to enable the links between economic growth and human development in the social sectors, to converge towards the development of perfect industrial societies that would be similar. This assumption made planners to believe that the benefits of global economic growth, which will result from economic activities around the world, would trickle-down to everyone in all nations through smooth and automatic self-adjustments. The assumption has gradually proved illusory and a misconception, which poses even more problems for economic policy-makers of the present time. In this study, therefore, attention will be given to the conceptual clarification of convergence and divergence, their links to economic growth, and how they reflect means for human well-being in the social sectors. The verification of indicators and hard data, will be followed-up by the analysis of culturally and politically diverse industrial and developing nations, to determine whether nations are moving closer and becoming more alike, under the imperatives of the logic of industrialism, as predicted by theories of convergence and divergence.

Within the parameters of convergence and divergence, this study intends to pursue arguments in favour of the definitions that see convergence as the tendency in which societies grow more and more alike in their structures, processes, and economic and social performances. It is believed that theoretical analysis, as well as empirical examination of data within the samples, will illuminate analytical discussions in determining the extent to which the impacts of global economic growth had improved the well-being of the human population of nation states.

The UNDP Human Development Report [HDR, (1996, 69)] indicates that incomes' effect on health appears to be larger for industrial nations than it is for the developing countries, probably because of the fact that the industrial nations have more wealth to improve health care facilities than their developing counterparts. Under these assumptions, increased household income can improve lives, but full benefits of long and improved healthy lives could not be realised without complimentary economic growth and the availability of other forms of social services in the country. However, these criteria could not be met in most poor developing countries because of the lack of sufficient amount of money to implement efficient modern social services, already developed in the industrial nations. Analysis will therefore argue for and against convergence and divergence, in order to explore how they relate to each other, the global economy, and social development phenomena, as well as how social policy could be used to improve the human being in future. Analysis would incorporate the broader issues of how to direct economic growth incentives around the world towards improving human well-being in the social sectors of all nations, and to reflect expected policy perspectives for the future. All aforementioned concepts of convergence and divergence in the global economy and social development will remain at the centre of various analyses, and to a large extent form the core of the study.

1.1.2. Objectives

Typically, convergence debates on the economies of the industrial and the developing nations occur due to the fact that at the centre of all industrial activities, lie issues of economic development and growth on one side; and human resource development and human well-being, on the other side. Human beings live in all world nations that operate various economic systems that are capable of providing some levels of social care for their people. This study accepts the assumption that the state of human well-being and development is the process of enlarging peoples' choices in living long and healthy lives, acquire knowledge, and have access to the resources that are needed for satisfying decent standards of livelihood. Here we come face to face with a dilemma on the choice to accept or reject an interpretation of convergence theory, which predicts that with increasing industrialisation, the industrialising nations will become more and more alike (Kerr et al, 1960, 33-46). This view also holds the assumption that the trend towards global economic and social equity, will begin to level off (or converge) in all nation states that were embedded in industrial development processes.

This study therefore, directs some of its perspectives to reviewing, as well as converting empirical verifications into issues and problems surrounding global economic growth, in contrast to numerous countries that merely report increases in poverty. The study intends to ascertain with empirical evidence the extent to which the gains from economic growth, as benefits from economic activities around the globe, were translated or used to improve the well-being of the human population. Studies here will therefore employ the use of data in the verification of global economic and social situations from the period after the Second World War, and the results will be analysed. The study would attempt to recommend relevant policy objectives for the future, as the case may be.

The study therefore begins with the pursuance of the following objectives, so as to maintain an orderly and systematic handling of sequences planned for the study as stated below:

(a) To determine through the analysis of data, whether the industrial, semi-industrial, and poor developing nations of the world, are converging or diverging from each other on economic and social development levels.

(b) To determine through empirical measurement, the effect of global economic growth and the extent to which it improves human lives in rich and poor countries, as the fulfilment of the promises embodied in the logic of industrialism.

(c) Where differences are found to exist, especially in economic growth and resultant social development on human well-being, the aim is to identify how wide the poverty gap between the rich and poor countries is.

(d) To discuss the role of social policy in improving human well-being

(e) (i) To analyse and discuss convergence and divergence in relation to social policy issues.

(ii) To recommend the best ways to improve social policy for human well-being, as the way ahead in the future.

1.1.3. Summary of aims

In recent times, empirical verification has become a crucial component of scientific discussions and analysis in social research. Data being the backbone to empirical investigations and analysis, this research will therefore make use of empirical data within the limits and paradigm outlined for the study. Processes of the investigations shall proceed along the following lines:

(a) Chapter one will discuss concepts of convergence and divergence, along related concepts of economy and society in the development of competitive global markets within the paradigm of the logic of industrialism, and the promotion of global economic growth for the sustenance of social development. These stages of the research will include introductory discussions on convergent and divergent issues of economic and social policies at the national levels, with some of the implications that are generated at the international levels. The syntax of studies in this first chapter will include: the tables of content, and lists of figures and tables; an introduction to the theoretical frame of the study; an outline of objectives and summary of aims; some considerations of historical development in the relationship between economy and society; related concepts in global economy; convergence and divergence in the era of globalisation; some guiding hypotheses for this study; economic growth and globalisation; international economic influence on national social policy; and global economy and social development.

(b) Issues of methodology and indicators that would be appropriate for the measurement of the impacts of global economic growth, will be treated within this chapter, and applied to their appropriate contexts. Empirical studies will be conducted mainly in this chapter two, and their analytical application is carried forward to subsequent chapters. Outline of the empirical analysis for the study will be introduced in this chapter; and this will include the selection of global samples for the study. These stances would be useful in verifying indicators on countries within levels to be graded as high, medium, or low in rank, which indicate how far the countries have developed on the index scale. The variety of studies to be conducted within this chapter would thus include: impacts of global economic growth - methodology and material (for the measurement of convergence and divergence); choice of indicators; sources of data; analysis of data; selection of global sample - cross-section of rich and poor countries; towards the measurement of convergence and divergence with indicators of human development; methodology for measuring human development; indicators for the calculation of human development index; improvement on the construction of human development index; setting the premise for the measurement of human development; the calculus for adult literacy index; the calculus for combined gross school enrolment index; the calculus for educational attainment index; the calculus for adjusted real GDP per capita index; and the calculus for human development index.

(c) Chapter three discusses and analyses the effect of the benefits of global economic growth on human beings, and so will the subsequent chapters. This stage of the study would therefore, attempt to assess the impacts of the benefits of global economic growth on the nations and human beings within the perspectives of convergence and divergence. The processes would include theoretical analyses of empirical data, with reference to levels of countries on the indicator. Levels of countries on the human development index will also be applied to groups of countries, as an indicator of the levels of their total achievements on economic and social development performances, with references to their real world situation during the particular years. This chapter will also re-examine the suitability of economic and social policies for the achievement of human well-being, with particular attention given to issues of global interdependence between nations, especially the industrial, semi-industrial, and the developing nations. The complexity of themes for investigation in this chapter include: analysis of convergent and divergent effects of economic growth on human well-being and development; comparisons by levels of human development indices; life expectancy indices of nations; educational attainment indices of nations; gross domestic product (GDP) indices of nations; a group perspective on industrial, semi-industrial, and developing nations; the industrial nations with high HDI; the semi-industrial nations with medium HDI; the developing nations with low HDI; and global economy and social policy for attaining global interdependence.

(d) The fourth chapter would link issues of economic growth policy to convergence and divergence theories that were discussed in this paper. The chapter would advance discussions and analyses on the effects of global economic growth on human well-being and development. The syntax for the studies would include the following themes: the state, global economic growth and human well-being: in-depth analysis I; economic growth, human well-being, and development; convergence, divergence, and economic policy; convergence and divergence for economic growth: social policy for human well-being; and policy for strong links between economic growth and human well-being.

(e) This chapter five will narrow-down perspectives of economic policy that are crucially required for future adjustments of economic growth policy, towards the inclusion of human dimension of development, as the best ways to attain social development goals in the future. Studies here would thus include: industry, technology development, and globalisation: in-depth analysis II; globalisation of the industry, and social policy; beyond the nation state; global citizenship and human well-being; and corrective social policy for attaining social development goals.

(f) This concluding chapter six will bring together the varied perspectives on the analysis of convergence and divergence in relation to globalisation of the markets, and the economic growth that would be responsive to the future of human well-being, would finally be summed up. These would advance analyses towards the redefinition of economic growth objectives for improvements on social policy. Recommendations on how economic growth objectives could be improved through social policy, would include economic growth for human well-being; and will be discussed in ways that would help the redefinition of economic policy towards convergence with social

policy goals. Concluding statements and recommendations on best policy strategies for the attainment of improved social development goals in the future will be made in this final chapter as contribution to social policy. This being the concluding chapter, themes would be as follows: conclusion; research summary; research findings; recommendations as contributions to improve social policy formulation; the way ahead: re-definition of economic growth objectives; and a references index on all chapters of the research.

(g) Notes on appendices 1-5 will include: a world map and a spotlight on the 30 countries in global samples; main indicators for computing a human development index (samples); setting-up indices for the construction of human development index (samples); processing data related to the construction of human development index (samples); economic and social indicators relevant to comparisons and analysis of convergent and divergent phenomena amongst countries; and abbreviations.

1.1.4. Some considerations of historical developments in the relationship between economy and society

The modern relationships between economy and society are conditioned by the industrial capitalist systems, which preceded the intensification of economic activities in certain parts of Europe during the sixteenth century. Economic advancement within this system of capitalism occurred with the rise of the bourgeois class that intermingled with dominant traditional groups and brought about positive changes in industry and in systems of exchanges between most trading partners. European trading companies (Furtado, 1983, 2) permitted the monarchies and many other elements of the traditional power elite (for example, in England and Netherlands) to co-operate with merchants in their lucrative trade overseas. Along the lines of these incentives, the dismantling of the guilds, the usury, the elimination of the feudal privileges, and the direct subordination of the productive activities to mercantile criteria, all together paved the way to the industrial revolution.

Industrial civilisation is therefore, an outcome of convergence through the bourgeois revolution as represented by the imposition of instrumental rationality on the organisation of production, and the scientific revolution that was represented by the predominance of the view of nature, as a system with rational structure but written in the language of mathematics. For early economic and social science scholars, diversified and complex contents of scientific and intellectual modes of inquiry to grasp the fundamentals of modern capitalist society, continue to exist within explanations about changes that take place in the economy and the society (Martinelli & Smelser, 1990, 2-4). This makes it difficult to pinpoint boundaries of economy (in relation to social) themes, in limiting discussions on the economy, when the origin of such themes are grounded in the social spheres in reference.

The changes that were initiated by the democratic protests of commercial and industrial revolution (Furtado, 1983, 2; Martinelli & Smelser, 1990, 2), involved series of social differentiation (divergence) that produced new types of institutions as well as

making the institutions objects for studies; for example, the development of the urban community, the modern family, and the emergence of new social problems such as crime, addiction, broken families, and poverty. These developments were followed by the emergence of additional new agencies of social control such as the police, and the prisons, as part of the solution to problems at the time. Intellectually, all these represent changes that required some kind of analytical explanations by the scientists. However, early economic and social themes were focussed more on economic motivation, behaviour, and human interaction; with little attention given to polity and other non-economic features that were related to social actions and structures. Pure economic solutions were often adopted as solutions to most social problems, while all other issues of wider social relationships were resolved by simplifying assumptions (Martinelli & Smelser, 1990, 3). The processes of political contestation and subsequent negotiations that may lead to social policies were ignored or passively represented.

Some areas of theoretical over simplification of social themes were also observed (Martinelli & Smelser, 1990, 2-3). Adam Smith's political economy was sighted as an example of a theme which is based on the postulate of over simplified assumptions about human action being the result of the behaviour of isolated individuals, who pursue personal interests in isolation and making rational choices after considering costs and benefits. Thus, along these lines of over simplification, classical economics adopted the view of people as being instrumental to maximising benefits towards achieving rational social ends. Cultures were then regarded as having no internal social dynamics, and collective action was assumed to be an aggregation of individual actions. Other aspects of social and personal interchange that were not related to economics, were completely left out of the account, ignored, or as usual over-simplified.

Martinelli & Smelser brought to light some of the cross disciplinary themes that featured prominently in debates within economy and social science literatures. Quoting emerging social scientists that worked at the edge of already developed economic sciences, Martinelli & Smelser (1990, 4-26) discussed the nature of some of the theoretical developments of the social sciences within the areas of economy and its relation to society. Economic explanations were regarded as being adequate in analysing kinds of social actions. In line with these perspectives, the scientists asserted that constructs such as 'derivations', and/or 'residues' were adequate to deal with the analysis of most aspects of reality.

Martinelli & Smelser (1990, 4) discussed the work of Max Weber and asserted that in selecting the phenomena for scientific explanations, Weber laid out the ideal type of institutional conditions under which the mentality of modern society was equated as being 'rational calculation'. This made the phenomena possible to be explained. On the relationships between economy and society, Weber also dealt extensively with the relations between capitalism and bureaucracy, the relation between economic class and other forms of stratification, the link between market freedom and the growth of cities, and the tension between formal and substantive rationality in economic action. Furthermore, Weber dealt with links between religious ethics, economic mentality, and economic action for understanding rationality and capitalism in the West. Modern

capitalism for Weber (Martinelli & Smelser, 1990, 11) is a great complex of interrelated institutions which included the market economy, business co-operations, free and voluntary labour, public credit, stock exchange, and so on. Within these complexities, each institution is taken to have its own separate history and its own relations with other institutions along the line.

What continued to be relevant in these views is that the intellectuals played leading roles in discrediting the values and institutions for earlier capitalist development. It was argued that Joseph Schumpeter held the view that capitalism leads the way to breeding social unrest (Martinelli & Smelser, 1990, 18-19) in the sense that it holds out the hope for growth and improvement. The same perspective also holds the view that capitalism generates a high level of personal and social in-security. With the spread of very large firms worldwide, state intervention, and the participation of the state in the control of important aspects of the economy, capitalism has therefore proved itself as being compatible with the modern times.

K. Polanyi's theoretical contribution to economy and social themes covered some areas of market forces, social policies, labour legislation, union strategies, tariff policies, and central bank activities (Martinelli & Smelser, 1990, 21). From the above, it could be deduced that the whole idea on the economy, was drawn mainly from the historical material of early industrial revolution in Britain and from the twentieth century period of international economic instability. The main point is that the economy was seen to be structured on the basis of market regulating factors, which were separated from themselves and other social institutions. The view asserts that an economy so structured, constrains the rest of society from functioning according to its laws, while it is able to transform land and labour into 'fictitious commodities'. The views also saw the market as self-regulating, and as the great institutional mechanism of economic regulation in capitalism. Capitalism was then seen as being so powerful that it could not exist for long without annulling the human and natural substances of the society, and destroying humanity, while it transforms the environment into a barren desert.

T. Parsons and N. J. Smelser also set out to study main conditions that confront societies (Martinelli & Smelser, 1990, 25-26). They made the list of the major types of differentiated subsystems that were oriented towards meeting the needs of the social conditions, in order to identify the major relations between the subsystems. Parsons and Smelser were compelled to focus mostly on areas of convergence and divergence within economic and related types of theories in social sciences, while they aimed at finding valid combinations. Amongst these theories of economy, society, and the development of the social sciences which is particularly relevant to our perspective, is that Parsons and Smelser viewed economic theory, as a special case of a more general theory. Their argument was that economic structure and its processes certainly constituted the parametric constraint for the emergence of other bodies of theoretical and empirical investigations. They developed the idea that the economy is one of the several societal sub-systems, which bear special relationships of mutual dependence within economy and social sciences. The sub-systems that were outlined are: -

(a) Latent pattern-maintenance and system management, whereby every society's sub-systems of values and beliefs operate as legitimate in sustaining arrangements for its major institutions, as well as for the structured motivational patterns for its members. Parts of the institutionalised energy of society go towards the maintenance of the consistency of these values, and in providing outlets for the tensions that arise in connection with conformity. Specialised institutions for the function of latent pattern-maintenance and system management were identified as religion, science, the family, and education.

(b) Goal attainment was referred to as functions in which the society establishes special goals that are legitimised through dominant values, whereby the population is mobilised to attain the goals. 'Polity' was then identified as society's sub-system, as well as the institution which governments use as instrument for the mobility of society.

(c) Adaptation was seen as referring to those goals, which had been institutionalised by society but are not realised automatically, for instance, the maximisation of aesthetic and economic productivity, and/or warfare. The realisation of these goals may require the society to devote some of its energies in providing the reservoir of facilities, at the expense of the society. It seems as if it is around this adaptive function that the economy is structured.

(d) Integration was finally identified as referring to the functions of the systems that are made available for resolving individual and group conflicts, and for the promotion of social solidarity within society. The integration functions are legitimatised through institutional arrangements that are legally and specifically provided by the state for peacekeeping, rewards, and/or punishments as the case may be.

While K. Marx and K. Polanyi addressed some of the problems of classical economics, they also looked directly outwards and raised questions about phenomena (for example, class conflict, group hegemony, and political instability) that were outside the analytic realms of classical political economy (Martinelli & Smelser, 1990, 4-5). Marx seemingly aimed at forming a new social theory and regarded the natural laws of political economy as relevant only to specific phases of world evolutionary processes in history. Sets of laws within political economy and other forms of knowledge were seen as the definite sequence of historical phases specific to other economic phases, which the human society goes through. Marx recognised this as the phase of bourgeois capitalism (Martinelli & Smelser, 1990, 5-6). Each phase is seen as having own dominant modes of production, distribution, as well as its own set of principles for its functioning. Some of the ideas on Marx's agenda included the idea of revolution, which referred specifically to the mechanism that makes possible the transition of the economy from one phase to another. Other ideas of Marx remained focused on the purposes to which his own knowledge was to be put into the revolutionary destruction of capitalism.

Widening the scope of early cross disciplinary perspectives on theories of economy and society, Martinelli & Smelser (1990, 6) quoted Marx and Engels as follow: "… The bourgeoisie cannot exist without continuously transforming the means of

production, hence the relation of production, hence the whole of social relation ... The continuous revolutionising of production, the unceasing shaking of all social conditions, the eternal uncertainty and movement distinguish the bourgeois epoch from all previous ones ... Everything which is solid melts into the air ..." (quoted in Martinelli & Smelser, 1990, 6). Marx's and Engels' social change theory that was analysed most completely with reference to capitalist society, is a theory of the processes of dialectical materialism, which regards society as never static, but constitute the engine of contradictions between the structural and the super-structural forces. By this theory, Marx and Engels regard economically based class interest and conflicts, as the driving force of the capitalist civilisation. The dynamic of this capitalist civilisation is seen to be within the mechanisms that propel it forward, which is the intense competition between firms in the market place. Intense competition of the market makes for an accelerating process in improving the bases of production, through the application of superior technology in the industry, as the means of competitive advantage in productivity.

The processes of improving technology now and again, is seen by Marx as a means of exploiting the labouring class even further through an accumulation of greater surplus value for the owner(s) of means of production. The accumulated wealth therefore increases inequality between the owner(s) of the means of production and the workers. Inequality is seen as sources of increase in the conflict between the owner(s) of the means of production and the workers. Inequality also intensifies already existing contradictions between owner(s) of means of production and the workers. It is this complex process that involves capital, production and over production, profit and the falling rate of profit, consumption, the contradiction of capital, and recurrent crises between owner(s) of means of production and the workers; that Marx predicts would speed capitalism towards self destruction (Martinelli & Smelser, 1990, 6-7). Marx believed that the destruction of capitalism would be realised through the process of increasing worker class-consciousness, which would ultimately lead to workers revolution that would serve to destroy the capitalist system and replace it with communal mode of production. For Marx, capitalism then, contains the germ of its own destruction.

Rostow's "Take-off" theory in relation to 'stages of economic growth' (a non-communist manifesto of development), offers generalisation on economic growth (Feiwel, 1985b, 716-717), which is universally relevant to most societies at different periods in time; and indicates processes by which industrialisation became rooted within the fibres of world economy. Rostow's "Take-off" theory on economic growth however, held the view that at different times countries pass through series of comparable stages of development that are fundamentally similar in their processes, and this holds true for present developing countries that are bound to follow the footsteps of developed nations. Critics on Rostow's postulates suggest that historical experiences of various countries diverge from the sequential order and stages of their development. Most interesting for perspectives of this study, is the important aspect of Rostow's work which suggests that economic growth relate to overall societal development, and the intrinsic relationship between capital investment and economic growth (Oman & Wignaraja, 1991, 10-11). In Rostow's view, these relationships are

inseparable, as much as they are necessarily required for global economic and social development.

1.2. Related concepts in global economy

In recent times the social scientists have focussed research and debates at the problems of society and the economy. Most of these interests have occupied the economists as well. The history of modern capitalism, the middle class democratic revolutions, and the origin of the association between economy and society (Furtado, 1983, 2-3; Martinelli & Smelser, 1990, 1-3), were all closely linked to the attributes and history of the industrial society from the sixteenth century. The economy and society therefore, have been closely linked from the inception of the industrial society and the middle-class democratic revolutions, through the intensification of commercial activities in the second half of the eighteenth century. Under circumstances such as these, the study of economy and society arose from those intellectual attempts that were modelled after the scientist's initial mode of inquiry to grasp the fundamentals of modern capitalist society. Early economists presented their classical models of economics as 'natural laws of economics', whereby sets of criteria were dished out for evaluating the correctness and incorrectness of economic arrangements, as well as for guiding the legislation of social policy.

The rise of the middle class, the democratic protests and revolutions, gave rise to early diversification of economic structures such as in production, banking, market distribution structures, the urban structures, and so on - from the social structures. All these caused important shifts in the relations between economy and the state. The markets opted for less control from the state, except for the collection of taxes and tariff. Together, these eventually lessened grips on society, and led to shifts in the position of many traditional integrative institutions (Martinelli & Smelser, 1990, 4; Furtado, 1983, 2-3) including the monarchy, the church, the local community, the artisan guild, and so on. Most importantly, under the factory systems, the differentiation further meant the dissociation of kinship relations from economic production.

The central and distinctive pre-occupation of economic and social thoughts, then became the implicit analysis of the changes that were taking place within and between the economy, the society, and their relationships with the state (Martinelli & Smelser, 1990, 1-4). The strains and contradictions brought about by the economic revolution, the pace of changes in industry and technology, the numerous economic instabilities; all were mainly assimilated within economic explanations, while the economists oversimplified explanations that were related to social issues. Diversification of themes eventually permitted the wholesome development of separate field of economics from sociology and other sub-branches within the social sciences.

Divergence allowed social scientific mode of inquiry to develop separately from the former philosophical, religious, and historical thoughts, which were based on logical experimental methods that were developed within the natural sciences. Furthermore, in

dealing with theories in those areas of the society that the economists had oversimplified (Martinelli & Smelser, 1990, 3-4), the social sciences integrated sociology, anthropology, political science, as well as demography, information science, and organisation theories, as separate from economic explanations. Economic explanations were found to be more or less inadequate to analyse certain types of emerging social actions and problems within the new industrial society. Economics and Social sciences therefore represent a mix of differentiation of distinct structures from one another, thus making them more separated and distinct for the study of the economy and society. For the emerging social scientists, the problems that dominated their themes relate to the integration of the new social order in ways that would permit avoidance of the potential of capitalist economic structures and processes from generating inequalities and injustice for the society, and disrupt normal development of whole community's life.

Simplified classical model in theories of production holds that an individual entrepreneur reads and responds to anticipated consumer demands by mobilising the different factors of production that are available to him, in order to produce goods for some profits. Simplified as it is, this model of production (Martinelli & Smelser, 1990, 35-36) becomes adversely complicated with the rise of large corporations that are equally economic agents, and eventually facilitated the involvement of states in production for the markets as well. The new forms of entrepreneurship, then faces complex sets of extended relationships with large corporations, multinational companies, banks, and states world-wide. While these relationships constitute sources for exchange of finances, goods, and services in world economy, they are also known to have developed some kind of resistance to change.

The corporations themselves formulate the scope of their business enterprises, which include the companies' strategies, programmes, products, business areas, and markets, and so on. The corporate companies provide the tools for their business operation within nations and across international frontiers through the control of production factories, as well as the marketing of finished products. Strategies of corporations include the use of co-ordinated programmes that are aimed at actions in securing long term sustainable and competitive advantage for winning economic benefits from business areas across nations. From these perspectives, corporation strategies are nothing more than the pattern of decisions, which companies make in order to promote their businesses (Hax & Majluf, 1984, 14-16, 41) and to win competitive advantages and profits. A corporate strategy produces the principal policies and plans for the achievement of the company's objectives, including the logic for explicit decisions on how it intends to use its finances and resources to achieve specific goals for the organisation (see Helander, 1984, 88-89). The strategy also defines the purposes and the range of businesses, which the company intends to pursue and off-course, states how it would deal with shareholders, employees, customers, and the communities.

Perspectives of globalisation therefore see the world as a system in which some very wealthy individuals, social organisations, and large scale multinational industries are dominant in industrial production, exchange, and marketing of goods for profits. Industrialisation itself leads to an increase in the proportion of technicians,

bureaucrats, and lower level managers (Williamson & Fleming, 1996, 353) in the labour force of various middle class occupations. This demonstrates the essence for economic development in creating employment, and most importantly, enabling the payment of wages to vast numbers of workers in the population. This recent view also holds the assumption that this situation occurs because labour and technology are incorporated in the production of goods, while wages and profit rates will converge as consequence of trade in new technological products of the modern industries. Thus, international trade theory based on the logic of industrialism holds the assumption that the mobility of goods across national borders will bring about convergence when consumers buy from the cheapest offers of goods at their disposal. Modern technology, information and communication systems, improved means of transportation, and international trade world-wide, all together have stimulated global economic and political interdependence between nations. This also sustains the assumption that the objectives of social development in an industrial, as well as in developing societies, cannot be achieved without economic development paving the way to growth, as means of financing the social sectors and related social objectives.

The drive for economic and social development in every nation, according to the postulates of Kerr et al (1960, 237) include amongst other things, the imitation of similar forms of modern technology, labour that provides goods in an economy performed by workers for wages, and the similarity of economic arrangements in nations. But economic policy solutions (or adjustments) that were implemented in one nation may have effects on other nations towards policy convergence or divergence. In the preface on integrating national economies, Aaron et al (1994, 11) held the view that economic interdependence has significantly improved standards of living for most countries, and still holds out the promise of further benefits. However, economic policies and events that originate from abroad must be properly reviewed and managed, in order to avoid dilemmas or pitfalls for the national economic policies, while sustaining the benefits of international co-operation. It will be right therefore, to say that other nations' economic policy directly and indirectly affect national economic and social development policies across nations.

The SIDA (1994, 29-31) informs us that there are strong links between growth and welfare, and that increased welfare is the primary objective of economic development. For the poor developing nations, according to Dube (1990, 50), poverty comprises chains of interrelated problems because their phenomenon is self re-enforcing. Poverty leads to low consumption and low calorie food intake (Dube, 1990, 38). When consumption is low, it leads to poor health and low productivity at the work place, which eventually contributes to the presence of poverty in a nation. The development of human resources to tackle the problems of poverty is therefore identified as an important pre-condition for economic and social development.

1.2.1. Convergence and divergence in the era of globalisation

In the past, interests in convergence theories had been immense, and continue to be at present. For instance, Marx reviewed the laws of capital accumulation; Durkheim

shifted convergence analysis to organic solidarity, and Weber discussed bureaucracy and rationalisation processes, all under early convergence theories (Rojek, 1986, 25-26). Rojek thus analyses divergence and shows that the ideology of divergence acts as central dynamic in relation to industrial production processes in global economy. Other convergence theorists such as Wilensky and Kerr supported Talcott Parson's modernisation theories that were based on Taylorist and Fordist principles (Hemerijck et al, 1995, 151). The convergence theory thus holds that the proliferation of standard methods of mass production was the driving force behind world-wide convergence of modern societies. Important to our perspective, is the convergence theory which holds that the structures of industrial societies tend to assume the same shape in various fields of societal development (Rojek, 1986, 26). The perspective also holds that the pace and trend of world's technological development nonetheless are similar, irrespective of minor cultural, political, economic, or social differences. It seems as if modern technologies are converging to become more and more alike.

The citations indicate that the exigencies of industrialisation produce identical values, beliefs, forms of technology, and organisational systems that are commonly found in the industrial countries at present. Analogously, these mean that the industrial man, his actions and policy, are shaped by the logic of industrialisation, while the ordinary man within the industrial society are being controlled by the processes of social and industrial constructions that are inherent in these societies. From same analogous perspective, individual nations (Rojek, 1986, 26, 33) are seen as being identical to trucks which are pulled by an engine, and they follow the industrial tracks of development in lines, one after the other. Individual nations are also seen as parts of the web in which all advancement in the line of development, would call for reciprocal adjustment within the core. From these perspectives of uniformity and diversity within the concepts of convergence and divergence, industrialisation (Kerr et al, 1960, 235, 255) is often implied when issues of industrial-relation systems are in focus. Due to the fact that industrial relation systems always involve the same technology which call for much the same occupational structure around the world, usual participants such as workers, managers, and the state are almost always involved. These relationships often involve the definition of complexity of established rules.

Although Kerr reformulated his argument on the logic of industrialism to allow the inclusion of national diversity or divergence into his debate, this new approach ultimately added divergence to convergence (Hemerijck et al, 1995, 159). The inclusion of national diversity to convergence debate eventually systematises relationships in world economic structures, and prompts the focus on industrialisation and global market as systems, which affect the world directly and indirectly, through national and international interests in collective participation in global economic activities. Here, the systems themselves come face to face with the problems of translating accumulated economic growth surpluses, into improvement on human well-being. The evolution of the welfare state after the Second World War inspired its analysis (Hemerijck et al, 1995, 145), in terms of convergent and divergent economic and social policies. Concepts of welfare states were then related to institutional uniformity and long term policy found to exist in advanced industrial societies. Comparative social policy favours convergence, in an instance where the influence of

similar social, economic, technology development, and finance commonly converge in making domestic systems of social care in nations to become increasingly alike. The notion of concepts of convergence with respect to policy goals, content, instruments, time, means and outcomes are therefore still frail with numerous problems, while the system is known to persist. It is envisaged that with time, variations in country specific institutional characteristics and national policy styles may narrow down or disappears completely, and could allow current variegated systems to converge towards identical domestic welfare state in the future.

The survey of eighteen OECD countries in 1980, and its quantitative comparisons by Esping-Andersen, found no significant correlation between a country's gross national product (GNP) and its type of welfare state regime (Hemerijck et al, 1995, 159, 160). The study therefore argues that political effect is stronger than the effect of economic development. The ideology of convergence holds the view that international interdependence in world political economy limits the scope of national independent actions. At the same time, certain aspects of vulnerability as well as gains in national economies are the results of increased international business transaction and the mobilisation of capital across national borders. The shortcomings of the convergence perspective are recent changes in international political economy with respect to monetary, fiscal and income policy, which undermined the sovereignty and hence the effectiveness of national institutions for social policy at the international levels. From divergence perspective, the scope for independent action is also undermined because of the consequences of international interdependence in world political economy. This situation occurs mainly because the placement of social policy is primarily too close to domestic institutions, with its distinct emphasis on the institutions of the nation state. In these instances, the possibility of international co-ordination and integration are therefore likely to be overlooked.

The assumption is that reliance on economic policy will revitalise stagnation in market forces and improve competitiveness of export trade so as to reduce inflation and tackle important problems, finance social security premium, reduce total tax burden, finance mass unemployment subsidy, and fund environmental issues. In the study on a Welfare State, important symptoms of the crisis in the welfare state (Alestalo & Uusitalo, 1986, 266-268) were that government was confronted with increased public expenditure and decreasing public revenue to finance the various social programmes simultaneously. These accentuated the ability of political parties to attack the welfare state policies due to the extra tax burden it imposes on the economy, which seemingly renders the bureaucracy inefficient. Signs of tax revolts emerged in opinion pools, and indicators of diminishing trust in the competency of state bureaucracy to invoke convergence on divergent stances of the electorates, became apparent. As a consequence of these revelations, the relationship between the economy and political aspects of the welfare state in many advance industrial countries become increasingly problematic. Alestalo & Uusitalo (1986, 272-277) identified that there exists wide spread consensus about the positive development of the Welfare State. However, preferences and support of the electorates differ along the social classes and the political party lines, regarding particular types of social security programmes to be adopted to ensure equality in the actual distribution of benefits.

Divergence perspectives emphasise the extent to which various advanced industrial societies are able to manage successfully the extraordinary diverse institutions and policies under common international pressures and similar domestic problems (Hemerijck et al, 1995, 145). Divergence perspectives consider homogeneous pressures as continually being mediated through country-specific institutional structures, national policy styles, and cultural traditions. It is envisaged that the outcomes will more likely, accentuate persistent country-specific features, and in the distant future, domestic welfare state regimes may likely grow apart, than growing similarly to one another.

In economic term, the word convergence refers mainly to economic policy variables such as interest rates, inflation, and unemployment and so on, in relation to production and the marketing of finished industrial products. In social sciences, 'convergence and divergence' had often been used loosely in split arguments, some of which support state similarities and others vie for state differences, instead of total agreement on inclined movement towards an identical convergent point. Convergence thus refers to the movement of two or more objects or variables (Unger et al, 1995, 3, 6), approaching one another and becoming more similar. Divergence then becomes the opposite of convergence. Currently the European States are still coming together in Unionism, while modern technology more than ever before intensifies the activities of globalisation in support of the logic of these theoretical arguments on convergence.

Popular views on convergence theories by writers during the 1970s and 1980s did not see Fordism as the dominant industrial model for Western or Eastern countries; nor technology as having the unifying effect in societies (Unger et al, 1995, 6), as was presumed to be the case. With the formation of the European Union, convergence theory has once more gained popularity in globalisation debates, and focuses on the question as to whether or not nations of the world are converging. That is, whether whole societies including the rich industrial and the poor developing nations or the capitalist and the socialist nations, are growing together and becoming one single society. However, convergence hypothesis (Unger et al, 1995, 8) holds the promise that smooth and automatic adjustments would result from economic activities, as a consequence of economic policies around the world. More importantly, though varied as they appear to be, these concepts therefore open the door for the effects of economic development on human population and the society to be discussed on national, international, and/or global contexts (Midgley, 1995, 73-74).

Early notions of economic development were based on the capacity of static national economies to generate and sustain growth in GNP at a rate between 5% and 7% increase annually (Dube, 1990, 1-3; UNDP HDR, 1998, 16). The current development paradigm in the social spheres see development in the extent to which societies have improved the quality of life of their populations through performances and growth in their nations' economies, and in the resultant levels of their human well-being. The role of players in the world economy, the characteristics of social problems, and the trends of policies in nations, therefore have become diversified in their outlook. The quest for the adoption of rapid economic growth policies by most world countries in order to improve upon their economies and achieve objectives set as goals for social

development in those nations, have also changed and became globally oriented in their phenomena.

Leaders in rich and poor countries, therefore tend to make use of social policy in guiding development in both economic and social spheres. Most countries have also opted for the adoption of capital intensive programs, while at the same time many rich countries have completely gone global with their industrial products in search of markets beyond their national borders. World economies seem to have become more tightly linked through interdependence in international market systems, whereby diverse economic and social policies converge through common interest in gains that are made from the global economy. From the viewpoints of economic and social policy sciences during our time, the challenges facing most world countries and their national leaders are eminent retribution from the belief that smooth and automatic adjustments would result all by themselves from economic activities around the world.

It is noteworthy that there cannot be one model to development in the sense that global processes cannot be reduced to a single dimension or even explained within one single discipline (Lesourne, 1989, 297-298), but must encompass in-depth analysis of diversity and eventual convergence between the processes. This paper would pursue arguments for convergence, as well as for divergence within the incentives of economic growth around the world for human well-being in the social sectors, and as a consequence of planned systematic application of social policy. From these perspectives, the term convergence would be seen in accordance with the definitions of Unger et al (1995, 3) which holds that convergence is the tendency in which societies grow more alike in their structures, processes, and performances. It may later become clear that wherever convergence exists, there would divergence also be found.

1.2.2. Some guiding hypotheses for this study

This paper holds the assumption that social policy will improve economic growth as well as translate gains from economic growth into human well-being. If the assumptions were correct, it would make the world much healthier, more prosperous, and much more peaceful place for human livelihood. This paper would therefore investigate the extent to which these assumptions were correct. It would then argue that improvement in human capabilities and well-being, are primarily ends in themselves and that they contribute to improved technology and economic growth, while economic growth becomes the means for furthering the expansion of human capabilities and well-being.

The profits that accrue from the economy should contribute directly to human well-being. From the links of those profits that accrue from economic growth and contribute to human well-being, GDP is identified as an important input in determining human life expectancy. GDP can therefore, be used as yardstick for the measurement of improvements in human being, due to its ability of contribution to the prolongation of human life. Enjoined from the stances of the links from economic growth to human well-being, this study would hypothesise as follow:

(a) The higher the GDP per capita in an industrial or industrialising society, the higher the life expectancy (or number of years people are expected to live during their lifetime) and vice-versa.

(b) The greater the GDP of countries, the more funds that would be available for governments to spend on various social programmes that improves livelihood.

(c) The higher the share of GDP per capita for any country, the higher the rate or improvement in human resources development indicators. The examples for these are increases in indicators which represent life expectancy such as health, and increases in adult literacy, combined primary, secondary, and tertiary levels of enrolment-figures in educational institutions.

Benefits also accrue from human well-being to the economy. From the links of the benefits that accrue from human well-being and contribute to economic growth, this paper sees life expectancy as an important input for the measurement of human well-being. It also sees long life expectancy as a determinant of increases in the rates of income growth. Primarily, long life expectancy is an end in itself. From this stance, this study would also hypothesise as follow:

(a) The higher the life expectancy, the higher the educational attainment index, and the higher the GDP per capita.

(b) The lower the human well-being in the nation, the poorer the health statuses, the lower the productivity of the economy.

(c) The poorer the countries, the poorer the people, the less capital for advancement in scientific and technological research for development.

(d) Without good government policies for the advancement of science and technology (for example, in vaccines, antibiotics, better seeds and fertilisers), the people will lack information and skills (for example, combat disease, raise crop-yields) to improve welfare and the level of living.

1.3. Economic growth and globalisation

Globalisation is not a clearly defined phenomenon. Modern societies are characterised as industrial societies due to the existence of different changes that had taken place within the societies and the environment, culture, and variety of technologies for competitive advantages, throughout the decades of consolidated industrial activities in those nations. These affect the different kinds of arrangements that men and women make in those societies for getting about their daily work-lives and improving their social well-being. With the speed that is generated by the global economic processes, the various technologies have gone through circles of more than four phases in the span of one person's life-time (UNIDO, 1996, 35). The rapid technological progress in various fields, for example, electronics and computer technology (UNDP HDR, 1995,

14), have revolutionalised people's lives towards increased global contacts and the globalisation of their market economy. Given the prospect of increased social and human well-being in industrial nations as a result of gains made out of market economy, industrialisation (Kerr et al, 1960, 17, 28) had spread out to most parts of the world, mainly through the diffusion processes of globalisation.

Pure capitalist market economy involves the exchange of goods based on prices that were fixed by the dynamics of demand and supply (Helander, 1984, 86-91), other national and international institutions of private property, and the various traders that compete for profit under minimum but necessary interventionist role of governments in removing injustices (Martinelli & Smelser, 1990, 33). Multinational enterprises apperently foster competitive conditions in national markets (Scherer, 1994, 15) by their application of three distinct strategies outlined below:

(a) The exports that are made from the home-bases, to other nations' local comsumers.
(b) The importation of goods for sale to the local affiliates, and
(c) The sale of goods produced by the affiliates, within domestic markets.

The governments' involvement in market economy, could then be said to be on the incease but occur in ways that guarrantee freedom of choice for the economic agents, as well as creating an evironment that maximises the freedom of mobility of resources, including labour within and across national borders. The word globalisation has been coined to describe the process by which certain events, decisions, and activities that men and women make in one part of the world (Bellak, 1995, 82), come to have significant consequences for individuals and communities in quite distant parts of the globe. It includes intensification on the level of interaction, the various inter-connections and/or interdependence between the various states and societies that constitute the world community. It employs competitiveness of the sort described by models of Wise & Gibb (1993, 78-81) that are representative of the European union, whereby competitive market environment permits the confrontation of different regulatory systems to compete with one another and win profits from the global arena. Globalisation is thus a phenomenon that comprises all economic and social activities in markets, including labour, goods, services, and financial capital across national borders world-wide.

Presently, it has become increasingly clear that globalisation relate to sets of international premises and processes in which governments, multinational companies, and few very wealthy individuals, become main operators in global financial arena. Globalisation therefore, is embedded in these processes of increased market and financial contacts between individuals and nations across their national borders. Globalisation is thus both structural differentiation and functional integration of markets within world economy (Ake, 1995, 22-23) through the processes of increasing interdependence between powerful multinational corporations that parade financial, and other capital resources all over the globe in search of more profits. Globalisation therefore, puts economic and social pressures on the nation states through the infusion of complex processes of trans-national mass-culture that concentrates its phenomena in diversified forms and contents to achieve convergence within the nation state, under

the imperatives of sophisticated modern technologies, advertising, and mass communication. 'Globalisation and the end of the Cold War' (Holm & Sorensen, 1995, 1), have become two main expressions that are often used to denote the occurrence of change in the international systems after the Second World War. The nature of global contacts is usually economic, political, social, or cultural relations, as well as the intensification of those contacts in more formal interdependencies across borders. In other words, it can be confidently asserted that globalisation is an increased contact in the exchange of everything else across national borders, including industrial technology, information technology, financial capital, goods and services, labour and so on, between various nations across the globe.

After the Second World War, scientific discourse and arguments of several prominent scholars and authors that were in favour of ideological and structural distinctions between communism and capitalism (Unger et al, 1995, 4-6), began to fade away, and thus, convergence theories were revived once more. In some ways, these became symptomatic indicators that suggest that Eastern and Western countries may develop and converge into more or less identical industrial societies. However, concepts of convergence persistently envisaged that the spread of industrialisation, modern technology, and economic growth will have the same effect on all nations, and that capitalist market failures may induce more states intervention and these would probably develop into some forms of welfare states. These views hold the promise that similar market failures in communist or capitalist regimes may result in the states allowing the development of market democracies. What is important to our perspectives in these convergence theories is the assumption that all nations would undergo similar stages in their processes of economic growth, although the ups and downs of academic interests may cause considerable disagreement between scholars.

The logic of industrialism and the nature of international competition, by themselves create pressures for more and more policy co-ordination for national governance, in order to allow the various nations to accommodate international or global structures of the market economy. Multinational enterprises continue to form organisations across nations, channel trade at markets, and invest financial capital, labour, machinery, technology know-how, patents, and access to raw material, ownership rights, information, and many other production factors to induce global economic growth. Expressed in terms used by Bellak (1995, 88-89), multinational enterprises have created their own 'sphere of discretion and markets', which are not accessible to national governments. International commodity, capital and labour markets were clearly decisive mechanisms in the propagation of economic development and growth in worldwide communities of the global markets. The multinational enterprises have become the main participants in international market competitions and hence, globalisation processes.

The trends in factors that lead to the introduction of a global manufacturing strategy in a nation (Gopal, 1992, 130-131) include as follow:

- The availability of national markets that is open to foreign goods and competitions.
- Response to import restrictions and content of local laws in countries.

- The promulgation of policies that make licensing of foreign firms contingent, on their ability to develop export markets for the nation, particularly, in many developing countries.
- The domination of formerly strong domestic market areas by foreign firms.
- The encouragement granted to foreign firms' to use multinational sourcing and manufacturing to gain cost and quality advantages.
- National policy to support firms to enter foreign markets, often in competition with strong domestic and multinational firms.
- Increasing participation in globalised marketplace that supports common products, albeit with local differences and consumer taste preferences.
  (Modified from Gopal, 1992, 130-131 for educational purposes only)

However, industrial policies are almost always a national responsibility of the nation state, while the interest of multinational enterprises and stateless firms, are to find markets and locate their companies in global areas where optimum profits will be maximised. In both economic and political senses (Bellak, 1995, 88-89) multinational enterprises create the need for improved international governance, which the multinational enterprises and stateless firms do not, and cannot provide due to their statuses of being stateless. They may, and therefore, do some lobby for equal, non-discriminatory policies in some areas, since the nature of their goods, services, and competitiveness differ substantially between industries and within nations where they operate. For example, in order to attract international companies to be engaged in foreign direct investment in any nation, the multinational enterprises must be satisfied with the 'location advantage' in that country (Bellak, 1995, 98) where it seeks to be located. In most cases, however, the companies are attracted by the availability of essential resources in the country, trained personnel, low production costs, suitability of technology, availability of information channels, and/or markets, in addition to some ownership specific advantages to compensate for possible foreign or cross border market failures.

The multinational enterprises now control more than half of entire global trade (Haq, 1995, 141-142) and world financial capital (Davidian, 1994, 19-22). They have the capability to move their capital and/or re-locate their firms across borders. The governments (Unger et al, 1995, 24), by means of their countries' technological specialisation, competency in skills that are required in specific production areas, are able to compete to attract the location of multinational enterprises in their nations. In response to strategic attributes required to attract the location of the multinational companies to nations, convergence and divergence perspectives identify that governments differentiate national location factors, from those of other nations. They differentiate national policy on foreign industries from those of indigenous firms (Tanzi & Coelho, 1993, 207-212). Governments also create and upgrade the competitive capacity of their nations; build-up assets for improving production in specific sectors that are advantageous to competitiveness and economic growth, in order to enable their nations to accumulate more wealth from their participation in the global markets.

One would expect convergence in policies of nations to occur through the use of similar strategies to win over the location of multinational firms to their nations. However, it still remains difficult to predict the occurrence of meaningful convergence in policy of supra-national industries as a whole (Unger et al, 1995, 24), and even more difficult to identify convergence in policies amongst different nations as well. All that could be said is that with strong competitive economic policy and internationally de-regulated labour markets, multinational enterprises (Bellak, 1995, 98-99) have several options open to them for direct investment, and for the location of their resources to maximise profits and economic growth anywhere across the globe. Where national government policy does not create attractive business environment for the investors, multinational enterprises always have other options that may suit their short and long term requirements of relocating their resources to more favourable business environment elsewhere across the globe.

1.4. International economic influence on national social policy

Economic activities in every nation had almost always, included international dimensions that relate to trade, labour or the search for precious material such as stones, metals, minerals, spices, and so on (Martinelli & Smelser, 1990, 48-49) across borders. But capitalism left alone (Walker, 1984, 6), has never been consistent in providing effective distribution of resources privately, particularly on issues that relate to societal level of living of individuals and families. The harsh experiences of the Second World War and the depression that followed it, gave rise to critical post war social policy innovations in meeting needs in nations, as well as other innovations on global economy, which took place within the international order. Viewed from convergence and divergence perspectives, the rapid global economic growth, which followed thereafter (Hemerijck et al, 1995, 150), was seen as caused by diversity within institutions and policies of advanced industrial nations. Diverse policies of the industrial nations were believed to be converging towards homogeneous polities that were dominated by large corporate firms with fluid social structures. Within the processes (Jones, 1985, 70-71), industrialisation and economic growth of countries with flexible political traditions eventually looked more alike in their policies, and thereby affect other countries' specific social care arrangements through assimilating widespread infusion of industrial and institutional patterns, which now prevail globally.

With constant innovations on industrial products, changes in technology, and improvement on communication networks, more and more walls as barriers to trade have been broken down (Bollason, 1995, 113-115), allowing freer manifestation of international trade around the world. Greater proportions of these international trades take place within multinational companies and their agencies around the globe. Most world countries have come under economic pressure to attract the location of some multinational enterprises in their areas, in order to induce further foreign investments and growth. On the other hand, the multinational companies themselves prefer the location of their firms in nations with favourable growth potentials and the kinds of competitive conditions that would enhance trade and profits. Important conditions that

attract foreign investments (Unger et al, 1995, 15-16) are the availability of secured currency, low inflation rate, good infrastructure of transportation and communications, low cost of living, pleasant living conditions, high wage which attract labour, low wage to attract capital, availability of qualified manpower, modern educational institutions, availability of research and development facilities, attractive tax regimes, fewer regulations such as those that will not disturb the functions of industries, and all else that places the nation states in a stronger competitive position to other nations.

The rise of the industrial society unavoidably caused economic activities to include an international dimension that intensified cross border trade and the internationalisation of labour through migration (Martinelli & Smelser, 1990, 48-49). All these had brought about more complex international economy that involved an augmentation of foreign trade with new international networks of businessmen, traders, and the possibility of yet more internationalisation for the activities of multinational companies. There have been constant international pressures on foreign policies and defence strategies of the military of some countries whose citizens are involved in international economics of food, oil, and illegal drugs as part of their consignments for international trade. However, changes in international market conditions, as a matter of fact, cause domestic participants in global economy to seek favourable changes for adjustments to certain imposed conditions from abroad where such conditions do not previously exist within their national policy. These national policy changes are necessary, in order to meet up with the demands that are made at the global levels. The nation's industrial policy is therefore constrained (Bellak, 1995, 97) and sometimes enhanced by the influence of other countries' national industrial policies. These external policies undoubtedly induce compliance in the behaviour of firms in another nation state towards convergence, taking into consideration the fact that labour and technology are incorporated in the production of goods.

Obviously, the argument here is about internationally imposed preferences in global competitive economy that brings pressure on individual national governments (Bellak, 1995, 160-161) through the domestic participation of citizens and nations in global markets. The domestic participants in free market transactions are usually affected by changes that take place in international market arena. Substituting international technical regulations for national ones has effects on domestic policies, for instance, the recent tax reforms in many European nations (Utne, 1995, 116-118) would not have been undertaken without pressures perceivably stemming from the international integration of such a policy. The variety of activities in global economic trade, the interests of multinational enterprises, and foreign direct investments (Bellak, 1995, 96-97); all cause fluctuations that affect national firms and threaten the capacity of governments to redeem its own national firms. Numerous unpredictable changes in these sectors invariably cause the domestic actors to depend on their national governments for competitive mobility, which would minimise the adversity of future market failures that may be induced by changes made internationally.

Based on the stances above, many governments with the best intentions to implement broadly based social development plans within their nations (UNDP HDR, 1996, 73), can find their aspirations for such plans frustrated by pressures originating from

economic policies of other nations far beyond their own national borders. This clearly demonstrates that international interdependence, somehow exerts pressure for convergence, while in some other cases, divergence are exerted on policies (Unger et al, 1995, 3) at the national levels. The extent to which these pressures affect the social policies of other nation states in the global arena, vary in intensity from one nation to the other. The extent of susceptibility to change also depends on how strongly the society is culturally attached to their national institutions, and the nature of laws by which the system interacts with the international community.

Changes in national social policy may occur, when governments adopt new strategies as their industrial policy measures that are meant for differentiation and/or specialisation in an industrial sector. This situation may arise in a nation when domestic participants in global markets, put up pressure and demand for changes within their national economies. Under similar situations, national governments' responses to such international demands may require more re-active industrial policy to contend the global arena. Global manufacturing policy requires the inclusion of a world system perspective that incorporates all necessary market factors (Gopal, 1992, 130-131), including integrated information systems designed to support the global strategy, but multinational manufacturing policy rather emphasises local production instead, for each specific market. Here, we may expect to find more divergent measures than convergence because governments may apply different industrial, as well as strong competitive market policy measures in order to create own competitiveness within unique business environment and modern technological specialisation in their nations.

Global manufacturing strategies allow products or parts of the products to be produced at different locations, and those parts that were produced are eventually shipped or transported to wherever locations the markets may exist. Most nations and governments derive excellence from certain industrial products that call for some particular but different industrial policy measures. Viewed from convergence perspectives (Unger et al, 1995, 2), flexible policy solutions that were implemented in one nation (for example, to attract customers from other nations), will have effects on prices of those other nations towards international trade policy convergence. This happens because of those conventional adjustments to policies that are made in the process to allow policies to conform to those of their neighbouring countries. It seemed possible that increased internationalisation through trade and other social contacts may lead to increased interdependence between the nations.

Perspectives on the developing nations, relate to Rostow's 'Take-off ' theory of development which states that aid and investment will induce rapid economic development to take-off (Oman & Wignaraja, 1991, 11-12), and last about twenty years period, to bring the aid recipient country to a point where aid would no longer be required. This assumption supported the political opinions of financial institutions and donor nations in granting massive dosage of aid and foreign capital to those developing countries that were supposedly ready for this professed economic 'take-off' in their economy. Most developing nations (Tanzi & Coelho, 1993, 202-203) got foreign resources in the form of inexpensive loans during the 1970s. The emergence of

the middle income developing countries as major borrowers in international capital market (Krueger, 1990, 370-371) was quite recent. Within this optimism, substantial inflow of foreign direct investments to most developing countries rapidly attracted and increased the presence of multinational corporations that participated in local manufacturing during this historical period around 1960s and 1970s (Oman & Wignaraja, 1991, 26). Import-substituting industrialisation (Hughes, 1984, 6-7) which was expected to have increasing productive and employment opportunities during those periods, eventually ran into great difficulties in most developing countries. In brief, development strategies for the developing countries ran into problems of deficits in balance of payments on loans from the World Bank institutions, as well as other investment related loans that were based on foreign direct investments; all which demanded the rectification of the problems as solution over the following issues:

- Specification of what the role of foreign direct investment and multinational corporations are, in the developing countries.
- Specification of the role of multinational firms, and the basis of their modern technology transfer.
- Defining the appropriateness of the technology that is being transferred.
- Defining the spectrum and limits in the use of transfer-pricing techniques and other means for the transfer of financial surpluses abroad.
- Clarifying limitations in de-nationalisation of local industry.
- Removal of the threat to national sovereignty by multinational corporations.

International concern over issues of control on foreign direct investment and the role of multinational corporations in the developing countries (Oman & Wignaraja, 1991, 27), contributed to the creation of the United Nations Centre on Trans-national Corporations, and this limited foreign ownership of investments in member countries. Both the Industrial nations and aid recipient developing nations eventually began to liberalise policies regarding industrial assets such as technology, organisational know-how, and access to export markets. Competitions to attract more foreign direct investments were gradually reinforced. However, some foreign investors increasingly became reluctant to invest huge sums in the industries in the developing countries, due to the recognition of risks perceived to be involved (UNIDO, Secretariat of; 1984, 57-58), at a period when the impact of such industrial policy may have been reduced by globalisation processes. As solution to these problems, many governments in the developing nations introduced policies to regulate foreign direct investments, and the behaviour of foreign investors. During the 1980s, the developing nations, particularly in Africa were mainly dependent on development assistance for import-substituting industrialisation (Krueger, 1990, 370-371), while officially most of the semi-industrial countries no longer competed to attract more funds from the international capital market.

Some developing countries, however, felt more comfortably to pursue loan-financed industrialisation policies, rather than negotiate with multinational corporations for fresh flows of foreign direct investments. Financial schemes of the World Bank programme for structural adjustment on long term loans, was designed to fill the gap in international markets for developing nations. Real interest rates on loans from the

1970s were also very low, and this generosity within the lending systems suited the developing nations, and attracted increased borrowing on international financial markets. Important aspect of government regulatory policy in most developing countries (Oman & Wignaraja, 1991, 26-27) included the establishment of government boards for screening, and for the registration of foreign direct investment in recipient nations. Specific industries and sectors where foreign direct investment was prohibited in the nation were clearly demarcated. Quotas on overseas remittances of profits and royalties were set. Automatic take-over of local firms by foreign partners was forbidden. Extent of local integration and limits of export performance requirements were specified. Restrictions on foreign equity ownership of minority shares were also clearly stated.

1.5. Global economy and social development

As the world begins the Twenty-first Century, emerging international political situation, the international economy, and global ecology; all exhibit some form of interconnectedness in the nature of visible changes (Soedjatmoko, 1989, 219-223) towards increasing conflicts, competitiveness, and economic co-operation between nations. Viewed from its global perspective, it could be said that the trend in world's common interest, seem to be evolving towards some kind of global structure that is driven by continuous changes in the approach to convergence and divergence, in relation to economic and social policy issues. In line with this trend which brought down the Berlin Walls in 1989, European Community have become the scene of great structural and democratic changes towards closer interaction and integration (Hantrais, 2000, 21-22; Wise & Gibb, 1993, 23-28). In the 1990s, the world have seen the Soviet Union and most East European countries initiate series of structural and policy reforms towards more decentralised decision making processes, thereby opening up their economy to wide range commercial, financial, and technological interchange with other world countries.

Presently, there is no Eastern or Western World in its former context. Japan has become one of the worlds` major suppliers of international goods and finance, while their rapid export growth had increased their domestic expenditure. China started a process of reform in the late 1970s and had increased her export trades, while her per capita income had doubled during 1980s and 1990s. Some Asian countries, including Latin America, and some African countries, although poor and have problems of economic growth; have increased consciousness to improve international trade surpluses. The United States of America has retained predominance as the largest economy of the world and had persistently shifted her pre-occupation to foreign policy issues. Rightly or wrongly within the development of these convergence theories, capitalism is seen by some authors (Jones, 1985, 45-47), as constituting the prime determinant of modern social policy development, while social policy then becomes the tool for the functional survival of the capitalist system.

The evolution towards organised systems and organisational changes that are characterised by integration (or convergence) and differentiation (or divergence) allow the emergence of vast information that are synchronously meshed into higher-order

interdependent interaction of human beings, nations, cultures, youths, music and so on (Land, 1984, 52, 55). All these create diversity and higher levels of organisation, as well as possibilities that are more complementary and mutually enriching in global business relationships. The rapid processes of accumulation and the technological advancement inherent in industrial civilisation enabled fewer industrial nations to gain control over the entire globe (Furtado, 1983, 3-5) through the spread of identical industrial civilisation. Globalisation perspectives therefore, see the world as a system in which few nations, organisations, large-scale industries, and very wealthy individuals are dominant participants in industrial production and global marketing.

Along perspectives of globalisation, lies the assumption that objectives of social development in an industrial society cannot be achieved without economic development as means to achieve that end. But the role of social policy and its scope is narrow and restrictively focussed on the state (Walker, 1984, 67), and the social activities of the state. Essentially, the World Banks' standards for accepting involvement and the granting of assistance are located at macroeconomic policy levels that operate prudent fiscal and monetary policies (Elson, 2001, 5) under the global development framework which, focuses on market-based criteria that emphasises stability in level of prices. The drive for economic and social development in every nation (Kerr et al, 1960, 237) includes the imitation of similar forms of modern labour and economic arrangements, and the provision of some form of security to sustain workers of the state. The workers of some big industres in the nations are also protected. In the context of recent debt-relief initiatives, the emphasis of International Monetary Fund on issues of social policy (Elson, 2001, 5) has been to help those that were adversely affected in the process of global market failures.

In recent years, the restless discontent of populations that were previously satisfied with traditional national standards and methods of production, have now resorted to increased use of machines and some form of advanced technologies in their industrial production. World populations are now accustomed to old and new concepts and terminology such as 'industrialisation, technological development, economic growth, modernisation, social development, internationalisation, global market', and so on. The recent achievements and advancements in rapid information exchange systems, for example, computer storage and retrieval of information, electronic mail and telephone communication between most world countries clearly enhance the concepts of democratic choices and co-existence of diversity (divergence) and uniformity (convergence) in worlds' economic and social systems.

Concepts of 'Logic of Industrialism' therefore, constitute the processes of industrialisation taken as a whole to approximate the unavoidable convergence course of all world nations in becoming industrialised societies. Industrialisation here (Kerr et al, 1960, 2, 33-46) refers to the process of a nation's transition from the traditional society toward becoming an industrialised nation, which is the ultimate limit that a traditional society approaches by her development activities towards industrialisation. It is assumed that through the diffusion processes of industrialisation to other parts of the world, the characteristics of different economic and social arrangements which

men and women will make in the new world system of industrial societies, would depend on this logic.

International trade policies focus on events that occur outside the nations, in order to find solutions to cope with problems such as those related to border barriers, quotas, and tariffs (Aaron et al, 1994, 14). On the other hand, domestic economic policies are concerned with all else that occur inside the nation's borders, ranging from corporate governance, workers safety, products quality, anti-trust rules and competition, tax codes, regulation of financial institutions, and short / long term domestic budgets. In most world countries today, global economic development (Midgley, 1995, 73-74) has not been accompanied by equal improvements in the social sectors for the well-being of millions of the domestic population, particularly in the poor nations around the globe.

The various kinds of disparities which exist in policies of nations (Trent, 1990, 8-9) on issues that relate to human well-being could have diversified effects amongst individuals in those sovereign nations, as well as between nations. It is also noteworthy that when reference is made of world capitalist system, the world as a whole is not refereed to (Kothari, 1993, 35-36); but only that part of the world that has access to modern state, the modern market, and modern technology are implied. This clarification means that all the other parts of the world that has no possibility to participate in the powerful and expensive drive towards restructuring everything else towards modernity, including developing their human resources for modernity, will have to find other means of fending for their nations outside the capitalist system. In other words, they will remain marginalised, un-integrated, redundant and unwanted in world capitalist system.

Numerous economic and social problems make the poor feel alienated from genuine development, rejected or excluded from the social structure of their nations and the wider global structure. The exclusion of the poor raise critical questions on suitability of on-going economic and social policies, and call for empirical investigations and analysis on various aspects of associated problems. Moreover, the existence of this situation in the first place, causes uncertainty regarding how to identify what the best polices for dealing with the problems ought to be, so as to be able to redirect global economic growth benefits towards improving human well-being and development in the social sectors. Secondly, the situation has also resulted in the resurgence of academic interests that call for empirical investigations on how improvements and growth within economic sectors would include improvement in human well-being, and the eradication of poverty in human population. In these instances, however, more empirical research are required on global issues of economic growth and social development, in order to ascertain how social policy could be made to translate economic growth surpluses towards achieving positive impacts on human well-being, and eliminate poverty within all the nations in the future.

2. EMPIRICAL STUDIES OF LEVELS OF ECONOMIC GROWTH AND HUMAND DEVELOPMENT

IMPACTS OF GLOBAL ECONOMIC GROWTH: METHODOLOGY AND MATERIAL FOR THE MEASUREMENT OF CONVERGENCE AND DIVERGENCE

The measurement of convergence and divergence in increasingly interrelated large and small world economies are questions of reviewing economic and social situations attained by inhabitants within national borders on comparative international context. This chapter therefore, introduces and discusses the methodology to be adopted, and material to be used in the measurement and study of the effect of global economic growth and social development policy on rich and poor countries.

Global comparisons of vast numbers of countries on their internal convergent or divergent characteristics would be expected to lead to somewhat divergent results. The 'United Nation Development Program - Human Development Report' (UNDP HDR) had developed some databases on economic and social indicators during 1990 and 2000, aimed mainly at capturing human dimensions of development through measurement. Efforts of the UNDP had led to the development of an index known as the 'Human Development Index' (HDI), whereby several indicators were technically combined into one single index that determines the level of economic and social development of each country within each particular year.

Growth lends itself to quantitative measurement (Oman & Wignaraja, 1991, 11), while most other concepts of development are often difficult to measure. The placement of large number of countries on the (human development) index scale allows the measurement of concepts of economic and social development (Kangas, 1991, 7) to be methodically grounded in scientific empiricism that are essential for comparative analysis between countries. Having accepted this premise as valid, the study is thus ready to select the thirty countries that will be used as the global sample. Towards this exercise, a brief explanation on related issues of choosing the indicators, determining sources of data, and pattern of analysis of data for the study, will necessarily be in order; before the actual selection of global samples is made. Choices of indicators and data will reflect the nature of economic and social problems, which the study proposes to investigate. It is known that the use of quantitative and qualitative materials (Critto, 1979, 91-92; Smith, 1968, 72-74) is complimentary to each other in social research. The statistics and indicators, which the study would include, will be useful for measuring the effect of economic growth on the social conditions of human beings in nations of the world as represented within the samples.

The terms 'human development' and 'human well-being' are used synonymously, and will somehow carry almost the same word-value or weight in their meanings. The terms shall be used reciprocally in this study, as the case may be. The focus of the study is concentrated on the decades after the Second World War, when world societies began raising consciousness on intersecting social, but economic-dominated goals in their economic and social policies for meeting basic human needs. Most

analysis of global samples will also focus on the effect of economic and social activities within world countries, after the Second World War. The study therefore intends to draw comparative inferences concerning the industrial and developing countries, after the empirical verification and analysis of data.

Since the accumulation of wealth through the means of production in the economy, has led to diversification in consumption, the resultant level of living in nations and the health of their citizens, can be regarded as useful indicators for which measurement and analysis is required. Care has been taken to select indicators and variables that are amenable to the measurement of trends in economic growth, the level of poverty amongst nations, and the prevalence of human well-being in nations. In the study, the most important yardsticks for the measurement and analytical discussions of human well-being (Haq, 1995, 49-50) are the GDP, life expectancy, and education indices of countries. These reflect essential survival needs, which every body (meaning representative bodies of all world countries such as the United Nations Organisation, the World Bank, the WHO, the ILO, the UNICEF, and so on) unanimously adopted. Some of the survival needs for the human beings and their well-being are income, health, education, nutrition, housing, water, sanitation facilities, and so on. This study would use indicators that broadly cover these and related areas, for in-depth qualitative and quantitative analysis. Backed-up with various data on the samples, conclusions would be reached through analytical discussions from various convergent and/or divergent points, which affect global economic activities, and the well-being of citizens of various nations around the world.

2.1. Choice of indicators for the study

Whenever issues of human well-being are in focus, solutions to the social problems are often sought through progress in economic growth (Walker, 1984, 65-66) and all economic policies imply social policies because, there are no clear distinctions between wholly economic or wholly social policy. For similar reasons, there have been advocates for the inclusion and use of economic indicators as a supplement, for social indicators. Although economy and social issues are intrinsically inter-linked in their assessment, the ultimate end of all development activities, is the ‘human being and his well-being’. From this perspective, financial income (UNDP HDR, 1995, 10) is important only as means of achieving this objective. Finance alone should never be an end by itself, but the means to well-being. The search for indicators for the measurement and analysis of human well-being, therefore, may consider a number of different techniques that can be used; for instance, time series development data that relate to economy, health, or human well-being (for example) are perfect for such investigations and analysis. But the choice between techniques (Sanders & Ward, 1994, 201) will depend on the kind of assumptions and the nature of the explanation that the researcher intends to formulate with the statistical model. Ragin (1987, 15-16) tells us that in cases of comparative analysis, the investigator must set boundaries for comparative examination, wherein methods of analyses will be relevant to instances where every phenomenon is examined and accounted for. In these instances, comparative methods of analysis are amenable to different combination of conditions,

and for the examination of differences and similarities amongst cases. The method is also consistent with the goals of interpreting and addressing historical specificity within empirical investigations.

A variety of social indicators are developed for the measurement of the quality of life (Doyal & Gough, 1991, 151). The indicators for the measurement of quality of life include ascertaining the number of doctors available, hospital beds per 1000 population, life expectancy at birth, infant mortality, and school enrolment rates in a nation and so on (see UNDP HDR, 1995, 10). Other guidelines or criterions for the selection of essential social indicators that reflect human well-being are partly drawn from perspectives of 'basic human needs' (Roos, 1973, 65-69). The perspectives on survival and basic needs also support the use of education and health-related socio-economic indicators for ascertaining human well-being and the quality of life. These indicators emphasise priority areas for potential human well-being, such as biological need for survival, good health, good quality of life, and security for the society; which are absolutely essential for the pursuance of other higher individual needs, as well as societal needs (Doyal & Gough, 1991, 249-261). The WHO Global strategy for health for all by the year 2000 (1981, 15, 24), supports the use of such indicators as number of doctors available, number of hospital beds per 1000 population, life expectancy at birth, infant mortality rates and school enrolment rates as suitable indicators for the measurement of quality of life. It is widely held view that these indicators are also responsive to the measurement of human well-being in various societies and nation states, at the global levels.

Growth in the economic sector is supposed to improve the life and health of human beings in the social sectors. Analysis within these perspectives will therefore revolve around indicators that were carefully selected to reflect most dimensions of human resource development, and human well-being. The three principal indicators being referred to are specified in chapter 2.5 below. They were developed and adopted by the UNDP for the calculation of human development. The choices to select them here were based on the relevancy and effectiveness of the yardsticks in measuring convergent and divergent points, on all economic and social activities in nations. Theoretical analyses of convergence and divergence, intend to show how much the impacts of global economic growth had improved the lives of populations of nation states in the rich and poor countries around the world. The indicators intend to show how much the different countries weigh on human development index-scale, which eventually becomes their levels on human well-being. However, for detailed explanation on these issues, and on the presentation of data for the construction of the index, see chapter 2.6 below.

2.2. Sources of data

All data for this study were collected mainly from the United Nations and her specialised agencies, such as the UNDP, the World Bank, the UNESCO, and so on. Data from early 1940s were not available for all countries within the sample. In this situation, analysis of the effects of economic growth on human well-being and

development after the Second World War would be based mainly on data from 1980s onwards, when the availability and uniformity of such data on most world countries became more systematic.

Policy framework for engagement on development activities usually takes into account the country's population structure and other resources that are available in the country (see appendixes 1 – 5). Information on population are important for understanding economic and social development, in relation to the distribution of private and public goods and resources that affect human well-being; and very often, they are also found to be essential for the analysis of most data on society. Demographic data forms the concrete background on which the computation of other social indicators is made meaningful, especially in scientific analysis within the social sectors. However, sources for the collection of social and demographic data depend very much on civil registration, census results, sample surveys, and from all levels of government bureaucracy and institutions. Under these circumstances, the registrations of births and deaths (or fertility and mortality) provide annual information for demographic analysis.

Projections on population are calculations regarding the course of future population growth, which almost always mirror patterns of growth in reproduction and longevity, and are based on known trends that had been observed in the past. Population growth then occurs through excess of births over deaths. Birth rates of countries therefore determine national differences in population growth. Urban population in the developing countries will continue to grow because large numbers of people leave rural areas to seek education and employment in the urban areas without the provision of readily constructed houses, the provision of adequate sanitation facilities, and/or the supply of pipe-borne water. These movements cause increases in social problems for the urban areas, particularly in poor developing countries.

In our present time however, sudden increase in population numbers may still constitute problems. Development policy therefore, has to consider the most efficient ways for resource utilisation, as well as provide for their maintenance, enhancement, or substitution as the case may be. But present fears on population explosion may prove to be illusory, and in the long run large population may turn out to be an asset. Population growth rates, somehow, have to be checked, but by prioritising investments in man, its quality would have to be improved for self-sustenance.

Nevertheless, the data that would be collected from the United Nation sources and from her specialised agencies for the study of convergence and divergence is expected to hold rigidly the significance of the phenomenon under investigation. Available data would also be sufficient to hold firmly the establishment of trends in global economic growth, and therefore, would be reflective to indicating the effects of social aspects of development, for which most of the discussions and analysis on convergence and divergence perspectives are focussed to investigate.

2.3. Analysis of data

The early attempts at measurements and analysis on processes of development (Oman & Wignaraja, 1991, 10-11) suggest that Rostow subscribed to the notion put forward by Simon Kismets, Albert Hirschman and others during 1950s and 1960s, in support of strategies for increasing productive capacity in industries of the nations. Their views were that at different periods of industrial growth in nations, the various sectors within the industry would grow considerably faster than the economy as a whole, and this growth would give dynamism and stability to the rest of the nation's economy. Kuznets's circles (Feiwel, 1985a, 433-434) provided early empirical work as foundation for quantitative measurement and analysis of economic time-series in national income accounting (system that identifies fluctuations over fifteen to twenty years circles) on economic growth of a nation. Concepts from Kuznets's empirical studies thereafter became the point of reference and interpretation of economic time-series, which also led to new and deepened insight into early economic and social analysis on processes of development.

Measurement and data analysis constitute important aspects of research, in addition to forming important links between phenomenon, data, and the theoretical assertions of the hypothesis that are formulated within the course of the study. Based on the logic of industrialism, comparative analysis of global economic growth and human well-being, would be far more incisive, persuasive, and unified on issues of its global effects; if we accept that the state of human well-being is the process of enlarging peoples' choices (see UNDP HDR, 1995, 11) in leading long and healthy lives, acquire knowledge and have access to the resources that are needed for satisfying decent standards of livelihood.

The research on global economic growth and its effects on human well-being in rich and poor countries will use perspectives of convergence and divergence as its central core, and for all other aspects of studies within the core. It is upon this framework that all analysis of the study would be based, in relation to identifying the various phenomena that indicate 'how similarly (convergence) or differently (divergence)' the human populations in different world countries were affected. This research will therefore, use data as its main tool in identifying positive or negative impacts of world economic growth policy on the human populations in rich and poor countries. Comparative analysis adopts a global perspective on the effect of economic growth, as the social outcome that the rich and poor countries are experiencing. Discussions and analysis would also see the world as the prime unit in global economy, where all constituent world nations operate as part of the single global system. Convergence and divergence perspectives will then continue to use the representational samples of world-countries, as representative of the entire global system (see Figure 1; Tables 1 – 22; and appendixes 1 – 5), to analyse and to ascertain the effects of world economy on the human population. The findings of the study will be adopted as being representational of the phenomena studied, and these will generally be referred to, as 'global phenomena' and will be used in references to countries categorised in the study as 'industrial', 'semi-industrial', or 'the developing nations' as the case may be.

2.4. Selection of global samples: Cross-section of rich and poor countries

In selecting samples for this global study, care has been taken to include evenly nations that are situated at different geographical regions of the world, so that a cross-section of both rich and poor countries will be adequately represented in line with implied concepts of the word 'global'.

The countries that are selected as samples (Figure 1) are grouped into categories, in accordance to their levels on economic and social indicators (see chapter 2.6.1), and constantly referred to as 'industrial' or 'rich', 'semi-industrial' or 'medium income', and 'developing' or 'poor' countries. These terms refer to the above stated meanings and are used inter-changeably where necessary. 'Countries' or 'nations' whose weights lie between the rich and poor nations, are more or less dormant in convergence and divergence analysis, and are often referred to as 'semi-industrial' or 'medium income' nations. They are also known as countries within the 'unbalanced economic quadrant', and their cases are dealt-with elsewhere in this study (see chapter 3.2.2). Individual nation states would be treated mainly from comparative perspectives, in relation to all other countries within the samples for the research.

Thirty countries were thus being selected as 'global sample'. The selection of these countries was considered as genuinely 'representational' of global sample, on the bases of their global distribution. The selection considered countries on their geographical location, as well as the availability of data for their study. Figure 1 shows the list of thirty countries as they were selected to represent the global sample for the study. The countries are placed in alphabetical order and numbered serially, as follow:

Figure 1. 30 Countries in global sample

1. Algeria	2. Argentina	3. Australia	4. Brazil
5. Cameroon	6. Canada	7. Chad	8. Colombia
9. Egypt	10. Finland	11. France	12. Ghana
13. Greece	14. Hungary	15. India	16. Japan
17. Kenya	18. Madagascar	19. Mauritania	20. Mexico
21. Netherlands	22. Nigeria	23. Norway	24. Philippines
25. South Africa	26. Sweden	27. Turkey	28.United Kingdom
29. United States	30. Zimbabwe		

2.5. Towards the measurement of convergence and divergence with indicators of human development

Attempts to identify directions and outcomes of diverse national policies that exist amongst nations regarding present situations in economic and social development,

prompt the assumption that it is impossible (in other words, too expensive) to conduct systematic survey on 'development' in each and every nation in the world. However, the social sciences help in the identification of factors, which are basic in relationships that are involved in development. In the event of any such studies, attempts are usually made to measure 'development' comprehensively (Haq, 1995, 46-48), in order to capture most choices that people make. In these exercises therefore, the researcher requires to be immersed in broadly based development knowledge on issues that represent most important aspects of all the economic and social progress of the nations. Obviously these must give priority to identification of effective and reliable indicators, as yardsticks that would be responsive to convergent and divergent policy issues that are often embodied within economic and social developments.

Here, Ragin (1996, 85) tells us that the definition of the word 'development' in a variety of ways had, by themselves, exposed problems inherent in such development perspectives, and this problem had attracted social scientists for years but still the issues had remained unresolved. The problem was that development had often been defined in economic terms of GDP or GNP per capita. A wholesome definition of 'development' in strict economic terms, places the United States of America, Western Europe, and some rich oil producing countries as most developed nations in the world because of the volume of their financial wealth. When others redefine the word 'development' in terms that are related to the human needs which the country successfully satisfies, the hierarchy of developed countries is again reshuffled and places the welfare states and most Eastern European countries as most developed nations in the world. Furthermore, when the definition of 'development' includes political and quantitative attributes on the emergence of national political cultures, which are supported by stable central governments and acknowledged as legitimate by their subjects, the definition again reshuffles the hierarchy of countries in the world. In this example, Mexico eventually emerges amongst the most developed nations in the world. These diversified forms, qualities, and structures in the definition of 'development' indicate non-existence of convergence in world views regarding what the meaning of development implies. They also unravel, as much as they suggest that more relevant facts are required to be dug-up in order to set-right the defunct perspectives and perhaps initiate scholarly investigations towards complete new approach that could be a more acceptable definition of the word 'development' in this millennium.

The measurement of the provision, and the quality of health care (Sintonen, 1981, 88-89), focuses on the administrative aspects of health organisations, characteristics of professional personnel, facilities, and equipment. These evaluations are usually done in relation to some population ratio - depending on the number of people who can be served by all the doctors and paramedical staffs in health institutions of the country. The fewer patients served by each personnel, the more efficient the services are evaluated to be. In cases of demographic statistics to show the health conditions in the country, birth and death rates per 1,000 populations are usually ascertained.

Human beings desire to have a comfortable standard of living, live long free lives in communities, acquire knowledge and gainful employment, and breathe clean air within

clean environment; all these interests have caused policy makers to do more for 'development'. From these perspectives, development in the health sector in relation to advances made in modern medicine and technological breakthrough in hospital equipment, have been tremendous, and so are the prolongation of life. A measurement of human development covers gains from economic and social activities of nations. The overall contributions of healthy population to economic growth are also targeted in the measurement of 'human development' (UNDP HDR, 1996, 75-78), which increases life expectancy, and raises growth rate within the economy of any country.

Comparative cross-country studies and analyses (UNDP HDR, 1996, 69) identifies GDP per capita income and adult literacy as the most important determinants of life expectancy. From this perspective, incomes' effect on health, however, appears to be larger for urban than for the rural areas. While GDP per capita is considered an important indicator for the measurement of global economic growth; human well-being, human resource development, and good health use other indicators for their measurement. To measure the development of the human being; life expectancy, educational attainment, adult literacy rate and combined primary, secondary and tertiary school enrolment ratios are all added together to GDP per capita (see UNDP HDR, 1999, 159-160), in the process of forming an index for its measurement. Together they form indices that are used as yardsticks for the measurement and/or comparison of development of the human being, in relation to his well-being within nations.

It has been noted elsewhere in this study, that the UNDP had developed useful economic and social indicators for the measurement of human development at some advanced levels, and this indicator is called the 'human development index'. The UNDP had based the calculation of human development index (see chapter 2.1.) on real life achievements of human beings in health and in other human resources that are developed within individual nations. The measurement of human well-being and development focuses investigations and discussions on considering indicators in three principal areas of human development such as longevity, educational attainment, and level of GDP income for sustaining livelihood. These indices show economic and social policy convergence and/or divergence in promoting living standards between countries (see UNDP HDR, 1996, 106). The calculation of each country's achievement-value on human development is done by adding up the sum of the three indices for the country, then dividing the total sum with 3. The three indices are 'longevity', as measured by life expectancy at birth, 'educational attainment', as measured by the combination of adult literacy with two-third weight, and combined primary, secondary, and tertiary school enrolment ratios with one-third the weight to make up its total weight, and the 'standard of living' as measured by real GDP per capita - PPP$. The resultant sum of this calculation is known as the 'human development index'. The placement of a country in a particular position on the human development index is based on the value obtained through the measurement of the country's (development) indices, which the nation had obtained within the three specific indicators that were stated above.

2.6. Methodology for the measurement of human development

The calculation of human development is the process of measuring the new stages, which the human being had attained as a result of his activities in all other sectors that contribute to increases in economic and social development. The UNDP HDR (1999, 127-128, 159-160) states that the measurements of the human development index of a country are currently aimed at achieving more solid empirical foundation for analytical work. The construction of Human Development Index for measurement uses three main components; longevity, knowledge, and income (Haq, 1995, 49). The report of the UNDP (HDR, 1999, 127-128, 159-160) had set margins to ensure the methodological accuracy of its calculation processes, which are strictly based on combined use of the three different indicators stated below:

(a) Longevity (as measured by life expectancy at birth).

(b) Educational attainment (as measured by adult literacy rate which carries some fraction of two-third weight) and the combined gross weight of primary, secondary, and tertiary enrolment ratio (which also carries the remaining fraction of one-third weight). When both weights of one-third combined gross primary, secondary, and tertiary school enrolment index are added to the two-thirds weight of adult literacy index, they make up the 'whole' grand-total weight of educational attainment index.

(c) Standard of living in the country as measured by the rate of real GDP per capita. GDP measures the total output of goods and services for the final use within the domestic territory of given nations. For the calculation of the human development index, adjusted real GDP based on purchasing power parity of that country ('PPP$'), is required. Here, however, some clarification on PPP$ will be in order. Purchasing power parity is GDP converted to international US dollar using estimates of nations, in order to provide standard measure of real price levels between other nations over time. This is necessary because exchange rates alone do not always provide standard measure of real price levels between countries.

The UNDP HDR (1999, 159-160) further states that the construction of the Human Development Index, requires the establishment of fixed minimum and maximum values for relevant indicators in a country (see Haq, 1995, 49-50). Minimum and maximum values of countries, change each year as other countries' performances improve at the end of the scale. Fixing the deprivation figures of a country between the range of 0 - 1, means that 0 is the minimum, while 1 is the maximum value that are observed. The format of an example by which minimum and maximum values were fixed, will then be as follow:

Life expectancy at birth: minimum value 25 years and maximum value 85 years.
Adult literacy rate: minimum value 0% and maximum value 100%.
Combined gross enrolment ratio: minimum value 0% and maximum 100%.
Real GDP per capita (PPP$): minimum value $100 and max., $40,000 (PPP$).

In addition to these fixed values as were explained and demonstrated above in this

chapter (chapter 2.6), the UNDP HDR (1999, 159) states that components of the indices above can be used in computing the human development index of a country, in accordance with the general formula below:

$$\text{Index} = \frac{\text{Actual Xi value} - \text{minimum Xi value}}{\text{Maximum Xi value} - \text{minimum Xi value}}$$

In practice, the application of this formula in working out the life expectancy index of a country would be done in the following way:

$$\text{For example, life expectancy index} = \frac{65 - 25}{85 - 25} = \frac{40}{60} = 0.667$$

As had been observed elsewhere in this paper, problems arise within yardsticks for measuring economic and social phenomenon, when attempts are made to calculate income index directly, whereas income had always been discounted in the calculation of human development indices of countries. The treatment of income in the construction of income index for use in the human development index, has become more complex (UNDP HDR, 1999, 159), because income enters into the calculation of human development index as a surrogate (substituting) for all the dimensions of human development. High income is discounted in the calculation of human development index because they do not reflect in living long healthy life and in possessing adequate knowledge. However, income has always remained a proxy for decent standards of livelihood in all world countries.

It does not require unlimited income, in order to achieve a respectable level of human development. From the above stances, the calculation of human development index in recent years (UNDP HDR, 1999, 159) adopts a soft approach in the treatment of income by discounting income above the threshold-level of the world's average income, and by using the following formula:

$$\begin{aligned} W(y) &= y^* \text{ for } 0 < y < y^* \\ &= y^* + 2[(y - y^*)\ ½] \text{ for } y^* < y < 2y^* \\ &= y^* + 2(y^*½) + 3[(y - 2y^*)\ 1/3] \text{ for } 2y^* < y < 3y^* \end{aligned}$$

In the above example "y" stands for the actual per capita income in PPP$, and "y*" is the threshold per capita income (PPP$) representing the world average income in the years for which the human development index is computed. World's average income (UNDP HDR, 1999, 159) was taken as the threshold income on the premise that each adult human being should have the income that the world enjoys as average. For the discounted value of the maximum income of $40,000 (PPP$) to be calculated, the above formula was necessary and therefore recommended to be used in the following sequence:

$$W(y) = y^* + 2(y^*½) + 3(y^*1/3) + 4(y^*1/4) + 5(y^*1/5) + 6(y^*1/6) + 7[(40{,}000 - 6y^*)\ 1/7]$$

It then follows that with the above formula, the discounted value of the maximum income of $40,000 (PPP$) will be $6,311 (PPP$). This situation occurs because in actual fact, $40,000 (PPP$) is between 6y* and 7y*.

As we shall soon find out, it has been observed that the main problem with this formula is that it discounts the income above the threshold-level very heavily, thereby penalising the countries in which income exceeds the threshold level. The penalty for countries whose income are above the threshold level (UNDP HDR, 1999, 159), is that it discounts and reduces the extra $34,000 (PPP$) between the threshold and maximum level of income to a mere $321 (PPP$). In these instances that are used as examples, income loses its relevance as a proxy for all dimensions of human development, leaving behind only but long healthy life and knowledge as gain, for the limited number of human beings whose income exceed the threshold.

The 1999 Human Development Report attempts to find solutions that may not discount income as heavily as has been the case in the past. In this direction, the report envisages several advantages in the treatment of income with the new formula:

$$W(y) = \frac{\log y - \log y \min}{\log y \max - \log \min}$$

In this later example, while the formula discounts income above a certain level (UNDP HDR, 1999, 159), it also discounts all income but not as severely as the earlier formula does, although the asymptote-effect starts quite late. Under these circumstances, all the middle income countries are not unduly penalised. It is further expected that as income rises in some countries, those countries will continue to receive recognition for their increasing income. These increases in income may eventually constitute the potential and means for the countries' further human development and well-being.

2.6.1. Indicators for the calculation of human development index

In cross-national comparisons (Jones, 1985, 4-5), it has become increasingly difficult to discuss typical development phenomena in one country under investigation, without reference to identical phenomena that constitute similar problems in relation to what some other countries are doing, which together form the core of the global problems. From same perspectives, the measuring of levels of human development in some countries can pose a lot of methodological problems of laxity, if the same phenomena are not measured and discussed at the levels of human development within other countries in the study. One way by which this problem in the measurement of the levels of human development can be meaningfully handled, is by comparing relevant indicator values (as stated in chapter 2.6) within the countries under investigation for some reasonable period of time. The levels of human development can be compared across many nations (UNDP HDR, 1999, 159) for a long period of time with the use of the human development index, and can be constantly reviewed on yearly basis.

This study replicates and adopts identical methodologies that were illustrated here, as

pattern for the construction of the human development index that will be used for the measurement of convergence (similarities) and divergence (differences) between nations. In this direction, the study will proceed with the processes in the construction of the human development index, along with the presentation of data for comparisons of economic and social development phenomena on sample of thirty countries for the period of eighteen years, beginning from the year 1980 up-till 1998. In recapitulation, the countries that were selected as global sample are made up of high income, middle income, and the poor developing countries in order to facilitate the representation of all groups and perspectives, but only three countries (namely: Finland, Brazil and Nigeria) were used for illustrative and methodological updates. These three countries that were selected from the global sample, would represent the different categories of countries, and would be used mainly in demonstrating the physical calculation of the various indices. The 'spotlight on all countries' within the appendix 1, has been included in the study, in order to broaden insight on cultural, political, geographic, and other vital information at a glance for the benefit of those countries that were not selected for analytical representation.

For illustrative purposes, Finland had been chosen to represent the developed high income industrialised countries, Brazil would represent the middle income or semi-industrial countries, and Nigeria, would represent the low income or the developing countries within our global sample. Below are the presentations of various examples that were used to illustrate the methodology, as well as other components of the indicators that form relevant inputs for the construction of human development index. The presentation of these indices on all countries within the sample (see also appendixes 2-4), is necessary for understanding how the indices led to the calculation of human development index between 1980 and 1998. The year 1995 was specifically chosen for use in the calculation of the human development index, analytical illustrations, orderly references, and discussions that relate to the group samples (namely, Finland, Brazil and Nigeria). These are the indicators for the calculation of human development index of nations.

Figure 2. Main indices for the calculus of human development index 1995

Country	Life Expectancy index	Educational attainment index	Adjusted real GDP (PPP$) index	Sum of the three indices	HDI
Finland	0.857	1.000	0.874	2.731	0.910
Brazil	0.692	0.636	0.699	2.027	0.676
Nigeria	0.454	0.486	0.354	1.294	0.431

Figure 2 above illustrates the examples on the procedure that is applied for the construction of the human development index with the three countries namely, Finland, Brazil, and Nigeria for the year 1995. These indices were derived from actual life expectancy, educational attainment, and adjusted real GDP figures of countries, before the figures were converted to indices. 3, then divided the sum of the above three indices, in order to achieve the human development index for each country in 1995.

Detailed results of the calculations for all the countries in the sample are presented in appendixes 2–4 of this paper.

In line with the expediency that is required at this stage of the study, the hard data are meticulously presented below (see also appendix 5), in order to follow up economic and social development between 1980 and 1998 for all the thirty countries that were selected. The three countries used as examples include the countries exemplified in Figure 2. This procedure is necessary in order to clarify how the indices for life expectancy (Table 1), educational attainment (Table 2), adjusted real GDP (Table 3), and the Sum of life expectancy, educational attainment, and adjusted real GDP indices (Table 4), were made-up to achieve the human development index (Table 5), which is referred to as 'the scale for measuring convergence and divergence or the levels of human well-being' in various world nations. The study will continue with a presentation of the Tables of the samples for the construction of the human development index.

Table 1. Life expectancy index 1980 – 1998 (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
Brazil	,628	,651	,674	,678	,682	,685	,689	,692	,696	,699	,701
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Finland	,803	,819	,834	,837	,840	,849	,857	,857	,862	,864	,868
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
India	,490	,535	,580	,591	,602	,609	,616	,622	,629	,636	,636
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 2. Educational attainment index 1980 – 1998 (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	,978
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Sweden	,926	,931	, 933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 3. Adjusted real GDP (PPP$) index 1980 – 1998 (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 4. Sum of life expectancy, educational attainment, and adjusted real GDP indices 1980 - 1998 (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
Chad	,645	,791	,904	,934	,963	,944	,976	,994	1,015	1,034	1,050
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Mauritania	,974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 5. Human development index 1980–1998 (Serial ranking based on 1995 calculus)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	.846	.872	.907	.912	.915	.929	.934	.939	.946	.947	.945
Norway	.846	.875	.910	.915	.920	.924	.929	.934	.938	.939	.940
Canada	.872	.895	.917	.919	.923	.926	.930	.933	.935	.937	.937
United States	.873	.892	.914	.915	.920	.921	.924	.927	.931	.934	.936
Sweden	.846	.867	.890	.896	.917	.917	.922	.927	.929	.930	.931
Australia	.804	.841	.874	.882	.890	.918	.922	.925	.928	.929	.932
France	.819	.851	.899	.909	.914	.915	.920	.923	.925	.927	.927
Netherlands	.845	.884	.907	.910	.915	.916	.919	.922	.924	.925	.926
U.K.	.805	.828	.866	.876	.903	.905	.910	.913	.916	.919	.919
Finland	.840	.867	.898	.896	.897	.900	.906	.910	.914	.917	.920
Greece	.770	.808	.859	.866	.872	.876	.876	.886	.891	.893	.894
Hungary	.749	.768	.793	.790	.795	.810	.819	.830	.837	.841	.842
Argentina	.738	.757	.802	.808	.814	.816	.818	.827	.839	.851	.861
Mexico	.647	.677	.711	.714	.721	.727	.735	.739	.748	.759	.769
South Africa	.619	.649	.685	.693	.700	.712	.724	.735	.745	.754	.748
Colombia	.619	.654	.698	.692	.682	.701	.721	.726	.735	.741	.743
Philippines	.631	.650	.697	.701	.708	.714	.721	.725	.736	.740	.739
Turkey	.537	.583	.646	.655	.670	.684	.687	.696	.706	.717	.722
Brazil	.592	.615	.640	.646	.653	.656	.663	.676	.687	.689	.689
Algeria	.474	.556	.615	.620	.628	.632	.636	.645	.654	.660	.668
Egypt	.440	.502	.565	.569	.579	.585	.594	.602	.609	.615	.619
Zimbabwe	.482	.542	.580	.586	.579	.575	.577	.577	.580	.580	.575
India	.392	.442	.496	.502	.515	.522	.530	.540	.548	.554	.558
Ghana	.421	.447	.489	.497	.507	.517	.524	.533	.542	.550	.554
Cameroon	.392	.453	.485	.489	.493	.493	.493	.498	.503	.506	.507
Kenya	.412	.443	.486	.491	.493	.490	.486	.486	.484	.481	.476
Madagascar	.376	.396	.432	.431	.437	.441	.443	.448	.451	.454	.456
Nigeria	.302	.343	.382	.391	.402	.414	.422	.431	.439	.449	.451
Mauritania	.325	.361	.382	.387	.394	.401	.408	.414	.420	.425	.428
Chad	.215	.264	.301	.311	.321	.315	.325	.331	.338	.345	.350

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

2.6.2. Improvement on the construction of human development index

The Human Development Report published in 1999 has human development index-values, which are not strictly comparable with those in earlier publications of same report issued during the previous years, probably because of the changes (according to the report) that were made in the treatment of income. On the whole, the formulation of the 1999 human development index represents an improvement on means of comparing values across nations and within reasonable period of time. This research accepts that the human development index is responsive to comparing values across nations, and that it is also responsive to the measurement of convergence and divergence at the global levels because of its transparency and suitability to indicate levels of many countries, which is the pre-requisite necessary for comparative analysis.

Usually differences in criteria and methods of measurement create difficulties in comparability of data across national boundaries (UNDP HDR, 1999, 160). These

problems had led to the significant revisions that were made by the World Bank on data series for economic and social indicators, particularly those related to income (PPP $) data. Due to the recent changes on income-related data and indicators, the 1999 Human Development Report predicts that both the human development index-values and the rankings for many countries are expected to differ considerably from those in previous year's report. Most of the changes in the rankings of human development index for the year 1999 can be attributed to the changes in the treatment of income.

In continuation with the search for improved means of measuring economic and social development phenomena (UNDP HDR, 1999, 159-160), some indicators emerged as relevant for the purpose. These are indicators that are based on longevity (measured by life expectancy at birth), educational attainment (measured by the combination of adult literacy with two-third weight, and combined primary, secondary, and tertiary school enrolment ratios with one-third weight to make up its total weight), and the standard of living (measured by real GDP per capita - PPP$) for the country. The HDI are usually calculated in a process that combines all indices into one index. This study replicates same measurement pattern. The examples of the formula for its calculation are presented in Figure 3 below.

Figure 3. Formula for the construction of human development index

$$HDI = \frac{LEI + EAI + GDPI}{3}$$

Key: HDI = Human Development Index. LEI = Life Expectancy Index.
EAI = Educational Attainment Index. GDPI = Gross Domestic Product Index.

The formula (Figure 3) shows how the indicators are used in setting up the first stages on the values required for the processes of constructing the human development index with the three sample countries, which are selected for the illustration of examples for the year 1995. Detailed illustrations will be undertaken as the study progresses. What follows below is the methodology and stages in the calculation and compilation of all the other indices in appendixes 2-4 that make up the processes of calculating the human development index.

2.6.2.1. Setting the premise for the measurement of human development index

The human development index (HDI) is calculated by obtaining the average of three indices, whereby life expectancy index (LEI), educational attainment index (EAI), and adjusted real GDP per capita (PPP$) index (GDPI) are all added dividing the sum of the three indices by 3, in order to arrive at the human development index. Although the procedure for the calculation of human development index is described in such a simplified formula, the processes of arriving at the indices that altogether make up the human development index when the sum of the indices are divided by three, is indeed

a lengthy and complex process illustrated in appendixes 2-4. The detailed treatment of the calculation processes is explained here between chapters 2.6.2.1 and 2.6.2.6.

The variables of life expectancy were presented in absolute number of years of longevity. The other variables were also presented without further adjustments made on them. The Tables (appendixes 2-4) have been put up for onward usage in the processes of the calculations that would lead to life expectancy index, educational attainment index, and adjusted real GDP per capita (PPP$) index. Indices of adult literacy rate and those of combined gross school enrolment ratio are usually brought together in a certain way (see chapter 2.6.2.4) to form one index known as educational attainment index. The sums of the three indices (life expectancy index, educational attainment index, and adjusted real GDP per capita PPP$ index), are then added together. The sums of these three indices as indicated earlier, are finally divided by 3 (see Figure 2) to achieve the final index, which is the human development index (Table 17 and Table app. 4.12).

It is the conversion process of moving from mere absolute numbers, to indices (for example, the conversion from life expectancy in absolute number of years, to life expectancy index), that forms the first stage in setting up the human development index. The first steps then, in the conversion process begins with the compilation of the indices (as presented in Figure 2) above. These processes are followed by the indices being combined in certain ways (see Chapter 2.6: a, b, and c), before the figures were used in the compilation of the human development index in accordance with the formula (Figure 3).

In Table 6, the study presents the first levels of figures in absolute number of years on life expectancy at birth for all countries within the sample, in a descending order that is based on 1995 merits on human development index. This clarification is necessary in order to illustrate how the figures were converted from absolute number of years of life expectancy, to life expectancy index. The conversion processes for life expectancy, as well as for all the other indicators (see also appendixes 2-4) that are relevant for compiling the human development index at this particular level, are illustrated below.

Table 6. Actual life expectancy at birth (years) 1980 – 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	76,0	77,7	78,8	79,0	79,1	79,3	79,7	79,5	80,2	80,4	80,5
Norway	75,7	76,1	76,5	77,0	77,2	77,5	77,7	77,9	78,2	78,1	78,3
Canada	74,7	76,3	77,2	77,6	77,8	78,0	78,3	78,5	78,7	78,9	79,0
United States	73,7	74,6	75,2	75,4	75,6	75,4	75,6	75,6	76,0	76,1	76,5
Sweden	75,9	76,7	77,5	77,7	77,9	78,1	78,4	78,8	78,9	79,1	79,2
Australia	74,4	75,7	77,0	77,3	77,6	77,7	77,8	77,9	78,1	78,2	78,6
France	74,3	75,5	76,8	76,9	77,2	77,2	77,7	77,8	78,0	78,4	78,3
Netherlands	75,7	76,3	76,9	77,1	77,3	77,4	77,4	77,4	77,4	77,5	77,6
United Kingdom	73,8	74,7	75,6	75,9	76,2	76,2	76,5	76,6	76,8	77,1	77,2
Finland	73,2	74,1	75,1	75,2	75,4	75,9	76,4	76,4	76,7	76,9	77,1
Greece	74,4	75,0	76,9	77,1	77,4	77,3	77,4	77,5	77,7	77,7	77,8

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Hungary	69,5	69,5	69,3	69,3	69,0	69,0	69,4	69,8	70,3	70,6	70,5
Argentina	69,6	68,7	71,6	71,8	72,1	72,3	72,5	72,7	72,9	73,1	73,3
Mexico	66,8	68,5	70,4	70,6	70,8	71,0	71,3	71,5	71,7	72,0	72,1
South Africa	57,1	59,5	61,9	62,4	62,9	63,4	63,8	64,3	64,8	65,2	63,4
Colombia	65,9	67,4	68,9	67,1	69,3	69,5	69,7	69,8	70,0	70,2	70,3
Philippines	61,1	63,2	65,4	65,8	66,3	66,7	67,1	67,5	67,9	68,3	68,6
Turkey	61,4	63,8	66,1	66,7	67,3	67,6	68,0	68,3	68,7	69,0	69,3
Brazil	62,7	64,1	65,4	65,7	65,9	66,1	66,3	66,5	66,7	67,0	67,1
Algeria	59,3	63,3	67,4	67,9	68,5	68,8	69,2	69,6	70,0	70,3	70,6
Egypt	55,5	59,2	62,8	63,4	64,0	64,4	64,9	65,3	65,8	66,3	66,5
Zimbabwe	54,9	55,5	56,2	55,9	55,7	55,0	54,3	53,7	53,0	52,4	50,9
India	54,4	57,1	59,8	60,5	61,1	61,5	61,9	62,3	62,7	63,1	63,1
Ghana	53,2	55,2	57,2	57,6	58,0	58,4	58,8	59,2	59,6	60,0	60,0
Cameroon	50,0	52,1	54,2	54,5	54,8	54,7	54,6	54,6	54,5	54,5	54,0
Kenya	54,8	56,0	57,1	57,0	56,8	55,9	54,9	53,9	53,0	52,0	51,0
Madagascar	50,7	52,7	54,7	55,1	55,5	55,9	56,3	56,7	57,1	57,5	57,8
Nigeria	45,9	47,7	49,5	49,9	50,3	50,9	51,6	52,2	52,9	53,5	53,4
Mauritania	46,7	48,7	50,7	51,1	51,5	51,9	52,3	52,7	53,1	53,5	53,7
Chad	42,2	44,2	46,2	46,4	46,7	47,0	47,4	47,8	48,2	48,6	48,5

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Life expectancy is the length of time a person is expected to live through his or her lifetime. It is also the means by which the social sciences measure longevity, in order to determine how long people live in a country or in a given population. Having presented the figures on life expectancy, the study is placed in a better position to proceed with the calculation of life expectancy index, as well as other related indices. The figures of the three countries, namely Finland, Brazil, and Nigeria are continuously used as examples and for purposes of illustrating the processes of calculating indices for the year 1995. These processes will be repeated on all the other indicators for which their indices will be required for the construction of the human development index.

Figure 4 A. Calculus for life expectancy index from actual 1995 life expectancy at birth

$$\text{Finland} = \frac{76.41 - 25}{85 - 25} = \frac{51.41}{60} = 0.857$$

$$\text{Brazil} = \frac{66.53 - 25}{85 - 25} = \frac{41.53}{60} = 0.692$$

$$\text{Nigeria} = \frac{52.21 - 25}{85 - 25} = \frac{27.21}{60} = 0.453$$

Figure 4 A, illustrates the process for the calculation of the life expectancy index. It shows the processes by which the figures on years of life expectancy were converted into life expectancy indices. The figures for Finland, Brazil, and Nigeria were

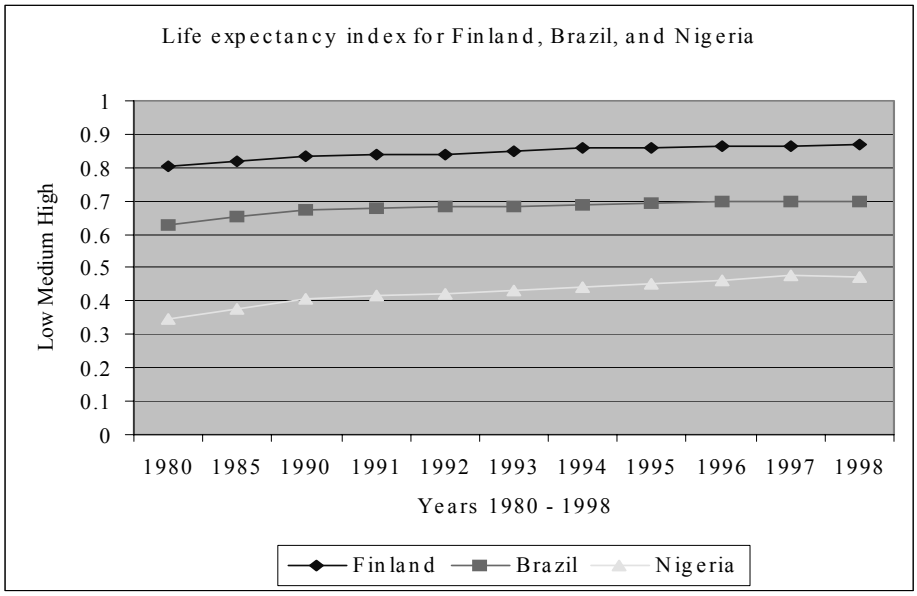
compiled from actual life expectancy at birth (Table 6) for the chosen year 1995. These three countries and the year 1995 have been chosen, and are being used as illustrative examples in comparative analyses and discussions that may be engaged upon within the study. In Table 7 (see also appendixes 2-4), this example had been adopted and applied to all other countries within the global sample, between the years 1980 and 1998, while holding the year 1995 constant (where necessary) for references on the process, as well as for various analysis and discussions that the study may require.

Table 7. Life expectancy index 1980 – 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
Finland	,803	,819	,834	,837	,840	,848	,857	,857	,862	,864	,868
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
Brazil	,628	,651	,674	,678	,682	,685	,689,	692	,696	,699	,701
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432
India	,490	,535	,580	,591	,602	,609,	616	,622	,629	,636	,636
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Figure 4 B. Low, medium, and high indices of life expectancy at birth 1980 - 1998



The life expectancy index of a country is derived from the actual number of years that persons are expected to live in their lifetime within a given nation. Figure 4 B, illustrates the trends and levels of development in relation to the life expectancy index in Finland representing the industrial countries with high indices, Brazil - representing the semi-industrial countries with medium indices, and Nigeria - representing the poor countries with low indices of life expectancy and hence human development between 1980 and 1998. The location of a country on the indicator shows the level of the country's economic progress, as well as her social achievements and human well-being portrayed in the number of yearly increases the countries' population gained in living longer lives.

2.6.2.2. The calculus for adult literacy index

While literacy is the ability to read with understanding, and to write simple meaningful statements, literacy statistics in various world countries usually cover members of the population aged 15 and above. In some countries, reasons such as the date of entry into the school systems before the age of five, indirectly inflate literacy rates. In several others, country by country differences on policies under which promotions to new grade (or class) were implemented (sometimes-automatic promotion or grade repetition by some students take place), all pose difficulties and affect comparability of literacy figures across nations. Differences between nations therefore, become inevitable when the entire enrolment policies of various nations are considered in addition to differences in the total length of school years between countries.

In chapter 2.6 (b) it was stated that educational attainment index is measured with

indices of adult literacy rate, which carries with it a fraction of its two-third weight, and the combined gross weight of primary, secondary and tertiary school enrolment ratio, which also carries the remaining fraction of one-third weight. These fractions of educational attainment index and those of combined gross weight of primary, secondary and tertiary school enrolment ratio make up the grand total weight of educational attainment indexes, when both indices are added together. Based on the fore-going considerations, the research premise has been placed in a better position to illustrate the calculus for adult literacy index in what follows. We shall therefore begin with the presentation of data on adult literacy rate (Table 8) for all countries within the global sample, for onward conversion into adult literacy index.

Table 8. Actual adult literacy rate (%) 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Norway	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Canada	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United States	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Sweden	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Australia	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
France	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Netherlands	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United Kingdom	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Finland	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Greece	91,2	93,3	95,0	95,3	95,6	95,8	96,1	96,3	96,5	96,7	96,9
Hungary	98,6	98,8	99,1	99,1	99,1	99,2	99,2	99,2	99,2	99,3	99,3
Argentina	94,4	95,1	95,7	95,9	96,0	96,1	96,2	96,3	96,5	96,6	96,7
Mexico	82,2	85,2	87,8	88,2	88,7	89,1	89,4	89,8	90,1	90,4	90,8
South Africa	76,2	78,9	81,3	81,7	82,1	82,6	83,0	83,3	83,8	84,2	84,6
Colombia	84,2	86,7	88,6	89,0	89,3	89,7	90,0	90,3	90,6	90,9	91,2
Philippines	89,0	91,0	92,5	92,8	93,1	93,4	93,8	94,0	94,3	94,6	94,8
Turkey	68,7	74,1	78,0	78,9	79,7	80,5	81,3	82,0	82,7	83,4	84,0
Brazil	75,5	78,4	80,9	81,4	81,9	82,4	82,8	83,2	83,7	84,1	84,5
Algeria	38,7	46,7	54,3	55,9	57,4	58,8	60,2	61,5	62,9	64,2	65,5
Egypt	39,2	43,2	47,1	47,9	48,7	49,5	50,3	51,2	52,0	52,9	53,7
Zimbabwe	70,0	75,7	80,7	81,7	82,5	83,3	84,0	84,8	85,6	86,4	87,2
India	41,0	45,2	49,3	50,2	50,9	51,7	52,5	53,3	54,1	54,9	55,7
Ghana	43,7	51,1	58,4	59,8	61,2	62,5	63,8	65,1	66,5	67,8	69,1
Cameroon	46,8	54,9	62,6	64,1	65,6	67,0	68,4	69,7	71,1	72,4	73,6
Kenya	56,3	63,9	70,8	72,2	73,6	74,8	76,0	77,1	78,3	79,4	80,5
Madagascar	47,7	52,9	58,0	58,9	59,8	60,7	61,5	62,4	63,2	64,0	64,9
Nigeria	32,9	40,8	48,6	50,2	51,8	53,4	54,9	56,4	58,0	59,6	61,1
Mauritania	30,7	33,6	36,4	37,0	37,7	38,1	38,8	39,4	39,9	40,5	41,2
Chad	16,7	21,8	27,7	29,0	30,3	31,7	33,1	34,6	36,1	37,7	39,4

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 8 above shows the data on adult literacy rate, for onward conversion into adult literacy index. The study shall proceeds with setting up the examples for 1995, which demonstrates the calculus for adult literacy index on all countries in Table 8 between 1980 and 1998. The three countries, Finland (representing the developed industrial nations), Brazil (representing the semi-industrial nations), and Nigeria (representing the developing but poor nations) around the globe, shall be used in the demonstrations. All relative terms will remain in use for descriptive and illustrative purposes, as the word may imply.

Figure 5 A. Calculus for adult literacy index - 1995

$$\text{Finland} = \frac{100 - 0}{100 - 0} = 1.000$$

$$\text{Brazil} = \frac{83.2 - 0}{100 - 0} = 0.832$$

$$\text{Nigeria} = \frac{56.4 - 0}{100 - 0} = 0.564$$

The demonstrations presented in Figure 5, show the processes for the calculation of the adult literacy index. More important, the examples illustrate how adult literacy rates are converted to adult literacy index. The same conversion processes were adopted in treating all the other countries in the sample. Table 9 therefore, presents the results of this conversion exercise, which had been applied on all the countries (see also appendixes 2-4). This research will continue to use the indices of the converted adult literacy in the study.

Table 9. Adult literacy index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Norway	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,912	,933	,950	,953	,956	,958	,961	,963	,965	,967	,969
Hungary	,986	,988	,991	,991	,991	,992	,992	,992	,992	,993	,993
Argentina	,944	,951	,957	,959	,960	,961	,962	,963	,965	,966	,967
Mexico	,822	,852	,878	,882	,887	,891	,894	,898	,901	,904	,908
South Africa	,762	,789	,813	,817	,821	,826	,830	,833	,838	,842	,846
Colombia	,842	,867	,886	,890	,893	,897	,900	,903	,906	,909	,912
Philippines	,890	,910	,925	,928	,931	,934	,938	,940	,943	,946	,948
Turkey	,687	,741	,780	,789	,797	,805	,813	,820	,827	,834	,840
Brazil	,755	,784	,809	,814	,819	,824	,828	,832	,837	,841	,845
Algeria	,387	,467	,543	,559	,574	,588	,602	,615	,629	,642	,655
Egypt	,392	,432	,471	,479	,487	,495	,503	,512	,520	,529	,537
Zimbabwe	,700	,757	,807	,817	,825	,833	,840	,848	,856	,864	,872
India	,410	,452	,493	,502	,509	,517	,525	,533	,541	,549	,557
Ghana	,437	,511	,584	,598	,612	,625	,638	,651	,665	,678	,691
Cameroon	,468	,549	,626	,641	,656	,670	,684	,697	,711	,724	,736
Kenya	,563	,639	,708	,722	,736	,748	,760	,771	,783	,794	,805
Madagascar	,477	,529	,580	,589	,598	,607	,615	,624	,632	,640	,649
Nigeria	,329	,408	,486	,502	,518	,534	,549	,564	,580	,596	,611
Mauritania	,307	,336	,364	,370	,377	,381	,388	,394	,399	,405	,412
Chad	,167	,218	,277	,290	,303	,317	,331	,346	,361	,377	,394

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

While the illiteracy rate is usually defined as the percentages of the population who cannot read or write short simple statements with understanding, literacy is the opposite. In practice illiteracy is very difficult to measure because of several reasons, some of which are based on differences in country specific educational policies or curriculum, and some others relate to problems of differences in culture, age of pupils considered appropriate for school enrolment in individual countries, and so on. All these create difficulties and distort meaningful comparisons that could be made across nations.

Figure 5 B. Low, medium, and high indices of adult literacy 1980 - 1998

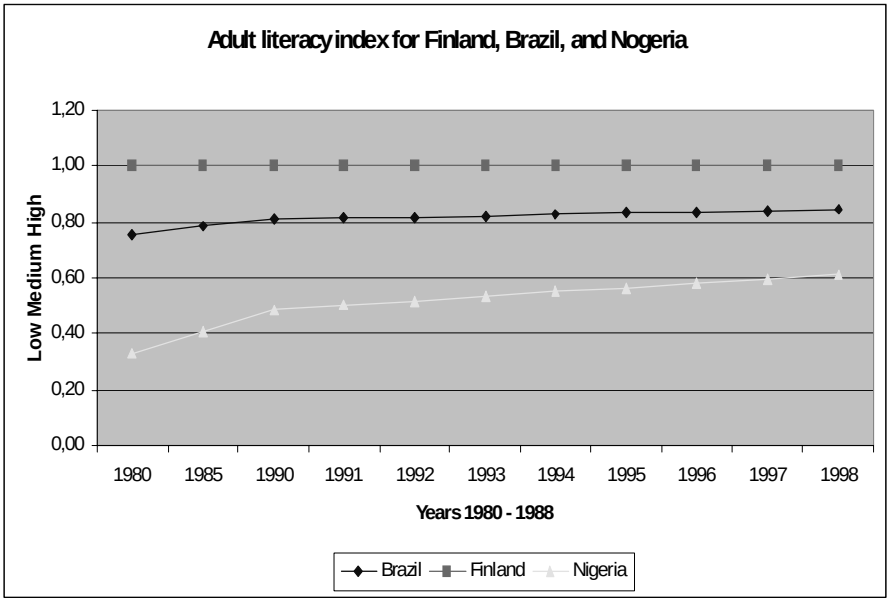


Figure 5 B, illustrates the level of the countries and their trends on the indicator for adult literacy between 1980 and 1998. The level at which a country is located on the indicator during particular period of years, shows the level of progress made on adult literacy of the country for those particular years.

2.6.2.3. The calculus for combined gross enrolment index for schools

The methodology for the calculation of combined gross school enrolment index and all other related indices (UNDP HDR, 1999, 159-160), have both minimum and maximum values fixed for their conversion processes. In accordance with this methodology for the measurement of human development [see chapter 2.6 (b)], the study requires to ascertain the combined gross primary, secondary, and tertiary school enrolment index which carries some fraction of one-third weight that is added to the two-third weight of adult literacy index, to make up the grand-total weight known as ‘educational attainment index’.

Combined gross primary, secondary and tertiary school enrolment ratio, represent the total number of enrolments in primary, secondary, and tertiary school establishments regardless of age, to the age groups which officially corresponds to levels of education that is based on the estimates of International Standard Classification of Education (ISCED). The process for the construction of combined gross school enrolment index is illustrated with the formula outlined in Figure 6 A.

In order to present the converted figures from combined gross weight of primary, secondary, and tertiary school enrolment index for the countries within the study; to combined enrolment index, the three countries (Finland, Brazil, and Nigeria) are again used as illustrative examples.

Figure 6 A. Calculus for combined gross school enrolment index - 1995

$$\text{Finland} = \frac{100 - 0}{100 - 0} = 1.000$$

$$\text{Brazil} = \frac{24.5 - 0}{100 - 0} = 0.245$$

$$\text{Nigeria} = \frac{33.0 - 0}{100 - 0} = 0.330$$

Table 10 presents the results of the conversion exercise on combined gross primary, secondary and tertiary school enrolment ratio for all countries within the global sample, which have been converted to combine gross primary, secondary and tertiary school enrolment index.

Table 10. Combined gross primary, secondary and tertiary school enrolment index 1980 – 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,808	,801	,845	,843	,841	,952	,965	1,000	1,000	1,000	1,000
Norway	,772	,860	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,777	,793	,798	,835	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,483	,620	,711	,756	,785	1,000	1,000	1,000	1,000	1,000	1,000
France	,623	,736	,920	,992	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,793	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,587	,609	,712	,788	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,914	,966	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,543	,704	,879	,898	,910	,949	,922	,982	1,000	1,000	1,000
Hungary	,566	,599	,682	,709	,762	,879	,920	,973	1,000	1,000	1,000
Argentina	,443	,632	,810	,792	,767	,742	,717	,788	,860	,931	1,000

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	,217	,260	,303	,293	,300	,324	,357	,402	,445	,507	,576
South Africa	,400	,450	,505	,545	,571	,640	,704	,755	,799	,851	,902
Colombia	,090	,193	,295	,306	,368	,382	409	425	,494	,513	,549
Philippines	,541	,567	,687	,697	,715	,733	,753	,737	,788	,788	,788
Turkey	,062	,109	,279	,299	,349	,394	,415	,422	,454	,492	,522
Brazil	,100	,112	,124	,150	,164	,160	,180	,245	,311	,311	,311
Algeria	,056	,300	,419	,408	,405	,406	,402	,419	,438	,459	,488
Egypt	,457	,556	,676	,660	,671	,670	,689	,698	,699	,704	,710
Zimbabwe	,113	,401	,458	,481	,456	,432	,434	,453	,462	,470	,490
India	,304	,375	,420	,423	,449	,452	,449	,457	,465	,474	,481
Ghana	,341	,329	,307	,307	,324	,341	,358	,375	,392	,409	,420
Cameroon	,197	,236	,282	,288	,285	,281	,275	,280	,285	,290	,300
Kenya	,208	,214	,235	,259	,254	,242	,234	,230	,230	,230	,230
Madagascar	,212	,212	,212	,197	,201	,190	,178	,179	,170	,163	,157
Nigeria	,214	,332	,262	,269	,292	,311	,323	,330	,350	,370	,380
Mauritania	,109	,160	,149	,156	,171	,178	,182	,190	,198	,205	,214
Chad	,070	,071	,092	,101	,101	,089	,095	,099	,103	,108	,114

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Figure 6 B. Low, medium, and high indices of combined gross school enrolment 1980 – 1998

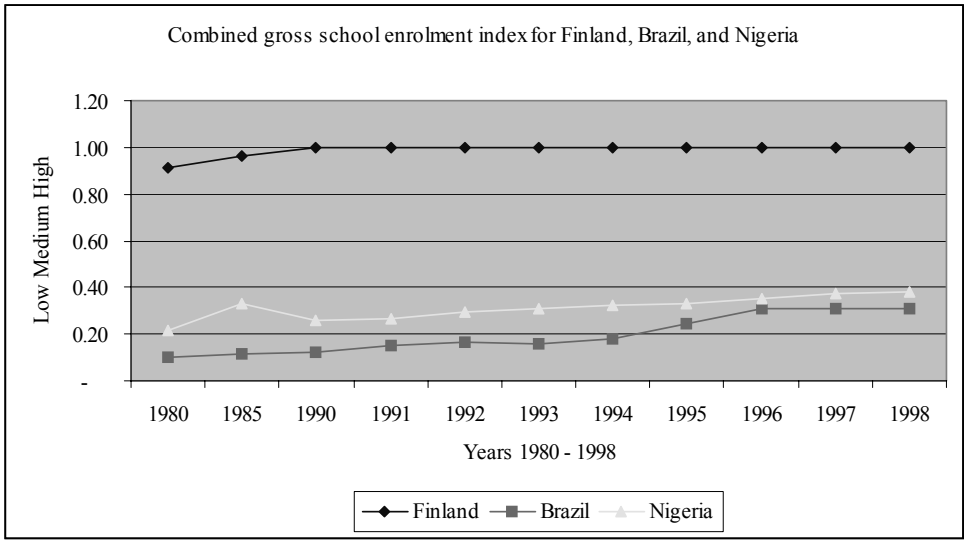


Figure 6 B illustrates the trend and level of each sample country on the indicator, during the particular periods between 1980 and 1998. The level at which a country is located on the indicator, shows the level of the country's combined gross school enrolment for the particular year.

2.6.2.4. The calculus for educational attainment index

Educational attainment index can briefly be described as the total sum of a person's educational achievements at a particular period of time. The processes of calculating educational attainment index, is somehow more complicated than the calculation of all the other indices required for inclusion in formulating the human development index. This is so because of the specific requirement of the process, which demands obtaining two-third weight of adult literacy index, and one-third weight of combined gross primary, secondary, and tertiary school enrolment indices; so as to combine the two sets of indices to achieve its grand total weight, known as the educational attainment index. Complications arise within this lengthy process because of the fact that different indices (e.g. two-third weight of adult literacy index, and the one-third weight of combined gross primary, secondary, and tertiary school enrolment index) must be found separately first, before they are combined to form the educational attainment index.

Table 11, therefore, presents the two-third weight of the combined adult literacy index separately for all countries in the study. This means that the two-third weight of combined adult literacy index is to be combined with the figures of one-third weight of combined gross primary, secondary, and tertiary school enrolment index.

Table 11. Two-third weight of combined adult literacy index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Norway	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Canada	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
United States	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Sweden	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Australia	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
France	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Netherlands	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
United Kingdom	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Finland	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Greece	,608	,622	,633	,635	,637	,639	,641	,642	,643	,645	,646
Hungary	,657	,659	,661	,661	,661	,661	,661	,661	,661	,662	,662
Argentina	,629	,634	,638	,639	,640	,641	,641	,642	,643	,644	,645
Mexico	,548	,568	,585	,588	,591	,594	,596	,599	,601	,603	,605
South Africa	,508	,526	,542	,545	,547	,551	,553	,555	,559	,561	,564
Colombia	,561	,578	,591	,593	,595	,598	,600	,602	,604	,606	,608
Philippines	,593	,607	,617	,619	,621	,623	,625	,627	,629	,631	,632
Turkey	,458	,494	,520	,526	,531	,537	,542	,547	,551	,556	,560
Brazil	,503	,523	,539	,543	,546	,549	,552	,555	,558	,561	,563
Algeria	,258	,311	,362	,373	,383	,392	,401	,410	,419	,428	,437
Egypt	,261	,288	,314	,319	,325	,330	,335	,341	,347	,353	,358
Zimbabwe	,467	,505	,538	,545	,550	,555	,560	,565	,571	,576	,581
India	,273	,301	,329	,335	,339	,345	,350	,355	,361	,366	,371
Ghana	,291	,341	,389	,399	,408	,417	,425	,434	,443	,452	,461
Cameroon	,312	,366	,417	,427	,437	,447	,456	,465	,474	,483	,491
Kenya	,375	,426	,472	,481	,491	,499	,507	,514	,522	,529	,537
Madagascar	,318	,353	,387	,393	,399	,404	,410	,416	,421	,427	,432
Nigeria	,219	,272	,324	,335	,345	,356	,366	,376	,387	,397	,407
Mauritania	,205	,224	,243	,247	,251	,254	,259	,263	,266	,270	,275
Chad	,112	,145	,185	,193	,202	,211	,221	,231	,241	,251	,263

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

In Table 12, data on one-third of the combined gross primary, secondary, and tertiary school enrolment index, are put up for addition to the two-third weight of combined adult literacy index. The two parts of these indices are required for combination in the calculation processes of educational attainment index. The presentation of data on all countries in the global sample for this exercise covers the periods between 1980 and 1998.

Table 12. One-third weight of combined gross primary, secondary and tertiary school enrolment index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,269	,267	,282	,281	,280	,317	,322	,333	,333	,333	,333
Norway	,257	,287	,333	,333	,333	,333	,333	,333	,333	,333	,333
Canada	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
United States	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
Sweden	,259	,264	,266	,278	,333	,333	,333	,333	,333	,333	,333
Australia	,161	,207	,237	,252	,262	,333	,333	,333	,333	,333	,333
France	,208	,245	,307	,331	,333	,333	,333	,333	,333	,333	,333
Netherlands	,264	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
United Kingdom	,196	,203	,237	,263	,333	,333	,333	,333	,333	,333	,333
Finland	,305	,322	,333	,333	,333	,333	,333	,333	,333	,333	,333
Greece	,181	,235	,293	,299	,303	,316	,307	,327	,333	,333	,333
Hungary	,189	,200	,227	,236	,254	,293	,307	,324	,333	,333	,333
Argentina	,148	,211	,270	,264	,256	,247	,239	,263	,287	,310	,333
Mexico	,072	,087	,101	,098	,100	,108	,119	,134	,148	,169	,192
South Africa	,133	,150	,168	,182	,190	,213	,235	,252	,266	,284	,301
Colombia	,030	,064	,098	,102	,123	,127	,136	,142	,165	,171	,183
Philippines	,180	,189	,229	,232	,238	,244	,251	,246	,263	,263	,263
Turkey	,021	,036	,093	,100	,116	,131	,138	,141	,151	,164	,174
Brazil	,033	,037	,041	,050	,055	,053	,060	,082	,104	,104	,104
Algeria	,019	,100	,140	,136	,135	,135	,134	,140	,146	,153	,163
Egypt	,152	,185	,225	,220	,224	,223	,230	,233	,233	,235	,237
Zimbabwe	,038	,134	,153	,160	,152	,144	,145	,151	,154	,157	,163
India	,101	,125	,140	,141	,150	,151	,150	,152	,155	,158	,160
Ghana	,114	,110	,102	,102	,108	,114	,119	,125	,131	,136	,140
Cameroon	,066	,079	,094	,096	,095	,094	,092	,093	,095	,097	,100
Kenya	,069	,071	,078	,086	,085	,081	,078	,077	,077	,077	,077
Madagascar	,071	,071	,071	,066	,067	,063	,059	,060	,057	,054	,052
Nigeria	,071	,111	,087	,090	,097	,104	,108	,110	,117	,123	,127
Mauritania	,036	,053	,050	,052	,057	,059	,061	,063	,066	,068	,071
Chad	,023	,024	,031	,034	,034	,030	,032	,033	,034	,036	,038

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

The processes for the calculation of the educational attainment index are illustrated in Figure 7A. The illustrations are performed with the three countries, namely Finland, Brazil, and Nigeria for the year 1995.

Figure 7 A. Calculus for educational attainment index - 1995

Finland = [2.1 + 1.1]/3 = 1.000

Brazil = [2 (0,832) + 1(0.245)]/3 = 0.636

Nigeria = [2 (0.564) + 1 (0.330)]/3 = 0.486

The two-third weight of adult literacy index, and the one-third weight of combined gross primary, secondary, and tertiary school enrolment index, have been added together and the grand total weight is known as the educational attainment index. Having illustrated the processes for the calculation of educational attainment index the study proceeds with a presentation of the weights on adult literacy and school enrolment indices. What follows below, are the sums of the two indices added together. In other words, Table 11, with two-third weight of combined adult literacy index, and Table 12, with one-third weight of combined gross primary, secondary and tertiary school enrolment index, were added together to achieve the educational attainment index in Table 13. This presentation covers all countries in the global sample.

Table 13. Educational attainment index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	978
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Figure 7 B. Low, medium, and high indices of educational attainment 1980 - 1998

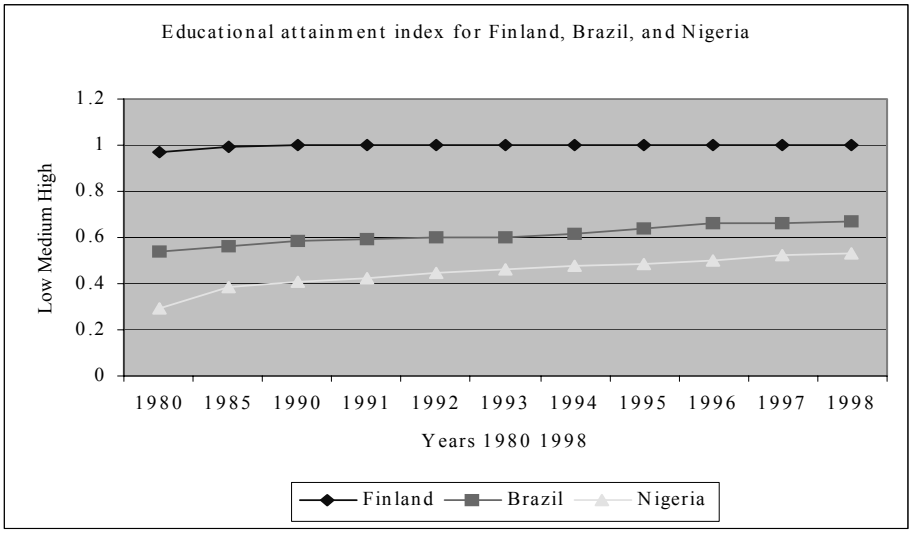


Figure 7 B, illustrates the trends and levels of the countries on the indicator, during particular periods between 1980 and 1998. The level at which a country is located on the indicator in a particular year, shows the level of the country in relation to the progress she made on educational attainment.

2.6.2.5. The calculus for adjusted real GDP per capita index

Thus far with the methodology and yardsticks for the measurements of convergence and divergence, it has become increasingly clear that the processes for the calculation of human development index, is indeed a vital part of the processes of understanding human development itself. The calculus for adjusted real GDP per capita is part of the processes in the measurement of income, as an important aspect for human development. To recapitulate, what has been done so far is that the actual figures for life expectancy at birth have been converted into life expectancy index. The study has also demonstrated the meticulous processes of calculating the educational attainment index, which required firstly, the establishment of the two-third weight of combined adult literacy index. This exercise was followed by the calculation of the one-third weight of combined primary, secondary, and tertiary school enrolment index. Finally, the two indices were combined. What was achieved is the educational attainment index.

Having come thus far on issues of methodology and measurement, the study is now placed in a better position to present the figures for real GDP per capita (PPP$), on all the countries in our global sample between the year 1980 and 1998 and to convert the figures to adjusted real GDP per capita indices. In Table 14, the data on GDP per capita (PPP$) that were compiled on all the sample countries are presented.

Table 14. Real GDP per capita (PPP$) 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	9029	12300	19062	20282	21350	21841	22357	23212	24511	24520	23257
Norway	9938	13648	18389	19410	20829	21749	23284	24694	26114	26573	26342
Canada	11174	14496	19672	19577	20385	21140	22202	23085	23296	23625	23582
United States	12674	16304	22537	22698	24102	24969	26166	27395	28513	29406	29605
Sweden	9810	12702	17537	17708	18129	18028	18877	20031	20424	20546	20659
Australia	9524	12355	16484	16807	17945	19076	20163	21268	21771	22083	22452
France	9551	12005	17278	17804	18708	18776	19614	20492	20889	21056	21175
Netherlands	9506	11796	16848	17579	18601	19035	19918	20812	21550	21961	22176
United Kingdom	8427	11007	16144	16202	16776	17449	18511	19465	20006	20380	20336
Finland	8739	11697	17172	16321	16353	16447	17466	18764	19525	20414	20847
Greece	6577	8145	11049	11615	12128	12132	12577	13147	13544	13790	13943
Hungary	5159	6802	9009	8181	8300	8459	8913	9315	9550	9914	10232
Argentina	6429	6535	7448	8408	9586	10180	10869	10736	11290	11944	12013
Mexico	4241	4990	6225	6544	6953	7117	7451	7061	7357	7637	7704
South Africa	5890	6444	7934	7913	7924	8029	8279	8582	8829	8783	8488
Colombia	3288	3938	5629	5826	3413	4516	6006	6151	6131	6278	6006
Philippines	2239	2215	3083	3079	3154	3217	3349	3519	3668	3727	3555
Turkey	2328	3108	4663	4749	5178	5663	5340	5804	6146	6461	6422
Brazil	3917	4444	5346	5442	5726	5877	6218	6572	6751	6828	6625
Algeria	3111	4082	4546	4507	4669	4564	4503	4697	4802	4753	4792
Egypt, Arab Rep.	1077	1602	2343	2380	2541	2617	2722	2870	2981	3054	3041
Zimbabwe	1437	1774	2385	2508	2317	2346	2499	2512	2686	2713	2669
India	642	893	1382	1399	1513	1592	1721	1877	1996	2036	2077
Ghana	1029	1026	1394	1465	1545	1610	1619	1685	1730	1740	1735
Cameroon	986	1597	1556	1494	1483	1423	1371	1415	1458	1471	1474
Kenya	584	662	930	939	945	948	953	997	1021	1006	980
Madagascar	644	620	784	741	761	772	765	777	774	767	756
Nigeria	494	496	701	742	778	812	817	832	813	813	795
Mauritania	929	1179	1273	1305	1347	1412	1471	1534	1578	1585	1563
Chad	384	613	751	817	896	749	818	817	831	832	856

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Here, the study adopts the stance that the rate of real GDP per capita (PPP$), which a country attained in a particular year, is considered to be the level of that country's economic growth statuses for that year. Table 14 shows the income level in all countries in the global sample, as measured by the rate of GDP per capita for each country. The study then proceeds with the processes of converting the figures to adjusted real GDP per capita (PPP$) indices. In Figure 8 A, the conversion processes are also demonstrated with Finland, Brazil, and Nigeria for the year 1995.

Figure 8 A. Calculus for adjusted real GDP per capita index - 1995

$$\text{Finland} = \frac{\log (18764.23) - \log (100)}{\log (40{,}000) - \log (100)} = 0.874$$

$$\text{Brazil} = \frac{\log (6572.01) - \log (100)}{\log (40{,}000) - \log (100)} = 0.699$$

$$\text{Nigeria} = \frac{\log 832.17 - \log 100}{\log 40{,}000 - \log 100} = 0.354$$

The results of the conversion exercise from real GDP per capita (PPP$) figures, to adjusted real GDP per capita index (see Table 15), were applied to the rest of the countries within the global sample for the years between 1980 - 1998. All actual figures on main indicators, stages in the processing of the data, and their converted versions as indices are included within the appendixes 2-4 below.

Table 15. Adjusted real GDP per capita (PPP$) index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

The adjusted real GDP per capita index is the final index required for the processes of calculating the human development index. The following stage that is required within the calculation processes to achieve the human development index will be continued under its appropriate heading below.

Figure 8 B. Low, medium, and high indices of adjusted real GDP per capita (PPP$) 1980 - 1998

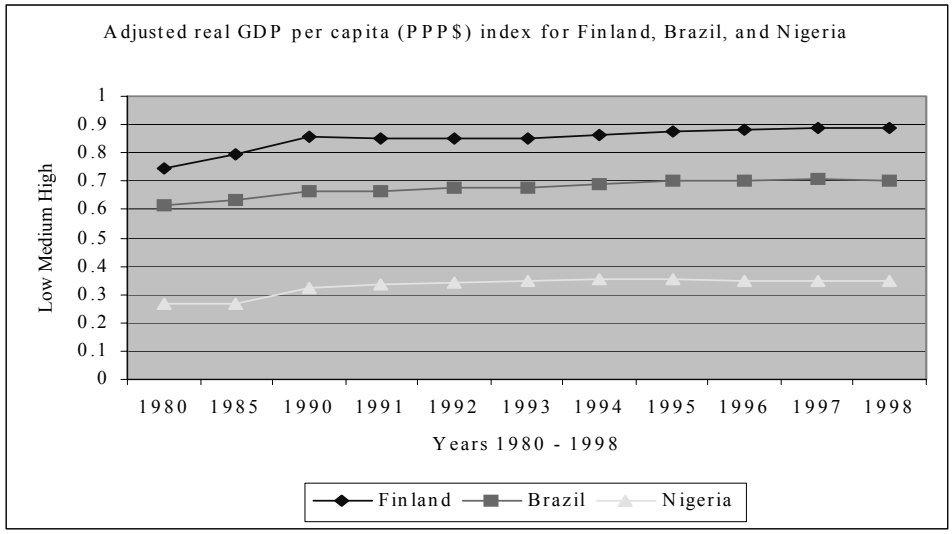


Figure 8 B, illustrates the trend in the growth of adjusted real GDP per capita (PPP$), as well as indicating the level of countries on the indicator during the particular period between the years 1980 and 1998. The location of a country on the indicator shows the level of the economic progress, which the country made.

2.6.2.6. The calculus for human development index

So far, attempts to measure the impacts of global economic growth on human beings, have dealt with crucial methodological issues in the measurement of convergence and divergence. The measurement is done through the use of yardsticks of human development index, which combine measurement of progress on economic and social development of individuals, as well as their nations.

In line with the processes inherent in this methodology, the study has been able to find and to combine the sums of life expectancy, educational attainment, and adjusted real GDP per capita (PPP$) indices in readiness for its final division by 3 (see Table 16), in order to arrive at the human development index.

Table 16. Sum of life expectancy, educational attainment, and adjusted real GDP indices (to be divided by 3)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354
Mauritania	,974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Chad	,645	,791	,904	,934	,963	,944	,976	,994	1,015	1,034	1,050

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

With the figures of life expectancy, educational attainment, and adjusted real GDP indices combined, the study shall proceed with the final stages in the processes of finding the human development index, which will be derived through the division of the sum of the indices by 3. The examples of this process are illustrated with the three countries, namely Finland, Brazil, and Nigeria for the year 1995 (see Figure 9 A below). The final results of the divisions will be the human development indices of the countries.

Figure 9 A. The calculation of human development index - 1995

Country	Life expectancy index	Educational attainment index	Adjusted real GDP (PPP$) index	Sum of the three indices	HDI
Finland	0.857	1.000	0.874	2.731	0.910
Brazil	0.692	0.636	0.699	2.027	0.676
Nigeria	0.454	0.486	0.354	1.294	0.431

Figure 9 A, demonstrates the processes by which the study arrived at the final stages of achieving the sum of life expectancy, educational attainment, and adjusted real GDP indices, and the resultant sum of the division by 3, through which the human development index was derived. These figures that were obtained (see Table 17) are the final results of the division processes. They are the human development indices of all countries in the global sample during the years 1980 and 1998.

Table 17. Human Development Index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	.846	.872	.907	.912	.915	.929	.934	.939	.946	.947	.945
Norway	.846	.875	.910	.915	.920	.924	.929	.934	.938	.939	.940
Canada	.872	.895	.917	.919	.923	.926	.930	.933	.935	.937	.937
United States	.873	.892	.914	.915	.920	.921	.924	.927	.931	.934	.936
Sweden	.846	.867	.890	.896	.917	.917	.922	.927	.929	.930	.931
Australia	.804	.841	.874	.882	.890	.918	.922	.925	.928	.929	.932
France	.819	.851	.899	.909	.914	.915	.920	.923	.925	.927	.927
Netherlands	.845	.884	.907	.910	.915	.916	.919	.922	.924	.925	.926
United Kingdom	.805	.828	.866	.876	.903	.905	.910	.913	.916	.919	.919
Finland	.840	.867	.898	.896	.897	.900	.906	.910	.914	.917	.920
Greece	.770	.808	.859	.866	.872	.876	.876	.886	.891	.893	.894
Hungary	.749	.768	.793	.790	.795	.810	.819	.830	.837	.841	.842
Argentina	.738	.757	.802	.808	.814	.816	.818	.827	.839	.851	.861
Mexico	.647	.677	.711	.714	.721	.727	.735	.739	.748	.759	.769
South Africa	.619	.649	.685	.693	.700	.712	.724	.735	.745	.754	.748
Colombia	.619	.654	.698	.692	.682	.701	.721	.726	.735	.741	.743
Philippines	.631	.650	.697	.701	.708	.714	.721	.725	.736	.740	.739
Turkey	.537	.583	.646	.655	.670	.684	.687	.696	.706	.717	.722
Brazil	.592	.615	.640	.646	.653	.656	.663	.676	.687	.689	.689
Algeria	.474	.556	.615	.620	.628	.632	.636	.645	.654	.660	.668
Egypt	.440	.502	.565	.569	.579	.585	.594	.602	.609	.615	.619
Zimbabwe	.482	.542	.580	.586	.579	.575	.577	.577	.580	.580	.575
India	.392	.442	.496	.502	.515	.522	.530	.540	.548	.554	.558
Ghana	.421	.447	.489	.497	.507	.517	.524	.533	.542	.550	.554
Cameroon	.392	.453	.485	.489	.493	.493	.493	.498	.503	.506	.507
Kenya	.412	.443	.486	.491	.493	.490	.486	.486	.484	.481	.476
Madagascar	.376	.396	.432	.431	.437	.441	.443	.448	.451	.454	.456
Nigeria	.302	.343	.382	.391	.402	.414	.422	.431	.439	.449	.451
Mauritania	.325	.361	.382	.387	.394	.401	.408	.414	.420	.425	.428
Chad	.215	.264	.301	.311	.321	.315	.325	.331	.338	.345	.350

Figures in this Table were compiled from: The World Bank; World Development Indicators (CD - Rom 2000).

Table 17 shows the human development indices, which were derived through the division of the sum of life expectancy index, educational attainment index, and adjusted real GDP per capita (PPP$) index, by three. The processes of arriving at these results were illustrated between Tables 6 and 16; and in Figures 4 and 9 (see also appendixes 2-4). It is important to note that the human development indices can also be used in many other ways (Haq, 1995, 50-54) such as, disaggregating policy inputs in order to arrive at relevant analysis and forecasts on solutions relating to economic and social problems (for example, see economic and social indicators relevant for comparisons and analysis of convergent and divergent phenomena amongst countries in appendix 5). The level of a country on the human development index is the level of that country's achievements on all her economic and social endeavours towards

development.

Figure 9 B. Low, medium, and high human development indices 1980 - 1998

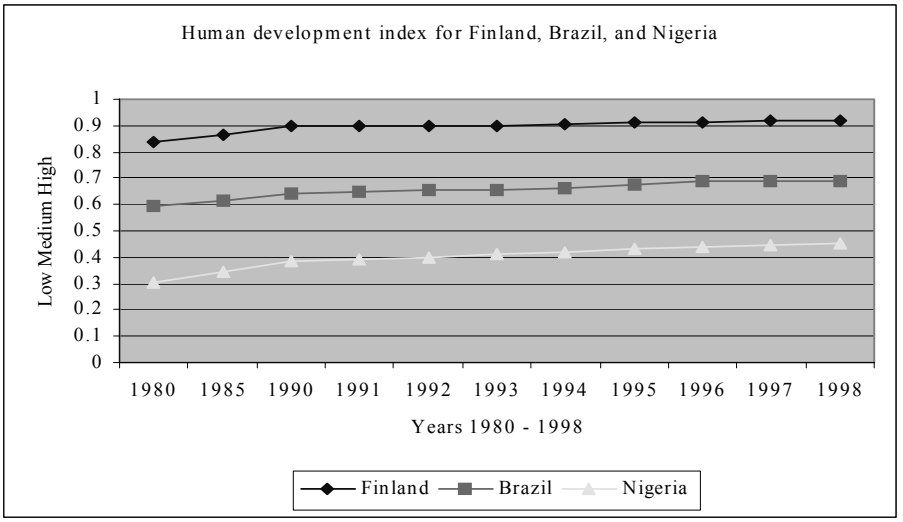


Figure 9 B, illustrates the trend in economic and social development, as well as indicating the levels of countries on the human development index, during particular years between 1980 and 1998. The final location of a country on the human development index shows both the levels of the country's economic progresses, as well as her achievements on human well-being. In other words, a country's location on the human development index tells how far the country has moved on the road to economic growth and human well-being. The measure almost always implies the identification of levels of economic growth of the countries (as represented by the GDP per capita). These are also in relation to how well such growths had been successfully translated by social policy into achieving other social objectives towards improving human well-being, for instance, the provision of better education, improved longevity, and so on; particularly in the context of cross-border comparisons of the nations world-wide.

3. ANALYSES OF CONVERGENT AND DIVERGENT EFFECT OF ECONOMIC GROWTH ON HUMAN WELL-BEING AND DEVELOPMENT

Economic growth is known to be important in increasing national wealth, but issues related to the translation of national wealth into human well-being by governments and private organisations, generate hosts of other unforeseen problems, particularly within the social sectors in most nations. In-depth analysis on some of the important problem areas on policy will be treated under separate headings (see chapters 4 and 5), as they relate to the state, global economic growth, human well-being, the industry, technology development, globalisation, and so on. Countries may have fairly high income through economic growth, but the utilisation of gained resources to achieve higher human needs and well-being for her entire population, may remain inadequate in many world countries for various reasons. The gains from economic growth should contribute to growth that is translated to human well-being and hence development, if the social policy of the nation reflect the problems. The problems of economic and social inequality particularly with respect to income also render illusory the achievements that have already been made through objectives of both economic and social development. Even with small families, the UNDP HDR (1996, 68) indicates that the extent to which households' income affect human development and well-being, does not depend only on huge size of income, but also reflect the wisdom in choices that were made, and how well medium level of family incomes were spent. These standpoints raise questions regarding whether increases in income mean the eradication of poverty?

Capital is seen as the key to economic success, but having the money then makes the difference. The possession or non-possession of money justified contempt for, or the resentment of those that are oppositely situated (Galbraith, 1967, 244-245), and therefore, social conflict is between the rich and the poor. With the ever changing social groups and their political activities in the society, new pressures often culminate around national and regional governments to deal with the social problems, provide social services, and politically co-ordinate economic development in order to avoid disjointed developments within national economy. Sometimes pressures may develop due to the needs within the educational systems, calling for improvement on skills required in industries and/or the service sectors (Martinelli & Smelser, 1990, 48). Sometimes the pressures may be focussed on neighbourhoods and communities, to modernise and accumulate different production and transportation needs of their communities. At other times, the pressures may be directed to improvements in family life as imposed by demands for many family members to participate in the labour force. All these pressures probably have one thing in common; they call on governments to deal more effectively with identifying and developing mechanisms that address those demands from the various groups in the population.

Sorting out the effects of economic growth on human well-being and development

within globalisation processes is a lengthy task indeed. The search for answers that explain how the benefits of economic growth policies could be made to reflect improvements on human well-being, and hence reduce poverty in societies, prompts this study to make use of indicators of human development, to measure and ascertain how much of the problems exist. Absence of adequate income has negative effect on health and well-being of the poor (Rein, 1970, 154) and could be largely responsible for the occurrence of vicious circles of poverty. Under such limitations, increased household income can improve, but full benefits of improved health and well-being could not be realised without resources from economic growth paving the way to the provisions for health and other complimentary social services. In the absence of these, poverty may then run its course to vicious circles. Increases in nations' income, as well as in the provision of adequate nutrition, educational and health institutional facilities, and so on (UNDP HDR, 1992, 96; 1996, 66), correlate in making human beings live long healthy lives in accordance to the hypothesis in 1.2.2, and thereby increase years of life expectancy for the nation. Indicators for life expectancy in Table 6 had substantiated these as facts. Here, the study found that the number of years of life expectancy for rich industrial nations were higher because they had improved most of their social provisions; and therefore had the highest prevalence of life expectancy for their population. The actual life expectancy for Finland was 73.2 in 1980, 76.4 in 1995, and 77.1 years in 1998. Brazil's life expectancy at birth was 62.7 in 1980, 66.5 in 1995, and 67.1 years in 1998. Nigeria's life expectancy at birth was 45.9 in 1980, 52.2 in 1995, and 53.4 years in 1998. The figures for Finland, Brazil, and Nigeria are representative of the industrial, semi-industrial, and the developing nations respectively. The gaps in the number of years of life expectancy between Finland and Nigeria are 27.3 years in 1980; 24.2 years in 1995; and 23.7 years in 1998. Differences in the gaps between the industrial, semi-industrial, and developing countries were found to be significantly huge. The study found no convergence between the nations in the number of years of life expectancy, except that convergence exists in similar patterns of up-ward trends in yearly increases for all the countries, while the world-wide trend could be attributed to general improvements found in the level of living in all countries.

The poverty circle theory (Rein, 1970, 154) stresses conditions under which the apathy of the poor develops within social environments, where the young people live in homes with parents whose level of education and income have been low for many generations. Under such circumstances, poverty becomes self perpetuating because amongst many other reasons, the children of ill-educated non-privileged poor citizens, who are disadvantaged through birth, start schooling and soon after fall behind standards within curriculum, and behind their contemporaries. Parents themselves cannot give them the encouragement and support they require. Subsequently, schooling then becomes a humiliating experience due to the fact that they cannot meet up to the demands of the teachers and their school processes. Children of the poor, no doubt, loose interest in school work and eventually dropout of school at the very first opportunity to do so. Growing into adulthood without skills or even confidence in themselves to face the civilised world, they remain marginally employable and often prone to violence and crime, while most of them remain poor. Robbed of the self-

respect, which viable employment offers through earnings for decent livelihood, the young man / woman becomes unable to sustain the responsibilities involved in marriage. He / she therefore bequeaths to his children the same burden of ignorance, broken homes, and apathy by which he himself is crippled (Rein, 1970, 154). It is obvious that without motivation, sacrifice, and opportunity; there can be no breaking of this circle of poverty, but with motivation and sacrifice these distortions can be set right and the circle could then be broken.

In another study conducted after the Second World War, Schmidt (1997, 154) found that social security expenditure amongst the nations of industrial democracies had been marked by continuous diversity of high and low spending between countries. Although by the 1950s, there has been a considerable increase in social security spending generally, Germany particularly was in the lead as one of the high spending countries with 14.8% of GDP, while Japan with 3.5% of GDP lagged behind countries of low spending. In that study, Schmidt (1997, 154) observed that four decades later in 1989, Japan managed to increase her spending to 11.8% of GDP, while Sweden was spending 35.9% of GDP on social security in the same year. By 1992, social security spending within the industrial democracies was still marked by continuous diversity between high and low spenders. In the same year (1992), Schmidt (1997, 154) noted that the expenditure figures for Sweden was 37.1%, Finland 34.8%, USA 15.6%, and Japan 12.4% of GDP respectively. The important finding of the study showed that the given figures demonstrated that increases in social security spending amongst the industrial countries, did not narrow down differences, rather the gap between these countries widened.

The maintenance and improvement on the quantity and quality of any capital (for example, human resources, material resources, financial resources, and so on), requires direct investment in the capital and also investment in the technology for its development (Dumas, 1986, 94-97). Many countries may claim that they have little income for high saving rates and for further investments. What they really lack is human capability and improved economic and social policy. As indicators on life expectancy (Table 6) already substantiated, diversity also implies that people and nations will exhibit differences in performance capabilities within the occupational statuses they choose for improvement on their general well-being. Viewed from convergence and divergence perspectives, there are no doubts that most countries in the world had benefited from global foreign direct investment (Tables app. 5.30 and app. 5.31) and from international exchange of goods and services (Table app. 5.29) on trade in new technological products of the modern industries. Table app. 5.29 indicates that the benefits from trade as percentage of GDP (PPP) for Finland were 69.0% in 1980, 71.7% in 1995, and 69.2% in 1998. Brazil's benefit from trade as percentage of GDP (PPP) was 9.1% in 1980, 9.2% in 1995, and 9.9% in 1998. Nigeria's benefit from trade as percentage of GDP (PPP) was 115.6% in 1980 due to the oil boom of the period, 21.6% in 1995, and 18.9% in 1998.

And so, foreign direct investment net inflows (in current US$) for the sampled countries remained as follow: Finland gained $27,949,700 in 1980; $1,044,129,984 in

1995; and $12,028,600,320 in 1998. Brazil gained $1,911,000,064 in 1980; $4,858,999,808 in 1995; and $31,913,000,960 in 1998. Nigeria gained $739,699,968 in 1980; $1,079,000,064 in 1995; and $1,051,000,000 in 1998 (see Table app. 5.30). The foreign direct investment net inflows (as % of GDP) for Finland represents 0.1% in 1980; 0.8% in 1995; and 9.7% of GDP in 1998. Brazil gained 0.8% in 1980; 0.7% in 1995; and 4.1% of GDP in 1998. Nigeria gained -1.2% in 1980; 3.8% in 1995; and 2.5% of GDP in 1998 (Table app. 5.31). From these stances, productivity in industries is identified as the strength between the links of global economic growth and human well-being, because many human capabilities are crucially dependent on peoples' total economic circumstances and capabilities in resource management, as predicted by the logic of industrialism. The study therefore asserts that differences in economic gains occur between nations because economic and social well-being of any nation depends on efficient deployment of its productive resources, including labour, machinery and equipment, natural resources, land use and so on, which are incorporated in the production of goods, higher profit rates, and wages. Some countries, however, manage their resources better than others, due to country specific differences and visions in developing different competitive programmes that are made to reflect on a nation's success.

3.1. Comparisons by levels of human development indices

In pursuit of material and financial wealth, which is necessary by itself; human beings often forget that the purpose of any development (both economic and social) is to facilitate the creation of an environment in which people can enjoy long, healthy, and creative lives. The real wealth of the nation is the human population (UNDP HDR, 1995, 11). From the economy point of view, it is a known fact that countries differ on how well growth surpluses are translated into income for the nation and its people, and then used for human well-being and hence development (see UNDP HDR, 1996, 66-67). The passages that follow exemplify how concepts of development can be amorphous, difficult to grasp, and sometimes almost impossible to measure. On Europe's growth experience during the 19th century, Oman & Wignaraja (1991, 11-12) cited the arguments of A. Gerschenkron in favour of classifying countries in accordance to the levels of their economic growth, as being equivalent to the degree of their backwardness. This view held that the more backward a country's economy is known to be, the more likely that its industrialisation would start discontinuously as a sudden 'great spurt', and that its manufacturing output and growth, would proceed relatively at a higher rate. The above hypothetical statements obviously, are contradicted by the known facts that economic development and growth definitely contribute to human development, while human development reciprocates, by contributing to economic growth. This section of the study therefore analyses countries on levels of their human development indices, whereby three hierarchical quadrants (Table 18) of high, medium, and low group of countries are discussed on the basis of their collective group merits on the human development scale.

One important reason for comparing nations by levels of human development indices

is to clarify the distinctions and the exact levels of each nation or group of nation states on the index. Attempts are made in this section to clarify the fact that the levels within economic quadrants, could shift upwards with improvements in economic growth, health (that is, life expectancy) and literacy (that is, educational attainment). It is also important to note that no poor country is expected to remain in an unbalanced economic quadrant all the time. The links between economic growth and human development in the social sectors are expected to converge towards the nations that assume stronger or weaker positions within quadrants, depending on the extent to which social policy of the nation eventually manages growth surpluses efficiently and satisfactorily or even falters.

The placement of countries on groups of high, medium, and low human development indices (Table 18), indicates the particular group of countries' achievement level in economic and social development. The placement of countries in groups are utilised for cross country comparisons, with regards to 'how well' or 'how poorly' the particular group of countries had performed during particular periods of time. Table 18 therefore demonstrates with data that countries with high rates of literacy, high rates of life expectancy, and high rates of GDP per capita (or colloquially, low poverty rates, low unemployment rates, low crime rates, and so on), have been classified as having high human development.

Table 18. High, medium, and low human development indices (1995 statuses)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
HIGH HUMAN DEVELOPMENT											
Japan	,846	,872	,907	,912	,915	,929	,934	,939	,946	,947	,945
Norway	,846	,875	,910	,915	,920	,924	,929	,934	,938	,939	,940
Canada	,872	,895	,917	,919	,923	,926	,930	,933	,935	,937	,937
United States	,873	,892	,914	,915	,920	,921	,924	,927	,931	,934	,936
Sweden	,846	,867	,890	,896	,917	,917	,922	,927	,929	,930	,931
Australia	,804	,841	,874	,882	,890	,918	,922	,925	,928	,929	,932
Netherlands	,845	,884	,907	,910	,915	,916	,919	,922	,924	,925	,926
United Kingdom	,805	,828	,866	,876	,903	,905	,910	,913	,916	,919	,919
Finland	,840	,867	,898	,896	,897	,900	,906	,910	,914	,917	,920
MEDIUM HUMAN DEVELOPMENT											
Greece	,770	,808	,859	,866	,872	,876	,876	,886	,891	,893	,894
Hungary	,749	,768	,793	,790	,795	,810	,819	,830	,837	,841	,842
Argentina	,738	,757	,802	,808	,814	,816	,818	,827	,839	,851	,861
Mexico	,647	,677	,711	,714	,721	,727	,735	,739	,748	,759	,769
South Africa	,619	,649	,685	,693	,700	,712	,724	,735	,745	,754	,748
Colombia	,619	,654	,698	,692	,682	,701	,721	,726	,735	,741	,743
Philippines	,631	,650	,697	,701	,708	,714	,721	,725	,736	,740	,739
Turkey	,537	,583	,646	,655	,670	,684	,687	,696	,706	,717	,722
Brazil	,592	,615	,640	,646	,653	,656	,663	,676	,687	,689	,689
Algeria	,474	,556	,615	,620	,628	,632	,636	,645	,654	,660	,668

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
LOW MEDIUM DEVELOPMENT											
Egypt	,440	,502	,565	,569	,579	,585	,594	,602	,609	,615	,619
Zimbabwe	,482	,542	,580	,586	,579	,575	,577	,577	,580	,580	,575
India	,392	,442	,496	,502	,515	,522	,530	,540	,548	,554	,558
Ghana	,421	,447	,489	,497	,507	,517	,524	,533	,542	,550	,554
Cameroon	,392	,453	,485	,489	,493	,493	,493	,498	,503	,506	,507
Kenya	,412	,443	,486	,491	,493	,490	,486	,486	,484	,481	,476
Madagascar	,376	,396	,432	,431	,437	,441	,443	,448	,451	,454	,456
Nigeria	,302	,343	,382	,391	,402	,414	,422	,431	,439	,449	,451
Mauritania	,325	,361	,382	,387	,394	,401	,408	,414	,420	,425	,428
Chad	,215	,264	,301	,311	,321	,315	,325	,331	,338	,345	,350

HDI ranking order was compiled and based on 1995 calculations. Data figures from World Bank CD Rom 2000

Similarly, countries with high rates of illiteracy, low rates of life expectancy, low rates of GDP per capita (or colloquially, high rates of poverty, and high rates of unemployment, high rates of crime, and so on), are classified on the index as having low human development. In Table 21, it has been demonstrated further, that countries on moderate levels of GDP per capita, literacy rates, life expectancy (or other social problems), lie between countries with high human development and those with low human development indices; and have been classified as having medium human development. Countries under medium levels of human development index often seem to remain dormant during analyses, while analyses of countries with high or low human development indices over-shadow those of medium human development, and are often used in a priori. This often happens, because medium human development is the transitional stage (or a grey area) through which all countries normally undergo, as they move upwards the ladder towards high or downwards towards low human developments.

Although most poor nations have worked so hard as well, for their economic and social development, their efforts have not yet brought about significant convergence between the developing and the industrialised nations, as predicted by the logic of industrialism, which states that all nations will meet at a convergent point. Evidence was found within the hard data in Tables 18 and 21, which indicate the existence of gaps between the three quadrants or groups of nations in their GDP per capita and in human development indices. Indeed, it seemed that the gaps are widening due to rapid and sustained one-sided growth in the economy of the industrial nations. The average group figures on human development indices for industrial nations were .840 in 1980; .926 in 1995; and .932 in 1998. Similarly, the average group HDI for semi-industrial nations was .638 in 1980; .749 in 1995; and .768 in 1998. The group HDI figures for developing nations were .376 in 1980; .486 in 1995; and .498 in 1998. The average group figures on human development indices for developing nations were the least, or less than halves of those for the industrial nations. More importantly, trends were found in GDP in Table 21 and the groups' indices in Figure 9 C between 1980 and 1998, all the figures indicate that during the first half of the millennium, poverty gap between the industrial nations and the developing nations will continue to be widening.

Without the intervention of any form of rescue through improved social policies of both industrial and the developing nations, it seems that the existing gap would continue to increase and separate nations further apart into two camps. One small group of very rich industrial nations will remain on one side, and the larger group of poor nations around the globe will remain on the other side. The study then proceeds with more incisive analytical investigations under separate headings, in an effort to ascertain the extent to which various groups of countries were affected by economic and social policy, which they adopt. Analysis would begin with the review of life expectancy indices of nations, educational attainment indices of nations, and GDP indices of nations. This procedure will be necessary in order to review the merits of groups of nations on human development indices towards policy considerations, discussions, in-depth analysis, and recommendations to improve policy (Chapters 3-6) on global human well-being in the future, as the ways ahead for mankind.

3.1.1. Life expectancy indices of nations

Good health is an immediate goal of development and the means of achieving related goals of higher labour and economic productivity, while life expectancy is the overall indicator of a population's health (UN Global Outlook 2000, 1990, 282). The prevalence of long livelihood in nations is the outcome of effective health policy. Thus, the goal of modern health policy in an industrialised nation is the achievement of increased provision and distribution of resources for the expansion of economic security, and for equal distribution of health amongst the population (Bäckman, 1984, 14-15). The promulgation of state finances and planning for health, are means to improve health conditions and achieve better health for all (Parston, 1980, 158), which are measured through longevity. Longevity itself is measured through the number of years of life expectancy at birth, which is the average number of years that an individual is expected to live in his or her lifetime. Life expectancy index has been developed (Chapter 2.6.1), and used in this study, as an indicator that is relevant for the measurement of the length of time that the human being lives in nations. Convergence and divergence analysis of economic and social development presupposes that life expectancy would be the final outcome, which is 'convergent point' of all the growth in GDP, and literacy rates. In other words, life expectancy is seen in this study, as the final benefit, which accrues from all economic and social activities in the nation state.

Table 19 shows the life expectancy indices of all the countries on our global sample. The ranking of the countries on the index was based on levels, which they scored on life expectancy index in the year 1995. The countries' placement in descending order is based on the individual country's total scores on the index, which represent their total achievements from all economic and social development activities that they performed. The groupings were categorised as high, medium, and low human development, for countries with identical scores on the index scale. The placement of the countries as quadrants or groups within the index further indicates that each group of countries belong to identical levels.

Further comparisons of life expectancy indices of countries (Tables 6 and 19 respectively) found that the yearly trend in life expectancy indices, improved significantly in all countries within our sample between 1980 and 1998. This finding on hard data, provide the evidence that the trend on average length of time an individual is expected to live, had risen significantly in all world countries between 1980 and 1998. The improvements indicate further that somehow social policy in all countries is moving positively on the path towards improved human well-being, and hence social development. However, huge differences are found between countries, on the actual number of years of life expectancy, particularly between the industrial nations and those of the developing countries. This finding implies that people from the industrial nations live twice as much longer life, more than the developing nations. The gap between the two groups of nations in the number of years person live in them, are indeed enormous, and in favour of the industrial nations. Low life expectancy in developing countries reflects the unfavourable living conditions in those nations (UN Global Outlook 2000, 1990, 207). In most world countries life expectancy for women is several years longer than it is for men.

Clearly, the developing nations have not performed well enough in bridging the existing life expectancy gaps, both in their economic and social developments even though the countries have been working hard as well. Why do the industrial countries have twice as much longer life expectancy indices than the developing counter parts? For instance, Finland's life expectancy index in 1980 was 0.803; in 1995 it was 0.857; and in 1998 it improved to 0.868. Brazil's life expectancy index was 0.628 in 1980; 0.692 in 1995; and 0.701 in 1998: while the life expectancy index for Nigeria was 0.348 in 1980; 0.453 in 1995; and 0.474 for the year 1998. The huge gaps of 0.455 in 1980; 0.404 in 1995; and 0.394 in 1998 on life expectancy indices as differences between Finland and Nigeria (Table 19), prompt scholarly investigations to answers questions on why these huge differences (or divergence) exist; particularly between the industrial nations and the developing countries. Comparative review of Tables 19, 20 and 21, indicates that the higher the life expectancy, the higher the educational attainment indices and the higher the GDP per capita income for the countries. From these findings, inferences were conclusively drawn that the industrial countries have considerably high human development indices; while the developing nations have low human development statuses (see Table 18). Convergence on life expectancy indices between the industrial and the developing countries simply did not exist.

The main indicator for the measurement of longevity is life expectancy at birth (see Table 6). The Tables (19, 20 and 21) further more, indicate that persons from any of the industrial nations have much longer life expectancy, than their counterparts from the group of nations of semi-industrial, and the developing countries. In other words, from various analyses of data in Tables 19, 20, and 21, it is confirmed that persons from the industrial nations generally live longer in their lifetime, than persons from the developing nations. This huge gap of differences between people that inhabit the industrial and the developing countries, indirectly represent differences in total achievements on their life sustenance, and therefore indicate how short persons from the developing countries have come, on the road towards human well-being and

development. No convergence exists in life expectancy between the industrial and developing groups of countries.

Again, more people live in urban areas in both of the industrial and the developing nations. Convergence analysis could see this development as the nature of habitat yet to come in most developing countries in future, and which the logic of industrialism and other forms of global pattern of economic and social development had induced. Contrary-wise, the developing countries consist mainly of agrarian communities that live in villages (MacPherson, 1985, 26-29), and initially have less percentage of the population that live in urban areas, where better social facilities and services are available. On the march into the future of globalisation, this indirectly indicates lower economic and social development for the developing nations. Given much of the obstacles that the developing countries face, the elimination of absolute poverty in low-income countries by the first half of the millennium, may seem absolutely impossible to achieve. More-over, economic and social formations in the developing countries also affect the nature of social policy issues and responses. Urban pattern of living and the provision of social services may be the hope for the survival of mankind, particularly for over populated developing countries.

The comparison of figures on trends of life expectancy indices during 1980s and 1990s on all countries within our sample reveals the fact that people have generally begun to live longer lives by the year 1998. The increases in trends of global life expectancy indices (Table 19), also indicate that the number of retired old people will probably increase from one decade to another. Increases in life expectancy may reflect on the composition of the dependent groups within the population, and will result in increased expenditure on social service administration to fund the provision of minimum standard of care in support of dependent children, the elderly, the disabled, and the unemployed.

Table 19. High, medium, and low life expectancy index 1980 – 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
HIGH HUMAN DEVELOPMENT											
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	**,**858
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	**,**903
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	**,**894
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	**,**888
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
Finland	,803	,819	,834	,837	,840	,848	,857	,857	,862	,864	,868

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEDIUM HUMAN DEVELOPMENT											
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
Brazil	,628	,651	,674	,678	,682	,685	,689,	692	,696	,699	,701
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
LOW HUMAN DEVELOPMENT											
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432
India	,490	,535	,580	,591	,602	,609,	,616	,622	,629	,636	,636
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391

HDI ranking order was compiled and based on 1995 calculations. Data figures from World Bank CD Rom 2000

Based on the empiricism that encompass the review of various hard data that are related to investigations in this chapter, the study comfortably states that the industrial nations are converging towards steady increases in years of life expectancy indicated in Table 19, as well as in educational attainment indices in Table 20. The same is true of the developing nations, with regards to the level of convergence found in trends within their steady rate of growth in years of life expectancy in Table 19, and in primary school enrolment in Tables app. 5.5 and app. 5.6. These Tables indicate that figures on life expectancy and school enrolment are increasing in all world countries, although no strong convergence exist in Tables 19 and 20, between the rich industrial nations and the developing nations.

From the various perspectives that have been reviewed in this chapter, the level and range of resources on human capabilities that are available to an individual in a nation, makes income relevant mainly in helping to enhance those capabilities (UNDP HDR, 1996, 67, 70). On the other hand, the greater the GDP of countries, the more funds that would be available for governments to spend on various social programmes that improve livelihood in the nations. This hypothesis supports reasons for governments in rich industrial nations in making available more resources toward human aspects of development, and for compensations to social costs and securities (Walker, 1984, 28-31). Similarly, for governments in the developing nations, the scarcity of funds cause programmes for assistance on human well-being to be diverted to the community levels.

3.1.2. Educational attainment indices of nations

Education is purely an investment in human capital. Literacy in nations is measured with educational attainment indices of citizens within those nations (see Chapter 2.6). The primary school education for literacy is a major goal for human resource development, and the means to achieving interrelated goals on good health, higher labour productivity, more GDP growth, and other goals for social integration such as the participation in cultural and political affairs (UN Global Outlook 2000, 1990, 247-248). The basic objective of education is to help people acquire the knowledge and skills that they deserve in order to develop own potentials and play useful roles in society. Education places the human being in a favourable position to be able to realise fully his or her resources and potentials in life. It is an important aspect for contribution to knowledge, and for human well-being and development. Education also offers favourable conditions and possibilities that are desirable for entire societal development and collective well-being.

In our time, development is moving towards regarding the human beings as a central resource for implementing social change. Increasingly, educated women have begun to have equal rights and responsibility to participate with men as equal partners in the processes of social transformation and development. Educational systems have become the central tools for the advancement of economic and social systems (Kerr et al, 1960, 91-92). With better education, human populations are able to develop higher aspirations and the potential to adjust easily to innovative processes. In most nations, education has been accepted as important investment in human beings, which yield both economic and social benefits in return. A healthy and a well-educated population contribute to prosperity and growth. The acquisition of knowledge and skills are also pre-requisite for economic development. Education therefore, contributes to the nation's future and its development by increasing the citizen's productive capacity, while at the same time giving human beings the power and freedom to choose their future wisely and/or act accordingly.

The satisfaction of human needs in education consists of the provision and the receiving of education. Standards and quality of education are often expressed in terms of the duration of schooling, which ranges from elementary to university educational achievements. Some times they are formulated in terms of acquired skills and knowledge that are necessary, and are required in specific areas. Here, Drewnowski & Scott (1966, 33-34) tell us that 'enrolment ratio' represents the quantity of education, while 'pupil-teacher ratio' and 'school output ratio' represent the quality of education. Higher education improves the quality of the labour force, help to generate new ideas, prompt innovations, improve scientific, administrative, and professional skills, as well as other social and economic opportunities. Knowledge is measured by two education-variables of adult literacy and mean-years of schooling, with weights of two-third to literacy (Table 11), and one-third weight to mean-years of schooling (Table 12). Education represents forms of social and economic investments in human being. Quantitative and qualitative inputs into education therefore, have earned countries, their final positions on educational attainment index (see Table 20), as well as their

statuses on levels that qualify them for entry into quadrants of high, medium, or low human development. Quantitatively, the developing countries have shown impressive improvements in their trends of primary school enrolment figures (Tables app. 5.4, app. 5.5 and app. 5.6). However, enrolment figures in higher education (Tables app. 5.7, app. 5.8 and app. 5.9) remain low; probably because some countries' still discriminate against the enrolment of women in higher education. The quality of education as represented by pupil-teacher ratio (see Table app. 5.10) still lags behind in the developing countries, due to excessive number of pupils on the screen for each teacher. It is impossible for one teacher with excessive increase in numbers of over 60 pupils in the class, to supervise and produce high quality education as such.

Table 20. High, medium, and low educational attainment index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
HIGH HUMAN DEVELOPMENT											
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
MEDIUM HUMAN DEVELOPMENT											
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	978
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
LOW HUMAN DEVELOPMENT											
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301

HDI ranking order was compiled and based on 1995 calculations. Data figures from World Bank CD Rom 2000

As literacy, represented by educational attainment index of the nation increases, illiteracy decreases (Table 20) amongst world population. Data on literacy rate for

most industrial nations indicate that the 100 percent mark on educational attainment (Table app. 4.3 and Table 20), have been achieved by most industrial nations. This means that illiteracy no longer exist in the developed nations. It is strange apparently, to find within our sample (see Table app. 5.12) that illiteracy rate in most developing countries by 1980, still ranges between 50 percent to over 80 percent in Chad. It also means that between 50 and 80 percent of the populations in the developing countries by 1980, have had no education at all. By 1998, illiteracy rates in most developing countries of Africa, including Egypt and India still remained at 30 and 60 percent, with Zimbabwe alone that had an illiteracy rate of 13 percent amongst countries in this group within our sample. Divergence between the groups of nations is significant both with quantity and quality of education.

With regards to the quality of education which is represented by pupil-teacher ratio and school out-put ratio, the study identifies that teachers in the industrial nations (Table app. 5.10) have quite fewer numbers of pupils on the screens. During the years 1990 and 1998, one teacher cared for 6 and 25 pupils. On the contrary, pupil-teacher ratios for primary schools in most developing countries still range between 30 and 70 pupils per teacher by 1980 and 1990. This empirical data revelation means that one teacher in the developing countries cared for screens of 30 and 67 pupils at its best, between 1990 and 1998. Fewer pupils per teacher, means that the teacher is more able to care for the pupils' progress and this represents qualitative educational standards. However, through the analyses of this revelation the study found that it will be considerably more important for gains from economic growth, to be invested in education and health than investments in other social sectors, particularly in the developing countries. No absolute convergence was found to exist between the industrial and the developing nations in pupil-teacher ratio.

Hard data in all world countries showed general increases in school enrolment figures between 1980 and 1998 (Table 10). General readability amongst the elderly population in both industrial and the developing nations within our sample were also examined through reviewing the number of newspapers that were read daily in the countries. In Table app. 5.18, it was found that around the years 1980 and 1998, only between 1 and 50 copies of daily newspapers were available for every 1000 persons in the population of most developing countries. These numbers in copies of daily newspapers that are available, indicate the existence of low level of readability, and hence low human development for the countries in reference. In countries with medium human development between 1980 and 1998 (Table app. 5.18), it was found that between 24 and 247 copies of daily newspapers were read or made available for every 1000 inhabitants within the population. In the data on educational attainment and literacy rates for the industrial and the developing nations, limited convergence was found to exist only in the trend of steady increases on school enrolment figures for all countries.

On the contrary, within the industrial nations between 1980 and 1998, it was found that between 221 and 593 (nearly 600 for Norway) copies of daily newspapers, were read or available for every 1000 persons in the population. The high numbers of newspapers read in the industrial nations indicate high level of readability, and high

human development statuses for those nations. The huge differences between these 'high, medium and low human development-quadrants' or groups of countries in our global sample (Table app. 5.18), indicate that huge amount of illiteracy, and hence low human development still exist in the developing nations. This high rate of illiteracy exacerbates the sort of poverty that is prevalent in populations of the developing countries. The high rates of newspaper read in industrial nations also indirectly indicate high literacy levels, and hence the capacity to improve well-being for the inhabitants of the industrial world. For instance, Finland's educational attainment index in 1980 was 0.971; in 1995 it improved to 1.000; and in 1998 it was 1.000. During the same periods, Brazil's educational attainment index in 1980 was 0.537; in 1995 it was 0.636; and in 1998 it was 0.667; while Nigeria's educational attainment index in 1980 was 0.291; in 1995 it was 0.486; and in 1998 it was 0.534. Comparing figures from the industrial nations against those of the developing nations (Table 20), huge gaps in educational attainment indices of 0.680 in 1980; 0.514 in 1995; and 0.466 in 1998 were found between Finland and Nigeria that represent the industrial and developing countries. The huge gaps that were found portray the differences and indicate significant divergence on newspaper readability, and this may explain reasons for incompetence of most developing countries to manage successfully the recycling of economic growth through translating the benefits to well-being at the social sectors.

While education and health form important factors for expanding economic growth further, they are primarily ends in themselves. Better education for parents, especially mothers, increases the likelihood that their children will also be educated. The effects of parent's education reflect on their children's nutritional statuses and health (UNDP HDR, 1996, 69). From same perspective, educating people well beyond retirement age is also worth doing in its own right (UNDP HDR, 1996, 75-78). More-over, helping in some form to train or educate the terminally ill, make most members of the society to lead lives that are as satisfying as possible. Neither of these investments adds greatly to physical productivity of the economy, but obviously both contribute indirectly to economic development and human well-being of the entire nation.

Education is a necessity. Education pays off. It is both an instrument and an indicator of development. More still, education is both a status symbol and a means of upward mobility for millions of most successful men and women that participate in industrial production and globalisation (Dube, 1990, 89, 91). Although no convergence exists in levels of education between the industrial and the developing nations, Table app. 5.7 (female) and Table app. 5.8 (male), indicate that the trend in enrolment figures into secondary and other higher educational institutions are on the increase, particularly in the developing countries. From these perspectives, education has been identified as a great mobility multiplier and equaliser of inequality through its forces of upward mobility. Norms of modern society may favour merit-qualifications in the recruitment of administrators and civil servants as against the inequalities and inefficiencies of ascriptive political recruitment, for achieving the goals of social equality in public policies. Some-how, these claims had been found to be contradictory. In nations where levels of educational achievements had encouraged inequality, it has been found (Dube, 1990, 89, 91) that it also contributes to the maintenance of those unequal

patterns of stratification, which were prevalent in many nations. Education therefore, does very little to break the unequal traditions of its social factors which create and protect such unequal upward mobility. Borrowing expressions from Dube (1990, 89, 91), education had emerged as a cruel defender of its class interests and privileges, even if that means 'sustenance of more inequality'.

3.1.3. Gross domestic product indices of nations

The growth of an economy can be measured by the use of GDP per capita of the country. The GDP per capita is considered to be appropriate and an important indicator for the measurement of growth derivatives as they relate to nations. From perspectives of this study, increases in GDP per capita as a result of growth in the economy, adds GDP per capita as third important input to discussions on the attributes that make up the measurement of human dimensions of development. GDP is also known to be the only viable and comparative means of evaluating nations' income level, in relation to others. UNDP HDR (1998, 218) therefore, defines GDP as the total output of goods and services produced for final use by both residents and non-residents of an economy and by the nation, regardless of the allocation to domestic and foreign claims. These do not include deductions for depreciation of physical capital or depletion and degradation of natural resources.

Income has been included in the construction of the Human Development Index (to represent) as a proxy because of the goods and services that are needed for the best use of human capabilities. Although income is a means, it is not treated as means in the construction of the index (Haq, 1995, 49-50), but it is being interpreted in terms of the ends it serves. Table 21 shows the adjusted real GDP per capita index of countries within the sample between 1980 and 1998, grouped relatively in its downward trends from high, medium, and low human development indices that form the respective quadrants. This study recognises that the growth of GDP per capita within countries (Chapter 3.2); are attributed to impacts of the industry, shipment of industrial products by globalisation processes, inflows of foreign direct investment, the gains from trade, sufficient human resources and skills, as well as appropriate economic and social policies.

Table 21. High, medium, and low group GDP per capita (PPP int. $) index 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
HIGH HUMAN DEVELOPMENT											
Japan	9029	12300	19062	20282	21350	21841	22357	23212	24511	24520	23257
Norway	9938	13648	18389	19410	20829	21749	23284	24694	26114	26573	26342
Canada	11174	14496	19672	19577	20385	21140	22202	23085	23296	23625	23582
United States	12674	16304	22537	22698	24102	24969	26166	27395	28513	29406	29605
Sweden	9810	12702	17537	17708	18129	18028	18877	20031	20424	20546	20659
Australia	9524	12355	16484	16807	17945	19076	20163	21268	21771	22083	22452
France	9551	12005	17278	17804	18708	18776	19614	20492	20889	21056	21175
Netherlands	9506	11796	16848	17579	18601	19035	19918	20812	21550	21961	22176
United Kingdom	8427	11007	16144	16202	16776	17449	18511	19465	20006	20380	20336
Finland	8739	11697	17172	16321	16353	16447	17466	18764	19525	20414	20847
Total (High)	98372	128310	181124	184388	193179	198509	208559	219219	226599	230564	230433
Group Average	9837	12831	18112	18439	19318	19852	20856	21922	22660	23056	23043
MEDIUM HUMAN DEVELOPMENT											
Greece	6577	8145	11049	11615	12128	12132	12577	13147	13544	13790	13943
Hungary	5159	6802	9009	8181	8300	8459	8913	9315	9550	9914	10232
Argentina	6429	6535	7448	8408	9586	10180	10869	10736	11290	11944	12013
Mexico	4241	4990	6225	6544	6953	7117	7451	7061	7357	7637	7704
South Africa	5890	6444	7934	7913	7924	8029	8279	8582	8829	8783	8488
Colombia	3288	3938	5629	5826	3413	4516	6006	6151	6131	6278	6006
Philippines	2239	2215	3083	3079	3154	3217	3349	3519	3668	3727	3555
Turkey	2328	3108	4663	4749	5178	5663	5340	5804	6146	6461	6422
Brazil	3917	4444	5346	5442	5726	5877	6218	6572	6751	6828	6625
Algeria	3111	4082	4546	4507	4669	4564	4503	4697	4802	4753	4792
Total (Medium)	43179	50701	64931	66264	67032	69753	73506	75585	78068	80115	79780
Group Average	4318	5071	6493	6626	6703	6975	7352	7559	7807	8012	7978
LOW GUMAN DEVELOPMENT											
Egypt, Arab Rep.	1077	1602	2343	2380	2541	2617	2722	2870	2981	3054	3041
Zimbabwe	1437	1774	2385	2508	2317	2346	2499	2512	2686	2713	2669
India	642	893	1382	1399	1513	1592	1721	1877	1996	2036	2077
Ghana	1029	1026	1394	1465	1545	1610	1619	1685	1730	1740	1735
Cameroon	986	1597	1556	1494	1483	1423	1371	1415	1458	1471	1474
Kenya	584	662	930	939	945	948	953	997	1021	1006	980
Madagascar	644	620	784	741	761	772	765	777	774	767	756
Nigeria	494	496	701	742	778	812	817	832	813	813	795
Mauritania	929	1179	1273	1305	1347	1412	1471	1534	1578	1585	1563
Chad	384	613	751	817	896	749	818	817	831	832	856
Total (Low)	8205	10462	13499	13789	14126	14281	14755	15316	15868	16018	15945
Group Average	821	1046	1351	1379	1413	1428	1476	1532	1587	1602	1595

HDI ranking order was compiled and based on 1995 calculations. Data figures from World Bank CD Rom 2000

Table 21 displays the GDP index levels for the group of countries within a quadrant, for comparative analysis with other quadrants, while both Table 14 and Table app. 5.27 show the data on GDP, as total income levels for countries in our sample between 1980 and 1998. In both Tables, the trends in income for all countries were on the increase between 1980 and 1998. These increases represent positive and significant

growth-effect of the GDP per capita within all countries. It can therefore be stated with confidence that the trends in economic growth had brought about significant increases in GDP per capita income, within all world countries. However, when these income levels are compared against the population of the human inhabitants of the various countries (Table app. 52), the differences become a clear gap of inequality in income between the industrial and the developing countries.

The indices of GDP based on Table 21, indicate that the lowest GDP which the industrial nations registered between 1980 and 1998, ranges between two-fold and six-fold, higher income more than the GDP figures amongst the developing countries. For instance (see Table 15), Finland's adjusted real GDP per capita index in 1980 was 0.746, in 1995 it was 0.874, and in 1998 it improved to 0.891 as representative of the industrial nations. At the same period in time, Brazil's adjusted real GDP per capita index in 1980 was 0.612, in 1995 it was 0.699, and in 1998 it improved to 0.700. Nigeria's adjusted real GDP per capita index in 1980 was 0.267; in 1995 it was 354; and in 1998 it fluctuated to 346 probably because of the political instability in the country during the transitional periods of 1990s and the change of leadership. Thus, from the review of Table 21, the study found that the GDP figures as levels of income for countries, indicate extra-ordinarily low income for poor countries, and hence non-existence of convergence between the industrial and the developing countries. However, the huge poverty gaps (Figure 12) between the industrial and the developing countries (see also Onitiri, 1988, 40), by all standards, do not sustain the logic of industrialism towards envisaged convergence between the industrial and the developing countries. Contrariwise, governments in poor nations are therefore placed in a better position to discuss the errors of unbalanced global economic strategies, which Myrdal and others had already opposed (Myrdal, 1970, 84, 278; 1981, 507). Moreover, governments in poor nations are also placed in a stronger position to argue for re-negotiations of terms of global trade, with governments of the rich industrial nations.

This study assumes that supra-national regulations on international competitions (Unger et al, 1995, 21-22) usually affect national economies in different ways, as much as they do to social policies of various nations that participate in global market economy. Although regulations may, for example, aim at convergent non-tariff trade barriers through technical norms and standards, but due to degrees of resistance and/or conformity to standards, nations are affected in diverse ways. Democratic systems of the populace are therefore paramount in which ever circumstances the economy would adapt to foster growth, as well as how the nations' economic benefits and social processes are to be used in improving human well-being and eliminating poverty.

Policies for development in most remote areas of poorer countries, must consider the use of indigenous expertise as part of the first level inputs to projects within processing plants, which constitute the most important productive innovation in strategies for national development planning (Kottak, 1985, 341-342) and in its implementation. Usually, growth incentives have to be supported with the appropriate economic and social policy, which are combined with the appropriate technology-mix, and applied

within human expertise that exist in the particular rural sectors of the nation.

Global economic problems sometimes require local solutions. Under these circumstances therefore, it would be very useful for every government to support their firms, and offer to them such incentives that would promote satisfactory conditions for participation in global marketing sectors. The governments particularly, must support their firms with the provision of basic education, basic health, safe water, and physical infrastructure such as roads, energy, irrigation works; and these may include the provision of institutions for research and development, as well as communication facilities in order to encourage participation in globalisation. These are necessary because skills are particularly important for countries with few natural resources (UNDP HDR, 1996, 77-78). This perspective also suggests that developing countries need to direct the incentives of their citizens to developing an alternative form of competitive advantage.

3.2. Group perspective on industrial, semi-industrial, and developing nations

Being educated improves the literacy rate of a nation, and living a long healthy life helps the human being to sustain and improve his economic growth that contributes to the achievement of improved GDP for his nation in accordance to the hypothesis of this study (see 1.2.2). This suggests that in order to raise a whole society that would be economically capable of being productive and competent, to the extent of participating and winning benefits from the global economy, there should be considerable investment in education, and in anything else that makes society's development healthier for competitiveness.

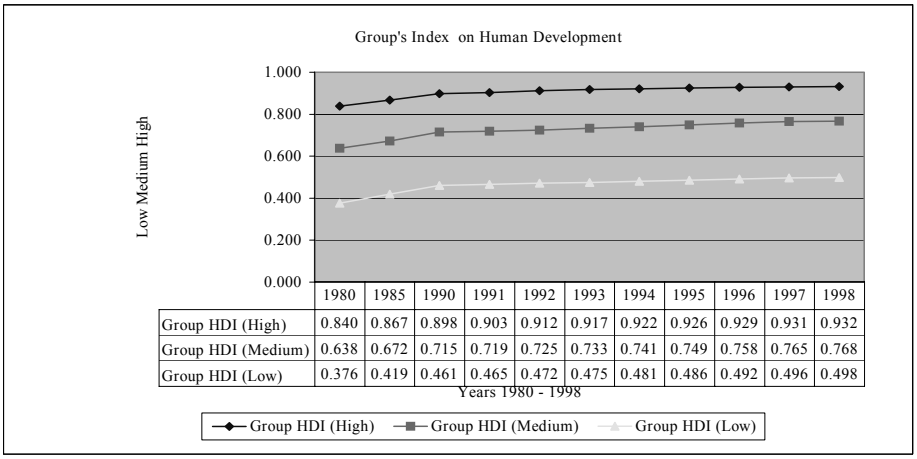
Usually, nations pursue a wide range of economic and social policy objectives in diverse ways. Growth incentives in economic sectors have to be combined with the appropriate technology-mix (see Chapter 5), as well as human expertise that are supported with appropriate economic and social policy. Without skills and sufficient resources, a very high rate of investment alone does not guarantee sustained growth. Even if market allocations produce optimal results, their effect on society or on human well-being in the population, may not be completely satisfactory. Within each income level (for example, Table 21), there are countries that convert income more effectively into capabilities, than the others that are not able to do so. Such countries may have high income but their final scores or levels within the human development index (Table 18) may be low, due to insufficient investments in human dimensions of development. It is then logical to say that some countries can improve their efficiency by translating growth into furthering human well-being and development, while some other countries can hardly perform this important task. As a result, the social infrastructure will remain inadequate to satisfy human well-being.

Kuznets's historical experience on how developed nations succeeded in becoming industrialised, indicate that usually a large low-income agricultural sector exists alongside the modern industrial high income sector (Oman & Wignaraja, 1991, 15-16),

during early periods of economic development in nations. This view holds the assumption that as industrialisation processes advance, employment and labour would gradually move slightly away from the agricultural sector, towards the incorporation of industrialisation. The movements of labour are usually towards the modern sectors, while growth of the industries are expected to trickle-down wealth to the working population in the long run (see Chapter 4), and these tend to have become significant factor in the reduction of inequality in industrial nations. On the short run, inequality assumedly tends to be on the increase in such nations, due to initial income differentials between the two sectors, which arise from the fact that a greater proportion of accumulated assets still remain with the owners of the modern production systems in the industries. However, when sufficient segment of the manpower in the population have been absorbed in wage employment within the modern industrial sector, inequality seems to be controlled (Oman & Wignaraja, 1991, 15-16) and to be reversed into equality as the low-income groups gain political influence (Alestalo & Uusitalo, 1986, 272-277).

With the dismantling of European colonial powers from most countries (Aaron et al, 1994, 14), a world in which economic power and the influence of independent nations have become wide spread and have begun to displace the world in which the colonial masters dominated the decision making processes of the nations. Inequality was self evident in the colonial era, when foreign powers' presence established systematic political, social, economic and cultural inequalities between themselves and the colonised nations (Martinelli & Smelser, 1990, 46). Most poor nations have begun to work hard in limiting external influence, while more often, they model economic reforms on principles of capitalist economies. Presently, international financial systems and modern industrial production systems shape the powerful and the weak economies alike. Inequality between nations has increasingly become an important international dimension within the wider global systems. Perhaps economic dominance by the super powers have become more powerful than colonialism itself, in contributing to the determination of the nature of in-equality in poor nations.

Figure 9 C. Group's index on high, medium, and low human development 1980 - 1998



	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Group HDI (High)	0.840	0.867	0.898	0.903	0.912	0.917	0.922	0.926	0.929	0.931	0.932
Group HDI (Medium)	0.638	0.672	0.715	0.719	0.725	0.733	0.741	0.749	0.758	0.765	0.768
Group HDI (Low)	0.376	0.419	0.461	0.465	0.472	0.475	0.481	0.486	0.492	0.496	0.498

Between the year 1980 and 1998, all groups of countries on high, medium, and low quadrants of human development indices, progressively showed significant increases on the human development index, which indicate the level and trend of progress that is made by the groups. Although the group of countries on low human development index attained significant growth between the years 1980 and 1998 (see Figure 9 C), their growth never converged to any significant equilibrium with the growth indices that are registered by countries on high human development index, during the same period. The industrial countries are believed to be developed and rich because they were industrialised. Most developing countries therefore, believe that they are poor because their economies continue to rely heavily on subsistence agriculture (Oman & Wignaraja, 1991, 9), and the under-pricing of agricultural production meant to keep down urban cost of living; tend to overvalue manufactured products from the industrial nations. The developing countries have been working hard to achieve what they believed to be the pre-requisite for development.

In these views, it seems that the groups of countries on low human development indices are mainly from semi-industrial and the developing nations. They want to achieve within decades what the industrial nations accomplished in centuries (Hughes, 1984, 6). The goals became misconceived, and in most cases, impossible to accomplish because the developing nations did not consider integrating attributes of their nations' cultural and environmental backgrounds into specific competitive economic policies. The results of the efforts by the developing nations are portrayed in Table 18, and within the diagram in Figure 9 C. Convergence between the countries are unlikely in the near future. But decolonisation was often accompanied by the nationalisation of existing enterprises and industries (Tanzi & Coelho, 1993, 201). Based on these historical facts, the developing countries therefore imitate the industrial nations through the diffusion processes of industrialism, and are still trying to increase their economic involvement with the rest of the groups that are having high or medium

human development indices in the world. It has been noted that a substantial proportion of the consumer goods that are required by the local markets and a significant range of materials for construction, including certain amount of capital goods, are presently being produced within import-substituting industries in some developing countries. The developing nations therefore require onward integration into the globalisation processes of the larger global economy for true economic growth and human well-being that yields stable development rewards that are similar to those of the industrial nations.

The dependency syndrome (Dube, 1990, 43) which follows the pattern that was laid down by international labour market policies, allows industrial development to take place in some countries, while indirectly restricting its development in others. How the developing countries can increase the rate of capital formation is therefore a matter of great importance for national governments in the developing countries, and for which they emphasise the need for capital accumulation. The growth policies of the developing countries are therefore constrained by international trade policies that were introduced by their former colonisers and the more powerful industrial nations, from which they also struggle to gain their economic independence. Strong convergent policies of the industrial nations, somehow, work together to negate economic development efforts of the poor developing nations (Onitiri, 1988, 39-40), as well as indirectly preventing the countries' autonomous development.

Comparative analyses on the new stage which the human being had attained as a result of his activities in all economic and social sectors, is hereby broadened to capture comparisons of groups of nations between high, medium, and low quadrants of human development indices. This is necessary in order to obtain the level of the groups in those quadrants (see Figure 9 C), in relation to where the quadrants stand with each other on economic and social development, hence human development. Discussions along these lines of analyses are between the industrial nations with high HDI, semi-industrial nations with medium HDI, and the developing nations with low HDI, and these shall be discussed as groups under separate headings below. The adoption of these stances is necessary for onward discussions and in-depth analysis on social policy issues.

3.2.1. The industrial nations with High HDI

The industrial nations consist of high-income countries with high human development indices within the sample. The group of industrial nations that were included in the study is Japan, Norway, Canada, United States, Sweden, Australia, France, Netherlands, United Kingdom, and Finland. These countries make up the group in the sample, which are on various instances referred to generally, as industrial, developed, or rich nations. It is this group of countries that are known (Table 18 and Figure 9 C) to have achieved the highest levels on human development index. Analytical perspectives in relation to this group focus singularly on Finland as representative of the industrial nations. Finland, more especially belong to the Universalist tax-based

welfare state system (Hantrais, 2000, 21-22). The GDP for Finland in 1980 was $8739 per capita (PPP$). In 1995 the GDP per capita rose to $18764. By the year 1998, the GDP for Finland had increased to $20847 per capita (PPP$). During the same periods, life expectancy in Finland rose from 73.2 years in 1980, to 76.4 years in 1995, and 77.1 years in 1998 (see Tables 6 and 14). Here, the study found that trends in the growth of GDP reflects improvement in the trend and increases in life expectancy between 1980 and 1998, and this pattern of incremental growth, similarly reflects on all the other industrial nations within the study (see Figure 9 C). The study also found that convergence, under the promise of logic of industrialism is hereby fulfilled amongst group of countries of the industrial nations.

Keynesian economics is known to comprise a body of macro-economic theories, which emphasise the primacy of investment decisions for understanding the levels of employment and growth performance in the nation. Literatures on economy also assume that on the long run, economic growth would result in higher income for everyone in an industrial nation, both for the rich and the poor alike. Critics on these issues (Thirlwall, 1985, 425-426) say that it is the capitalists themselves, and not the savers that make the investment decisions. However, what is certain is that post-war capitalists made investment decisions for economic development for higher economic returns from an uncertain future. Industrialisation and increased capital accumulation were always perceived by many policy makers to have been the vehicle by which the developed nations historically achieved sustained growth and development (Oman & Wignaraja, 1991, 7).

Perspectives of convergence and divergence on social development within the industrial nations focus on important changes that took place in the Welfare States social policy after the Second World War, in relation to efforts that were made in reducing poverty and improving well-being. The efforts of the United Nations experts and others who re-assess benefits of world economic development, are pointing at directions towards the integration and unification of economic and social development planning. The rethinking of this situation has become necessary because academic interests and those of experts want to understand the state of global under-development, so as to be able to reach-out to disprivileged sections of human societies. The concentration of attention by experts and scholars on the state of economy and social backwardness that are prevalent particularly, in developing countries; conceal the fact that many deprived regions of the industrial world (Midgley, 1995, 74), have also been characterised by some form of disjunction between economic and social development.

However, many industrial countries still find the task of management difficult, as do the poorer nations, because they have to contend the problems of recession, inflation and unemployment in their economies, as well as deal with uncertainties of modern economic fluctuations that impinge from other parts of the globe. As a matter of necessity, most industrial nations (Kerr et al, 1960, 29) had initiated programmes of accident compensation, sickness benefits, unemployment insurance, and old age pension for industrial workers, as well as for persons who cannot work for reasons

beyond their control. All these programmes guarantee for them, some form of minimum welfare security. Globalisation seem to be reversing some of the gains embodied in the institutionalised welfare states (Razavi, 2001, 1), whereby global economic forces constrain and dominate traditions of national policy choices and interest-representation in political consensus-building that shape national policy priorities.

Based on the above standpoints, development is seen to include concepts of poverty and the search for ways in which the level of living can be raised in both the industrial, as well as in the developing nations. The earlier notions that an individual was responsible for his or her predicaments (Hemerijck et al, 1995, 165, 172) for being poor and for being unemployed, have already begun to be altered or changed. Most Welfare States have begun to modify their values and to accept that the externalities of the capitalist economy can strike poverty on any nation, and/or unemployment on any individual within the society. Although the needs and pressures to develop the welfare state in modern times are not declining, growth in the economy and the distribution of its benefits, are still the outcome of conflicts, bargaining and coalitions between social classes, groups, and the political parties on choices regarding the types of social security programmes to be implemented, the extent of actual distribution of benefits, as well as the share of its burdens, have also become crucial. However, majority of the citizens and groups increasingly tend to favour the mix of certain welfare programmes over others, while consensus culminates around policy towards child and maternity allowance that enjoys the most support (Alestalo & Uusitalo, 1986, 272-277).

It becomes clear therefore, that in industrial nations the main objective of these divergent policy responses to international competition is for countries to create own competitive advantages to accumulate wealth from the international arena over other nations' ability to do the same. International trade has the tendency to benefit the rich nations more than the poor countries because of the capacity of rich nations to invest in whatever trade that yields greatest financial returns. The differentiation and protection of the nations' accumulated technological specialisation as competitive resources attract foreign direct investments to the nation. From these perspectives, it becomes clear that divergence and differentiation of production (Bellak, 1995, 96-97) by themselves have now become more important than convergence for economic growth of the nation, and for attracting foreign investments from the global arena.

Policies that are meant to target the improvement of income for the poor, in individual nations, must also consider the wider issues of convergence and divergence within the global economy as they relate to social development, because both occur simultaneously. In 1980, women in the labour force in Finland made up 46.5% of the entire labour force; in 1995 it increased to 47.7%; and in 1998 it increased to 47.9%; while the trend in other European nations is similarly on the increase. This is to say that along with men, women now constitute about half of the labour force in the advanced welfare states (see Tables app. 5.35 and app. 5.3) as well as in most industrial nations. But while double incomes (Hemerijck et al, 1995, 176) have almost become the new standards in many European countries, social benefits which sustain

the worse-off citizens in industrial societies (Unger et al, 1995, 26), now have begun to be on the defensive. In many rich industrial nations the problems facing governance, are the resurgence of poverty amongst the disprivileged, the demand for welfare provision, crises in making such provisions available to those mostly in need, rising unemployment, increased crime, drug abuse, environmental hazards, some health problems, and so on.

Many individuals in several European nations suffer threats of personal scrutiny, and they develop a sense of individual isolation. Allen (1989, 124) cites the case of confirmed failures of industrialism, in providing the basis for material and cultural well-being within some sectors of advanced industrial societies. Besides the foregoing, in many of the well-developed welfare states, lowering welfare (Unger et al, 1995, 26), may increase social inequality and create other unforeseen but related problems. Such related problems may include financial deprivation, poverty, structural exclusion, social isolation, anomie, alienation of the poor from central societal institutions, and permanence of dependence on welfare; all of which may converge towards the proliferation of systems of a residual welfare state. However, the policies and the social institutions of the welfare states (Hemerijck et al, 1995, 163) invariably seem to be converging under these imperatives of more and more need to protect citizens in industrial nations. Well-being for humanity has therefore, become identified as the true security.

For convergence and divergence perspectives, what is unique with the industrial society, is the consistency which exist in the different ways and strategies for globalisation that are adopted by various individuals as well as nation states, in getting about the provision of various social security for the citizens in daily lives. With the same consistency and identical strategies, the industrial societies adopt the implementation of similar solutions in dealing with diverse economic and social problems, in somewhat different ways to achieve similar results. These different strategies are related to the common divergent strategies inherent in the nature of industrial societies themselves (Kerr et al, 1960, 2, 33-34). Convergent and divergent strategies of various industrial nations bend and shape the lives of men and women of the industrial societies, through the processes of industrialisation in accordance to the logic of industrialism.

3.2.2. The semi-industrial nations with medium HDI

Some groups of the developing countries have since built up a considerable expertise in manufacturing sectors and have improved certain social indicators which, although income levels on the index scale may still be considerably low, may be regarded as semi-industrial nations. This group of developing countries falls into the medium human development index levels in the sample for the study. Countries within this group include Greece, Hungary, Argentina, Mexico, South Africa, Colombia, Philippines, Turkey, Brazil, and Algeria. It is this group of countries that has achieved the medium-level positions on the human development index scale (Table 18), and

therefore make up the group that is referred to as ‘semi-industrial nations’. Singular analytical perspectives on this group focus on Brazil, as representative of the semi-industrial nations. Analytical comments that are syllogistically made on Brazil as representative of the semi-industrial nations are sometimes generalised and applied to all the other nations under this category, as the case may be. For example, in 1980 the GDP per capita (PPP$) for Brazil, was $3917 (Tables 6 and 14). By the year 1995 the GDP per capita increased to $6572; and in 1998 the GDP per capita for Brazil further increased to $6625. In Brazil, life expectancy also increased from 62.7 years in 1980, to 66.5 years in 1995; and 67.1 years in 1998. From these increases, the study found that trends in the growth of GDP per capita reflects improvement on the trend and increases in life expectancy between 1980 and 1998, and this pattern of steady incremental growth (Figure 9 C), similarly reflects on all the other semi-industrial nations within this study. Here, it is also found that convergence, under the promise of the logic of industrialism is fulfilled amongst this group of countries of the semi-industrial nations.

After the great depression between 1927 and 1930, and the Second World War that followed (Hughes, 1984, 6-7), the primary producers came under strong pressure to supply raw material to industrial countries in war - that were faced with shortages of manufactured goods. Some developing countries began to break out of their traditional economic structures, and the balance of payment considerations, became strong argument for opting to adopt policy on import-substituting industrialisation. Under these circumstances, local manufacturing was eventually stimulated, and in some cases manufactured goods were exported. It became logical for some developing countries to purchase capital equipment from industrial countries for the purposes of manufacturing. Increasingly, emphasis was placed on import-substituting industrialisation in semi-industrial nations. These early efforts paid off in helping some nations to gain the experiences and the competency within global markets and which has helped to improve their economic statuses as semi-industrial nations.

Under those prevailing circumstances at the time, most import-substituting industries in the developing countries were limited to assembly processes that relied on imported raw materials and components, which were also purchased from industrial countries. Later on, the exportation of manufactures became an important component of industrialisation strategies in semi-industrial nations. The ability to use modern equipment meant the end of slow, exhaustive but unproductive manual labour that brought limited financial profits. A substantial proportion of the consumer goods required by the domestic markets, and a significant range of intermediate goods such as construction materials, including certain amounts of capital goods are produced in these countries. Industrialisation of the developing nations thus became an important factor, when the changes that are taking place in those countries, are weighed against the extent to which world economy is increasingly being transformed.

In spite of all the advances that had been made in financial investments and industrial technology within the developed nations, it was only mid 1960s that saw the beginning of the promotion of import-substituting industrialisation in some of the developing

countries. The focus of import-substituting industrialisation in the developing countries was the production of consumption goods (Oman & Wignaraja, 1991, 25), which sometimes included assembly lines of imported inputs. In some of these developing countries, small scale industries were later upgraded and used for the promotion of basic industries. The promotion of import-substituting industrialisation in most developing countries (Haggard, 1995, 15-16, 19-20), later became the vehicle which was often used to encourage the pursuits of policies that allowed other options such as those that attracted foreign direct investments. These became the main policy instruments that were used by some multinational corporations that operated the foreign direct investment projects in the developing countries, as well as for policies used to protect existing industries against the tariff and non-tariff barriers at the national borders of nations.

The small and big the countries want to compete and win profits from the global market arena. Most industrial nations have been working hard to correct the market allocations of their factor goods, either indirectly by influencing relative prices, for example, through subsidies or directly through competitive policy and administrative regulations, directed at price control and/or up-grading quality standards of productions. In some cases, nations may, and in fact do adjust monetary or physical policies (Aaron et al, 1994, 17), in order to influence domestic employment or inflation. The implementation of such a policy by one nation may adversely constrain economic policies and goals set by smaller and poorer nations. From these perspectives, convergence and divergence will somehow, prompt the acquisition of more knowledge, about how state regulatory functions are made to be responsive to paying compensation for the correction of some market failures where and when necessary. Here, it will be enough to state that a divergent differentiation of production in industries of the nation states (Bellak, 1995, 95-97), are therefore causes of policy responses to international competition by governments, so as to protect the nations' specialisation in particular production areas. This stance by national government is necessary in order to protect accumulated experiences in those nations, and for the formation of competitive resources for globalisation.

As indicated with data earlier in this study, and according to the logic that industrialism brings convergence between nations (Wilensky et al, 1985, 9-12), trends in global economic growth and human development particularly in industrial nations are tied to advancement in modern technology. The convergence and divergence perspectives therefore, hold that speciality in high technologies within semi-industrial and developing nation states are limited, probably because industrialisation and economic development place great reliance on science and technology for continuity. Technology is therefore developed in specific areas of competency within a nation's economy, for efficiency of its sector as well as for her competitive advantage. Although high technology is capital intensive and requires highly skilled personnel, its utilisation sometimes, becomes imperative at least in some sectors where the demand for efficiency is mostly needed. Meanwhile, the semi-industrial and the developing nations are still preoccupied in the struggle to build up the educational systems to include research and development in science and technologies, so as to capture the

imperatives of high technology. These are necessary prerequisites on which they intend to build the manufacturing sectors for competitive global economy, and to be able to raise the levels of income, as well as create and fund systems of social security.

3.2.3. The developing nations with low HDI

The countries on low human development indices in the sample represent the developing nations within the study. The countries in this group include Egypt, Zimbabwe, India, Ghana, Cameroon, Kenya, Madagascar, Nigeria, Mauritania, and Chad. India is largely, a traditional agricultural country that has developed highly complex and relatively sophisticated industrial structure and should be regarded as semi-industrialised nation, but the fact that her total GDP and other social indicators are still relatively low had resulted in her present position on the index. India therefore, remains in the category of countries with low human development index. All the nations in this group are referred to as developing, or poor countries. It is this group of countries that is known (Table 18) to be of the lowest rank on levels of human development index. Analytical perspectives on this group focus singularly on Nigeria, as representative of the developing nations. Comments that are syllogistically made on Nigeria as being the representative of the developing nations are generalised and applied to all the other nations under this category, as the case may be. Tables 6 and 14 for example, indicate that in 1980 the GDP per capita (PPP$) for Nigeria was $494, and in 1995 the GDP per capita for Nigeria increased to $832. The GDP per capita (PPP$) for Nigeria by the year 1998 had marginally declined to $795. This decline of the GDP per capita for Nigeria in 1998 could be attributed to fluctuations in her oil industry during the period, but unfortunately not many developing countries produce crude oil for export purposes. Nigeria's life expectancy was also on the increase. In 1980, the life expectancy for Nigeria was 45.9 years. In 1995, the life expectancy for Nigeria increased to 52.2 years; while in 1998 the life expectancy for Nigeria increased further to 53.4 years. From analysis based on these figures, the study found that trends in the growth of GDP per capita reflects improvement in trends and increases in life expectancy between 1980 and 1998. This pattern of incremental growth similarly reflects on all the other developing nations within this study (see Figure 9 C). Data and logic correlate and the study found that convergence, under the promise of the logic of industrialism is hereby fulfilled amongst the group of countries of the developing nations. No convergence is found to exist in years of life expectancy between the developing and the industrial countries, except that all the groups of countries with high, medium, and low human development indices similarly registered increases in growth trends, due to their improvements on the human development index scale.

The perspectives on the history of economies in developing nations portray colonialism as the child of economic development in those countries. The population of the world has doubled from what it used to be during the era of colonisation (Transforming humanity, 1994, 135-136) and the largest share of population growth now occur in developing countries (Table app. 5.2) where more than half of world's

population inhabit. The colonial policy and administration in developing nations, was for the creation and maintenance of conditions that favoured economic interests of the colonising industrial nations in plantations and in extractive industries that were oriented towards primary production of unprocessed export goods for external use. The industries produced nothing that was used within the colonies (MacPherson, 1985, 37-39, 45), and they were managed by the foreign administration. The legacy of colonialism was its enormous influence and control on commodities of the economy, as well as control over issues of social policies in the colonies. But decolonisation (Transforming humanity, 1994, 135-136), has again rewritten the political map for most developing countries. The changes in political power and governance within the newly independent states after independence caused increases in the number of decision making units on global economy, and thus would have required simultaneous integrative transformation of the expanded world economic systems to include its new comers. However, at independence ill-trained and ill-paid civil servants in the developing nations used former colonial instrument of control and regulation to enrich themselves. Presently, most developing nations are increasingly dependent on goods and technologies produced in industrial nations, and they are facing a spectre of increased poverty on mass scale (see Table 21).

The pattern of rural livelihood of the poor (Gutierrez, 1990, 248) whereby a large percentage of families live in rural areas, and depend on agricultural work for survival, suffices for most developing countries. The economic activities of the rural families include the combination of various farm-work, such as raising animals and crops, earn some wages off the farm, involve in handicraft production, construct own local houses, and look for potential petty commercial activities and services to supplement income, sometimes on daily basis. From these perspectives, poverty is seen as the absence of complementary resources with which the workers could utilise for increased productivity, in order to make gains in income that would be significant for some form of savings. The task of development under prevailing levels of income, therefore, was to raise individual income and increase saving-rates, embark on projects with significant capital output ratios, with the hope to accelerate economic and social development processes.

Through the colonial education processes, people in the colonies believed that only market forces would automatically resolve social problems and bring about improved human well-being. When most colonised countries began to gain political independence, concepts of economy and social development process (Sovani, 1985, 139) continued to be misunderstood. The growth output goals were often stated in economic terms. No particular efforts were made by the colonisers to distinguish between favourable or unfavourable social conditions in those countries. No systematic education was given about what development goals ought to be, and how they would improve the social sectors at the time. The policies of the industrial nations indirectly fed the developing countries with false paradigms (Dube, 1990, 43-44), which were not directed to improve the backward economic positions of the poor nations. Without sufficient expertise and financial capital for investment (Razavi, 2001, 1), globalisation is indirectly lessening the likelihood that developing countries

will have the necessary policy autonomy and fiscal capacity to develop and finance comprehensive social policies for their entire population in the near future.

The main economic problems facing the African countries were low productivity, especially in the field of agriculture. This could be developed and sustained in addition to improving the unbalanced economic structures inherited from the colonial regimes. Most economic problems in Africa had persisted through the decades after the Second World War. However, in July 1985 the African countries held a summit (Onitiri, 1988, 25-29), to address the important economic problems for Africa. The summit adopted an African Priority Programme for Economic Recovery (APPER) for the years 1986-1990, and for submission there-after, to the Special Session of the United Nations General Assembly on the critical economic situation facing Africa; presumably in order to gain some form of assistance from the international forum. The resolution drew attention of the UN to the increased volume of Africa's external debt, heavy financial burden for African countries on servicing the debt, and in-depth analyses on identified causes of Africa's economic crises. The APPER drew attention of the special session of the UN General Assembly to the causes of the crises in Africa, shortcomings and problems in domestic economic policies, the collapse of primary commodity prices, the decline in concessional assistance, and the effects of high interest rates on external debt.

Directly and indirectly the APPER provided the constructive framework needed for discussions (Onitiri, 1988, 26-28), and for understanding why assistance was necessarily needed from the developed nations on Africa's economic problems. Through the APPER, the developing countries of Africa called on the Special Session of the United Nations General Assembly for sizeable commitment to a common point of reference, as the basis for mutually agreed responsibilities and co-operation between the African countries and the rest of the international community. Africa's expectations from the international community were not realised, and no commitments were made by the international community to address these important rescue appeals. The African countries then undertook the policy of reforms that included re-ordering of their development priorities, while euphemistically the developed countries would undertake to fill the gap in external resources required to finance the priority programme, as well as removing the external constraints to Africa's development. In other words, the international community recognised the magnitude of Africa's debt problem, and they also became aware that African countries need additional resources to assist her economic and social development efforts to be productive. However, the responses of the developed nations', although sympathetic of the APPER and the important role it has been designated to serve in economic development for African countries, did not make any financial commitment for the implementation of the APPER.

In the light of all the debates, delegates from the African countries wondered whether any kind of commitments from the developed countries, which did not include at least some indicative figures of concessional financial flows, should be taken seriously as long as Africa's economic problems lingers on. Verbal statements and promises by

some of the donor governments of the developed countries sounded more like formal lectures on the virtues of privatisation and free markets, and these exacerbated frustrations and disappointments for the developing countries. The truth of the matter is that real initiatives for the promotion and implementation of the United Nations Programmes for Africa should lie particularly with the African governments themselves (Soedjatmoko, 1989, 227). The stance of the African countries in undertaking the policy of reforms and the re-ordering of their development priorities is in order. The African governments must follow-up these landmarks, and look for alternative ways of resolving the promotion of their national development plans, and the co-ordination of their sectorial programmes (Soedjatmoko, 1989, 228) at sub-regional levels, as the means of strengthening available sub-regional instruments for co-operation. The numerous developing nations may carry little individual weight, but their combined participation in global economy, could influence considerable change in the unfavourable rules within the framework of the global economy. It is however, left to the developing countries themselves to solve their problems (Stokke, 1989, 174; Onitiri, 1988, 35), and achieve increased economic growth that is translated to human well-being and hence over-all national development. From convergence and divergence perspectives on these instances, the differences between developing countries have become more important in many respects than the similarities between them.

The economic interplay of trade at global levels, continue to disfavour most developing countries through unequal terms of trade, inappropriate transfer of technology, misdirected assistance and conditions for the granting of aids, and the processes for repayment of debts. The privileged access to scarce raw material in the developing countries, for the industrial nations on unequal terms, perpetuates dependency relationships (Dube, 1990, 43-44) and leads to continued existence of under-development for the poorest countries. While rich nations have the tendency to benefit more than the poor countries from participation in international trade because of their ability for prompt investment in whatever that yields the greatest financial returns, most developing nations are still trying to strengthen their human resource base, along with setting up social and economic infrastructures. Although such measures can have positive impact on economic and social sectors for favourable international competitiveness (Cornia, 2001, 4), they will not be enough to promote the kind of growth that would reduce poverty under present limitations and rules for access to international markets. The developing countries need is gradual, but selective areas for integration into global economy, recognising that it would be extremely difficult to start economic growth in very backward and under developed economies. The removal of certain obstacles to facilitate the balance of trade, would also involve the removal of broader asymmetries and barriers that have been woven into the democratic structures and governance within the institutions of global markets.

The economy theorists (Oman & Wignaraja, 1991, 15-16) believed that highly unequal distribution of income was necessary in order to make the savings, which would be used for investment and to facilitate economic growth. The general stance of this theory was that the more growth occurs, the more national income would ‘trickle

down' to the lower income strata of the population through market mechanisms of taxation and redistributive subsidy programmes. Under the background of existing economic and social conditions, globalisation were fraught with unequal and unfavourable terms of trade for poor nations, and can hardly contribute significantly to economic growth that is expected to trickle-down benefits to be used for social development in developing nations. What exists in developing nations is increasing polarisation between individuals who amass considerable wealth (Allen, 1989, 124), from the urban and rural poor, in addition to the nation's indebtedness.

The need to develop the rural sectors and to repay debts owed by the developing countries, are increasingly the major problems for many of these countries, especially countries of Sub-Sahara Africa. During the advent of the 'green revolution' production techniques of 1960s and 1970s (Oman & Wignaraja, 1991, 7), and their controversial applicability to conditions of small rural producers, growth was increasingly constrained by severe inefficiencies in local industries, causing considerable dependence on food imports and balance-of-payments deficits. The cost of servicing development aid in developing nations is immense, and could be used by governments in those countries for education and health, where-as aid-donor countries of the industrial nations, often showed very little interest in aiding social and basic health services in other nations.

Most developing countries have begun to realise that their predicaments are worse than those of the industrial nations. International trade policy has subjected the developing countries to unfavourable conditions of becoming sources of cheap raw materials and primary agricultural products for export (Oman & Wignaraja, 1991, 9), and to finance import from the global economy. The poor countries have become aware that they have to face all the similar problems confronting the industrial countries in globalisation, and sooner or later, will finally deal with issues of mass poverty within their own nations. There are no doubts that the developing countries are now working hard to improve upon the in-elastic market economy, which the unequal terms of international trade policy has brought about. The problems that relate to in-ability of social policy to improve the quality of life in developing nations are that social policy has never been simultaneously linked hand in hand with the objectives of economic growth. Low priority had always been given to the objectives of eradicating poverty (Dube, 1990, 38, 50, 66) through the use social policy. Poverty for the developing nations does not consist of one problem. Poverty comprises chains of interrelated problems because their phenomenon is self reinforcing, and leads to low consumption. Low consumption by itself, then leads to poor health, which altogether lead to low productivity. Low productivity contributes to the presence of poverty when the circle is completed.

The under-development and poverty in the developing countries (Stokke, 1989, 174) were at different times seen in terms of the countries' lack of essential factors of development such as the lack of appropriate technology, education, capital, and resources for the health sectors. It is however, known that in most developing countries, financial capital is scarce and competing claims for finance and funding are

enormously huge. The families spend most of their income on food, and cannot afford to pay for additional calorie supply. The factors that generate employment also constitute great problems in many of the developing countries. Although the labour forces in some of these countries are considerably huge (Table app. 5.3), the numbers that constitutes the highly skilled labour force (Table app. 5.35) are only beginning to grow. However, awareness of the need to combat poverty is beginning to emerge from governments, national leaders, and international agencies. For developments within the nation states, investments and economic policy are expected to consider relevant activities that enhance opportunities for populations to participate in productive employment in order to sustain human well-being. They relate to the need for clarity that is required in setting priorities on what the country's best policy options ought to be. They also relate to planning and implementation of appropriate economic and social development objectives. These should be formulated in ways that sufficiently reflect appropriate low cost development programmes that would be responsive to providing basic needs, which would be well spread amongst the poor, and the low income groups within nations.

The level of economic and social achievements in developing countries are low (see Table 18), but it could be said that their developments are improving considerably, when trends in human development indices between 1980 and 1998 are considered. The developing countries must be considered under the background of the many centuries that it took the industrial nations to reach their existing development statuses. Some of the important gains that were made by various nations reflect the fact that people live much longer and healthier lives in our time than ever before. For example, figures for life expectancy in industrial nations, as well as in the developing countries (see Table 6) show impressive increases between 1980 and 1998. Indicators on years of life expectancy for Nigeria showed an increase, which rose from 45.9 years in 1980, to 53.4 years in 1998. Figures for school enrolment at the primary, secondary, and tertiary levels (see Tables app. 5.4 and app. 5.9), also indicate significant increases. The GDP:s for all the developing countries (see Table 14) also indicated trends towards positive increases.

The developing countries are committed to an industrial future (Kerr et al, 1960, 17), and if they must achieve the goals of being industrialised, they must work twice as hard to achieve their objectives. Kerr (1969, 94) stated that in recent times, progress no longer just happens, it is forced to happen. Private Citizens in most developing nations have called in private investors, and have promoted trade and industry. Privatisation and the large scale industries have become specialists in performing many important duties, and have contributed significantly to financial flows to many developing nations. For example, foreign direct investment net inflows in current US Dollars to Nigeria, being the country that represents the developing countries; amounted to $739,699,968 in 1980. In 1995 foreign direct investment net inflows to Nigeria was $1,079,000,064; and in 1998, the foreign direct investment net inflows to Nigeria increased to $1,051,000,000. Many of the developing countries around the globe had received similar financial flows through trade and investments in production between 1980 and 1998 (see Tables app. 5.29, app. 5.30 and app. 5.31).

After the years following independence, most developing countries focussed mainly on planning for industrialisation and capital accumulation, on the conviction that it is the proper way to achieve development. The developing countries therefore, based their development programmes on the patterns found in developed industrial nations. The poor nations had believed that being industrialised is the only sure way by which a country could attain the goals of development, while they still lacked all the necessary high level manpower and technological inputs for efficient functioning (UNIDO, 1984, 212-213) of their industrial production. It was during the 1970s that the excessive emphasis that was placed on industrialisation (Oman & Wignaraja, 1991, 7) was superseded by the focus to invest in agriculture, and the realisation of the need to develop the rural sector in its own right. The progress that was made on this front was significant. For instance, value added to agricultural production for Nigeria amounted to 20.6% of GDP in 1980. In 1995, agricultural production for Nigeria amounted to 31.6% of GDP; and in 1998 growth in the value added to agriculture for Nigeria increased to 31.7% of GDP. Similar pattern of increases in agricultural production were recorded for most developing nations between 1980 and 1998 (see Table app. 5. 34). In these schemes of development planning, the rural sectors began to be seen as the sector that would provide the surplus labour and part of the financial capital required for future investment in industrial development. Considering global imbalances in technology gap between the industrial and the developing countries, pressures toward condemning the developing countries permanently to low technology statuses, must be reviewed and changed in future. Prestigious projects that were formerly given greater priority somehow ought to be reversed (UNDP HDR, 1996, 83).

The goals of economic progress and human well-being are required to be set by national leaders, who in turn, are expected to be committed to those objectives that were set. Putting this into practice may require some adjustments in policies. The ways in which profits from economic growth were re-invested, must be restructured towards priorities of investments on the creation of jobs and on programmes that promote human well-being, so as to benefit the masses of the people. In these respects, breakdown of figures in national budgets should indicate available resources, the best means of meeting up with set priorities and projects, and who the real beneficiaries of the projected allocations are. Viewed from this perspective, the relationships between economy and social sectors have to be improved at the centre, by employing professionals who are economists to formulate policies with professionals of social policy, for economic / social development. Many programs that were designed to meet standards of basic needs which were approved by the United Nations and other world bodies (Midgley, 1995, 135) are never properly financed because many of the developing countries are too poor (Table app. 5.39). The poor countries are also poor in availability of data (Wilensky et al, 1985, 11). Ironically, other Western financial institutions that could help such countries, rather extracted more resources from the countries. These issues had lead to the observation that the developing countries spend less on research for development (Table app. 5.34). The key role of governments in these respects will be to provide policy and regulatory environments to see technological innovations through. They must acquire and borrow sufficient technical

knowledge from the rest of the industrial world. It will be necessary for them to set up research and development studies and acquire some form of competency in science and technology, and to adapt them to the needs of their nations. It is absolutely essential, as well as necessary for governments in the developing countries to invest in science and technology for improvement on all aspects of their nations in the future.

The development and implementation of social policy in many developing countries have not been very satisfactory. Many developing countries lack the political will to restructure their budget priorities (see Haq, 1995, 40-41), and to invest more in education, health, and the provision of various social services, instead of the lavish spending on the military (Table app. 5.38). In the few developing countries where social services are available, they are not funded adequately. However, the level of services that are provided has fallen short of local needs and frequently, available (hospital) services favour urban populations primarily. In many of these countries, ministries and institutions that are responsible for social services, have nothing to do in terms of having official contact with those responsible for planning of the services that being implemented at the grassroots levels. The main objective of any development (whether economic or social), ought to be directed at improving the lives and well-being of the people, including sharpening the society's capability to come to grips with her poor economic situations (Dube, 1990, 62) and to find solutions to the problems of poverty.

3.3. Global economy and social policy for global inter-dependence

Global economy and social policy are still broadening to include the idea of global interdependence, in the satisfaction of basic human needs. There had been growths in both the numbers of independent states across the world, as well as in the membership of nations in international organisations such as the United Nation (UN), the International Monetary Fund (IMF), and so on. The IMF was born in July 1944 (Aaron et al, 1994, 13) with the 44 nations that participated in the Bretton Woods conference, New Hampshire, United States of America (see also Nitsch, 1991, 16-17). The membership of nations in the IMF grew to 118 in 1970, and to 150 during the 1980s. After the collapse of most colonial empires, membership of nations in the IMF (Aaron et al, 1994, 13) grew to 178 by December 1993. Under the auspices of the United Nations, various world nations including the United States of America (USA) and Russia (then known as the Union of Soviet Socialist Republics - USSR), participated in the conference that laid the foundation of world economy that was based on the principles of free trade. The economies of most nations being weakened by Second World War, the World Bank or International Bank for Reconstruction and Development (IBRD) was also born at Bretton Woods (Nitsch, 1991, 16-17). The bank was designed to guarantee for the multilateral corporations the funds for the systems of international free trade, projects, and the promotion of exports. From this perspective, the institutions eventually became preferred sources for governments to borrow money as short time solutions for their financial problems, and gradually the movement of capital became compatible with the system whereby the IMF was transformed from

world central bank to a multilateral credit institution.

It is analogously known that man and woman are interdependent (Unger et al, 1995, 13) precisely for their dissimilarity. The same analogy goes for one nation and the other, or the employers and the employees in various economic settings. Interdependence between nations is more likely to bring about divergence and dissimilarity, than similarity because of world-wide differences in most fields of industrial specialisation and culture. Human beings are fundamentally inter-dependent because civilisation processes entail intensification of human interdependence (Hemerijck et al, 1995, 163). Policies that were once completely domestic, have become issues of international negotiations (Haggard, 1995, 2-3) and the co-ordination of these wider policies, now constitute integration through processes that extend beyond co-ordination of national policies, to the development of wider regional political institutions and policies. In the course of history their mutual interdependencies usually grow more and more complex and intense. Industrialisation, urbanisation, and the creation of states during our times, are part and parcel of increasingly complex interdependencies within the extended global civilisation process. In-depth analysis on these topics and related global issues are conducted under separate headings (see Chapters 4 and 5).

The market economy however, is the strongest force anywhere in the world. The industrial nations had, and will still depend on developing countries for the supply of many important resources (Dube, 1990, 64-66) that made, and continue to make further industrial developments possible. In line with these examples, interdependence may enhance economic competitiveness amongst interdependent nations, and eventually may cause their economic behaviour to become more alike and converge in similarity. Consensus between nations on decisions that qualify as ‘corporate’ (Helander, 1984, 88-89), requires specific precondition which allows various participants to bargain freely, and to arrive at a set of decision-package as solution, whereby every participant in the process claims satisfaction without having winners or losers in the basic decisions that were made. The internal markets of nation states are usually tied to the external markets of world nations at their ports of entry (Kerr 1969, 93). This is the indispensable grip of world economy on globalisation, which un-equivocally forms its backbone for growth and continuity. The industrial nations as well as the developing countries constitute participants in the global economy. Inter-dependently, they operate the elastic markets of world economy. They do all what they do, without necessarily calling it ‘globalisation’. The nations’ inter-dependence on the exchange of their finished industrial products across national borders is considered normal within globalisation processes, as well as perfect by international standards in the global systems for the exchange of goods.

The United Nations Organisation plays an important role in improving the integration of economies with social development objectives throughout the world. The United Nations for instance, had established several research institutions such as the UNDP, the WHO, the UNRISD and so on, in an effort to enlighten all nations on the importance of reconciling relationships between economy and social development

objectives. These organisations convene the participation of experts in numerous educational and research projects, publish educational books and periodicals to enlighten world population on the objectives and importance of various fields of economic and social activities. These activities are expected to broaden in scope beyond the limits that they are known to exist at the present time. Globalisation and economic growth are expected to provide major policy approaches to tackle national and inter-national social problems. The divergent economic and social needs within the global sectors require social policy to give direction to the nations, governments, communities and the individuals (Walker, 1984, 65-69) towards the achievement of social goals. The modern states provide an indispensable framework for social policy and the re-distribution of resources from global economic growth to the poorer nations on principles of global interdependence.

It seems society is being challenged for convergent actions by both governments and individuals regarding global social needs, which can only be addressed (Midgley, 1995, 7) through economic growth and pragmatic policies that are backed by programmes for human well-being. These may call for explicit awareness of the political and ideological nature of economic and social development, during policy formulation stages for the nation. An instance of this is the case of global economic recessions that struck between the 1970s and 1980s (Helleiner, 1994, 4) during which the fall in world market prices brought about protectionism, as well as disorder in the global financial systems of many industrial nations. The economic policies of protectionism in many rich industrial nations were the cause of the overall economic instability and hardship particularly, for the developing nations, due to high interest rates on loans and high oil prices at the time. With increased profits from global economic growth, the policy choices of the central planners in rich industrial nations, must embrace some form of commitment from the point of view of the deprived citizens and the poor nations that do not benefit directly from such accumulated profits of the global economy.

The dominant processes underpinning globalisation is the concept of economic growth, which is tied to the processes of development rather than concepts that capture issues of human well-being, and the need for investments in human resource development as well. The important negative outcome of using concepts of economic growth alone for the processes of development, are the various forms of global in-equality which presently dominate international protests and social politics. The vast complexity of options within global economy and the deeper international economic integration that is required (Gray, 1999, 139-143), increases compulsion on governments to use policy, as instruments and means by which she could benefit, as well as reduce the cost of involvement in globalisation. Where-as politics and policies differ across nations, it has to be recognised that social policy is still the only means by which societies could collectively attain meaningful changes in their objectives to improve human well-being. International politics on development are built on concepts of economic growth, which indirectly call on social policy to adopt new approaches for the problems of translating benefits from economic growth to human dimensions of development, and to fend for global human well-being.

The human needs and the wider networks of social relationships and moral expectations (Dower, 1983, 86-87), stand between one nation towards another, as well as with the vast majority of the other world nations. The advocates for the satisfaction of human needs, the concern for human well-being, and their welfare, are not just focussed on relationships with those individuals whom one has direct dealings with, but do have an explicit social morality and specifically, do have concern for solutions to the problems of world poverty. Some of these advocates on how the human needs can be satisfied, argue in favour of simple life styles, simpler technologies, organic farming methods, and so on, which are not relevant just to their own lives, but have useful application to the problems of poverty in distant countries around the globe, particularly in the developing countries.

The instances of two nations possessing identical resources and cultural backgrounds, but industrialising at different speeds and periods of time (Kerr et al, 1960, 236) would be expected to develop industrial relation systems that are completely different from each other. However, the opposite was identified to be the case because cultural patterns intermingle and converge. The resultant levels of economic development could be related to differences in demographic structures, which are also important in explaining, for example, the differences in social programmes initiated by governments across those nation states. It has also been a widely shared view that global interdependence was mainly initiated by the industrial nations for economic reasons. But at the beginning of the new millennium, it seems that world nations are beginning to en-route the process of coming together (the examples of the European Union suffixes), and to solve economic and social problems collectively. The time has therefore come for the use of this same forum created by global inter-dependent processes, to satisfy global economic and human development needs of both the industrial and the developing nations, and thereby make the world to be free from hunger and become more secured.

The inter-actions between domestic and external affairs (Merle, 1978, 75-76) may result in convergence of demands that are made by two systems. For the nation state, this may mean convergence of domestic and external demands. It could also be the integration of the demands of one system, into the terms of the other. These two propositions obviously seem to aim at adjusting domestic policy to fit with foreign policy. Under these situations, political parties will work best either to modify the international environment so as to accept domestic demands, or change the domestic environment to accommodate constraints imposed by external factors. Changes are bound to occur within the systems of interactions between domestic policy and foreign policy of the nations, which would be most efficiently handled by leading political parties and policy makers in the nations.

The developmentalists' policies are concerned with the situation of the world's poor, now. They insist that poor nations need all the economic growth they can achieve in the use of their resources, but the environmentalists are concerned with our future, our children's, and therefore, advocate for the control of material consumption, control in the use of natural resources and/or energy. The environmentalists focus on population

explosion as a main cause of global problems and emphasize birth control programmes; while developmentalists see Western affluence as wasteful priorities and attitudes to development schemes, and therefore regard them as main causes of global problems. Within the differences and similarities of these approaches to achieve good livelihood, both views express the need to live in harmony with one's ecological milieu and be less wasteful, less polluting, and less bound by the assumptions of the affluence. Moreover, both the developmentalists and the environmentalists agree on a common policy that technologies need to be appropriate for genuine social needs (Dower, 1983, 83-85), whether in the industrial or the developing countries. They also agree that greater control ought to be given over the activities of multinational companies in the exploitation of both human and natural resources. The industrial and the developing nations need critical appraisal of types of technologies that are appropriate for development, and for what ever specific purposes the technologies need to be developed or used for.

The global issues of scientific knowledge and modern technologies, which had been substantially accumulated over a long period of time, will be useful for the entire human race, and must be applied as investments in human beings in order to enhance individual and collective human well-being. The diffusion of knowledge by one nation (Aaron et al, 1994, 15) makes the knowledge available for utilisation by another nation free of charge. The social and economic aspects of benefits in the use of new technologies in small scale traditional production are that they form improved ways of producing the things, and contribute to improvements in the living conditions of the bulk of populations in developing countries. In this sense, conventional ways of producing the same articles could now be done more efficiently. Such improvements may reduce the technology gap (Bhalla & James, 1988, 287-288) between the modern and the traditional sectors, and are likely to add benefits to wider segments of the local community living in remote rural areas of the developing countries.

Social policy could therefore direct the emerging concepts of human well-being to be responsive to the meaning of global interdependence, and thereby satisfy human needs. This study accepts that the adoption of social policy measures in translating the gains from economic growth, towards promoting education, public health, and equity, would generate social progress and longer life expectancy, higher economic growth, and sustain more stable macro economy for the nations. In the future, heads of states in various nations, through international consensus, could use policy statements of their individual nation states, to control systems and give direction on the emerging concepts of human well-being and global interdependence. In practice, this would involve head of states taking global control in the years to come, and giving attention and direction on issues of human well-being in global economy.

4. THE STATE, GLOBAL ECONOMIC GROWTH, AND HUMAN WELL-BEING: IN-DEPTH ANALYSIS I

The analysis of convergence and divergence in global economy and social development policy on rich and poor countries will not be completely coherent without inclusive perspectives on the intermediations and contributions of the state, as a platform on which gains from economic growth are transformed into instruments of social policy. The state serves the intermediary functions of transforming benefits from economic growth for onward improvements on human resources and the sustenance of human well-being within the social sectors. Here, the concept 'state' refers to a self-governing community that is organised politically with the apparatus of governance within the territory in which the sovereign power exists, and deals with other nations as a unity. This concept of the modern state (Minogue, 1985, 818-820), embodies the notion of a state as being a centralised entity that is organised under civil rules and legislative laws, with own constitution, customs, and currency, and is distinguished with national languages and flags as a symbol of unity.

The decision making processes in the states have prompted the brief review of concepts of the development of bureaucracies. The transformation of benefits from economic growth within all modern states, make use of bureaucracies and other instruments of power and control, for the implementation of decisions. It is therefore noteworthy that decision making in state bureaucracies are the responsibilities of politicians, who employ and commit planners to the services of planning courses of actions, as well as indicating the means for attaining the implementation of goals set on behalf of the state. Bureaucracy therefore, is a powerful instrument (Zeitlin, 1987, 156-160), which facilitates the control of large numbers of people. Once bureaucratic structures are established, they are practically indestructible. Prime ministers, judges, policy makers, and so on, are state decision makers and bureaucrats (although supposedly impersonal), their operating routines, predisposition, and values affect the quality of performances in the state (and same applies to private organisations). On behalf of the state (or the private organisation, as the case may be), the bureaucrats accept or reject applications, implement or execute public programmes, and/or sentence or free individual culprits, as final decisions that form the range of public policy.

Bureaucratic structures have evolved in the course of history, as weapons to alter inefficiencies of economic and social structures of the society, and to integrate political motives with broad values for the administration of public policies. In all these instances, the state, in order to protect all her citizens and career executives, is therefore, organised in bureaucracies that represent the ideal structures for repetitive decision making processes of applying predetermined rules to similar cases on prompt and impartial solutions to problems within the sovereignty of the state. The relationship between politics and public administration is that the political systems must first enlist and train the public administrators on the expertise of implementing

public decisions and programmes. The official roles of experts in public administration (for example, the duties of tax collection) are therefore, not rewarded directly with benefits from such transactions. All state officials are dependent on the sovereign state for salaries, which are paid on behalf of the work they do.

Officialdom in all systems of governance are based on executive powers of the state which are shared by two categories of executives, namely, the political executive and the salaried expert as career executive. Political executives are accountable to, and are controlled by the legislature and the tax-paying citizens that opt for desired changes in public preferences, while career executives remain the technical advisers and/or assistants to the political executives. The growth of bureaucracy and the powers that are vested in it, the social control and the discipline it facilitates, the specialisation of work and the accompanying requirements on expertise that it demands (Zeitlin, 1987, 156-160), all contribute to make the dismantling of a bureaucracy an extremely difficult exercise. With the change of every government, the career executives or administrators are not affected by similar changes, but that is the case with their elected counterparts who are so directly affected by the changes.

Under circumstances induced by global economic growth syndrome, the state has increasingly become committed to arbiter and care for all her citizens through her status of being the biggest single employer (Kerr et al, 1960, 273, 286). As society becomes more diversified, the state assumes new duties and therefore remains an important instrument in co-ordinating and controlling ways in which economic development affects citizens in the nation, by virtue of the powers invested in her to use public funds and welfare resources for human well-being. From these perspectives, the state has been given the responsibility of assessing the general rate of growth in the nation and for the protection of her national economic interests, the settlement of conflicts and hence, the state assumes the responsibility for the distribution of resources and power in the society. Furthermore, the state provides employment and social security, regulates and/or settles industrial labour conflicts, redistributes wealth, penetrates into the internal activities of organisations and attempts to guarantee equity of treatment and hence, guarantees opportunities for the participation of every individual in her economic systems.

The most important roles of the states in market economy during late twentieth century (Martinelli & Smelser, 1990, 33) are directed towards ameliorating and eliminating imbalances and injustices in global capitalist market economy. Most governments left the main institutional structures and mechanisms of the capitalist market open to participants, but often influenced the conditions of demand and supply through monetary policy (that is, interest rate regulation and the regulation of money supply), and the fiscal policy (that is, progressive taxation, transfer payments, and public works). The governments' interventions in the economy are also directed towards easing chronic imperfection of cartels (through legislation, agency monitoring, and/or direct government action such as monopoly break-up) in order to restore the mechanisms of the markets. Usually, governments are allowed to intervene in the

markets (Lim, 1996, 30), but only to do so by strengthening it, and not to replace it.

In these instances, the state remains an important part of the economy. In most nations (capitalist or socialist), the state has therefore become the source of market intervention and works to provide safe environment for both legal and administrative security that are conducive for carrying out domestic, as well as global economic activities of all her citizens. The state has the responsibility to provide the educational goods and services (Table app. 5.11) that are required in operating almost everything in the economy (Martinelli & Smelser, 1990, 42-43). In recent times, the state has emerged as the major producer of infrastructures such as the highway system, sewage system, the postal system, and the state is inevitably, the central actor in defence and national security in every nation. However, the state may be the largest consumer of goods and services in the society, but certainly state employees (see Table app. 5.3) are an important part of every nation's labour force, whether in the industrial or in the developing nations.

The state regulates her national economy by influencing the demand and redistribution of income through taxation policies, and the transfer of payments as had been indicated elsewhere in this paper. The state plays the important roles of stabilising her market processes (with varying degrees of successes), while she fosters economic growth through allowing competitions in her society. The state is the guarantor of legitimacy of the specie, the regulator of the value of her nation's currency, and the controller of inflation in her nation. The state establishes price policy control-instrument (Helander, 1984, 86-87) by setting up a National Board of Trade and Consumer Interest within the nation, which are structured to be exclusively responsive to the corporate terms of the participating actors. The state settles economic and other conflicts between social classes or interest groups within her society. The state expands and takes over many of the cultural and ideological functions that relate to her nation's economic life, as well as control the economies that had been the province of her educationists, intellectuals, ideologists and religious leaders (Martinelli & Smelser, 1990, 43). Cultural and ideological roles of the state are important components in her economically relevant matters such as the generating and sustaining motivations in her labour force, defining priorities between her economy and other social goals, and securing the legitimacy of competing economic interests of groups, and classes, within her nation, and between the other states.

Nowhere is the economic role of the state more critical than within spheres that are related to international market arena. Minimally but necessarily, the state is per force involved in international affairs because the state is required in honouring or negotiating trade deficits between her nation and the global arena, while she remains the guarantor of the nation's money. The state is therefore legally responsible for the integrity of her currency, and has always maintained interest in, if not control of the banks, including their international operations. Present global economy requires more active state control in countries that are involved in cross border trade (Martinelli & Smelser, 1990, 44-45), because it has become progressively less possible to regard

transactions between individuals and groups in different societies, without the involvement of the states in those activities. Finally, the states have become the agents that enforce tariffs and other taxes, as well as enter into trade agreements with other nations.

The structure of global production systems, has changed significantly from what it had been in the past. Present global production systems are characterised by world-wide division of labour amongst individuals and firms, and the new situations affect world countries in diverse ways. The recent changes make it possible for multinational enterprises to be able to transfer huge resources easily between different locations and across national borders (Stöhr, 1990, 24-25), and to create the links of interdependencies in everything else between their citizens, and those of the other nations. Concepts of development have therefore broadened from economy, to include cultural, social, political and environmental aspects, as the results of fresh developments within the spheres of recent technologies in communication systems that facilitate the ability of entrepreneurial organisation to transfer large amount or resources across national borders.

The relative autonomy of both the state and state systems is fast becoming over-shadowed by the present nature of the logic of industrialism, whereby the need for world capitalism and world corporate-capitalist structures integrate with diverse economies and markets into one large global market-system of finance and management, seems eminent. Multinational corporations have emerged as dominant structures within which fiscal modelling of the economy, capital accumulation, technological development, scientific research, and social development take place under the imperatives of capitalism. Present evolution of the economy within the multi-national corporation (Kothari, 1993, 34-37), represents significant mutation in former structures of economic and social institutions for human development, and these, to a large extent, undermine the influence of the state in diverse ways. Most national governments are not able to manage the restructuring of their local finance problems to be secured enough, and to be able to cope with the wider global structures, due to their ‘weak’ economies (Stöhr, 1990, 21-23). These individual nations therefore, cannot affect desired changes in restructuring larger international economic structures and processes within world division of labour, which are currently dominated by large financial institutions and multinational enterprises.

While world-wide trade and global divison of labour develop within national borders (Giersch, 1991, 104-105), it has become a known fact that participants in globalisation derive enormous benefits from the concentration of production on those goods and services, which they can produce and export to make the most of profits. Within same national borders, participants in globalisation also import other goods and services in return, which they cannot produce cheaply by themselves. The interplay of exports and imports in trade during the period between 1950 and 1992, caused world income to increase from $4 trillion to $23 trillion (UNDP HDR, 1995, 14). This increase could be attributed to the active participation of worlds’ nations in globalisation, and are

substantiated with the facts that by 1980 Finland, as an industrial nation, achieved 69.0% of her GDP as gain through global trade. In 1995, Finland's gain from global trade increased to 71.7% of her GDP, and in 1998 the gain for Finland from international trade was 69.2% of her GDP per capita (see Table app. 5.29). At the same time period, Brazil as a semi-industrial nation gained 9.1% of her GDP from international trade. In 1995, the gain for Brazil from international trade was 9.2%, and in 1998, the gain for Brazil from international trade was 9.9% of her GDP per capita. Nigeria, as a developing nation gained 115.6% of her GDP in 1980 from international trade probably because of the boom in her oil industry during the period. In 1995, the gain for Nigeria from international trade was 21.9%; while in the year 1998 Nigeria gained 18.9% of her GDP per capita from international trade. All countries in the sample (see Table app. 5.29) indicated increases in gains through participation in globalisation. Table app. 5.29 also indicate that world nations that participated in global economy, had benefited from the trade. This finding confirms that global economic structures and growth rates had improved from what it used to be immediately after the Second World War and during 1950s.

More than three-fourth of world's people live in semi-industrial and developing countries (see Table app. 5.2), but these greater numbers of world's population share only 16% of the world's income (UNDP HDR, 1995, 15). The worse-off Southern population of the world depend mainly on agriculture (Table app. 5.32) and are not sophisticated in industrial production, but has per capita income that is mere 6% of the North's. Within the past decades, the contribution of agricultural products to GDP per capita for both low income and middle income group of countries are significant. The Table app. 5.28 within our sample; indicate the chronology by which most countries' per capita income rates increased. Although some group of countries had performed better than the others in economic growth, and in other social development indices (Figure 9 C, and for the growth of Group's GDP per capita index, Table 21), most countries had registered impressive economic growth figures over the years. These vast increases in per capita terms indicate that world's economic growth rate had more than tripled in just a few decades after the Second World War.

It has been a long standing assumption under development theories, that higher GDP would lead to higher national income for citizens (UNDP HDR, 1995, 14), and would extend benefits to all citizens in a nation through the trickling down effect. Here, it is observed that the rate of increases in GDP per capita in world countries, is not without other serious but important implications, in as much as the assumption distracts and misdirects attention from important human factors of development, to the adoption of strategies of economic development alone. More-over, macro-economic policies can be sound in balancing budgets, keeping inflation low, and accepting the balance of financial power (Elson, 2001, 5), but same policies can be quite unsound if they destroy human capabilities, and cause people to lose their paid employment or assess to public benefits due to the higher standards which impinges through globalisation.

Poverty and social inequality between nations may occur as the result of unequal terms

of trade within, and between nations (see Chapters 5.1 and 5.2). Social policy is both emancipatory, and the pre-condition for economic efficiency (Esping-Andersen, 1990, 12), because workers must be healthy and educated in order to be able to participate effectively in public institutions. Ill-conceived assumptions had led many governments and scholars of economy and social policy to address development programmes to the mass of society, instead of addressing particular programmes to specific disprivileged sections of needy population in society. These problems transgress international frontiers to constitute global problems, such that trigger mass migration and/or immigration to where the economy and social conditions are favourable. If the state has become an important instrument in controlling the ways in which economic growth and welfare resources are translated for the purposes of improving human well-being, it remains to be ascertained the extent to which governments are concerned about the eradication of inequality and/or poverty in their nations.

Many states are older and have developed their human, financial, and other competitive resources better than others. The developed states are assumed to be richer and economically more powerful than the other weaker and poorer new states. Global policy convergence and/or divergence are derived through the means by which economic growth is translated into human well-being, which of course, are likely to differ between nations and between policy fields of a nation, because the economies, as well as social policy-priorities of nations also differ. The existence of the United Nations Organisation however is essential in balancing the political powers of states that are big and small, so that all human beings everywhere in the world can live more like citizens of the same planet earth. These assumptions follow the consideration that human beings (Sen, 1994, 19-21) also differ from each other in their external characteristics and circumstances, due to the fact that they begin life with different endowments of inherited wealth and liabilities. Human beings are also known to differ in their personal characteristics such as age, sex, physical and mental abilities, while at the same time different societies offer different opportunities as to what can, or cannot be done. All these differences should be considered important in assessing inequality amongst human beings and between nations, because these are characteristics that directly and indirectly affect health and human well-being in the various nations. Here, divergence (rather than convergence) should be considered as paramount in translating economic growth surpluses into human well-being in individual nations, and more importantly therefore, must reflect policy options in the nation states.

The mechanisms of convergence, as well as the various approaches to economic policy (Unger et al, 1995, 7-8), have relevant outcomes for both the domestic economy, and their global counterparts. For example, the convergence of factor prices (that is, wages and interest rates) and the prices of goods are expected to merge as a result of policy on international trade, and the political enforcement that are necessary for their implementation and operation. With the influence of expanding industrialisation and gains in world markets, convergence in policies for economic growth, may indicate that Western polities (Hemerijck et al, 1995, 151), may gradually accept more state intervention on policy issues within their market economies. This view supportively

reflects Esping-Andersen's (1990, 15) contention, which stated that, for the economy to survive, it must be embedded within the fabrics of the social communities.

The role of the state under these limitations is the translation of gains from economic growth to human well-being within its national boundaries, but levels of the nations' economic growth limit the extent to which this can be done. Obviously, the problems call on social policy for solutions. Here, the basic role of social policy (George, 1983, 22-23) has always been to encourage economic growth through improvements in education and the provision of competent labour force, facilitate the mobility of the industry, and encourage production through increased consumption. All these mean that the state will make use of its national social policy to encourage economic growth, and to translate its benefits to human well-being within its national boundaries. With divergent economic and social policies in nations, states achieve similar results in their translation of economic benefits to human well-being through income redistributive-mechanisms that operate through budget allocations, progressive taxation, and other government expenditure policies. Poverty and inequality therefore, may affect certain national economies, as well as other social sectors of a nation, more than the other.

Thus, the wage bargaining policies are not only allocative but could also be an important instrument for resource redistribution, as long as it facilitates redistribution through wages, as well as facilitating improvements in the equitably provision of education, health facilities and all public goods for public consumption and for the well-being of her poorer population. Indirectly, the policy on improving the labour force and for bargaining on wages, also determines the redistribution of resources as benefits to all members of the nation.

4.1. Economic growth, human well-being, and development

Industrialisation has been accompanied by global economic growth, but the idea that global economic growth has not contributed sufficiently to human well-being in the social sectors, kept researchers examining the extent to which globalisation of the industry and economic growth had contributed to improvement and development of the human being. In this direction, the application of convergence and divergence perspectives in debates shifts the narrow focus on national systems alone, to include broadly based perspectives across national borders with regards to the general effects of global economic arrangements that human beings in various nations make for improvement on well-being.

Crucial to industrialisation and economic growth, are issues of export trade across national borders with its crutches on globalisation on one hand, and the impacts of economic gains on human populations and well-being, on the other hand. These two factors act as forces that trigger world-wide trends, which also have become inseparable in discussions of economic growth and human well-being due to numerous forms of other interactions that take place between human being and the ever-

advancing sophistication in modern technology. Here, human well-being and capabilities that contribute to improvements in technology and economic growth are primarily ends in themselves, while economic growth becomes the means for furthering the expansion of human capabilities. In these views, the logic of industrialism (see chapter 1) requires that workers in modern industries must be literate, and that they need competency in numeric and work disciplines learned at least, in primary or lower secondary school levels.

It is important to re-assert that human well-being and development are issues that relate to improvement in the satisfaction of human needs, which would eventually result in improvements on the quality of life and well-being (see hypotheses in Chapter 1.2.2 above). The resources and options that are available in the nation for the translation to social progress are made possible through increases in economic growth, while social progress reciprocates by creating conducive environment for the continuity of economic growth. The convergence hypothesis in this study promises that smooth and automatic adjustments (convergence) would result from economic activities, as consequence of economic policies (Unger et al, 1995, 8) converging especially in their uniformity or similarity within the incentives of economic growth around the world. Current development paradigm in the social spheres are seen in the extent to which society has improved the quality of lives in its population as indicated by human development indices (Table 17) through performances and growth in the economy, for further translation and improvement in the social sectors. This concept of social development policy sees economic growth as the means for bringing about increases in human resources that culminate to growth in human development and well-being. The scope of this new concept has therefore become more comprehensive than the ideals embodied solely in those of economic development alone. Chang (2001, 20) explains that although social policy measures have come under strain due to changing national and international circumstances in recent times, social policy must remain an essential ingredient to move any development strategy forward.

Industrial-relations systems reflect significant diversity that is derived from their historical inception (Kerr et al, 1960, 235; Furtado, 1983, 2; Martinelli & Smelser, 1990, 2-4), because each country is presumed to have embarked on industrial production system from different degrees of economic backwardness. The differences in the economy between the various nations reflect the different levels in the stages of embarkation on industrialisation, and these affect the speeds of the nations' economic and social development. However, the endless political and economic demonstrations and protests by disprivileged sections of the populations in the industrial world (Kerr et al, 1960, 7; Martinelli & Smelser, 1990, 2) have not disappeared. The demonstrations and protests rather, took new forms of convergence in favour of constant demands for the adoption of sweeping changes both in economic and the social spheres. The modern public outrages and protests call for more and more changes and improvements (see Furtado, 1983, 2) on already divergent economic arrangements, which men and women operate in getting about their daily lives and improving their well-being.

The career leaders at the national levels establish rules for governance that is similar to those found in other modern nations. The global markets as a system, affect the human population of various sovereign nations directly and indirectly, through identical national and international interests for their participation in global economic activities. The workers in industrial societies therefore organise themselves in trade unions, in order to protect their interests and improve their economic and social conditions, but their efforts are limited by rules that are usually based on country specific domestic arrangements in dealing with the global market. Some governments impose strict conditions on the rules that guide the activities of the Trade unions, as well as specifying ways in which workers' protests are managed and controlled. Trade unionism, industrial protests and demonstrations place in check the limits of negative impacts in global market systems as they relate to various working populations in different sovereign nations. The protection and the well-being of the workers in modern states, keep the work force fit at work, and therefore more able to satisfy the demands of consumers in ways that are consistent with people's interests in global economy. Economic development therefore, tend to have triggered convergence in the ways countries with different cultural and political traditions (Wilensky et al, 1985, 9-12) have become more similar in their strategies for constructing levels of their basic programmes alike for economic and social protection, and increasingly extending coverage over time to those who were not previously protected.

The Welfare State is a product of converging logic of increased social interdependence (Hemerijck et al, 1995, 163). The policies and the social institutions of the welfare state invariably seem to be converging under these imperatives of more and more need for the security of citizens in the industrial nations. In line with the logic of industrialism, it has become the responsibility of governments and the managers in states (Kerr et al, 1960, 180-181) to guarantee the welfare security of the industrial man. The systems have thus come face to face with the problems of how to facilitate the translation of accumulated economic growth surpluses into human well-being, and hence, to facilitate the eradication of global poverty. The protests of recent times therefore, occur with diverse reasons in most world countries, and in accordance to the problems that manifest in them. The protests have persisted in favour of sustaining the logic of industrialism in an increasingly democratic world. Certainly the protests continue to converge in similarity, and their patterns are identical to the industrial societies.

So far, this study has illustrated and substantiated with data showing that since the Second World War, significant improvement and development had been accomplished both in the industrial, and the developing nations alike. Data confirms that many developing countries have expanded their role in global economy, while others have doubled their share of foreign direct investment within the last decade (see Tables app. 5.30 and app. 5.31). The women in most developing countries, have also begun to participate in paid employment of the labour markets (Table app. 5.35), which was almost impossible in many countries a few decades ago. The medium and low income groups of economies have begun to increase their trade in the global arena (see Table

app. 5.29), and are trying to include manufactured goods as part of their export consignments. While investments may be viewed within the wider contexts of contributing to the development and growth of the industry (UNIDO, Secretariat of, 1984, 57), it also provides the financial resources which the processes in social policy could use in directing welfare benefits to the social sectors. Within the global economy, people in many nations have begun to have better standards of living, better education, higher incomes, more access to health care, and access to social services and so on, through economic growth (see Chapter 3). Many developing countries have improved their standards of education, increased their access to health care, provided better housing and clean drinking water, and also improved the sanitation of their environments. More people now live longer lives due to improvements in the social sectors, and hence better life expectancy indices (Table 19) than immediately after World War II.

Economic theory accepts that profit is income received as the result of an exchange. Under capitalism, income is received in exchange for contributions to production in the form of wages and salaries, in return for labour and services which they rendered. The private owners of the capital control the supply factor of production that is made available to employees, in return for an income for their services (Lessnoff, 1974, 162). Other forms of profit as income, are received in return for the supply of capital. For the poor countries, the inflows of foreign direct investment are highly cherished, and have been an ongoing process for decades. This form of investment has been extended to all countries in our global sample (see Tables app. 5.30. and app. 5.31.). Foreign direct investment provides fresh capitals and higher levels of technology, particularly for industrial production and economic development in many of the poor countries. These had contributed enormously to raising the material levels of overall income and to other income through profits from the markets, as well as to wages for workers in various countries where such production facilities are located. They had also increased economic growth for domestic consumption, hence it can be asserted that globalisation of the industry and international trade have contributed significantly to raising the general standards of living within countries that are participating in globalisation. The growth of GDP per capita in most world countries between 1980 and 1998 (Tables 14, 21, and app. 5.27), had also increased through global economic activities, and these confirm that significant improvement and development had been accomplished both in the industrial, and the developing nations.

The issues of equality and the reduction of poverty through public policy in nations, therefore depends on the levels of economic growth that has been achieved in the national economy, and the level of governments' commitment to improve social policy. Growth within the economy is important in several ways. Some of the reasons why growth becomes essential for an economy (for example, Giersch, 1991, 39-40) are as follow: Growth, when anticipated through moderate wages takes the form of employment intensive strategies in the community, and thereby reduces poverty that is caused by joblessness. Growth through industrial productivity raises income and hopes for the future, while it raised the hope that the disadvantaged will attain higher

standard of living more quickly than under stagnation. Steady growth in income and wealth makes it easier for individuals to save for the future, in order to protect their living standards. Growth and income allow society to spend more on the social sectors, and towards the relief of absolute poverty in the nation.

Growth of the national economy from the corporatist point of view holds that redistributive taxes indeed have negative side-effects on the motivation level, the division of labour, the allocation of resources, and capital accumulation. The view sees redistributive taxes as impairing the attractiveness of investible funds to locations where they may be needed (Giersch, 1991, 39-40). Thus, this point of view envisages that such taxes may cause cross border migration of the labour force, because many of the poor may become dependent on relief, while others may become illusioned in not working hard to avoid poverty. The relief itself may attract recipients, including foreigners from abroad, who may pretend to seek asylum through various kinds of sweet tales of political instability in their countries of origin. These critics on corporatism and world-wide competitive capital markets also assume that redistribution of economic growth benefits to the poor may impair economic growth, and therefore, tend to push arguments for redistribution into the background. However, redistribution in the form of translating economic growth benefits through facilitating increased access to education, health, and housing facilities to the poor (Peacock, 1997, 68), are justified on the grounds that investment in human capital holds the promise of reducing the incidence of poverty on the long run.

The concept of development, amongst others (Stoltenberg, 1989, 233-234), include the need for the provision of food, clothing, shelter, and jobs that are usually provided through social policy of governments, and in ways that do not compromise the ability of future generations to meet their own basic and higher needs. In this direction, some critical objectives such as improved quality of economic growth, meeting essential needs for jobs, food, energy, water and sanitation, as well as ensuring for sustainable levels of population growth, are all implied within growth policy. The realisation of these afore-mentioned developments will also mean achieving success in conserving and enhancing the resource base of the nation, as primary objective. The main national technologies must be adapted to the developmental and environmental needs of the nation. The decision making processes on international aspects of the national economy, its development, and all the essential issues on environmental protection, therefore require closer co-ordination between the sectors.

4.2. Convergence, divergence, and economic policy

Five decades after the Second World War, economic growth strategies of the global markets have favoured some countries more than others, while many nations remain poor under convergent and divergent policies of the various nations. Economic and social policy goals that were previously pursued, and the strategies for development that were adopted by the industrial, semi-industrial, and most developing countries,

have come under scrutiny (UNDP HDR, 1995, 14) because poverty has become wide spread amongst the developing nations (Table 14). Most of the poverty stricken countries are found particularly amongst regions of Asia, the Latin America, and Africa south of the Sahara. Razavi (2001, 1) states that peoples' renewed interest in social policy and rights-based development have been rekindled due to the fact that global economic policies tended to depress growth with resultant poverty and inequality within, and between countries. There seem to be urgent need for action to be taken in rectifying and/or reconciling the goals and strategies for global economy, with those of social policy for human well-being. It seems that social policy is also the main area through which solutions to improve global economy and social development, as well as solutions to world poverty would be found.

Most nations in the world are now independent. Through one way or the other, they participate in the pursuance of global economic growth, which are driven by industrialisation processes. Convergence thesis argues that the development of economics and technology (Brewster & Tyson, 1992, 3-5) are creating a world wherein most societies have watches, radios, televisions, automobile, and so on; and therefore become less differentiated. This is so because the global trading activities of the multinational corporations that are situated in most world countries are increasingly similar through activities of the corporations, although the multinational corporations themselves benefit more from the international trade than the host developing nations. To the extent that facts support theses of convergence, it is postulated that as business *vis-à-vis* industries become more alike, societies will be more alike in those nations. The problem remains that while industrial nations get richer through these global activities, their developing counterparts become alienated and left to fall below acceptable world poverty criteria.

Progress on the development of the private sectors has been retarded by policies which reduced levels of competitiveness directly. For example, real exchange rates of some countries (Lim, 1996, 25-26) have been kept too high because government policy was focussed on targeting national price stability rather than competitiveness in global economy. These sorts of regulations and procedures are domestic strategies that are intrinsically designed by national governments to control and protect non-competitive production factors, rather than promote fresh investments. In these instances, domestic industrial and trade policies protect internal production processes against complex licensing systems and competitive forces from outside, while on the other hand, domestic workers and consumers may lose in terms of achieving more growth from competitive global economy.

Problems of inequality of income had continued to expand both at national and global levels. Many developing countries have become less integrated with world economy. The cross border economic integration and national political sovereignty (Aaron et al, 1994, 14), have increasingly come into conflict with the political structures of the world, due to the fact that the domains of economic markets have come to coincide less and less with national governmental jurisdictions and control. More-over, the

present form of global economy does not portray the lack of economic development, but that no matter how hard people work in poor nations, the vast majority of her population remain poor in the midst of global affluence. These assertions are substantiated with the fact that the average group GDP per capita income for the industrial nations was $9837 in 1980; $21922 in 1995; and $23043 in 1998. The average group GDP per capita income for semi-industrial nations was $4318 in 1980; $7559 in 1995; and $7978 in 1998; while the average group GDP per capita income for the developing nations was $821 in 1980; $1532 in 1995; and $1595 in 1998 (see Table 21). Here, the study found that the average group GDP per capita income for the developing nations was 12 times less than the average group GDP per capita income for the industrial nations in 1980; 14.3 times less in 1995; and 14.45 times less in 1998. Furthermore, the study found that trends in the growth of income also indicate an increase in the income-gap between the industrial and the developing nations. Economic progress and development had failed to deliver prosperity, or extend the benefits of economic growth to the poor sectors of the population, particularly in developing nations. More and more citizens of the nation states, more than ever before, are deprived through exclusion from participation in global economy (Midgley, 1995, 157), whereas this seem to be the only important means of improving their well-being. Myrdal (1970, 278) wrote as follows: quote "… International in-equality of income has been increasing for a long time and is still increasing. After the avalanche of the liquidation of the colonial power structure since the end of the Second World War, this development toward increasing in-equality has become an ever more pressing concern in international politics..." unquote. (Quoted in; Myrdal, 1970, 278).

In every nation, men and women want progress. They also want to participate in acquiring better education, better health, as well as being able to purchase the goods and services, which their time has to offer. Within limits of human efforts to achieve these aspirations, education and good health have been identified as major inputs for the attainment of success in achieving other aspirations on economic and social goals. The logic of industrialism however, requires the populations to be literate in order to receive instructions, follow directives at work places, keep records, and operate instruments of high technologies. The industrial society and modern production systems require the availability of teachers, university professors, scientists, managers, engineers, civil servants, doctors, lawyers and all levels of workers to operate efficiently. In all these, good health is primarily required in achieving all other objectives. More-over, other policy sectors can constitute some form of implications for social policy (OECD New Orientation for social policy, 1994, 52), when goals between economic and social developments compete for resources. From these perspectives, the study re-asserts that social policy must aspire to affect employment, education, health, and other provisions within policy domains equally. For example, successful social policy on public health services aspires to reduce rates of diseases and death, increase life expectancy and thereby contribute to the economy (Coe, 1970, 366-367). A healthy society is both an active society for man's capacity to love one another, do creative work (Fromm 1991, 72-73), and participate in industrial production for economic growth of the nations. On the other side of the coin, poverty

breeds a culture of its own. Dube (1990, 86) charted the concept of culture of poverty, and claimed that the following features are always present and nearly universal wherever poverty exists. He stated that 'in poverty culture' life expectancy is relatively low, death rates are high, the proportion of younger age group is higher, both children and women work, the world view is provincially and locally oriented, levels of literacy and education are low, less participation in unions and political parties take place, social security schemes such as medical care, maternity or other benefits do not exist, and that people make little use of elite hospitals, department stores, museums and art galleries (Adduced from Dube, 1990, 86).

Dube (1990, 87) also stated that economic traits in the culture of poverty include as follow: constant struggle for survival; unemployment and underemployment; low wages for unskilled occupation; persistence of child labour; absence of saving; chronic shortage of cash; absence of food reserves in the home; spontaneous informal credit devices organised by neighbours; pawning and borrowing locally; and the use of second-hand clothing and furniture. These traits are seen as nearly universal with only minor regional and cultural variations (Adduced from Dube 1990, 87). In the light of the lessons from these perspectives, economic growth should expand the material base for the fulfilment of basic, secondary and higher levels of human needs (UNDP HDR, 1996, 66; Doyal & Gough, 1991, 168-169). It is a widely held view of this study that the satisfaction of human needs in the social sectors, obviously would depend on the allocation of more and more resources towards the institutions that deal directly with peoples' welfare. The effective participation in egalitarian translation of economic gains of allocated resources would depend on the offering of opportunities, especially those that relate to the creation, as well as the filling of necessary employment positions with competent personnel.

Economic growth paves the way to the provision of resources for welfare, through making available surpluses of gained resources for translation to the well-being of all disprivileged groups within the society. In an effort to improve poor economic performances, modern economic thoughts have been identified as positive causes for planning at the local authority levels (Djupsund, 1984, 110-114), in order to facilitate the meeting of specific objectives. When a nation's economy recovers and expands, welfare in the form of schools and health care facilities can then be extended to those within the society that were formerly left out in the scheme (SIDA, 1994, 15). This line of social policy analysis sees economic growth strategies as a vital means through which extra resources can be created for the implementation of social projects at the nation's local levels. It is also the only sustainable means of expanding welfare in the nation. The state often develops its own neutral interests, which sometimes coincide and represent democratic interests of the majority, the poor, the weak, and the vulnerable groups in society. From this perspective, the state is a resource centre for the translation of economic growth surpluses, for the utility of development processes in combating poverty, sustaining development, and ensuring continuity in popular participation of the disprivileged groups in the economy.

It is expected that market forces and competitive trade will produce economic growth and convergence between nations globally. Interdependence and technology have opened all national boundaries for the flow of information and ideas (Transforming humanity, 1994, 44), and thus increasing the impacts of decisions that are made elsewhere outside the national borders. Under these imperatives, standards are modified and adopted in ways that are acceptable across wide spectrum of cultures and ideologies. Here, economic growth theory (Unger et al, 1995, 6-7) considers convergence as the end-product, which the imitation of all ideas and technological progress will eventually arrive at. Under such evolving conditions, policies will either remain impotent, or will be stimulated by market forces and levels of economic growth across national borders, to converge and look more alike. While divergences in income levels exist between the rich and the poor countries, this study found the existence of convergence (Table 21) only amongst the group of countries with same levels of HDI. Thus, income levels in industrial nations converge within its group of industrial nations only, in their levels of GDP per capita. The same is true of convergence that is found amongst the medium income levels of semi-industrial nations. Amongst the group of developing countries with low levels of income, convergence is found to exist within the group, in their low levels of GDP per capita. This means that the various groups with levels of high, medium, and low income, are reflected in the levels of expenditures on health (Tables app. 5.15; app. 5.16) and education (Table app. 5.11), which also represent the resultant levels of their translation of economic benefits to the nations (Table 18).

High levels of human development and human well-being are promoted through economic growth (UNDP HDR, 1996, 79), which in turn pays off in promoting human well-being and development. Weak or low human development is expected to result in low growth, which would undermine further the prospect of achieving human development in the future. Links between economic growth and human development are literally interwoven and continually reinforced as indicated in Table 18. The inputs that strengthen the links on the chain towards human development, relies among other things, on effective public expenditure on education, and health care. Where these social inputs are absent or not given adequate priority, high economic growth may not generate significant improvements in human development and well-being. The outcome of these situations would probably manifest itself in some kind of development that is lopsided, because development is not only an economic process (Transforming humanity, 1994, 34-35), but embodies social processes as well. Convergence and divergence intrinsically link economic policies to social policy for human well-being and hence development.

If income distribution in the population is unequal, many households (in one way or the other) will be deprived of reasonable amount of money for food, education and personal or family health care at the expense of equity (for example Granqvist, 1998, 99-101, 110-111). Where this situation occurs, it may result in low human development and thus, indicate the existence of weak links in the development circle (see figure 10); and can also unbalance development towards the negative direction.

On the chain that leads from economic growth to human development, the weak links could arise from various causes (UNDP HDR, 1996, 79), including government mismanagement, the introduction of policy that distorts market factors, policy that discourage employment-generating production or distorts exports of manufactured products, and so on. The other possible causes of the weak links between economic growth and human development are the lack of provisions for national science and technology that are usually geared to keep the economy, and well-being of the nation in check. The absence of efforts to sustain growth may also destabilise progress in investments on human resources that could be useful for development and human well-being of the entire nation in the future.

Most national governments often adopt some form of strategy for re-activating industrial policy for the global market arena, in response to demands that are made at the international markets, which may require developing some form of resources for competitive advantage. This policy is adopted at local levels in order to assist national participants to enhance their capabilities to meet up with those demands that are made at the global markets, because certain industrial products call for different industrial technological specialisation (see Ratti, 1993, 37-40). Governments therefore offer assistance because certain types of technological excellence that are derived from the industrial productions constitute a competitive advantage for the nation as a whole. Due to those competitive advantages that are derived from the products, governments adopt different protective industrial policy measures to assist their production. Here, we may find divergent measures as being more impotent than convergence. In such cases, governments adopt differential industrial policy in areas of modern technological specialisation, in order to create and protect own strong competitive advantages. While the industrial nations represented by Finland invested the equivalence of 2.4% of their GNP in 1995, and 2.8% GNP in 1998 for research and development, the semi-industrial and the developing countries' investments were insignificant in that direction and amounted to nothing (Table app. 5.34).

Divergence and differentiation in industries of nation states (Bellak, 1995, 96-97) are policy responses to challenges of international competition, co-operation, and partnership between governments, multinational institutions, and other economic decision makers. A nations' specialisation in particular production areas and her years of accumulated experiences, usually add-up to form competitive resources for the nation's participation in the global market economy. The main objective of these divergent policy responses to international competitions usually serve to help nations to acquire the ability to win those market competitions in favour of their nations. The cross border trade is valuable for participants because of differences in specialised goods and services that are made available for competition. Aaron et al (1994, 16) uphold the view that international trade simply occurs due to differences between nations' efficiency in handling productive skills, national resource endowment, capabilities in specialised areas for the production of goods, and demands based on consumers tastes. However, when the contents of the international institutions are focused upon, similarities (convergence) are found, but if the focus is on the processes

of the international institutions, then differences (divergence) are almost always found (see Brewster & Tyson, 1992, 3-5). In these instances, as has been stated elsewhere in this study, divergence by itself becomes more important for economic growth of the nation, and for attracting foreign investment from the global market.

4.3. Convergence and divergence for economic growth: social policy for human well-being

While convergent and divergent attributes of the industries and markets led to globalisation and significant economic growth for all nations (Table 21), convergence on certain aspects of policy (for example, the European Union) had led to the removal of borders, the flow of capital, goods, and immigrants between the European communities. Could the processes of industrialisation, globalisation, and economic growth also become useful tools in tackling the global problems of poverty, and bring about human well-being across wider international frontiers? Will convergence and divergence lead to the integration of other non-European nations (including the developing nations) into the larger global economic unions, improve greater economic development, and contribute to overall global social well-being? In our time, it is the private individual and the business sectors that create wealth (Bollason, 1995, 113-115), while the governments provide stable macro-economic environments, control for low inflation, and provide hospitals, better schools, and other social services through taxation and public finances that improve the level of living.

The discomforts caused by a variety of social problems contradict the successes made within spheres of modern technology. Some of the problems are (World Summit for Social Development, 1995, 3) the high level of global job insecurity such as unemployment, lower income margins for poor countries, increased number of people living in poverty, low health statuses, constant social disruption or unrest, various forms of social violence, and so on. All these obviously constitute positive and negative global impacts of past economic policies on human being, since the Second World War. Although the market penalises failure and rewards success, it promotes self help and funds the management of voluntary bodies. Market mechanisms therefore, to an extent, can be effective instrument through which preferences to help the poor and the unfortunate ones are addressed. But the market as a way of co-ordinating economic decisions may not correct its own failures (Peacock, 1997, 12-15) and guarantee minimum standard of living for everyone in the society, without the role of social policy specifically designed by governments to relieve poverty directly. Critics on social policy for failure to translate economic growth to stigmatised low status groups, had been that policy treats state welfare as end in itself. Therefore, resource inputs by governments are regarded as progress (Webb, 1985, 52-55) hence less attention is given to utilising the dis-privileged for productive engagements.

Economic growth is necessary but it does not replace the satisfaction of needs for human well-being that are performed within the domain of social policy it-self (Dube,

1990, 64). In many important ways (see Figure 10), the benefits of economic growth are linked to social and cultural objectives that they serve. Clearly enough, economic growth remains the main instruments for achieving most development goals, and for the translation of benefits to human well-being through social policy. If the benefits of economic growth and the satisfaction of needs are well integrated within social policy, global economic growth should be able to contribute sufficiently to improvements in the quality of life of every person in every country in the world.

At the inception of social science disciplines, all concepts of development were simply understood as growth (Myrdal, 1981, 504), and were regularly accounted for (Dube, 1990, 66), in terms of statistics (Sovani, 1985, 139-142) on aggregate income of GDP. Those concepts still form the dominant pattern of much economic literature. On one hand, development ought to make use of social policy and planning to achieve policy objectives on improving human well-being. On the other hand, planning as a projective thought is a continuum on which the planners probe into certain direction of imaginary changes for better outcomes in the future. Social policy therefore had developed out of governments' concern to protect the weak and vulnerable groups in society (Hill, 1980, 258-259); and to offer such services that would meet their most salient grievances. In this direction, social benefits in the form of offering education and the maintenance of good health, are therefore designed and extended to the poor in order to increase productive efficiency, and to stave off revolutions along the road to prosperity and social equality.

The importance of global interdependence of nations cannot be ignored in the schemes of economic development and human well-being in any nation state. With significant policy information, the future becomes relevant to the present. Many people perceive the future of economic development, in relation to ways in which global economic activities and interdependence affect human lives in their nations. From convergence and divergence perspectives, this study accepts that differences exist between countries in levels of efficiency in translating benefits from economic growth to human well-being. This suggests that convergence in the levels of human well-being between nations, can be improved with divergent levels of income (see public spending on education, Table app. 5.11; and primary school enrolment figure, Table app. 5.4) when income is efficiently and properly managed by nations with lesser incomes. The social policy objective then, is to make better choices that would converge on improving human well-being in the future, through present policy decisions.

Within all convergent and divergent human responses to economic development, lie the modern industrial civilisation and its twin-impacts of science and industry, which are the most aggressive forms of civilisation that mankind has ever known (Kerr et al, 1960, 266). This citation is important because convergence and divergence involve all aspects of human life and social behaviours within modern industrial civilisations that are receptive to inputs of social policy for total transformation of the human being and his well-being. Governments are also expected to mobilise resources to implement and

achieve those development goals that would result in human well-being and development, but the production, allocation, and management of public goods is inherently problematic due to disjunction between economic policies and social policy. Politically, the state apparatus can be made to work for anybody who knows how to gain control of it. Governments have the authority to make policy decisions that would ensure that economic and social policy objectives are reconciled. It seems that social policy is the only effective tool that can be used in integrating the objectives of economic growth with objectives of the social sectors, in order to achieve the sort of human well-being that would transgress the global frontiers.

The management of economic growth, the provision for human needs, and the enhancement of opportunities within nations (Midgley, 1995, 15), basically comprise requirements for the attainment of improved conditions of human well-being in the populations. There has been sufficient evidence in this study which indicate that economic development paves the way to basic protection programmes that begins mainly through employment and labour. In 1980, Finland that represents the industrial nations had a population of 4780000 and her total labour force was 2390000. In 1995, the population of Finland increased to 5108000 and her labour force also increased to 2605080. In 1998, the population of Finland increased to 5153000 with her labour force increasing to 2628030. Similarly, in 1980 the population of Brazil was 121672000 and her total labour force was 47452080. In 1995, the population of Brazil increased to 159346000 and her labour force also increased to 73299160. In 1998, the population of Brazil increased to 165873632 and her labour force increased to 76301872. Furthermore, the population of Nigeria in 1980 was 71148000, and her total labour force was 29170680. In 1995, the population of Nigeria increased to 111270000 and her labour force also increased to 44508000. In 1998, the population of Nigeria increased to 120817264 and her labour force increased to 48326904 (Tables app. 5.2 and app. 5.3). This study therefore found that poorer countries have vast populations that are growing faster than those of the industrial nations. The poor countries would be obliged to aim at accelerating job-led growth, which would help them to attempt the provision of basic social services of some sort known to exist in the welfare states, and to improve the conditions of deprived persons in their nations. Governments in the developing countries must aim at appealing to the industrial nations to dismantle those barriers on trade and investment, which reduce the ability of poor nations' to compete at the global markets.

Empirical studies such as those conducted by Myrdal (1970, 278), sustain that global inequality is not limited to levels of financial income alone, but includes various forms of inequality that are found to exist in all sectors of various societies. If the resources that are available in most poor nations are properly co-ordinated through responsive policies, same resources could contribute significantly to economic growth and collective well-being of those nations. Diversified forms of inequalities are still the dominant pattern that constitutes part of the agenda in international politics. They are a direct outcome of local and international market forces, which were automatically set in motion through the logic of industrialism, and by previous sectoral-incremental

economic growth policies. These phenomena are global. Analyses in this study show that poverty, particularly in the developing countries, constitute problems that cause (for example) citizens of the poorer nations to migrate across international borders in search of new life and wealth. More-over, Western industrial nations relentlessly pursue economic growth for the industrialised nations with raw materials from other poorer nations. The globalisation processes of getting these done profitably, sometimes generate costs that are detrimental to all other world nations in general, and to the poor developing countries in particular.

In every nation, poverty constitutes problems for collective action. Under normal circumstances, social policy should be able to guarantee the provision of modern education, training, and the turnover of competent personnel for utilisation by the labour markets of the nations. However, nations adopt different measures and produce different outcomes, while different instruments are used, which also produce similar convergent results (see Unger et al, 1995, 11-12; UNDP HDR, 1996, 67). In the light of this, policies do not always have to converge, in order to produce the same results. Good economic or social policy can go wrong if the institutional mechanism for its implementation is inadequate, inefficient, or even corrupt. Convergent administrative tendencies go together with divergent development outcome. Governments therefore, share similar national development goals, but may choose different instruments for their implementation, and thus produce different results. In these situations, social policy and its legislation must work behind the problems that they are supposed to solve. The social innovations of the present therefore, are the outcome of past conflicts over the provision of public goods for human well-being and care.

Social policy and development planning, is never a one-bus stop. It is a learning process in which the planner and those affected by the plan during implementation stages continuously make necessary adjustments to achieve desired objectives. The leadership in different international communities (for example, Soedjatmoko, 1989, 130-131) must reach a consensus of opinion within the social policy of their governments, as an important instrument for the achievement of social development objectives in their nations, and for the eradication of poverty around the globe. The international community has to arrive at a consensus on the important principle of using social policy to promote factors of human well-being. They also have to agree on the unification of concepts of economic development with those of social policy, in the formulation of development policy that would be responsive to human dimension of development, as well as being appropriate for future policies.

4.4. Policy for strong links between economic growth and human well-being

All around the globe, mechanisms of convergence are market forces, which influence countries to exchange trade and production factors willingly. Convergence forces naturally include the inducement on countries to copy ideas (Unger et al, 1995, 19) in order to imitate others on their economic activities. These imitations sometimes, result

in economic policy changes that occur within nations through political enforcement or coercion that are embodied in international trade regulations. International competition and supranational regulations, which exist in various forms, are strong forces that exert pressures on policies of nation states towards change.

Policy then, is the product of each nation's political system, which governments design to achieve specific objectives (Jones, 1985, 12-13), and particularly for national development. Private plans do not qualify as public policy. Policy related activities are publicly financed, managed, and publicly regulated, and are considered relevant for programmes that benefit the whole society as an integrated community, for the enhancement of more productive and healthier national human well-being. National public policies usually differ within various nations, especially in the nature of prioritised goals that they were structured to achieve. The nature, quantity, and quality of implementation-instruments that are available for public policy may cause differences in policy outcome amongst nations. The study recognises the vast divergences that exist between nations in the level of priority given to social programmes, the pattern of policy implementation, and the styles of the administrative record keeping. The system for the selection of persons that are considered eligible for benefit (if benefits are not for all citizens), also cause divergence between nations. Prolonged income supports alone, for instance, may sometimes achieve unintended outcome of causing the stagnation of human resource development, by causing dependency on the support. Investments on human resource development to enable the participation of the individuals in active contribution to development, is a better alternative for self-sufficiency of the economy (Utchay, 1988, 145-148). These investments are necessarily needed to attain higher levels of national development. More divergences in the economy and social development occur due to geographic, demographic, political, and cultural differences, as well as differences due to demands that are triggered by consumer tastes in the society.

The governments in industrial societies have the responsibility for the provision of highways, airports, the regulation of traffics, radio or television stations, telephones and all modern means of communication (Kerr et al, 1960, 40), as well as the responsibility for urban development, and the maintenance of the police and military. The state provides for domestic law and order, and for the internal and external security of the nation. It is the responsibility of the state to provide the facilities that enhance education, encourage trade unionism, reduce various kinds of inequality, and provide for public health and city planning. Above all, it is also the responsibility of the state to provide welfare security to assist the poor. In turn, the state is charged with the responsibility to collects taxes in the nation (Kerr, 1969, 15), in order to meet up with these demands. However, the highest responsibility of the state is the protection of all her citizens (Kerr et al, 1960, 26), as well as their private property.

Setting the stage for natural development of human capabilities in the nation is an end by itself because human capabilities contribute to economic growth (UNDP HDR, 1996, 75-78). Improvement on the capacity of the workforce and its management to

function efficiently in the nation increases productivity in the various economic and social sectors. From these perspectives, the provision and availability of essential skills in the nation would include the infusion of essential skills within a vast array of governments' administrative and legal structures, and the financial systems. These help nations in attracting foreign investment and high technology, as well as strengthening both the private and public institutions. In these instances, highly qualified workforce could meaningfully manage effectively the vast diversity of rules, which govern all the systems that are shared amongst managers, workers, and civil servants within the state apparatus.

Globalisation somehow restricts national stabilisation policy through the activities of trans-national firms that reduce the room for manoeuvre of national governments in their industrial policies (Unger et al, 1995, 24), thus possible trends towards convergence are offset by country-specific, divergent reactions and economic strategies. Similarly, processes by which social security programmes were formerly introduced in various industrialised nations differ from one country to another, especially due to characteristics of economic and social policies of the nations. The review of policy convergence on the development of social security in industrial societies (Jones, 1985, 70-72) indicates that the first time when social protection was introduced, workers were required to contribute for their own social security benefits in relation to sickness, industrial injury, and old age insurance. As economies develop, improved forms of social security had evolved with it, and eventually most social protection systems in Europe appear to look similar in various nations where they operate. However, it has been noted elsewhere (Chapter 1.2) that in some instances, policy convergence and/or divergence occurs simultaneously in time and place.

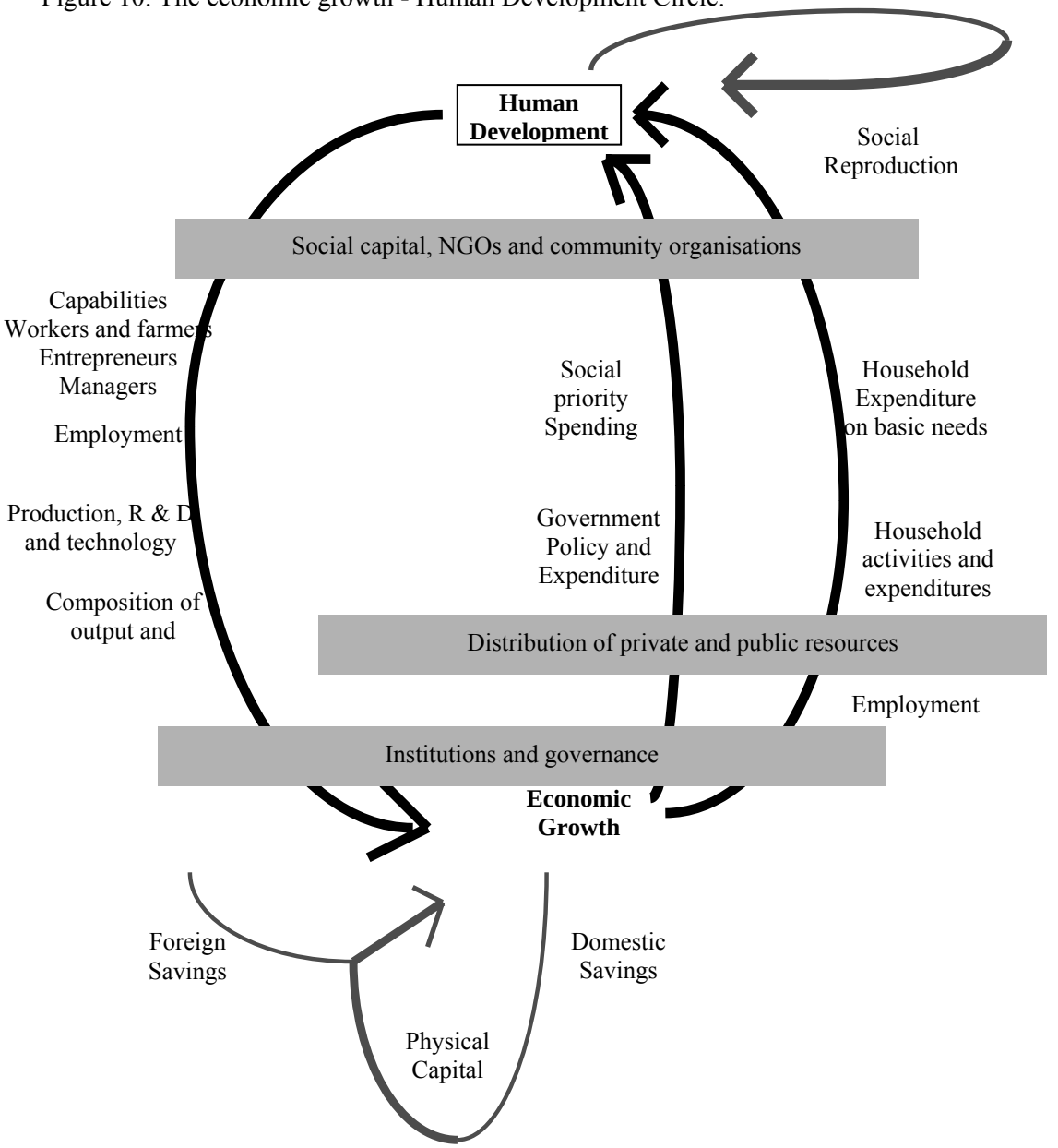
As had been indicated in Chapter 2.6 above, the minimum and maximum index values of nations change each year on the human development index, as some other countries' performances improve within the index scale. The countries that perform better on the index scale (Table 17) move upward on the scale, while those that perform poorly would naturally move downwards the scale continuum. The stable performances of countries for periods of over three or more decades (Haq, 1995, 49-50) permit meaningful comparisons, as well as enable accurate future policy-predictions to be made on those countries' expected performances. The circle is completed when economic growth leads to human development, and human development reciprocates by leading to economic growth (see Figure 10).

Unsatisfactory outcomes in economic development are reflections of an inadequacy or one-sided growth in world economic markets that are managed and controlled by small numbers of very wealthy world population, who also enjoy the benefits derived from these global economic activities. When masses of people do not benefit from rewards that accrue from their economic systems, the situation should not result in the abandonment of all efforts within the system. Rather, such failures should serve as feedback on which renewed efforts in the search for measures that are most appropriate in improving the poorly conceived social policies, would be based.

Economic growth is for the peoples' well-being. The link between economic growth and human well-being (UNDP HDR, 1996, 67-69) exists in the form of a chain-relationship whereby one link in the chain, reciprocates the other.

An example of ways in which these relationships work (UNDP HDR, 1996, 67), is that economic development would contribute to factors of human development that are meant for human well-being. In turn, well-developed and healthy human society would reciprocate with their contributions towards building up economic growth as hypothesised by this study (see Chapter 1.2.2). Within this two-way structure of economic growth and human development pictured as a circle (see the illustrative diagram, Figure 10), the links seem rather strong, but it cannot be said that they are perfect and completely efficient. It seems obvious that these forms of structural relationships give room to convergence and divergence of the economy and social policies, to re-enforce and nurture the two-way relationships in contributing to the country's economic and social development.

Figure 10. The economic growth - Human Development Circle.



Source: Human Development Report (1996, 68). Note: Other growth factors of human development exist; namely, political freedom, cultural heritage and environmental sustainability (see also the UNDP HDR, 1996, 66; and the diagram p. 68), but due to the necessity of limiting studies to our perspectives; these were neither included, nor analysed in this study.

The strengthening of economic growth in a nation, most importantly depends on the availability and accessibility of opportunities for people to contribute to economic development through participation in social, political and economic activities of the

nation. The analysis of Figure 10 based on data in Table 18, indicates that the links on the chain between economic growth and human development and well-being, can either be 'strong', 'unbalanced', or 'weak'. The strength of the chain (Figure 10) depends on the strength of each link that constitutes a part of the chain. The strengthening of economic growth (UNDP HDR, 1996, 79), depends more on human factors that relate to the nature of investments, and the accumulation of human capital in the nation. The accumulation of human capital requires, for instance, sustained investments in health, investment in education, investment in research and development, and the training of workers in essential skills. These form the accumulated capital.

The weak links emerge when economic growth becomes non-existent, and the essential resources that are required to be invested in the human dimension of development, are no longer available. The emergent results are most likely to be the prevalence of poor standards of health, education and poverty. Definitely, it would be impossible to achieve rapid economic growth with poor health, and poor standards of education. It is here that the unbalanced link is identified to exist when development becomes loop-sided with rapid economic growth, which is accompanied by slow human development, and low levels of human well-being. The existence of unbalanced links is also identified through observation that the links had become weak in translating economic growth into human well-being. Besides all identified weakness, the existence of sudden or rapid human development across the nation could also result in conditions such as redundancy, unemployment amongst the educated population, and slow or negative economic growth.

The relationships within the links that lead from economic growth to human development (Figure 10) reveal employment as an important part of the criteria that influence household activities and spending habits (UNDP HDR, 1996, 67-69), along with the involvement of government policies and expenditures. Usually, household activities and spending are not properly recorded either in the home or by the state. Spouses, particularly women, do their household work that is unpaid, while they raise children. In most families, households' incomes are used in the purchase of food, schoolbooks, medicines, and for a variety of other means that improve the capabilities of their family members. Families do much more than care for their sick members; they also care for their elderly. All these contribute directly to human well-being and so, contribute to non-monetarised global output in health, education, and poverty reduction.

Further on the link between economic growth and human development circle, governments also contribute to the nations' economic growth through policy actions and direct expenditures on inputs that encourage human development. Governments, direct national policies and encourage the patterns of the nations' economic growth. Governments, also direct the allocation of resources, which include financial resources earmarked for public and private utilisation on health, education, and other social concerns. These also raise satisfaction in market demands for human capital, both

within the nation and at the global arena.

Economic growth and human well-being reciprocate each other. The links between economic growth and human well-being lie within factors that must be strengthened so that they will be able to reinforce each other. In Table 22, Finland, which represents the industrial nations, had fulfilled most of her human development aspirations, leaving only 0.160 unfulfilled human development indices in 1980; 0.090 in 1995; and 0.080 in 1998. An unfulfilled human development index for Brazil in 1980 was 0.408; in 1995 it was 0.342; and in 1998 Brazil's unfulfilled human development indices was 0.311. Nigeria had the largest unfulfilled human development indices of 0.697 in 1980; in 1995 it was 0.569; and in 1998 Nigeria's' unfulfilled human development indices was 0.549. Industrialised nations had achieved these capabilities, while the developing nations still lag behind in achieving these important factors of human development (see Table 22), due to poverty. When these links between economic growth and human well-being become weak or broken, however, they become dormant in re-activating each other. The absence of one essential link undermines the presence of the other. Unbalanced links can also be caused by rapid human development without being accompanied by economic growth or other significant growth potentials (UNDP HDR, 1996, 66) from the social sectors. Besides these, unbalanced growth can also be the result of fast economic growth without being accompanied and reciprocated by high levels of human well-being.

It is undoubtedly important for national policy makers to accept that all development, whether economic or social, involve investment in people, which enable society to meet provisions for basic needs first, and gradually expand improvements on other aspects of the quality of life in the nation. Although recently human resource development programmes in the developing nations have been successful in investing and attempting to produce some high level of literacy rates (Tables app. 5.11; app. 5.4; and app. 5.9), much less had been achieved in the supply of skilled workers (Table app. 5.34). For instance, there is severe shortage of skilled and experienced technical and vocational personnel in most developing nations, which has acted as a major constraint on economic growth. This fact portrays the lack of convergence between the industrialised and the developing nations in the sphere of human resource development in relation to the supply of skilled workers, whereas in the later, key technical and administrative positions continue to be filled by expatriates at high financial costs. It would be necessary, therefore, to adopt major changes in policy orientation (Utchay, 1984, 113) such as the redefinition of policy objectives for development that would see the human being as the main purpose of both economic and social development in future. The concepts of development must clarify the meaning of 'economic growth' for policy makers - that is, 'growth is for human well-being and it is equivalent to development by itself, and that development is necessarily societal'. Such concepts of development are required within global economy and social development paradigm for the survival of mankind in the future. There is need to evolve social policy as distinct from economic policy (Kothari, 1993, 140-141), and to deal specifically with the social dimensions of global poverty.

5. INDUSTRY, TECHNOLOGY DEVELOPMENT AND GLOBALISATION: IN-DEPTH ANALYSIS II

Industrialisation is the most important source of economic growth, and the basis for global economic development. It is certain that some minimum level of development will be reached before industrial production increases significantly in the nation. In the long run growth in the industrial sector will be expected to be more rapid than within other sectors, until a high level of per capita income is reached (Bos, 1984, 36-37), after which the services sectors will tend to grow more rapidly. Industrialisation offers the opportunity, which enables countries that participate in it to earn foreign exchange through the export of products. The stability of economic development in a nation is also protected by growth of her industries through the nation's effective control of production fluctuations, prices, and revenues from diverse primary commodities. Industrialisation often stimulates improvements in the training of the nations' labour force, and thereby widens the opportunities for their productive employment. The earnings from industrial activities improve both the average national income of the labour force, and the economy as a whole. More important to the perspectives held by this study, is that export trade on industrial products intensifies interdependence between all the industrialised and the developing nations towards convergence.

Within most industrial nations, the industry and technology are improved upon everyday in order to maximise production efficiency, profit, and hence economic growth (Stewart & Ranis, 1990, 4-6). The modern technologies have continued to displace highly repetitive tasks with new machinery and industrial technological processes that are superior to earlier forms of production. Increases in GDP per capita (Table 14) indicate that the effect of the industry and technology have raised wages for workers (Table app. 5.35), reduced hours of work, maximised industrial production, raised living standards for workers and families, and sustained all participants in global distributive systems of the industrial products around the globe. Like industrial goods and services, modern (industrial) technologies have increasingly moved beyond national borders. In both the industrial and most developing nations, industrial products of modern technologies are continuously confronting men and women towards changes and conformity with the imperatives of convergence on the use of industrial products, and in maximising economic growth.

Here, technology implies a systematic application of scientific or other organised knowledge to the practical purposes of economics enforcing the division and subdivision of (industrial) tasks into component parts, in order that they bear on performances (Galbraith, (1967, 12). However, it has been demonstrated empirically that the development of modern sophisticated technology undoubtedly increases the skills that are essential for high level employment positions. The desire to sustain economic growth induces people, as well as nations to adopt appropriate technologies (Stewart & Ranis, 1990, 4-6), that would use local resources to achieve development objectives, secure wider range and equitable participation in growth processes, enable

populations to satisfy basic needs, and protect their environments. This development relegates unskilled personnel incompetent of securing job placements in high technological spheres (Unger et al, 1995, 6), and the results are evident in more and more resort to divergence in skills requirement for job placements, working conditions, and assessment of levels of workers consciousness. More over, the effects of modern technology on societies are felt differently in various societies, depending on the types of technological undertakings and levels of specialisation in the nations where the technology is being utilised. The differences between nations in technological development and specialisation also lead to divergence instead of expected convergence, and this sustains earlier observation that within each convergence theory, traces of its divergent counter-parts are found. With fresh information, continuity in the processes of learning allows the accumulation of experiences, which the industrial firms adapt in the form of specific competence gained and guarded by the nation for competitiveness (Chiesa & Barbeschi, 1994, 299). In other words, the processes of learning allow continuous feedback between the content of a resource-based technological strategy and national competence, to merge knowledge outside the firm, with those of its inner contexts for globalisation.

The strategies for technology development, should be viewed as a 'trajectory' that determines how to acquire and internalise technical knowledge and competence in the light of characteristics of current and the perceived areas, for future technological development for the nation. The mode of acquisition of knowledge and technology on which the firm relies upon for its own internal development and her ability to develop further capabilities for the nation (Chiesa & Barbeschi, 1994, 305-306) depends on accurate choices on technology. Choices on types of technologies to be adopted are determined on the basis of the nature of existing competence within the firm. It is important that decisions on choice of technology must include elements of available resources and the types of additional knowledge to be gained and developed from outside sources, before the new technology will be integrated with the skills and knowledge that are already available internally. It is not simply a matter of developing an in-house critical resource to compete and out-perform non-critical resources of others, but here the central point rather is the level of the nation's absorptive capacity in given technical areas that had been internalised for competitiveness.

The concentration of economic power in highly industrialised nations is reinforced by advances in communication technology, and this has enhanced industrial capitalism in taking a firm grip on globalisation, which in turn had proved most fertile on the international market arena. In the preface on integrating national economies, Aaron et al (1994, 12) stated that computers, tele-communication satellites, electronic devices, and so on, have reduced costs and saved time for transmitting information, confirming transactions, and paying for transactions across borders. The study observed (Table app. 5.21) that by 1980, Nigeria had only 1 telephone mainline for 1000 persons in her population, while telephone mainlines in Finland was 364 per 1000 persons during the same year. Telephone mainlines in Brazil was 41 in 1980, and 121 in 1998. The number of telephone mainlines for Nigeria in 1998, increased to 4 per 1000

population, while in Finland telephone mainlines increased to 554 per 1000 population during the same year. New technologies of mobile phones were none existent in world market by the year 1980; in 1995 Finland already had 196.6 mobile phones per 1000 population, while Nigeria had only 0.1 mobile phones per 1000 population in the same year. By the year 1998, mobile phones in use in Finland increased to 571.8 per 1000 population, whereas in Nigeria mobile phones increased to 0.2 per 1000 population during the same year. In 1995, Brazil had 8.2 mobile phones in her population, and in the year 1998, mobile phones in Brazil increased to 46.8 for every 1000 persons in her population.

Here, the study found no convergence in globalisation processes between the industrial, semi-industrial, and developing nations, on the number of telephone mainlines and/or mobile phones used. Rather, the study found increases in the use of telephones (Tables app. 5.20 and app. 5.21), television sets (Table app. 5.19), and Internet Web sites (Table app. 5.23) between nations across the globe. These increases revealed that market factors are in fact interconnected with improvements and the development of modern information systems in globalisation. Developments in these sectors ultimately reduced the costs of acquiring vital information, improved earlier inefficient systems, and eased the irrational traditional arrangements and responses to the difficulties that were associated with the high costs, and the lack of obtaining timely information. Although computers and tele-communications technology had advanced global markets recently, the study found that the developing countries with vast population of inhabitants had not benefited significantly from such world-wide services. Part of the reasons for the huge gap between the industrial and developing nations (Tables app. 19-21 and app. 23), could be that developing countries are poor. Altogether, high technology has brought considerable changes in global economic relations between nations, and has also given rise to the development of unlimited trans-national economic systems that are controlled by yet more appetite for increased advancement on technology, they ought to do the same for the developing nations.

The development of modern technology in the context of urban growth has already been noted within innovations that are likely to occur frequently in existing industrial sectors. Collins & Walker (1975, 8) envisage that technology change has now become day to day features of most industrial nations for which major breakthroughs are rewarded with continuity in further search for technological advancements. The application of new ideas and technologies will not necessarily benefit only those living in the urban areas, but will also benefit those living in very remote areas of the globe. The important natures of most technological changes are hereby identified in their present forms or attributes, as follow:

(a) Most technology changes are country or site specific. The change enhances techniques in competitiveness of the region's resources. This change applies mainly to first levels of technologies in the early stages of processing national or regional raw materials.

(b) Some technology changes are induced by the need for low cost resource-input, in order to widen an industry's market, and thereby allowing the emergence of the technology in greater scale within the economies of the nation.

(c) Some technology changes occur in order to provide the basis for a new footloose industry for its region or nation, in meeting demands that are made on productions.

(d) Some technology changes occur as a result of discoveries made on better ways of doing the same things, and these apply equally to all production firms and industries. Its spread depends upon the rate of the technology's adoption, and on its effectiveness in serving its professed purposes.

The changes in technology and the consequences for developing a new technique and product, are that in future the technology and product will go through a lifetime circle (and/or become obsolete), while they await further development. Although changes in the development are based on the demands of the markets, the functional requirements for developing the technology, the processes in their development, and the tests performed at their experimental stages, lie with the skilled scientists and technicians, from their drawing boards to their final production. In most cases, after some technologies had been developed, such technology still requires highly skilled manpower for its operation, if mass production of it is needed. This is so because some new technologies pose even greater problems after their production had been completed, due to other changes, which the introduction of the technology are bound to cause. In cases where the introduction of the new technologies relates to siting or building a new production industry, necessary changes are expected to pose problems for the towns and/or regions where such industries are to be located. For example, the location of such industries may call for the separation of facilities from public residential areas, but unless there are several products at various stages of the production circle, fluctuations and costs in siting separate industries at distant locations for production of separate products, may likely be enormous.

Technology and economic development inherently implies increases in the production of goods (Martinelli & Smelser, 1990, 47) for the markets, so as to raise the level of wealth through profits. In order to do this successfully, companies forge new productive organisation, which require new kinds of technologies and in most cases, new markets, and new types of distribution systems. Through similar divergent strategies such as these, enormous economic growth had taken place world-wide. Between 1980 and 1998, world-wide merchandise trade and foreign direct investments contributed to increases in GDP per capita, which had doubled or almost doubled in various world countries (see Table 21). For example, the average group-gross domestic product per capita for the industrial nations increased from $9837 in 1980, to $23043 in 1998. In semi-industrial nations, the average group-gross domestic product per capita increased from $4318 in 1980, to $7978 in 1998; while the average group-gross domestic product per capita for the developing nations increased from $821 in

1980, to $1595 in 1998. Here the study found that in 1980, the gap between the group-gross domestic product per capita of the industrial nations, and those of the developing nations, is $9016; and this means that the gap is 11 times greater than the GDP for developing nations. Similarly in 1998, the gap between the group-gross domestic product per capita of the industrial nations, and those of the developing nations, is $21448, and this also means that the gap is 13.4 times greater than the GDP for developing nations. Further-more, increases in the trend of growth indicate that the gap is increasing. Although growth occurred in all groups of nations, the gap between the industrial and the developing nations is still very wide and therefore, there is no convergence between the two groups of nations in growth of GDP per capita.

The economic interests and financial gains ranging from industrial production of telephone mainlines and mobile phones, to faxes, computers, television sets, and many other modern technology goods, may have given the manufacturers the financial gains that were sort, but these also serve as additional improvements on other global information exchange systems. It has been noted from perspectives of global contacts, that the extent to which successful global business contacts occur depends on increases in the use of high communication technologies and facilities that make it possible for greater numbers of people to converge on certain consumer tastes, rather than the others. Certainly, advertisements on television sets (Table app. 5.19) and in newspapers (Table app. 5.18) for millions of audiences across the globe, undoubtedly cause global convergence on consumer behaviour, due to the fact that the consumers are lured into agreement in sharing identical experiences on same consumer tastes and the eventual purchase of those industrial products. Technological development therefore makes it possible for the telephones, television channels, and the internet web sites that work through computers, to connect together world-wide audiences (Unger et al, 1995, 2), and converge their experiences in the share of identical global information. These experiences may trigger boundless imitation on consumer preferences, and mutual voluntary learning programmes between nations (see also Transforming humanity, 1994, 108). They also raise awareness on issues of global interdependence, and hence possible global convergence on certain nation state policies across national borders. The gains that are being made on school enrolment figures around the globe (Tables app. 5.4 - app. 5.9) are good indicators of the effectiveness of successes scored on this social sector. In these and similar instances, globalisation (Bellak, 1995, 82), ties together various linkages, and all types of interconnections between states and societies that make up the present world as a single global market system.

The successes of most economies in the industrial nations depend on the citizens' competency in the absorption of knowledge regarding the new technologies. Initially, countries may have only simple assembly plants and simple identical tasks to perform, but they later become more flexible to accommodate new intricacies in the technologies and market conditions that follow. For most industrial productions to be successfully accomplished, the technologies must depend on the deployment of competent and flexible work force. In other words, workers have to be sufficiently

educated in order to adapt to new technologies and to disseminate its usefulness with the products. It is worth noting that when technology fails in its continuity to contribute to the performances of its functions in the real world (Ravetz, 1979, 329), then the reason for its existence and support is completely lost. In this sense, investment in human beings helps the continuous development of countries own technologies in various ways, which sustains the technology, attracts and encourages foreign direct investments in her industries, and thereby contributes to further productive capabilities and continuity in the advancement of the technology.

In fact, under various types of political and economic systems after the Second World War, industrialisation had technically proved to be a reliable means of production. It can then be confidently stated that industrialisation creates and establishes webs of policies and rules globally (Kerr et al, 1960, 263), which are derived from the logic of industrialisation, the common features of technology, and the global markets for its growth. For example, distances between nations have been drastically reduced by technological, social, and cultural changes, making it possible for most government policies, which inhibited cross border transactions immediately after the Second World War, to be dismantled (Scherer, 1994, 12). Analysis in trade competitiveness further envisages that international trade will strive to achieve convergence through market forces, and therefore would stress competition. The recent successes already made within these modern technological spheres, are noticed everywhere around the globe where the industrial products are distributed and utilised. The results of these interactions between technology and the human being are the constant changes in primary products for export trade, within the nations' pattern of manufacture and expertise. Authoritative citations could multiply indefinitely, but it would be sufficient to state that these modern trends in technological development reinforce globalisation.

The important aspects of technology innovation and development are the spread and general use of the knowledge from the technology within a country or region. Technology has become particularistic along skill levels needed to use the technology (Feller, 1975, 98-99), and in this direction technology has become occupationally and regionally concentrated. Those companies that wish to locate factories for the production of goods for international competitiveness and growth within such technologies (Bellak, 1995, 96-97) are attracted to locate the industries in global areas where the companies would not be involved in training the workers themselves for production and use of the technology. In order words, industries are located where trained manpower already exists. The companies continuously prefer to make use of trained workers that are available in the region being considered for the location of such industries. In this situation, however, formal education systems in technology development concerns the extent to which the spread of knowledge in manufacturing and use of the particular technology has developed necessary skill levels in the region, so as to adopt schemes for further development of the technology. The various choices that are made on the bases of tastes and imitation, create global demand for the diffusion of the technology even further to the most remote areas of the globe through the utilisation of the products (see Kothari, 1993, 35-37), and hence the occurrence of

convergence. Table app. 5.34 indicates that the industrial nations had continuously invested on research and development in their schools and training systems, while Nigeria and most developing nations, had failed to invest meaningfully on research and development between 1980 and 1998 respectively.

Analysis of mechanisms of convergence would take into consideration the fact that modern technology will diffuse world-wide (Unger et al, 1995, 2) and that poor countries will continue to imitate production technology and know-how that were already developed in the industrialised nations. Here, in Table app. 5.36 the study found that no convergence exists between the industrial and developing countries in the exportation of high technologies. For the developing countries that are very poor, the productivity benefits of modern agricultural technology could be said to have managed to improve their yields (see Table app. 5.32), although they still lag behind the industrial nations in agricultural production. The education of farmers on better farming techniques, would help to enhance the yields, improve the ability of farmers to learn from own experiences and those of others, in order to improve productivity. The curriculum of the educational systems must vary accordingly to the technology that is available in the nation, and must provide farmers with alternative options and more technical information on world views, that may lead to better resource development towards further participation and advances in winning benefits from global export trade.

Technological development since the Second World War has been overwhelming, when compared to preceding developments during the four billion-year histories of life on earth. The most renowned technology developments since the Second World War (Platt, 1984, 57-60) include weaponry warheads of nuclear missiles of the super-powers or contraceptives that could have global effects, the recombinant-DNA technology that could create millions of new species, and so on. The technology for solar electric-power may become important as the photosynthesis that has served as energy source for billions of years. The electronic revolution in the processing of data has changed science, businesses, and the bases for improved governments' policies. The television and other electronic information systems bring about changes in the behaviour of the human race, commerce, societies, schools, families, and so on, but all changes incline towards some form of convergence. Sooner than later, people may begin to accept the idea of the human beings working and living in space due to advances in technological development.

From globalisation perspectives, both short time economic gains and long time economic investments have motivated the proliferation of high technology goods into all countries around the globe. The global sales of finished industrial products have become instruments that make possible the daily global contacts that are made on behalf of trade. These products endlessly call for further improvement and more sophistication on the technologies that are increasingly based on preferences of regional or climatic suitability, and/or the experiences of the users around the world. The modern technology products and global markets have become the engines and

instruments by which globalisation is reinforced and promoted. Finland represents the industrial countries with high human development index within this study. Table app. 5.19 indicates that during the year 1980, every 1000 persons in the population in Finland had 414 television sets in their homes. In 1998 the number of persons and families having television sets in Finland increased to 640 per 1000 population. Similarly, in this study Brazil represents the semi-industrial nations with medium human development index in the world. In Brazil by the year 1980, every 1000 persons in the population had 124 television sets available for use in their homes. In 1998, the number of persons that had television sets in Brazilian homes increased to 316 for every 1000 persons in the population. Nigeria also represents the developing nations with low human development index in the world. By the year 1980, the number of television sets for every 1000 persons in Nigerian population was 6. By the year 1997 (1998 figures were not available), the number of persons that had television sets in Nigeria increased to 66 for every 1000 persons in the population. The number of television sets per 1000 population for other countries with low human development indices during the same 1980 and 1998, ranged from 1 television set for Chad (1990) and 122 television sets for Egypt (1998). The figures for Chad were recorded as from 1990, which could indicate further that some poor countries may not have television sets at all until the year 1990. Here, no convergence is found in the number of television set usage between the industrial and developing nations, although trends in increases for all nations indicate that convergence is a possibility in future.

The analysis of data reveal increases in the availability of instruments of high technologies and facilities for mass communication, and these indicate the extent to which countries have enhanced capabilities to participate in global contacts, and to gain world views that are necessarily required for further development. Within countries of high human development indices, the number of personal computers increased from 100 in Finland for every 1000 persons in the population during 1980, to 349 computers in 1998 (see Table app. 5.22). During the same period in time, personal computers in Brazil increased from 3 in 1990, to 30 computers per 1000 persons in the population by the year 1998. In Nigeria between 1980 and 1998, personal computers increased from 4 (1993) to 6 computers for every 1000 persons in the population by the year 1997 (figures for 1998 were not available). The data on Table app. 5.22 also indicate that in countries with low human development indices, only few personal computers were available for every 1000 persons in the population by the year 1993. By the year 1998, many countries with low human development indices had only 1 or 2 computers in them, and it is likely that some poor countries may not have computers at all during the same period in time. When these figures are compared with data from the rest of the countries in the world (see Table app. 5. 22), it was found that no convergence exists between the industrial and the developing countries in number of computer usage. These findings further indicate the extent to which convergence existed between the industrial and the developing countries, while the data indicate that great disparities exist here and there between the countries of high human development indices, and those of medium, and low human development indices. Here again, it is found that although the demand and need for industrial

products of high technology are increasing, no convergence really exists between the industrial and the developing nations on their use, due to the low levels of computers and other communication facilities that are available in developing countries by the year 1998.

Divergences between the industrial and developing nations on the availability and usage of various technological products are significant, when a variety of economic and social indicators were compared over some period of two decades. In sectors of high technologies, it has been interesting to note that in many developing countries, some employers train their workers on the job. This kind of training is possible and important only in specific production sectors of high technologies. However, it is mostly important to combine research and development with the education of personnel at higher levels of technology. In many industrial countries, governments support new technologies with institutes of science and technology, for the development and training of personnel. In some other countries where industries are concentrated, governments allow some form of tax incentives (see UNDP HDR, 1996, 75-78) which encourage firms to establish own research projects for the development of technologies.

It is interesting also to note that, through improvements made in the development of human and competitive resources for globalisation, all nations and their populations have shown the capacity for increasing their ability to live more independent and satisfactory lives than ever before. The problems here are that whenever old challenges have been overcome, new and some times, more intractable ones may emerge. So are the endless search for further innovations and technological developments to enhance the capacity of industries to produce, so as to meet up with the new challenges and demands that are made on technology and its products. Science and technology alone cannot simply reshape social structures in which in-equality and poverty through convergent and divergent processes of economic development, are deeply entrenched (Transforming humanity, 1994, 46-47), unless efforts are made to use science and technology in ways that could serve social and ethical purposes in nations. The major differences between nations on these issues lie in the level of technology development in every nation, and how effectively the nation had developed own competency to utilise indigenous technology to compete and win benefits and growth from the global market arena. From these perspectives, however, the new solutions to reducing global poverty are expected to come from advances that are made in industry, science, and technology.

5.1. Globalisation of the industry, and social policy

The early international trade structures are known to have begun to change in recent times due to divergent effects of the strategies of globalisation, which focus increasingly on the manufacturing sectors and export trade across national borders. The globalisation of economic activities implies an international division of labour that

is based on the fragmentation of production (Nunnenkamp et al, 1994, 81), which is located within different countries, as well as being closely integrated to world markets. Foreign direct investment liberalisation under these global arrangements (for example within European Union), offers trans-national corporations more options to include other nations particularly from the developing countries, within their strategies for globalisation.

The concepts of convergence and divergence are suitable platforms on which progress on economic growth, and problems on how the benefits from globalisation that alienate the poor, are laid bear through measurement and analysis so as to find policy solutions in the social sectors, for their reconciliation with real world poverty situations. Governments design policies to achieve specific objectives, and particularly for national economic and social development of their nations. Government policies therefore serve as tools for monitoring the implementation and the control of the machinery, which the nation designed to allow development programmes to achieve their specific objectives. Social policy has the important task of adjusting economic growth policies, through various means and strategies (for example, legal enforcement, political pressure, and so on), in order to induce compliance on the social objectives, and to achieve human well-being in the nation. Social policy therefore, represents an open door whereby benefits of economic growth policies are linked with the broad objectives of social development policy, thereby enhancing the possibility of extending benefits from economic growth to everyone in the nation.

The globalisation of economic endeavour through exports and trade on industrial products across international borders, somehow pose direct challenges to social policy on how to reconcile domestic issues, with their global counterparts that relate to economic growth from global trade. Aaron et al (1994, 12) stated that the GATT negotiations, which took place during the mid 1980s, were largely responsible for the reduction in border restrictions on trade and services, during the period when large number of developing countries moved unilaterally against border barriers, and then pursued outward policies. The positive and negative economic growth effects on human beings and society are not only outcomes of global economic processes, but also the outcomes of public policy within nations. Governments in various nations re-act differently to policy issues, especially in their choices on policy goals, policy instruments, and strategies for policy implementation on issues relating to rewards from the global sectors. This situation occurs because social policy generally focuses inward on the nation state and national intervention strategies for human well-being, which are almost always applied in isolation of world-wide trends and expectations, but rather prone to compliance towards invocations that were triggered from other nations. The same is true of the different domestic economic and social policies that operate in other nations. Putting together these convergence and divergence phenomena in relation to domestic policy towards globalisation of industrial production and internationalisation of national economic endeavours for export trade world-wide, the study already observed the existence of traces of convergence and divergence here and there, within policies of various nations. The review of some

policy areas will follow below:

First, global industrial policy aims at allocation of multinational firms in viable global regions. Here, the main pressure from globalisation that affects policy (Bellak, 1995, 30-31), is economic pressure. Mechanisms of convergence use state competition as common instrument to gain approval for the location of multinational firms in countries or regions, while the mechanisms of divergence are political choices of actors that selectively use divergent industrial policy, as an act of competitive advantage over other countries. The most likely outcome on this policy field will be divergent industrial policy strategies by competitors. The tax policy aims at distribution. The main pressure from globalisation that affects policy here (Kitzmantel & Moser, 1995, 30-31) is economic pressures, that are used by multinational firms to gain financial market liberalisation. Mechanisms of convergence are based on state competition through the use of tax policies that are liberalised, in order to attract capital, while divergence sets in through institutional differences of the tax systems, and through disparities in the mobility of capital and labour between nations. Expected policy outcomes here, will be convergence towards searching for remedy to worse situations, while options for the existence of some differences may still remain.

Markets aim at distribution of goods and services for the accumulation of profits, while social protection policy aims at the redistribution of resources. The main pressure from globalisation that affects policy here (Mosley, 1995, 30-31), is political ideology that uses political and/or legal pressure to gain effectiveness and acceptance. Mechanisms of convergence are the imitation of ideas, while the mechanisms of divergence are based on institutional differences, and centre-periphery political problems. Expected policy outcome here, will be that there could be no social dumping, and the existence of some centre-periphery divergences could be found. Labour relations (policy) between nations aim at gaining the allocation of capital and labour. The main pressure from globalisation that affects policy here (Keller, 1995, 30-31), is organisational structures of capital and labour, and these use political and/or legal pressures to gain allocation of human and financial resources. Mechanisms of convergence are national / domestic interests and organisational structures, while mechanisms of divergence are based on divergent domestic interests and disparities in the organisation of capital and labour. Expected policy outcome here will be the persistence of existing labour statuses due to different organisational interests.

Health and safety policy aims at the allocation of resources. The main pressure from globalisation that affects policy here (Eichener, 1995, 30-31) is, for example, European Union harmonisation law(s), which employs political and/or legal pressure. Mechanisms of convergence here are legal enforcement, while divergence sets in through institutional differences in the implementation processes. Expected policy outcome here will be a soft approach to convergence and/or divergence, but consensus towards better standards is likely and sometimes, imminent. Anti-poverty policy aims at distribution of resources. The main pressure from globalisation, that affects policy here (Engbersen, 1995, 30-31), is political ideology, financial problems of the welfare

state, and the imposition of political and/or legal pressure to gain support and acceptance. Mechanisms of convergence are the imitation of ideas, while mechanisms of divergence exploit institutional differences in welfare-state regimes. Expected policy outcome here will be convergence of deprivation to those outside the means-tested qualifying standards, and anomie to those in need but were negatively affected.

Monetary policy aims at stabilisation of financial market liberalisation. The main pressure from globalisation that affects policy here (Thomasberger, 1995, 30-31), is economic pressure. Mechanisms of convergence are market forces that are amenable to assessment and control of central banks, while the mechanisms of divergence impinges through competing interests between the key currency countries, and between monetary and fiscal policy makers. The expected final outcome here will be convergence in policy impotence, and divergence in interest rates and inflation. Environmental policy aims at the allocation of resources. The main pressure from globalisation that affects policy here (Kelemen, 1995, 30-31) is, for example, the European Union laws and court-decisions, which adopt political or legal pressures for the maintenance of standards. Mechanisms of convergence are legal enforcement, while divergence develops from the different opinions between councils, commissions, unclear priority of competition, and environmental laws. Expected policy outcome here will be convergence towards the worse situations and divergence, due to different interests of courts, commissions, and councils.

Migration policy aims at the allocation of vacancies for labour and capital. The main pressure from globalisation that affects policy here (Sassen, 1995, 30-31), is economic pressure for the location of multinational firms in nations for direct investments in industries and for promoting employment positions. Mechanisms of convergence here use market forces and trade to gain approval for the location of multinational firms in the areas or regions, while the mechanisms of divergence invoke on historical paths, cultural networks, politically induced unequal chances for labour, and capital to cross borders. Expected policy outcome here will be both convergence and divergence.

The policy actions that nations adopt for international competitiveness are important because they seem to assume the same pattern of convergence and/or divergence in various nations (see Figure 11), and these phenomena are global. Globalisation therefore does represent convergence and divergence of market forces, and patterns as well. Usually, phases of convergence may be followed by divergence in market forces, and then another fresh period of convergence, and again followed by another period of divergence, interchangeably. These double phases of convergence and divergence are well demonstrated by Bellak (1995, 95-100), with the examples of the strategies of multinational enterprises in global competition, and the threat of firms' relocation which also indirectly cause convergence within domestic industrial policies. Some of the important threats of firms' relocation are that multinational companies reserve the rights to dismantle their factories and pack them away (see also Kangas, 1991, 6) to other global areas where they find more favourable conditions for making profits and for economic growth.

The global market forces do not necessarily pronounce, which policy goals are to be adopted by the nation states. It is the policy makers in the nation states that have to analyse own national economic and social development interests and the objectives that they will pursue, pinpoint their own competitive advantages, and identify their policy goals in the global market. Amongst the several strategies that may be available at their disposal, they must find the right direction and the most effective ways of achieving their economic goals. In the cause of doing these, they must consider how their legal systems function, the nature of their political environment, and the administrative settings of their bureaucracy, which all their interactive social systems have to assimilate in order to assume the legality of working efficiently and effectively. For a detailed insight on mechanisms of convergence and divergence, see Figure 11. Divergent economic and social policies must bring about convergent co-existence between objectives of economic growth and those of the social sectors, in translating economic benefits to human well-being.

Figure 11. Layout of convergence mechanisms and outcome by policy fields

Policy field	Main pressures of Internationalisation affecting policy fields	Mechanisms of convergence	Mechanisms of divergence	Net outcome
Monetary Policy (Stabilisation)	Financial market liberalisation (Economic pressure)	Market forces, tying central banks' hands	Asymmetries of power between key currency countries and other countries, and between monetary and fiscal policy makers	Convergence to policy impotence but divergence in outcome (interest rates and inflation)
Fiscal Policy (Stabilisation)	Political ideology and Maastricht convergence criteria (Political and legal pressure)	Imitation of political ideology, legal enforcement of Maastricht	Problems of collective action-free riding, institutional differences of state spending	Range of options, convergence not likely
Industrial Policy (Allocation)	Multinational firms (Economic pressure)	State competition of industrial policy for the location of multinational firms	Political choice of actors for selective industrial policy, creation of niches by using competitive advantage over other countries	Divergence of industrial policy strategies more likely
Migration policy (Allocation)	Multinational firms (Economic pressure)	Market forces and trade	Historical paths, culture and networks, politically-induced unequal chances for labour and capital to cross borders	Convergence and divergence
Tax Policy (Distribution)	Financial market liberalisation and multinational firms (Economic pressure)	State competition of tax policies in order to attract capital	Institutional differences of tax systems, disparities in the mobility of capital and labour	Convergence towards the worse, some differences remain

Welfare Policy (Distribution)	Diffusion of technology, global interdependence of risks (Economic pressure)	Imitation of technology evolutionary enlightenment of actors	Path dependence of institutions, strategic options of actors	Both convergence and divergence
Social Protection Policy (Distribution)	Political ideology (Political and/or legal pressure)	Imitation of ideas	Institutional differences, centre-periphery problems	No social dumping, cen -tre periphery divergence
Antipoverty Policy (Distribution)	Political ideology, financial problems of the welfare state (Political and/or legal pressure)	Imitation of ideas	Institutional differences in welfare state regimes	Convergence to deprivation and anomia
Health and Safety policy (Allocation)	European union harmonisation laws (Political and/or legal pressure)	Legal enforcement	Institutional differences in implementation	No race to the bottom, convergence to better standards
Labour Relations (Allocation)	Organisational structures of capital and labour (Political and/or legal pressure)	National interests and organisational structures	Divergent national interests and disparities in the organisation of capital and labour	At best, persistence of status quo due to different interests and organisation
Clean Air Policy (Allocation)	International law and political pressure (Political and/or legal pressure)	Political pressure	National interests being more or less receptive to environmental problems	Convergence and divergence, impor tance of international pressure
Environmental Policy (Allocation)	European union law and court decisions (Political and/or legal pressure)	Legal enforcement	Different opinions between council and commission, unclear priority of competition and environmental law	Convergence towards the worse or divergence due to different interests of court, commission and council
Regulatory Styles (Policy Implementation)	European union harmoni sation (Political and/or legal pressure)	Legal enforcement	Institutional embeddednes of public administration, routinised behaviour	Persistence of differences due to history and institutions

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Layout of convergence mechanisms and outcome by policy fields: Source: Introduction: An interdisciplinary approach to convergence (Internationalisation, convergence mechanisms and outcome by policy fields). In: Unger, B. & van Waarden, F. eds. Convergence or divergence (1995).

Figure 11 illustrates perspectives of mechanisms of convergence and divergence, and the layout of outcomes by policy fields after the portfolios of the policy fields had been executed. The Figure also illustrates the different policy fields in relation to how the various types of economic and social pressures from internationalisation, set in motion the mechanisms of convergence and/or divergence, and indicate the possible outcomes by those policy fields. It is a known fact that in recent development of capitalism, super-structures of economic systems are currently controlling two main axes of world economy. These two axes of the world economy revolve around the finances of multinational enterprises, and the various forms of economic associations between private companies and/or the nation states. Firstly, capitalism revolves around areas that were relatively backward in accumulation of capital. Secondly, capitalism revolves in situations of dependency by the vacuum created at the exit of colonialism, which account for prevailing lack of adequate domestic social organisation in many poor developing nations. The diffusion processes of the global economy, to some extent, had converged to make world nations interdependent. The theme of uniformity (convergence) and diversity (divergence) make significant, but important marks on the world due to their presence in every economic and social activities of the present global economy. These forces of convergence and divergence in every nation (Kerr et al, 1960, 296) will continue to give the mix that characterises the future, but will never reach a final equilibrium. Social policy therefore, is best linked to local needs, and when it is foreseen and implemented, will improve human well-being in individual nation states. The globalisation of the industry then, will work for convergence, divergence, and economic growth, while social policy would always stand for the adjustment and translation of benefits from economic growth, into human well-being and for further social development.

The multinational corporations have the potential for becoming important means of improvements on human conditions in most parts of the world, because they are directly involved in all activities within the international businesses, and are the great providers of foreign direct investments. Multinational corporations are usually very large and often have affiliates in all world countries. Although the multinational corporations are useful to society (Kefalas, 1980, 148-152), they also represent potential threats to domestic companies, to the labour of the host nations, the labour of their home country, the international economic order, and to the power of the governments in the host nation states in maintaining political and economic stability within their sovereignty. The involvement of the multinational corporations in nations, are known to be both useful and wasteful, but their presence are necessary for the nations' economic developments.

The important factors of internationalisation, which affect convergence of national economic policies, are the states' competition for the location of foreign firms in their territories. These competitive actions in various nations are found everywhere where the multinational industries are located for the purposes of manufacturing goods for exports, or at places where the distributive activities and marketing the industrial products are transacted. Habermas (1985, 157) made some remarks on concepts of

communicative action, and the standard paradigm for the use of money in the process of exchange of goods. In these processes, Habermas sees exchange partners as pursuing their economic interests with different strategies in the rational use of scarce resources to maximise profits in mutual business transactions through the medium of money, which is an acceptable precondition for all financial settlements, rewards, and so on; as the final results which the exchange partners envisage. The other single most powerful engine of convergence in globalisation (Kothari, 1993, 35-37) is communicative action through the media and the ability of business enterprises to make use of this modern information technology, to communicate with diverse world societies and make people to demand similar industrial products within the global market.

The modern systems of communication and information technology induce people all over the world with the desire of catching up with those who already have the industrial products, which they advertise. Interactions under these conditions of free economic competition is then strategic, in the sense that such actions are steered through the medium of money as a precondition, whereby exchange partners mutually participate on the conditions of each other's re-action through their offers and their settlements in cash rewards. Thus strategic free market competition within money codes schematises possible reactions, in which participants accept offers of the exchange bids or reject them, and/or acquire possession of the money or dispense with its acquisition. This paper accepts Habermas' (1985, 157) views, that the utility of money becomes the generalised value of money when its use is acceptable as valid by all the actors that participate in the same ways in the monetary relationships, and at all times everywhere where money is relied upon, including settlements cross national borders. In all these economic market relations and interactions, profitability then emerges to form the measure, according to which successes of economic actors can be estimated.

As a common practice, governments impose taxes on goods for international trade, subsidise exports, restrict imports of certain goods, and limit international capital movement or outflows. For the private sectors, high taxes on cross border goods and transactions, not only reduced international trade, but in many cases eliminated trades, and widened economic depression. The objectives of competition policy then coincide with the international trade policy (Scherer, 1994, 1-2) laid bare in the principles of the international trade relations as stated in the 1947 General Agreement on Tariffs and Trade (GATT), which were adopted and signed on October 30th 1947 in Geneva. Both competition policy and international trade policy were meant to harmonise trade through the imposition of substantial reduction on Tariff, as well as the removal of other barriers to trade, including the elimination of many previous cross border discriminatory treatments and practices in international commerce.

The policy areas within the GATT agreement known as 'the Magna Carta of international relations' (Scherer, 1994, 1), are intended to help nations in raising the standard of living, as well as envisaging full employment, in the midst of a steadily

growing volume of worlds' real income (see Table 14). This policy area demands further development in the light of the scarce resources of the world, while production and exchange of goods are expected to be expanded globally. Thus, international trade policy and competition policy, seek to use the General Agreement on Tariff and Trade, to reduce taxes on goods, so as to reduce substantially the barriers on international commerce at borders, and at the ports of entry. During the 1990s, governments' restrictions on capital flows were modest or significantly reduced (Aaron et al, 1994, 13), while modern transportation systems and communication technologies, shrank distances and integrated nations around the globe.

The needs and requirements of the developing nations for participation in global economy (UNIDO, 1984a, 57) are important, and hence it is necessary to clarify certain safety rules on the terms of foreign investments and their impacts on industrial financing. In relation to the needs for the provision of appropriate guarantees for partnerships both in industries, and in the developing nations, it is essential to ascertain the scope and forms of governments' intervention. Proper clarification of the agreements and rules for the transfer of finance, and perhaps technology between the partners must be clearly made to serve as general frameworks and principles for further co-operation, and/or for involvement in the relationship of providing additional resources for reducing inequalities. Industrial partners would further require certain assurances and guarantees against non-commercial risks, such as nationalisation or expropriation of the corporate industries or firms. The objectives of industrialisation go beyond normal inter-firm relations (UNIDO, 1984a, 58), and lie much further towards the spheres of competence of governments to guarantee security either through national legislation or through international agreements between the nations.

A genuine attempt to eradicate poverty in the world means that the industrial nations must participate at global levels, and give concessions in favour of bridging the poverty gaps, particularly between the developing countries. From these perspectives, Dube (1990, 45) points out that the industrial nations must encourage and allow full participation of the developing countries in global economic decision making processes. Joint deliberations on the economic problems that are facing the poor nations are also necessary for the industrial nations. The international community must arrive at some form of consensus on the terms of trade regarding raw material from the poor countries, so as to allow those poor countries to benefit from the resources as well. The industrial nations must allow better terms of trade for the poor countries. The agreements between countries must allow the poor countries to benefit from resources that accrue from their economy, to be used for strengthening the social sectors, and in translating economic benefits to human well-being.

The theory of comparative advantage focuses on differences amongst nations (Aaron et al, 1994, 16), and argues that free trade between nations will maximise global welfare. But Holm & Sorensen (1995, 1) had identified that the processes of globalisation are uneven in terms of cross national intensity, geographical scope, and national or local depths, particularly between Northern and Southern nations around

the globe. As clarified elsewhere in this paper, economic growths as well as international trade theories, all accept that real global convergence (see Ake, 1995, 22), is the outcome of increased interdependence between nations through market forces. Policy makers in nations must accept the logic of the markets and make it work more efficiently, in order to help the poor countries and individuals to compete on equal footings within the global market. Growths through the markets are the only means to achieve well-being. People must be seen as goals and essence of development, whether the issues are concerned with economic or social development.

5.2. Beyond the nation state: Global citizenship and human well-being

The scientific activities of the modern industrial society depend increasingly on industrial productions that are based on the application of scientific knowledge and getting results towards improved economic production and growth. The impacts of the application of a fresh scientific knowledge may be smooth and problems free for the present time, but are not completely understood in terms of their effects on well-being in the distant future. Many environmental risks also stem from the economic activities that are concentrated in the industrial nations (UN Global Outlook 2000, 1990, 75-87) as they cross national borders to constitute risks that are shared by all world countries, whether the countries benefited from those economic activities or not. The complete nature, extent, and forms of their implications are imperfectly understood at present, especially the various ways in which they affect human beings around the globe. The management and control of environmental health-effects of the industries and their finished products have largely become difficult and expensive problems for the international community. All that is known is that the effects of science-based technology in areas of finished products of the industries may constitute problems in future due to contacts with other human societies for which neither academic sciences, nor present industry-based sciences, possesses the appropriate techniques and/or attitudes to usher in solutions.

Science and technology have created jobs, but they may have displaced much more than they helped, for example, the consequences of the relocation of production facilities and internationalisation of capital (Allen, 1989, 124) may lead to local structural unemployment, and the intensification of labour relations in nations. Environmental concerns stem from alarming evidence of serious and sometimes irreparable damage on ecological systems (UN Global Outlook 2000, 1990, 328-332) that were inflicted by industrial production methods. Although problems of poverty and under-development (including environmental problems) cannot be solved without sufficient economic growth, far less is known about how to guide economic and social progress, in order to avoid harmful after-effect of untested scientific discoveries. The relocation of industries in the developing countries for manufacturing processes, away from their home bases in the industrial countries, are sometimes at the risk of transferring environmental costs from the industrial nations to the developing countries. Debates on greenhouse gases, acid rain, and climate change, indicate

significant global warnings (UN Global Outlook 2000, 1990, 75-87) against the dangers that lie ahead of unregulated scientific and industrial production practices. These implications during our time indicate the need for the creation of sustainable forms of development for the future. Meanwhile, much depends upon the nature of improvements that could be made both in the national social policy, the policies for international co-operation between nations, as well as the monitoring of scientific activities at the global levels.

Economic activities had almost always included international dimensions, which relate to import or export of trade and labour, hence globalisation may imply that 'we are in each other's world'. Advances in transportation and communication technologies made it much easier and cheaper for companies in one location to move or ship goods from one village to the city (Aaron et al, 1994, 12); they may also facilitate trade, migration, and the movement of financial capital from nations to continents. The rise of globalised society (Holm & Sorensen, 1995, 4-10) brought about a more complex international order, which involves an augmentation of foreign trade with new international networks of businessmen and traders, and the possibility of internationalisation of labour through migration and increased activities of multinational companies. All these induce changes towards convergence and/or divergence in consumer tastes, and in the choice of where to live or work. As a matter of policy, some multinational companies rotationally transfer their management staff world-wide from one branch to another. Encouraging labour mobility, for example, was part of the general project of establishing barrier free Europe (Teague, 1989, 17-21), given the fact that substantial proportion of the community's intra-trade and service movements, involve trans-national companies that move their staffs across various member states within the economic union. Freer international trade implies that mobility will be expected to become more widespread through future policies on international co-operation. In various nations' policy, migration and immigration assumedly, are often taken for granted as cancelling off each other.

The period after the Second World War became important due to economic policy changes in the location of industries in various nations. Some of the changes that occurred in this sector are the location and/or re-location of manufacturing activities of the industries within sub-urbanisation areas. It is known that when a group of closely related industrial plants cluster together (Collins & Walker, 1975, 6), they frequently benefit from each other through the common use of some facilities and services that are needed by all the industries. The urban areas provide an overall level of services to all industries, which tends to be proportionate to the size of the urban area. The services are more noticeable in the common use of transportation, vocational schools that are geared to the needs of the industries, industrial machinery, tool production, the social services, the banks, and so on. In addition to these industrial policies, the industries specialise narrowly to be able to attain cheaper production, but obviously they remain close enough to the suppliers and buyers, in order to keep transportation costs to the minimum. Thus, as more production plants are concentrated in the city, the range and quality of services available to the manufacturers usually increases. Where

capital and know-how are scarce (Tanzi & Coelho, 1993, 200-201), foreign borrowing, foreign capital, and immigrant workers had always been an important factor in the development of the host nation, and could brings prosperity through the governments offering employment incentives, so as to increase production. Besides these privileges, the larger industrial centres often can provide the management and labour force with more cultural, educational, and other facilities, which make the places more attractive and unique as places to live and conduct the affairs of their industrial productions.

The history of international migration is often motivated by economic considerations for resettlement and labour, due to economic disparities between the sending and the receiving countries (UN Global Outlook 2000, 1990, 217-222), although movements of refugees are not economic, but rather they have economic repercussions. The main destinations of labour migration have always been the industrial nations of Western Europe and America, and sometimes the Middle East. The governments of the receiving countries promoted most migration, in order to satisfy the labour needs of their growing economies. When migration to Western Europe was officially prohibited, the policies of allowing the re-union of family members, precipitated the continuation of foreign population flows into the receiving countries, though undoubtedly, increasing number of immigrant workers still remain, after their work contracts had expired. Migration also has undesirable effects on the sending countries, especially those migrant workers that tended to be better educated and possess higher skills than the average population. Migrants generally have experienced negligible occupational upgrading while abroad, and those choosing to return to countries of origin, seem to be negatively selected in terms of skills, age, or health statuses.

The growth of an urban centre or region then has an impact in attracting immigrants from neighbouring regions. Such urban growths do not only attract the immigration of person of other nationalities, they also attract capital from elsewhere, which is likely to reduce the attractiveness of the supplying nations' economic development further. This seems particularly true in view of the fact that migration tends to be selective, so that the younger and more able members of the population, are most likely to move. Depending on the pattern of industrial development in the area, the geographical redistribution of human resources through migration differs from one society to another. Migration to the locus of activity on the part of multinational co-operations, in some cases, may be internal to the society. Sometimes massive immigration causes a variety of consumer demands in society. Often the society faces the more complex problems of how to deploy resources and wealth as capital need for the provision of other vital services. Amongst these multiple consequences that are caused by immigration, are the disruption of residential patterns, culture shock and acculturation (Collins & Walker, 1975, 7), all which imminently emerge. Migration brings about new ethnic contacts, as well as conflicts, different kinds of strain on the infrastructure such as transportation or education, and the creation of new urban centres with unforeseen social problems.

The formation of new functional groups in society based on occupational and regional

group integration, patterns of economic rewards, and the appearance of new classes and sub-classes based on economic positions, are all options that cannot be ruled out with fresh inflows of migrant citizens. But with many countries moving gradually from trade liberalisation to privatisation of many state owned enterprises, the deregulation of global capital markets, the development of the international labour markets, and in some cases, countries' abolition of exchange control, all adhere to mechanisms of convergence and divergence in global economy. All the above mechanisms of convergence and divergence increasingly give rise to the creation of a borderless world. The perspective sees globalisation as the private enterprise's response to the changing international business environment, which is increasingly characterised by a complex pattern of cross border activities (UNIDO, 1996, 35-36) involving international trade and foreign investments. The global economic development has come that far to accept the principles of mutual obligation in integrating social objectives within policies that places the human being at the centre of all economic growth and social development. It seems that populations of the world are now developing statuses that lie beyond the nation states, and towards the acquisition of future identities of global citizenship.

The level of technological advancement in modern heavy industries, suggests that healthy, literate and reliable work force are inevitably needed world-wide, to meet up with the demands of the new market arrangements within national and global economies. The main problems regarding global market's interdependence are that countries operate on unequal terms of trade, and do not provide each other with any advantageous social purpose for economic growth, hence the envisaged translation of gains from growth to human well-being, and between industrial and developing nations. Viewed from these perspectives, poverty and poor regions indirectly constitutes problems for the rich nations of the world. This situation arises because of the fact that the external effects of poverty often present themselves, more so in social conflicts and labour migration to richer parts of the world (Hemerijck et al, 1995, 172). There has been no indication that migration, immigration, and asylum seeking are going to stop within the foreseeable future. Immigration and asylum seeking are therefore, new forms of worlds' social order to be embraced by social policy. Important part of policy solutions to the problems, lie with broadening and sharpening the scope of social policy, in order to cope with the sustenance of decent forms of immigration in the new economic and social order, within the emerging concepts of a world without borders (Soedjatmoko, 1989, 230).

Most countries with low human development indices and those with unbalanced or medium human development indices (Table 20) have successfully participated in processes of globalisation (UNIDO, 1996, 39-40) and some share identical policy characteristics of competency in the mobilisation of human and financial resources of foreign direct investments. They also share in the supply of educated manpower that is capable of competing with low and medium skilled labour in industrialised nations. Labour market policies in one nation, triggers labour migration or immigration elsewhere around the globe (Aaron et al, 1994, 15). While old problems seemed to be

solved by one nation, a new social problem within the periphery of similar migration and immigration nexus emerges elsewhere, sometimes with serious implications for the host nation.

At this juncture, the study re-asserts that series of attempts have been made within this study to clarify the conception of poverty through the experiences of the poor individuals and countries themselves. However, three concepts of poverty are identified and these relate firstly to subsistence poverty, which is concerned with minimum of provisions that are needed to maintain health and the capacity to work efficiently for survival. Secondly, poverty that is based on inequality is concerned with the relative positions of income groups or nations to each other, which also sees society as comprising a variety of stratified income layers with poverty located at the bottom levels of the layers. Here, the concept of poverty is relative to how the poor group or nation fares with the rest of (global) society, but the global context of society is the stance taken in this study. Thirdly, the externality of poverty is concerned with the social consequences of poverty to the rest of society, rather than in terms of the needs of the poor. However, Rein (1970, 446-458) tells us that to understand the poor, the affluent themselves must be studied, in order to understand their level of living, since it is those conditions that are relative to critical conception of inequality. It is known that the social problems of poverty are correlated with low income (Table 21), to the extent that low income creates problems to those that are poor, while the implication spills over to everyone else in the society. Social problems in the realms of poverty exist in a society because poor people are allowed to become so poor that they offend or become hurtful to the society. This is another way of saying that it is not so much the misery and plight of the poor, but the discomforts and costs to the community, which is crucial to this concept of poverty. Hence, the concept of poverty must be seen in the context of society as a whole.

Figure 12. Real GDP per capita ($): Poverty Gap between industrial and developing nations

	1980	1995	1998
Finland	8739	18764	20847
Brazil	Gap – 4822	Gap - 12192	Gap - 14222
Nigeria	Gap – 8245	Gap - 17932	Gap - 20052

Key: The higher the figures for Brazil and Nigeria; the larger their poverty gaps.

The study finds that the GDP per capita for Finland was $8739 in 1980, $18764 in 1995, and $20847 in 1998. Brazil's GDP per capita was $3917 in 1980, $6572 in 1995, and $6625 in 1998; while Nigeria's GDP per capita was $494 in 1980, $832 in 1995, and $795 in 1998 (Table 14). When figures on GDP per capita for the developing nations that are represented by Nigeria are compared to those of the industrial nations, huge 'gaps' emerge as differences between the industrial and the developing nations. Figure 12 therefore indicates the huge gaps that emerge from the GDP per capita of the industrial nations, on comparison against those of developing

nations during the years 1980, 1995, and 1998. Comparing figures for the developing countries with those of the industrial nations, the study found that the developing countries had 16.7 times less GDP per capita in 1980; 21.6 times less in 1995; and 25.2 times less GDP per capita in 1998, against the GDP figures of the industrial nations (see Table 14). These figures represent the poverty gaps between the industrial and developing nations, but the higher the figures for Brazil and Nigeria, the larger their poverty gaps (Figure 12). The study also found that the trends in gaps of real GDP per capita indicate that the gaps between the nations are in fact increasing.

The political economies of countries constitute systems and culturally specific patterns of legitimate contestation of associated citizens' right to social provisions. Health care and other social systems in some countries (for example), bear broader social relationships of inequality, but this sets the stage for both the contestation and constitution of the rights of citizens, which in turn, constitute important impute towards legitimising the states as being democratic. This happens because welfare systems are constructed on the notions of who is, and who is not a full citizen (Mackintosh, 2001, 11), hence the systems exclude and stratify, for example, by race, gender, and social class. The levels of health care provision, as well as the provision of other essential social services, are therefore seen as levels of commitment for the translation of economic benefits to well-being through governments' actions within democracies. All nation states have to accept the emerging concepts of global citizenship that places the human being at the centre of all developments, while the nations focus on social policy, as the basis for governments' intervention in the translation of economic benefits to human beings. It is here that social policy must prioritise programs to deal more effectively with the translation of economic benefits to unfulfilled aspects of human well-being in nations, for the eradication of global poverty in the future.

As stated in Chapter 2.6.2.6, the level of countries on the human development index scale, is the level of the country's achievements on all her economic and social endeavours, and therefore indicates whether countries are converging or diverging in accordance to the convergence hypothesis. This means that the HDI is an indicator for the measurement of levels of well-being that the human being has achieved through all domestic and global economic activities, in relation to how well economic development were translated to the social sectors of their nations. In other words, the human development index shows the level of translated benefits from domestic and global economic growth, to human well-being at the social sectors of the nations. The examples of industrial and developing nations will be in order here.

The HDI for Finland was .840 in 1980, .910 in 1995, and .920 in 1998. Brazil's HDI was .592 in 1980, .676 in 1985, and .689 in 1998; while Nigeria's HDI was .302 in 1980, .431 in 1995, and .451 in 1998 (Table 18). These figures represent fulfilled human development indices during the periods, but when the figures for the developing nations are compared to those of the industrial nations, the differences become huge gaps that exist between industrial and developing nations. On comparing

the figures of the industrial nations, against those of developing nations during the same periods, the study found that huge gaps exist between the two groups of nations on levels of human development. The smaller the figures for Brazil and Nigeria, the less HDI gaps exist. The gaps are therefore illustrated in Figure 13.

Figure 13. Fulfilled HDI: Gaps between industrial and developing nations

	1980	1995	1998
Finland	0.840	0.910	0.920
Brazil	Gap - 0.248	Gap - 0.234	Gap - 0.231
Nigeria	Gap - 0.538	Gap - 0.479	Gap - 0.469

Key: The smaller the figures for Brazil and Nigeria; the less HDI gaps exist.

The unfulfilled human development indices of nations remain the reasons why present rich nations still work harder to maintain and improve their positions toward levels of a 100 percent margin on the index scale. In doing so, some countries have performed better than others between 1980 and 1998 (see Table 18 and Figure 9 C). Table 22 therefore shows the unfulfilled human development indices of nations between 1980 and 1998. The Table (22) was drawn-up as a converted version of the human development index that indicates the unfulfilled human development indices in nations. When the unfulfilled human development indices (Unfulfilled HDI) of the poor nations are deducted from the unfulfilled HDI of the rich industrial nations, 'the gaps' between nations emerge, and indicate extent of the differences (divergence) between the industrial and poor the developing countries. Convergence remains within, but not between the divergent groups.

Table 22. Unfulfilled human development indices of nations 1980 - 1998

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	0.154	0.128	0.093	0.088	0.087	0.071	0.066	0.061	0.054	0.053	0.055
Norway	0.154	0.125	0.090	0.085	0.080	0.076	0.071	0.066	0.062	0.061	0.060
Canada	0.128	0.104	0.083	0.081	0.077	0.074	0.070	0.067	0.065	0.063	0.063
United States	0.127	0.108	0.086	0.085	0.080	0.079	0.076	0.073	0.069	0.066	0.064
Sweden	0.154	0.133	0.110	0.104	0.083	0.083	0.078	0.073	0.071	0.070	0.069
Australia	0.196	0.159	0.126	0.118	0.110	0.082	0.078	0.075	0.072	0.071	0.068
France	0.181	0.149	0.101	0.091	0.086	0.085	0.080	0.077	0.075	0.073	0.073
Netherlands	0.155	0.116	0.093	0.090	0.085	0.084	0.081	0.078	0.076	0.075	0.074
United Kingdom	0.195	0.172	0.134	0.124	0.097	0.095	0.090	0.083	0.084	0.081	0.081
Finland	0.160	0.133	0.102	0.104	0.103	0.100	0.094	0.090	0.086	0.083	0.080
Greece	0.230	0.192	0.141	0.134	0.128	0.124	0.124	0.114	0.109	0.107	0.106
Hungary	0.251	0.232	0.203	0.210	0.205	0.190	0.181	0.170	0.163	0.159	0.158
Argentina	0.262	0.243	0.198	0.192	0.186	0.184	0.182	0.173	0.161	0.149	0.139
Mexico	0.353	0.323	0.289	0.286	0.279	0.273	0.265	0.261	0.252	0.241	0.231
South Africa	0.381	0.351	0.315	0.307	0.300	0.288	0.276	0.265	0.255	0.246	0.252
Colombia	0.381	0.346	0.302	0.308	0.318	0.299	0.379	0.274	0.265	0.259	0.257

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	0.369	0.350	0.303	0.299	0.292	0.286	0.279	0.275	0.264	0.260	0.261
Turkey	0.463	0.418	0.354	0.345	0.330	0.316	0.313	0.304	0.294	0.283	0.278
Brazil	0.408	0.385	0.360	0.354	0.347	0.344	0.337	0.324	0.313	0.311	0.311
Algeria	0.526	0.444	0.385	0.380	0.372	0.368	0.364	0.355	0.346	0.340	0.332
Egypt	0.560	0.498	0.435	0.431	0.421	0.415	0.406	0.393	0.391	0.385	0.381
Zimbabwe	0.518	0.458	0.420	0.414	0.421	0.425	0.423	0.423	0.420	0.420	0.425
India	0.608	0.558	0.504	0.498	0.485	0.478	0.470	0.460	0.452	0.446	0.442
Ghana	0.579	0.553	0.517	0.503	0.493	0.483	0.467	0.453	0.458	0.550	0.446
Cameroon	0.608	0.547	0.515	0.511	0.507	0.507	0.507	0.502	0.497	0.494	0.493
Kenya	0.588	0.557	0.514	0.509	0.507	0.510	0.514	0.514	0.516	0.519	0.524
Madagascar	0.624	0.604	0.568	0.569	0.563	0.559	0.557	0.552	0.549	0.546	0.544
Nigeria	0.698	0.657	0.618	0.609	0.598	0.586	0.578	0.569	0.561	0.551	0.549
Mauritania	0.675	0.639	0.618	0.613	0.606	0.599	0.592	0.586	0.580	0.575	0.572
Chad	0.785	0.736	0.699	0.689	0.679	0.685	0.675	0.669	0.662	0.655	0.650

In Table 22, the study identifies that Finland, which represents the industrial nations had unfulfilled human development indices of 0.160 in 1980; 0.090 in 1995; and 0.080 in 1998; while Brazil that represents the semi-industrial nations had 0.408 unfulfilled human development indices in 1980; 0.342 in 1995; and 0.311 in 1998. The developing nations as represented by Nigeria, had unfulfilled human development indices of 0.698 in 1980; 0.569 in 1995; and 0.549 in 1998. The study found that the higher the figures for Brazil and Nigeria in Figure 13, the larger the unfulfilled HDI gaps that exist in those countries. Besides, it was observed that when the trend of the unfulfilled human development indices in Table 22 decreases, the trend in the human development indices increases in Table 18. These are important discoveries which explain the fact that when more economic benefits are translated to human well-being at the social sectors, the less the unfulfilled human development becomes in the nations, and the more the positions of those nations in human development index scale improve and become reshuffled. As development reshuffles the position of countries' on the human development index scale, Figure 14 indicates the huge gaps of unfulfilled HDI that exist between the industrial and the developing nations during the years 1980, 1995, and 1998.

Figure 14. Unfulfilled HDI: Gaps between industrial and developing nations

	1980	1995	1998
Finland	0.160	0.090	0.080
Brazil	Gap - 0.248	Gap - 0.234	Gap - 0.231
Nigeria	Gap - 0.538	Gap - 0.479	Gap - 0.469

Key: The higher the figures for Brazil and Nigeria; the larger the unfulfilled HDI gaps.

The comparison of figures from the developing countries with those of the industrial nations, the study found that the developing countries had 3.4 times more unfulfilled human development indices in 1980, 5.3 times more in 1995, and 5.9 times more

unfulfilled human development indices in 1998, against those of the industrial nations. It is observed that the higher the figures for the developing countries, the larger the unfulfilled HDI gaps become. The Figure 14 indicate that although the developing countries are trying hard to participate in world trade, they had derived only marginal benefits from the increased globalisation of their economic activities, and have not benefited sufficiently from it as to improve upon their human development and well-being to levels of the industrial counterparts. The figures also mean that the industrial nations have fulfilled almost all aspirations in human development, and that they have less work to do towards further improvements upon well-being.

In Table 21, the study found that many of the developing countries, however, have achieved modest GDP per capita growth that are accompanied by significant improvement in human well-being between the years 1980 and 1998, although all the developing countries have low human development indices (Table 18). But their levels of growth seem to shrink when they are compared with the world's levels of GDP per capita for the industrial nations with high human development indices; thereby portraying huge gaps between the groups of countries (for example, see Figure 13). Those nations with low human development indices need to initiate and sustain improvements in their economies, in order to attain the sort of growth that would improve and sustain the well-being of their entire population. Social policy has the relevance of translating gains from economic growth into human well-being. The policy challenges for the countries with rapid improvements in income are that the countries must give greater attention to the reduction of poverty, sustenance of human rights and the conservation of their environments, and these will ensure that growth surpluses will be translated and be used for improvements in the social sectors in future. For the semi-industrial nations with unbalanced links, the translation of economic growth benefits to human well-being is required. Under these circumstances, governments in poor nations should emphasise investments in human resource development, rather than investments in physical capital.

The prevalence of huge populations (Table app. 5.2) in the developing countries, affect the levels of human development (Table 18) and indicate enormous disparities between the industrial and the developing nations (Figure 13), and these may have engendered irresistible pressure for the labouring manpower to migrate to the industrial countries. More-over, the results of global disparities in income and knowledge therefore, are clearly the existing brain drain in many poor developing nations where such pressures had already manifested themselves. Knowledge-gap (for example, Table 13) between the North and the South, is still growing to form new kinds of dependencies, and may require the structuring of institutions for the management of such interdependencies. Many developing nations have confronted these problems (Transforming humanity, 1994, 100-101) by trying to make the exit of talented scholars impossible, while others pay inducement fees to scholars through employment, and high salaries based on merits, in order to deter migration. The imposition of difficult exit rules for scholars causes frustration, while high salaries and inducement fees may serve to perpetuate elite positions of inequality in the nation's

bureaucracy. Solutions to these challenges are for universities in poor developing nations to work hard in the future, for the transformation of their societies into learning societies.

Global interdependence and polity, to some extent, have transformed every human being into a global citizen. After the Second World War, the United Nations established the Economic and Social Council as an arm of the United Nation. The United Nations also established the United Nations Commission on Human Rights, while the Prevention of Discrimination and Protection of Minorities were sub-commissioned. The memberships of these Commissions are made-up of experts, rather than representatives of governments. The Commission for human right is charged with the responsibilities of monitoring compliance on various human right laws. Human rights, therefore, became the core rights for humanity through the Universal Declaration of Human Rights Bill that was passed by the General Assembly of the United Nations in 1948 (Vincent, 1992, 287-289). The Declaration asserted equal rights for men and women, and for nations large and small, and the rights of man and citizen on behalf of world society as a whole. Other embodiments of the global bill of rights' Declaration include the Universal Declaration of Human Rights, the International Covenants on Civil and Political Rights, and Economic, Social and Cultural Rights. These commitments allowed the United Nation's Charter to be interpreted as 'the Global Bills of Rights'.

Under the auspices of the United Nations, other regional Human Rights institutions have been formed. Amongst these are the European Convention of Human Rights that came into force in 1953, the American Convention on Human Rights, which came into force in 1978, and the African (Banjul) Charter of Human and People's Right that was adopted by the Organisation of African Unity in 1981. Besides these Conventions, the institutions of regional Human Right Commission and the Courts were also set up as the means by which every individual, as a global citizen (Vincent, 1992, 287-289) can protect his or her rights under the law. Furthermore, as citizens of one planet, the Amnesty International also came into existence to promote the Freedom of Opinion, the Right to a Fair Trial, Freedom from Torture, and the Abolition of Death Penalty across all nations, through various types of pressures on decision makers and the world leaders. The present Twenty-first Century is moving forward towards international affairs of increased security and welfare. The security against nuclear threat and its deterrence, the securing of national and world's resources from being wastefully run-down, the control of population explosion, the control of environmental pollution and the greenhouse effects, and so on – all these issues became the concern of the United Nations.

The state and the diverse private and commercial structures will therefore co-exist with public institutional arrangements, alongside government domestic policies for promoting human well-being, and these will transcend international frontiers to converge with the countries that operate identical policies on translating economic benefits for the reduction of poverty. Globalisation therefore, offers national

governments the forum for the type of interaction that is required between nations, for joint co-operation on the issues of integrating the domestic economy and the social policy objectives of other nations. Policies of nations are expected to converge through priorities given to the domestic policy on translation of economic gains within the nation states, towards the reduction of poverty through the redefinition of objectives for global economic growth arrangements. Policies here would simply aim at the inclusion of the phrase, 'economic growth for human well-being and social development', along the following lines:

(a) Alter all earlier policies, which saw the concept of economic development as equivalent to capital accumulation and economic growth, to include 'economic growth and capital accumulation, particularly for human well-being' (for example, these seem to be the path for the European Union).

(b) Broaden foreign policy of the nation towards embracing the idea of global interdependence, in areas that relate to the satisfaction of basic human needs.

(c) Re-direct the nations' domestic policies at improving the shortcomings of domestic and foreign policies of the nation, by including improved concepts of global economic growth, in the context of envisaged improvements on satisfaction of human well-being. Foreign policy must be based on priorities of economic and social policy in nations, and should be directed at using the benefits of global economic growth in the future, for the purposes of eradicating poverty in all countries (for example, through the United Nations).

(d) Domestic and foreign policies of nations should include regulations that would improve interdependence, through defining the limits of activities for the multinational enterprises, foreign direct investments, global ownership structure, size and areas of international competition, and so on. Foreign policy should include 'the promotion of social justice and human well-being' in clauses of agreements and other legal documents that serve as mechanisms of global market liberalisation between nations.

(e) National social policy should be directed (where applicable) at tackling any foreseen problems in respect to improving competitive resources in globalisation, and in favour of supporting the principles of poverty eradication, global environmental protection, and reduction in the military armament world-wide.

(f) Nations should keep track of good policies for considerable period of time (in terms of several years).

(g) Accept policy modification but implement change, only when there is sufficient evidence to do so.

This study asserts that poverty in nations presents themselves in social conflicts and still poverty remain the cause for labour migration, while the same is true of poverty in poor regions. Both incidence of poverty constitute problems for the rich nations or regions; and for the world as a whole (Figure 12). Based on these stances, useful remedies to improve the situations within the emerging world economies and the social sectors, would be for nations that have attained high human development indices (Table 18), to intervene by offering solutions on world poverty. Effective solutions would include offering financial support to poor countries with low human development indices, along the following directions:

(a) Foreign policy in industrialised nations should encourage and support economic and social development of countries with low human development indices, through the transfer of sizeable modern technology and the promotion of export trade between the industrial, and the developing countries.

(b) The rich industrial nations should integrate countries of low human development indices that have competitive resources, into the global market systems, by purchasing and paying the equivalence of their minerals and products on better terms of trade, and by allowing reduced import tariffs, especially for poor developing nations.

(c) The industrial nations must limit production that uses dangerous chemicals of various types; comply with safety rules in line with the demands of the green revolution, while encouraging the utilisation of safer and cheaper natural resources from the developing countries, for a sustainable development of the various world regions.

(d) Finally, the industrial nations must increase the quantum of development assistance and aid, to poor countries with low human development indices, in order to help them develop the bases for their own agriculture, as well as other vital infrastructures necessary for human well-being.

Economic development having come thus far to accept ultimately the principles of mutual obligations that are required for successful integration of economic and social objectives within policies, must go further to embrace new concepts of global interdependence of economic and social development. The primary objectives for social policy in all countries in the near future will not merge or converge instantly as to defuse and meet the economic and social needs of all human societies, without the immediate institutionalisation of the principles of welfare in those nation states. Global citizenship therefore, implies that nations (in the terms of Soedjatmoko 1989, 224), would have to accept the inevitability of ‘multi-ethnic states’, and ‘a world without borders’, as simply the nature of social policy yet to unravel in the future. Humanism and economics are not disparate concerns in globalisation.

5.3. Corrective social policy for attaining social development goals

It is definitely not enough to state all that is wrong, it is also important and necessary to clarify on how defunct perspectives and misconceived economic and social goals can be corrected for further development of social policy in the right direction. Like within organisations (Ahrne, 1994, 28, 62-63), the state, industries, and multinational corporations have resources and rules by which the human representatives of the organisation, act, interact, compete and operate the functions of the organisation within national and international contexts, on behalf of the organisation. This stance applies in the same way to policy makers, because it is a widely held view that the centre of all development activities is for improvement of the human beings, and the translation of benefits from economic activities, for present and future social well-being of humanity. Razavi (2001, 1) identifies that there has been increasing demand on 'the enabling role' that social policy can play in the development processes. The spread of democratisation processes around the globe, therefore, had reinforced citizenry pressures for social issues to be put back on national agenda, along with economic policies that are socially equitable in the context of development processes. Ethics of global competitiveness and other cultural barriers that have impacts on the economy must be softened to allow goals that are related to human well-being, to realise their full potentials and benefits.

The participation in globalisation will be equally representative in its structure, if supposedly it includes all nations in this its important aspect. Bellak (1995, 87) points out that about ninety per cent of all firms belonging to multinational enterprises world-wide, are located in the developing countries, thus indicating that major parts of the globe are actually excluded from reciprocal representation in the location of firms outside their national borders. Poor countries could not afford the costs to cross borders, and to locate firms in industrial nations and thereby, fulfil its participatory obligations. Those poor countries that intend to participate in globalisation therefore need to reconstruct their global economic strategies in ways that will enable them to gain competitive capabilities. To be able to compete in global markets and achieve economic gains, the developing nations must continuing to put forward debates over constraints posed by tariffs and other obstacles to international trade, and to demand for favourable conditions on financial flows to be offered to the developing nations. The developing nations in turn, must first overcome challenges on strengthening their policies and institutions that would be effective in the management of risks and other collateral costs, in order to make the most of the opportunities offered by globalisation.

As a necessity for the poor nations themselves, economic and social development strategies could make use of social policy of the nation, as an important strategy on development efforts to improve human resource capabilities and hence, well-being. The setting out of planned objectives does not guarantee their fulfilment. The policy goals that are pursued, Utchay (1985, 22) must reflect the needs, demands of the people, expectations in the society, and the final actions on the implementation of decisions, would combine consensus reached within those premises. Under

circumstances such as these, social policy of the nation plays important role in identifying and directing resources particularly to the poorer and needy groups in the society. The poorest countries in the world need vast sums of money from the industrial nations, as concessions (Myrdal, 1981, 507; Davidian, 1994, 189-190), to improve their level of living, and the various forms of institutional reforms that are needed to meet up with global standards of interdependence.

The national economy and social policy ought to encourage investments in productive assets, as well as offer income generating employment to citizens. However, some countries that have low human development indices, un-necessarily spend large sums of money extravagantly on military armaments (see Table app. 5.38), which are totally unproductive. For instance, on all total government expenditure; Nigeria's central government spent 9.4% (1985), 15.6% (1992), 16% (1994) 14.4 (1996) and 12.3% (1997) respectively, on the military. Whereas, about half of these expenditures could meet up with the cost of all their needs on basic services, such as the need for basic education, basic health care and nutrition, low cost water supply, sanitation and reproductive health, especially in countries like Nigeria where money is scarce. For most countries with low human development indices, the examples of the Welfare states will be in order as substitutes for their present unproductive investment systems. Social policy should aim at encouraging the participation of all social groups in economic growth efforts, as well as in translating the gains from the growth of their national economies to human well-being in the social sectors.

As indicated earlier (Chapter 5.2), it is important for the governments in poor developing countries to form global compacts (or agreements) with some other countries, for development co-operation that are aimed at improving human well-being and alleviating poverty in their populations. It is also important for countries in the low human development index category, to locate partners and create favourable external economic environment, which would be conducive to support their internal economic growth. Growth of GDP per capita alone does not always filter down equally to every citizen in poor nations without transparent policy and planning. Mass poverty in many developing nations therefore, has to be tackled directly with strategies that satisfy basic human needs, and not necessarily those gains that are stated in growth figures of the markets only. Healthy population means healthy labour forces, which contribute to the growth of the nation's economy at all times.

The prevalence of mass poverty in societies, particularly in the developing nations prompts this study to ask; 'what is the essence of economic growth?' From the perspectives of this study, the answer to this question would be that 'economic growth is for investment in people'. The concept of basic need approach (UNDP HDR, 1995, 12), focuses on providing material goods and services to disprivileged and deprived individuals or groups in the population. This suggests that policy perspectives could be re-directed at recognising and selecting the individuals, including women (Dube, 1990, 95-96) belonging to groups that were formerly victims of age old discriminatory prejudices in social protection. The policy options should be broadened to include

these groups in society, by offering them state protection through legal enactments and enforcements. The weak and vulnerable segments of society must be targeted as groups of individuals of economic and social deprivations. Through legislation (if necessary), they must be given protection, amelioration, and compensation as the case may be. The basic policy objective here would be to identify, recognise, and prepare this weakest segment of the population, for equal economic participation through offering them opportunities for resource development, and rewarding them with employment at various levels.

On one hand, most human capabilities are dependent on peoples' economic circumstances. This situation brings us face to face with the fact that if economic growth is not properly managed, this could be detrimental to human resource development, because resources of individuals, who cannot pay for education, will not have their resources developed. Again, this could result in joblessness and cause people not to have a good health or a pleasant future in their nations, which they deserved or had prepared themselves for. On the other hand, education and health form important factors for furthering the expansion of human resources, as well as the bases for economic growth. Social policy and employment are therefore, important means of translating those benefits of economic growth into the lives of people. Advances in economic growth and human well-being can move together, only when social policy co-ordinates both sectors. To meet these objectives, policy makers must deliberately forge and reconcile the links between economic growth and human resource development, so as to achieve the two-way relationship between economy and society, or rather between economic growth and its translation to human well-being.

For the nation to achieve convergence through the adoption of strategies of corrective economic and social policy that could foster the integration and stabilisation of domestic, as well as international standards, the nation must first aim at eradicating poverty in all its forms, and where-ever such poverty may exist. The poor and hungry people can hardly work any harder to attain those social development goals that are related to environmental protection. The governments in various nations must implement public policies that are aimed at targeting and having the greatest impact on poor segments of their populations. The best approach for the implementation of corrective social policy would be the adoption of sustained basic need patterns that are consciously designed and directed at setting up permanent programmes for the disprivileged poor. The governments in rich and poor nations alike must therefore gear policy and development programmes within the social sectors, to be able to carry out these functions along the following lines:

(a) Aim at a better understanding of the nature and locus of poverty in society
(b) Set out clear and progressive goals for poverty reduction
(c) Identify poverty groups in the society
(d) Set out priority areas of plan implementation
(e) Assess the clients' needs
(f) Target resources to reach the poor

(g) Track and monitor progress in a particular manner (for example) through carefully selected outcome indicators
(h) Analyse feedback and identify follow-up sectors
(i) Educate the local masses on rules of hygiene and environmental protection

A particularly important remark would be that the local set of workers who know much more about the local conditions, needs, and workable strategies within the environment, are desirable in the choice of matching available resources with local needs. Implementation requires diversification in the use of decision makers and staffs at the local levels who will be exposed to pressure and scrutiny of the local people whom the services are directed to benefit, and these will ensure the delivery of services and/or goods regularly. Sometimes these services are improvised through local taxes. The whole arrangement is aimed at offering the local people at the grass root levels more opportunity to participate in planning and decision making processes, as the best ways to satisfy most of the local needs at the local authority levels. The local inhabitants are known to give higher priority to services pertaining to human well-being. However, some of the problems with decentralised services through local government authorities are related to the central governments' reluctance either to release funds, or decision making power to the local levels. On the other hand, very often shortage of higher skilled workers exists amongst the local staff, and sometimes programmes are necessarily bent to reflect the preferences of local chiefs, village heads and/or elders etc., who lack professional competence to tackle services pertaining to human well-being at the disadvantages of the poor masses at those local levels.

The concepts of development should no longer be defined and based only on economic growth per capita income (Dube, 1990, 62) of a country, without connections to the assessment of the result of such growth impetus, the translation of its benefits, and their expected social impacts on human well-being. Developments in the economy should improve the social sectors and human well-being, and it should be concerned with the nature of the social problems of the poor and/or the neglected sections in the community. The gains from economic development must raise the level of living of the poor, through public policy that is geared to encourage the full participation, and the integration of the people into economic and social activities, within the country's over-all national development programmes.

It is important therefore for policy makers to receive quicker feedbacks on the constraints and the effects of their policy, during the implementation stages. These are as important as any other economic or technological factors, in explaining the successes of their policy during implementation. Strong links between economic growth and human well-being (Figure 10), are known to exist when resources generated by economic growth had financed human well-being and development. At the same time, human well-being and development are known to contribute to economic growth.

6. CONCLUSIONS

In this chapter, the study summarises the central issues of convergence and divergence as they relate to the global economy and social development, in respect to their effects on the economy and the social development policies of the rich and poor countries included in the global sample. The stages of early development processes of the global economy (Chapter 1) had illustrated that the dominant sources of the differences between economy and social development were pre-industrial cultures, religions, and specific differences within national cultures. All these components stimulated leadership and expertise visions in developing country-specific competitive programmes for boosting the economies towards profits and growth through globalisation. The logic of industrialism, therefore, holds that industrialisation creates industrial societies that are faced with the task of organising economic and social institutions alike. The perspectives within the logic of industrialism emphasise industrialisation, and uphold that industrial societies are expected to develop identical rules, and to govern complex institutions within communities through interactions between workers, managers, and the states.

Thus, the convergence theory asserts that industrialisation would reach a convergent point where nations become more similar and perfect within their means of production, the nature of their corporate cultures, their finished products, and hence become similar in affluence through the gains from industrial production. The application of modern technology in industrial production implies the use of science as the main tool for the explicit purposes of obtaining the best quality products with less manpower, and in most efficient, low cost mass production across the globe. But globalisation is universality of participation only of those nations and corporations that can afford the huge financial capital required for cross border economic investments, in order to gain more profits within the international community. The social situations and realities of the present world economy taken as a whole, demonstrate that benefits from globalisation are not translated to human well-being in ways that allow the benefits to reflect substantial segments of all human populations in all nations (Chapter 1). The outcome of this situation is a world that is divided into the industrial, semi-industrial, and the developing countries; each group has different level of wealth, development, and technological capability in the economy, social provisions, and human well-being. All these inequalities necessitate the central role which the United Nation plays in helping the states to meet the challenges in development, and the security for global interdependence. The thesis presupposes that similarity in technology will become the convergent and unifying force between nations, while divergence remains the opposite of convergence. The likelihood, however, exists that cultural and religious differences would still mediate the effect of convergence world-wide.

6.1. Research summary

Industrialisation, export trade across national borders, and economic growth of nations which lay their crutches on globalisation, act as forces that trigger world-wide trends in economic growth, as well as discussions about the manner in which profits from economic growth are used for improvements on the well-being of human populations. Due to numerous forms of interactions that take place between human beings and the ever-advancing sophistication in modern technology, human well-being and his capabilities, which contribute to improvements in technology and economic growth, have become ends in themselves. Economic growth, however, remains the means to further the expansion of human capabilities. This study had verified and identified that global economic prosperity had enriched some nations in the world (Table 14), while the majority of semi-industrial and developing nations that form the greater part of world's population (Table app. 5.2) remained poor (Figure 12). Problems of poverty and low standards of living for the majority of worlds' population (Figure 14) trigger academic investigations on how global prosperity could be made to benefit the masses of the world's societies. By understanding present economic and social situations as they exist within the world nations, the attention of economic and social planners around the globe become focussed on how to contribute appropriate solutions to assist governments to gear policies towards world's need, especially in the developing countries.

After the Second World War and the exodus of colonising powers, governments in most developing nations set the goals of achieving rapid economic growth. The governments in those nations have begun to make efforts to improve the welfare of their people and they expect to attain development as the industrial nations have done. The developing nations therefore, began investing in the construction of industries without sufficient experiences of entrepreneurship. With the short supply of competent and skilled labour, and inadequate capital, many developing nations embarked on industrialisation with various types of financial and structural problems. Some governments in developing nations undertook the responsibility of building and organising industries, in order to ensure that the nations' scarce resources were managed efficiently. Expert investment decisions and the setting of priorities were difficult for many governments to make. The private sectors were therefore allowed to participate in developing industrial infrastructures, although such private enterprises were regulated by the governments in order to minimise excess profits, and to control differences between the markets and domestic prices.

On one hand, regulations on industrial activities were necessary, so that governments could be enabled to control fluctuations in businesses, and on the other hand, regulations helped governments to encourage their citizens to participate in international trade. The planning commission therefore formulates industrial development strategies in most developing nations, with the advice of the ministries of industry, trade, and finance, usually with some advice from the public enterprises and from results of project evaluations. All these form inputs that are put forward for final

approval by the political leadership. Most developing nations have established the five-year development planning systems, whereby the actual planning is carried out by the economic planning commissions within the ministries. However, the planning procedures differ in style and importance amongst the developing nations.

The advanced industrial nations with high human development indices, and the economically under-developed nations with medium and low human development indices (Table 18), are confronted with international competition at the global market levels. It is found that the three groups of countries are separated from each other by levels of their human development indices (Figure 9 C), and they enjoy (more or less) opportunities, as well as threats that globalisation processes pose for all nations. In these instances, countries with high human development indices interchangeably move downwards, and/or countries with low indices, can also move upwards the ladder into the medium human development index-levels (or quadrants), due to successes or failures at the global markets, and as the results of the levels of inputs to the social sectors. The improvements that countries make on all economic and social sectors culminate in merits that place the countries on particular levels on the continuum (Chapter 2.6), through which process the groups or quadrants of countries are assimilated into high, medium, and low levels of human development at the index scale.

The placement of countries on the medium human development quadrant, takes the transitional form of unbalanced positions through which countries that drop-out from high human development levels due to poor performances on economic activities and the poor translation of benefits to well-being, are formally located. Conversely, when the performances of countries with low human development indices, improve and become excellent due to gains from economic activities that are translated to well-being, the countries eventually move upwards on the ladder to medium human development index levels, until they attain high human development index positions or statuses. The medium human development index level or quadrant is like a no man's land in global economy and social development, which are defined entirely with indices of human development. Economic assistance or aid alone cannot guarantee that economies will grow, if citizens in the nation are not sufficiently educated as to be motivated and capable of advancing economic development incentives to a higher level, and to use resources wisely for further investments and to attract growth. The advancement of economic development incentives to higher levels and the successful management of the translation of economic benefits into human well-being, remain the very qualities that the poor countries must develop.

In-depth analysis of convergence and divergence in global economy and social development processes in relation to global effect of economic and social development policy has been meticulously conducted in this study. Characteristics and concepts of convergence and divergence in global economy are vast, and are still unfolding as an ongoing process, and its forms are not completely known to any single individual yet, due to its incremental but vast diversification in the nature of its development. The

interrelationships of domestic economic activities and the entire structure of export oriented trade strategies, imply that more is to be understood on how the system works in bringing about rapid economic growth and increases in shares of GDP to all countries world-wide (Table 21) under export oriented trade mechanisms. Global market strategies of convergence and divergence are still emerging as forms of global economic and social interdependence for national development.

Rapid changes in technology development within industries reinforce globalisation even in the most remote areas of the globe. Rapid growth cannot take place in a static technology (Montgomery, 1976, 271-272), thus modern technology is considered the means for development. One exemplary development in this sphere is the economics of information systems for improved and more efficient market responses to globalisation. This study made use of indicators and found increases in the usage of telephones (Tables app. 5.20 and app. 5.21), television sets (Table app. 5.19), Internet Web-sites (Table app. 5.23), and so on. The analysis of the data on these increases revealed further that market factors are in fact interconnected with the development of improved information systems in globalisation. The developments in these sectors ultimately reduced the costs of acquiring vital information, improved earlier tenancy and share-cropping that was inefficient, eased the irrational traditional arrangements and responses to the difficulties that were associated with the high costs, or the lack of obtaining timely information. However, the speed and nature of change in technology development world-wide generate hosts of other social problems, particularly for the poor countries that must reshuffle material and human resources in their systems, in order to cope with such new products that may involve yet more changes during their integration.

As the world moved into the Twenty-first Century, the rich industrial nations had dominated global industrial production and trade, as imposed by the logic of industrialism which forecasts that similarity in technology will become the convergent and unifying force between nations. The comparative cross-country analyses of convergent and divergent effects of economic and social development policies on the rich and poor countries uncovered various forms of disparities between the groups of nations. No convergence was found to exist between the industrial and the developing nations. The theoretical explanations on prerequisites and patterns of these developments (for example, Chapter 1.1.4; 1.2, and 1.2.1), revolve around the emulation of other nations, the significance of established trading practices, availability of raw material, availability of capital for investment, viable national agricultural system, and availability of efficient manpower resources.

Theoretical analysis (Chapter 3.2.2 and 3.2.3) on developing nations reveal that industrialisation in nations begins with small processing mills and home industries. Manufacturing in heavy industries follows later with increases in urban workers, and with working class wage insecurity that emerges as a main reason for the introduction of social security especially, in industrial nations. Competitive global trade on most newly developed technologies, create the emergence of an industrial proletariat within

most developing nations, and prompt their movement towards convergence in consumer tastes through their use of the new products and technologies. The policies of most developing nations seem to be converging towards increased free market competition, as pre-requisite for continuity in national development and economic prosperity for the new independent nations.

Summarily, the study endeavoured to examine convergence and divergence theories on policy areas that are related to global economy and social development, in both the industrial and the developing countries. The study reviewed various instances whereby concepts of economy overlapped with concepts of social development (Chapter 1), as well as the discrepancies between interpretation of different concepts, and the interplay for understanding the nature of the intricacies on problem areas in formulating the social policy that are needed. With representative global sample of thirty nations that were selected randomly from the industrial, semi-industrial, and the developing nations; the study measured the benefits of global economic growth policy, as they affect activities of human beings within the economy, and in the social sectors of various nations. Hard data were available for the study between the period 1980 and 1998. The study successfully measured the level of global well-being in the population with indices of human development (Chapter 2), and ascertained the extent and conditions under which convergence and divergence in the economy and social development improved human being globally, from the periods after the Second World War.

The conclusions on theoretical analysis of the study accept that the adoption of social policy measures in translating the gains from economic growth, towards promoting education, public health, equity, and so on would generate social progress and longer life expectancy, higher economic growth, and sustain more stable macro economy for the nations. In these instances, the theoretical analyses of the study identified convergence, as much as divergence, within several economic and social development concepts. Sometimes, both convergence and divergence were identified within same conceptual paradigm. At other times, convergence and divergence are found to be representing different phenomena at different economic and social situations. Wherever they were found, they were identified as forces that propel economic production, expansion, and growth. Factors of convergence work together with divergence to form the engines for globalisation of industrial production, and world-wide economic growth (UNIDO, 1996, 27). The double phases of convergence and divergence are interwoven within the main factors that affect market forces, growth, social development, the evolution of national policies for globalisation of industrial production, and the resultant international politics in globalisation. Most cross border economic policies of nations are relevant mainly to participants in the global economy.

The huge poverty gaps (Figure 12) which were found, are reflected in the levels of GDP per capita for the industrial nations (Table 21) in comparison with those of the developing countries. The Table 22 indicates that no convergence exists as was promised under the logic of industrialism in economic policy outcome, and the

resultant social indicators of unfulfilled human development. The Table 22 also indicates that no significant convergence existed between the industrial and the developing countries on levels of global economic growth, and the levels of benefits that were translated to human well-being through past economic and social development policies. For the developing nations, there was poverty and little or no significant economic growth comparatively with the industrial nations, and this left millions of people (Table 22) at the margins of survival. Contrarily, a very high rate of increase in the trends of GDP per capita for the industrial nations is found to be on going, against the low margins of growth found in those of the developing nations (Table 21). The Figure 12 therefore indicates that the gaps between the rich and the poor countries are indeed widening. Analysis in this study illustrates that privatisation and private investments could represent vital sources for the flow of capital in the future.

The study did not uncover the existence of any specific international social policy. However, there exists similarity on the upward trends of most data (Tables app. 5.17-5.26) particularly on the consumption of industrial products in nations. These increases in the pattern of consumption of various industrial products by the industrial, the semi-industrial, and the developing nations of the world, are hereby identified as attributes of convergence. This trend is found to be on the increase within all nations (Table app. 5.17-5.26), and may point towards symptoms of convergence on consumer tastes in the future. However, the wide poverty gaps between rich and poor countries (Figures 12 and 14) represent and indicate the existence of divergence in economic policies and systems of technology development and deployment, in the context of the poor masses in the population that the technologies serve. It seems that the political processes of the international community are not quite ready to deal with problems that arise from globalisation as they affect most poor developing countries, regarding the poor translation of gains from the global markets to human well-being. In order to identify grounds for consensus and find suitable responses to the common problems and threats that are posed by globalisation, nations must come together to determine the kind of policy actions that they would like to adopt on specific issues that threatens the international community or its environment. Under such circumstances, the consensus and decisions that are reached between nations at the meetings, are usually put down on papers and signed-up between the nations, or groups of nations. It is this kind of agreements (or treaties) between nations that eventually become sources of social policies at the international levels.

The intrinsic relationship between capital and social policy, may point to the logical explanation for the emergence of the welfare state. This study identified that the lack of integration between the economy and the social sectors of the nations, are the main reasons why the benefits of economic growth were not meaningfully translated into human well-being, particularly in the developing nations. The study therefore, argues in favour of redefining the concepts of development, to include its human aspects. Well founded social policy is simply the best way to reconcile and solve problems that relate to lack of integration between economic growth and the translation of benefits to

the social sectors for development and human well-being. The social policy that promotes education, health care, productive employment and so on, is the most important and effective means of translating the benefits of economic growth, in order to allow the benefits to reflect the well-being of the majority of human beings in nations.

Through the analysis of the data, the study identified the fact that economic growth alone will not eliminate poverty in the world. But economic growth can create the opportunity and resources, which social policy could use for a meaningful translation of economic growth surpluses to human well-being, and thereby, reduce and/or eliminate poverty in individual nations. Poverty rates have declined in many economies of Europe and in most industrial nations. Most developing nations obtained poor results on the over-all levels of achievements on the human development index scale (Table 17), although some countries had performed better than the others in improving well-being in their nations. The reasons for poor performances seemed to be multifaceted, but mostly located within the globalisation syndrome that is beyond national policy capabilities of the nation states in bringing about meaningful changes that are symbolic of development. Multinational companies simply offer some form of benefits, but only to their employees under private insurance schemes. Here, the study identifies that convergence in the elimination of poverty in nations would be attained, only when social policy of individual nations co-ordinates the translation of gains from economic growth, to the well-being of every human manpower and citizen in the nation.

The trading arrangements amongst most developing nations, have failed to yield the kind of benefits that have been realised by the outward oriented economies of the industrial nations. Although foreign aid cannot transform entire national economy, foreign aid can help nations to meet limited but specific needs of the poor developing countries, from which point their economy may begin to look outwards and grow. The analytical conclusions above highlight the urgency needed in bridging the gaps between the groups of nation, namely ‘the industrial, the semi-industrial, and the developing nations’ within the global market platforms. This can be done through offering poorer nations some kinds of economic concessions that would allow them to develop own human resources for participation in global economy, and to improve well-being. This gesture will also allow the poor countries to work together more closely under the imperatives of convergence and divergence in globalisation, towards the redefinition of concepts of economic development to include human well-being in the years to come. This new approach to social policy in solving poverty and development problems, must give priority to establishing a new international economic order that is based on collective national and international co-operation, and on the recognition of the importance of human aspects of development for increased equality in participation within a world economy.

6.2. Research Findings

Through the theoretical presentations in the introductory chapter (1), this study noted the disarray in economic policy objectives that were assumed to exist between global economic growth policies, and social development policy, which were expected to result in global human well being in nations. In order to ascertain the magnitude of the problems that were associated with the disarray, the study chose to intervene through empirical investigations and analysis which it set for itself, and to be pursued with the following aims 1 - 5 below (Chapter 1, p. 14):

Aim 1.

> To determine through the analysis of data, whether the industrial, semi-industrial, and poor developing nations of the world, are converging or diverging from each other on levels of economic and social development.

Findings:

The level of a country on the HDI scale (Table 18), indicates the level of the country's achievements on all economic and social indicators, and indicates the level of convergence or divergence in economic development and well-being that were achieved through domestic and global economic activities, in relation to how well they were translated into the social sectors of the nation. The analysis of data (Table 18) that represent the fulfilled HDI for industrial and developing nations, found that the HDI for Finland was .840 in 1980, .910 in 1995, and .920 in 1998. Brazil's HDI was .592 in 1980, .676 in 1985, and .689 in 1998; while Nigeria's HDI was .302 in 1980, .431 in 1995, and .451 in 1998. On comparing figures of the industrial, against those of the developing nations during the same periods, the study found that huge gaps exist between the two groups of nations on levels of human development (Chapter 5.2). Divergences exist between the nations' HDI.

Similarly, the study found that the GDP per capita for Finland was $8739 in 1980, $18764 in 1995, and $20847 in 1998. Brazil's GDP per capita was $3917 in 1980, $6572 in 1995, and $6625 in 1998; while Nigeria's GDP per capita was $494 in 1980, $832 in 1995, and $795 in 1998 (Chapter 5.2 and Table 14). The study found in Table 21 that most countries, including many of the developing countries, have achieved modest GDP per capita growth, which is accompanied by significant improvement in well-being between the years 1980 and 1998, although all developing nations have low human development indices (Chapter 3.1.3). The study found out that levels of GDP per capita growth for developing nations tend to shrink, when compared with the levels of industrial nations that have achieved high human development indices Chapter 5.2). Thus, huge gaps on GDP were found to exist between the groups of industrial and the developing countries (for example, see Figure 12).

The study found that the gap in group-gross domestic product per capita between the industrial and the developing nations in 1980 was $9016; and this means that the gap

was 11 times greater than the group-gross domestic product for developing nations in that year (Chapter 5). In 1998, the gap in group-gross domestic product per capita between the industrial and the developing nations was $21448; this means that the gap increased up to 13.4 times than the group-gross domestic product for developing nations, in less than a 20 years period. Growth in group-gross domestic product occurred in all groups of the industrial and the developing nations. The increases in growth trends of the gaps in GDP (Figure 12) indicate that the gaps are increasing between the countries. The very huge gaps between the industrial and the developing nations indicate that there is no convergence in GDP per capita between the two groups of nations.

The study found that the gaps in the number of years of life expectancy between the industrial, and the developing countries were significantly huge. The differences in the gaps between Finland and Nigeria were 27.3 years in 1980; 24.2 years in 1995; and 23.7 years in 1998. The study found that people in all world nations now live longer than they did in 1980, and this fact was substantiated with indicators of life expectancy in Table 6 (Chapter 3). The study also found that the number of years of life expectancy for rich industrial nations were higher, because the industrial nations had improved most of their social infrastructures that reflect on levels of HDI, which in turn reciprocated the prevalence of highest life expectancy for those nations (Chapter 4.4). The study did not find a convergence between the groups of nations, in number of years of life expectancy, except that convergence exists in similar patterns of upward trends in yearly increases for all industrial and developing countries alike (Chapter 3).

The study found that world-wide increases in trends of years of life expectancy (Table 6) and life expectancy indices (table 19), could be attributed to general improvements in the level of living (Table 18) in all countries (Chapters 2 and 3). Through comparisons, the study found that the yearly trend in life expectancy indices, improved significantly in all countries between 1980 and 1998 (Table 19). This important finding implies that people from the industrial nations almost lived twice as long than people from the developing nations (Chapter 3).

The study found that the number of television sets per 1000 in the population for countries with low human development indices during 1980 and 1998, ranged between 1 television-set for Chad in 1990; 6 for Nigeria in 1980, 59 in 1995: and 66 for Nigeria in 1997, while Finland had 414 in 1980, 512 in 1995, and 640 television sets in 1998 (Table app. 5.19). Here, no convergence was found to exist in the television-set usage between the industrial and developing nations, although trends in their increase indicate that convergence through consumer tastes could be a possibility in the distant future (Chapter 5).

Aim 2.

> To determine through empirical measurement, the effect of global economic growth and the extent to which it improves human lives in rich and poor countries; as the fulfilment of the promises embodied in the

logic of industrialism.

Findings:

This study adopted the HDI as the core indicator for the measurement of levels of well-being that were translated, depending on convergence and divergence in economic and social development activities of the nations. This means that governments' policy must build up social infrastructure and allocate resources, which include financial resources for public and private utilisation to satisfy and improve the provisions for human well-being in health, education and other social concerns in the nation, and for participation at the global markets (Chapter 4.4). Thus, the level of representative countries on HDI (1980 - 1998 statuses), is that of benefits from domestic and global economy, that has been translated through governments' policy instruments to the social sectors of the countries, for human well-being and hence for development.

Economic growth and human well-being reciprocate each other. In consideration of the fact that many nations are older and had developed their human, financial, and all other competitive resources more efficiently than poor nations, those developed-nations are economically richer and therefore, more powerful in translating benefits from economic growth to human well-being, than the poorer and weaker developing nations (Chapter 3 and Table 18). The result of these findings is stated in the HDI figures of the industrial and the developing nations below.

HDI: Industrial and developing nations

Year:	1980	1995	1998
Finland	.840	.910	.920
Brazil	.592	.676	.689
Nigeria	.302	.431	.451
Gap:	.538	.479	.469

The outlined HDI figures indicate high levels of achievements for industrial nations, and low levels of achievements in human well-being for the developing countries. The gaps between Finland and Nigeria were .538 in 1980; .479 in 1995; and .469 in 1998. The gaps were significantly huge and indicate huge differences. No convergence exists between the nations on levels of HDI.

The study found that the higher the gaps between the developed and the developing nations in Figure 13, the larger the existence of unfulfilled HDI in those developing countries. As trends in unfulfilled human development index decreases in Table 22 the trend in human development indices increases in Table 18. These increases are significant and important discoveries, which ultimately explain the fact, that when more economic benefits are translated into human well-being at the social sectors, the less the quantum of unfulfilled human development becomes in the nations. And therefore, the study found that the more the positions of those nations on the human

development index-scale improve, the more the position of the nations become reshuffled on the levels of well-being on HDI. As development reshuffles the position of countries' on the human development index-scale, Figure 14 then indicates the huge gaps of unfulfilled HDI that exist between industrial and developing nations during the years 1980, 1995, and 1998 (Chapter 5.2).

In Table 22, the study found that Finland which represents the industrial nations had fulfilled most of her human development aspirations between 1980 and 1998, while unfulfilled human development indices for the developing nations still lagged behind with huge poverty gaps. While divergence was found between the industrial and the developing nations, convergence remains within, but not between the divergent groups.

The study found that between 1980 and 1998 (Tables 21 and app. 5.27), governments in many poor nations' failed to make use of social policy measures in translating gains from economic growth, to improve human well-being within the social sectors. The levels of achievements by the developing nations in Table 18 indicate low performances on HDI for most developing nations.

Aim 3.

> Where differences are found to exist, especially in economic growth and resultant social development and human well-being, the aim is to identify how wide the poverty gap between the rich and poor countries is.

Findings:

The level of a country on a particular index scale, is the level of the country's total achievements on that sector, and therefore, the levels of contraries on the index, indicate the level at which the countries are converging or diverging comparatively with other nations, in accordance to the convergence hypothesis. The study found that the various gaps that exist between Finland and Nigeria in the various sectors, separate the industrial from the developing nations.

Gaps between industrial and developing nations:

HDI Gap: .538 (1980) .497 (1995) .469 (1998)
GDP Gap: 8245 (1980) 17932 (1995) 20052 (1998)
Life Expectancy Index Gap: .455 (1980) .404 (1995) .394 (1998)
Educational Attainment Index Gap: .680 (1980) .514 (1995) .466 (1998)

Comparing the data for industrial nations, to those of the developing nations during the period 1980 and 1998, the study found in Chapters 3, 4, and 5 that huge gaps exist between the two groups of nations on levels of human development, GDP per capita, life expectancy, and educational attainment indices as stated above. The gaps are significant and indicate divergence.

The comparison of data for the developing countries with those of the industrial nations in the study showed that the developing countries had 3.4 times more unfulfilled human development indices in 1980; 5.3 times in 1995, and 5.9 times more unfulfilled human development indices in 1998 against those of the industrial nations (Chapter 5.2).

The study found that the developing countries had 16.7 times less GDP per capita in 1980, 21.6 times less in 1995, and 25.2 times less GDP per capita in 1998, against the GDP figures of the industrial nations (Figure 12 and Table 14). The study also found that the trends in the gaps of real GDP per capita for Finland and Nigeria indicate that the poverty gaps between the industrial and the developing nations are in fact increasing.

When data for all countries are compared, the study found that only 1 or 2 computers were available for 1000 person in the populations of many developing countries by the year 1998, while Finland had 100 computers in 1990; 232 in 1995; and 349 computers per 1000 persons in 1998. These findings further indicate that great disparities exist between countries having high human development indices, and those of medium, and low human development indices (Chapter 5). No convergence exists between the industrial and the developing nations in numbers of computers available for use in those nations (see Table app. 5. 22).

Although the needs and demands for industrial products of high technology are increasing in most countries, it is found that no convergence really exists between the industrial and the developing nations on availability and use of those instruments of high technology (Tables app. 5.20 - 5.23), due to low levels of availability of computers and other communication facilities in the developing countries by the year 1998. Where fewer computers were found to be available, lesser global Internet contacts also occur across World-wide Web-sites between the nations.

The study found that the huge poverty gaps in GDP (Figure 12 and Table 21) exist between the industrial and the developing countries, by all standards; this does not sustain the logic of industrialism towards envisaged convergence between the industrial and the developing countries. This study found that the poorer countries have vast populations (for example, Nigeria, Brazil, India, Argentina) that are growing faster than those of the industrial nations (Table app. 5.2). This makes it even more difficult for poverty gaps to be narrowed down, without the relaxation of harsh trade policy of the global markets, or the enlargement of access to trade for the developing countries, by the international community.

The study found no convergence in globalisation processes between the industrial, semi-industrial, and developing nations on the number of telephone mainlines and/or mobile phones in use (Chapter 5) in those nations. The study rather found increases in the use of telephones (Tables app. 5.20 and app. 5.21), television sets (Table app. 5.19), and Internet Web sites (Table app. 5.23) between the industrial and the

developing nations across the globe. These increases indicate that market factors are in fact interconnected with improvements and the development of modern information systems in globalisation processes.

Through the analysis of data in Chapter 5, p. 167, the study found that computers and telephone communications technology had advanced global markets in recent years. With vast population of inhabitants, the developing countries had not benefited significantly from such world-wide telephone communications services when compared with the industrial nations. Part of the reasons for the huge gap (Tables app. 5.19 - 5.23) between the industrial and developing nations could be that some developing countries are poor and cannot afford the purchase of the modern technology.

Aim 4.

To discuss the role of social policy in improving human well-being

Findings:

Social policy had developed out of governments' concern to protect the weak and vulnerable groups in society, and to offer such services that would meet most salient grievances in the nation. In this direction, social benefits in the form of offering education and the maintenance of good health, are therefore, designed and extended to the poor citizens by the governments, in order to increase productive efficiency and to be on the road to prosperity and social equality. The social policy objective then, is to make better choices that would converge on improving the social infrastructure as well as human well-being in the future, through present policy decisions (Chapter 4.3). Social policy therefore, has the relevance of translating gains from economic growth into human well-being.

In Table 6 the study found that the trend on the average length of time an individual is expected to live had increased in all world countries between 1980 and 1998. These increases were analysed in Chapter 3, and are illustrated in levels of life expectancy index in Table 19. The increases in life expectancy index represent the level of domestic and global economic benefits that the nation had been able to translate to the well-being of her population.

Life expectancy index: Industrial and developing nations

	1980	1995	1998
Finland	.803	.857	.868
Brazil	.628	.692	.701
Nigeria	.348	.453	.474

The data on life expectancy indices that were outlined above, illustrate the growth trends for the industrial and the developing nations. The study found in Table 19, that the trends in life expectancy indices are increasing in all countries. These increases

indicate that social policy is moving positively on the path towards improved human well-being, and hence improvements in social development (Chapter 3). The study did not find any convergence in years of life expectancy (Table 6) between the developing and the industrial countries, except that all the groups of countries with high, medium, and low human development indices, similarly registered increases in growth trends, due to levels of improvement on human development (Table 18).

The long standing assumption under development theories had been that higher GDP per capita would lead to higher national income for citizens, and that it would extend benefits to all citizens in a nation through the trickling down effect. Here, mass-poverty in many developing nations indicate a contradiction and therefore, has other serious but important implications, to be tackled directly with strategies of social policy that would satisfy basic human needs, and not necessarily those gains that are stated in growth policy of the markets (Chapter 5.3).

The study found, that trends in the growth of GDP per capita in countries with high HDI, reflect improvement in the trends and increases in life expectancy between 1980 and 1998, and this pattern reflects on all industrial nations (see Figure 9 C). Similarly, these patterns of incremental growth reflect on all the semi-industrial and the developing nations in growth of GDP per capita. The data and logic correlate in the study under the premises of the logic of industrialism, and found that convergence is fulfilled within the various groups of countries of the industrial, semi-industrial, and developing nations, but not between them (Chapter 3.2.1).

In Table 21, the study found that the average group GDP per capita income for the developing nations was 12 times lower than the average group GDP per capita income for the industrial nations in 1980; 14.3 times less in 1995, and 14.45 times less, average group GDP per capita in 1998. The study found that trends in the growth of income for the industrial nations (Table 21) also indicate an increase in the income gap (Figure 12) between the industrial and the developing nations. Economic progress and development had failed to deliver prosperity, or extend the benefits of economic growth to the poor sectors of the population, particularly in the developing nations.

It is found in Table app. 5.34, that Finland had continuously invested (1.6% in 1990, 2.4% in 1995, and 2.8% of GNP in 1997) on research and development in schools and training institutions, while Nigeria and most developing nations, had failed to invest meaningfully on research and development between 1980 and 1998 respectively (Chapter 5).

Aim 5 A.

To analyse and discuss convergence and divergence in relation to social policy issues.

Findings:

This study accepts that the adoption of social policy measures in translating the gains

from economic growth, towards promoting education, public health, equity, and so on, would generate social progress and longer life expectancy, which in turn would sustain higher economic growth, more jobs, and a stable macro economy for the nation (Chapters 1 and 4).

Through the comparison of data from the industrial nations against those of the developing nations in Table 20, the study found huge gaps of 0.680 in 1980; 0.514 in 1995, and 0.466 in 1998 in educational attainment indices between Finland and Nigeria as representatives of the industrial and developing nations. The huge gaps that were found in educational attainment indices of the two groups of nations indicate a significant difference, which also explains the cause of divergence found on newspaper readability in relation to the very low numbers of daily newspapers that are read in most developing nations. And these together may form explanations for incompetence of most developing countries to manage successfully the recycling of economic growth through the instruments of their social sectors that are managed by the state, for translating economic benefits to human well-being (Chapter 3.1.2).

The study found that the level of economic benefits that the public services translated to well-being in the social sectors of the developing countries are low (Table 18), but increases steadily with trends in data, which could mean that their developments are improving considerably, especially when the trends in human development indices between 1980 and 1998 are included in the analysis. Although divergence in HDI was found between the industrial and developing nations, convergence remains within, but not between the divergent groups (Chapter 3.1).

Global policy convergence and/or divergence, is therefore derived through the means by which economic growth is translated into human well-being, which off-course, is likely to differ between nations and between policy fields of a nation, because the economies, as well as social policy-priorities of nations differ (Chapters 3.1 and 4).

While divergences in levels of income exist between the rich and poor countries (Table 21), this study identified the existence of convergence, but only amongst group of countries with the same levels of HDI. The economic growth theory considers convergence as the end product, which the imitation of all ideas and technological-progress will eventually arrive at. Under such evolving conditions, policies in nations will either remain impotent, or will be stimulated by market forces and levels of economic growth across national borders, to converge and look more alike globally (Chapters 4.2 and 5).

The study found that the lesser the unfulfilled HDI (Table 22), the higher the levels of the HDI (Table 18), and the higher the poverty gaps would become (Figure 12). The explanations for these findings could be that the developing countries have been trying to participate in world trade. Although they had derived some form of benefits from increased globalisation of their economic activities, they have not benefited sufficiently from it as to improve their social infrastructure and human well-being to

levels found in the industrial nations (Chapter 5.2).

National governments adopt differential industrial policy measures in areas of modern technological specialisation, in order to create and protect their own strong competitive advantages, and to assist their national productions due to the competitive advantages that are derived from the products. Through theoretical analysis of these issues, the study identified divergent policy measures as being more important than convergence on technological specialisation that are meant for global market competitiveness on modern technology (Chapter 4.2).

The study identified that while convergent and divergent attributes of the industries and markets (Table app. 5.31), led to globalisation of the markets and economic growth for all nations (Table 21), convergence on certain aspects of policy, had led to the removal of borders, the flow of capital, goods, and improved migration and immigration between (the European) community (Chapter 4.3). Social policy therefore represents an open door whereby benefits of economic growth policies are linked with the broad objectives of social development policy, thereby enhancing the possibility of translating and extending equal benefits from economic growth to everyone in the nation (Chapter 5).

Clearly enough, the analysis of data in this study identifies that the social policy of a nation is the instrument for the translation of benefits from economic growth to human well-being, and for achieving other development goals. When benefits from economic growth are well integrated within social policy for the satisfaction of human needs, global economic growth would be able to contribute sufficiently to improvements in the quality of life of every person in every country in the world (Chapter 4. 3).

6.3. Recommendations to formulate social policy

Aim 5 B.

To recommend the best ways to improve social policy for human well-being, as the way ahead in future.

Findings:

The unfulfilled HDI Table 22 was drawn up in this study as a converted version of the human development index, used in the study to explain the unfulfilled human development indices in nations between 1980 and 1998 (Chapter 5.2). The method through which these unfulfilled human development indices were extracted, were successfully developed and explained in this study (see Chapter 5.2). It is part of the contributions to improve the presentation of the theoretical explanations on findings, in relation to the unfulfilled ‘gaps’ in human development for social policy making. When the unfulfilled human development indices (unfulfilled HDI) of the poor nations are deducted from the unfulfilled HDI of the rich industrial nations, ‘the gaps’ between the nations clearly emerge, and these gaps indicate the extent and magnitude of the

differences (divergence) between the industrial and the poor developing countries.

Issues of social policy recommendations arise due to the fact that the study investigated assumptions, that previous economic policy of nations often had been formulated without proper attention to relevant objectives in wider social contexts of development and underdevelopment, particularly in the developing countries. The outcomes indicate that those economic policies did not succeed in bridging the poverty gaps between the rich and poor countries as intended (see Figure 12 and Table 22), but rather had contributed to entrenchment of globalisation patterns of inequality and hence poverty for so many nations.

Earlier economic policies and globalisation processes have assumedly imposed systems of social provisions that are not well spread to include developing countries, and therefore, do not meet the needs of the poor majority of the world's population, particularly in developing nations. The redefinition of policy objectives, and a more precise policy formulation of objectives, is required as the new approach to social policy for better choices on the treatment of poverty and other social problems in the future. Such measures would enable benefits from the domestic and the global economies to be meaningfully translated to human well-being, as the way ahead in future. This study, therefore, contributes ideas to improve social policy and the efficiency of professional policy makers in dealing with similar policy issues that have been examined in these research papers.

The policy recommendations would include outlines of useful options as solutions that may be relevant to guide the formulation of social policy objectives, and thereby reducing the problems and difficulties in formulating the best policy for specific social sectors in the future. The recommendations provide better insights and broad outlines on different practices to meet basic requirements on improving policy objectives, toward the inclusion of human aspects of development in its redefinitions. The options towards the redefinition of policy objectives that are included in the outline as policy recommendations need to be considered carefully by planners before being adopted in their proper contexts as 'planned objectives of social policy'. The choices between the different options would naturally depend on the nature of objectives that are intended to be set by governments, planners, and policy makers. However, under the compulsion of country cultural and religious differences, further analyses may be needed to identify the very concrete situations in which the policy recommendations could be adjusted and made relevant to solving the problems, and hence meeting the nations' specific policy requirements.

6.4. The way ahead: Redefinition of economic growth objectives

The evolution of economic and social development through the decades of the Second World War to the New Millennium, indicates that the world has changed on all factual dimensions within data and the interpretation of the meanings, including ideas,

aspirations, and the setting of priorities for development. In this study, economic growth has been explained primarily in terms of the need for utilising growth surpluses of the economy, towards translating benefits to human well-being and thereby expanding human capital and potentials. The policies for the development of the economy within nations, and for dealing with the sufferings of the poor, revolve around solutions that were directed at facilitating gains and growth for the economy. At their inception, the objectives of these policies were required to sustain long-term plans for economic growth, and were not intended to be translated into improvements on human well-being.

Convergence and divergence therefore, became most suited for investigations in the socio-economic sectors because solutions require the transformation of human perception on what constitutes human needs that cannot be so rigidly defined, from one generation to the other. Thus, planning for poverty alleviation in nations, can begin with the evaluation of the economy, the assessment of growth potentials of the nation, understanding the concepts of 'who the poor are', targeting resources to reach the poor, and making plans, that are continually monitored and upgraded (see Chapter 5. 3). However, under conditions of depression, improvements on qualities of life would depend on re-assessment and redefinition of human need structures, and these are often short in new perspectives, but in times of affluence, human beings usually strive for higher need fulfilment. Various analyses in this study uphold the view, that narrow economic growth policies have limited impacts on poverty eradication in the world. Mass poverty must be tackled directly with the creation of jobs and the translation of economic growth surpluses to human well-being, and not to rely on passive theories of the trickling-down processes. Theories and concepts of economic growth for purposes of improving social policy, must state with clarity the essence of economic growth, which of course, would be that economic growth, is necessarily for the purposes of implementing social programmes to satisfy human needs, and improve human well-being. The policy measures, therefore, must seek out directly those relevant objectives that are compatible with available policy means. Such policies must be designed in ways that would allow basic needs of the low income groups in the population to be met directly.

As illustrated in the in-depth analysis in Chapter 4.4, investments in human resource development and in well-being can generate accelerated economic growth, but in turn economic growth must be reinvested in human well-being, whereby the circle in economic development and human well-being becomes completed. At the global levels, countries that lack sufficient human resources and basic skills, will find it more difficult to adapt to the changing world market conditions, or adapt to newly required skills for competitiveness in the production of goods and services, that enhance higher and rapid economic growth. Viewed from convergence and divergence perspectives, it is the levels of the literate population, the availability of universal education, sufficiency in developed human resources, and high levels of human well-being in nations that transform and sustain all forms of growth, whether in economic development or human well-being.

For the developing countries, social policy must overcome challenges in the management of risks from globalisation, aim at structural transformation of the economy through broadening the national policy objectives, strengthening existing institutions, and raising quantitative and qualitative levels of education. To arrive at acceptable participatory levels in globalisation, the developing countries must create and strengthen their institutions for competitiveness as a precondition (Utchay, 1985, 23-25) that would enable them to compete and win benefits from the global economy, and thereby attain other goals that relate to social development. On the part of governments and people in the developing nations, the important preconditions for successful participation of their nations in global economy and social development, will include:

- The existence of good leadership, political will, and a stability of the governing body in the nation.

- The existence of administrative capability and the competence to carry out planning and implementation of economic and social development policies of the nation.

- The availability of sufficient manpower resources as well as financial and material resources at both the urban centres and at the rural areas of the nation.

- The existence of efficient policy making machinery for the design of policies both for the economy and for the social sectors, as well as the availability of efficient administrative management staff at the central and local implementation levels.

- Certainty regarding existing areas of economic potentials for growth and competitiveness for the nation.

- The separation of economic and social development planning, from the administration, although these could be co-ordinated through monitoring.
- The existence of democratic traditions and sufficient reductions in racist / tribal discriminations, nepotism, bribery and corrupt practices, especially in the appointment of public officials, and in the distribution of amenities in a multi-tribal society.

- The existence of a shared understanding of what is beneficial, affordable, possible, and practicable (in consideration to the nations technological capacity), rather than the adoption of objectives based on technologies of higher scientific values without adequate funds and human resources to cope with the running of the systems.

- The existence of professional planners that provide policy making levels with facts, implications of specific plans, and available alternative courses of actions (if any), concerning the overall plan objectives.

- The existence of administrative structures with strong convergent and divergent links between economic policies, social development policy, and other sectors of national development efforts within the nation's globalisation processes and machinery.

- The existence of an understanding, that the availability of other human resources in the form of less expensively trained personnel is also functionally useful in poor developing countries.

- The existence of an understanding that social care takes an essential share of the development budget, and therefore, should be geared towards less expensive options, depending on the growth rate of the nation's economy on which the financial policy for the social sectors are based.

- Whereas, the import of care related goods is common in the developing countries, the existence of an understanding, that the cost for care increases yearly, and so are rates in world exchange markets.

International trade theory accepts that a real convergence is the outcome of increased interdependence between nations through market forces. The existence of convergence, for example, in levels of education within and between most nation states of the world, will most likely ensure global acceptance of the emerging concepts of development that will place the human being at the centre of all development efforts. Similarly, governments may now look at globalisation as the main factor, which affects international politics, and its resultant phases of convergence and divergence in market forces, the respect of international laws, and the compliance to human rights promulgation. From same standpoint, social policies of nations may begin to converge through each nation's economic interests in globalisation. These interests focus on social policy as the basis for improvements on economic and social intervention programmes, for reducing the poverty gap within and between nations during the years to come. As the trends in globalisation processes and poverty alleviation around the world continue to emerge, greater attention may be given to social protection against poverty in poorer nations, and in environmental protection issues, within and across borders, which will be taken seriously.

Economic growth, social development, and human well-being reciprocate each other. Income though important, it is not the only measure of economic status. The quality of growth is as important as the quantity. The social policy that improves the quantity and quality of education, health, and employment, is a most important means of translating the benefits of economic growth to people. New patterns of growth that would be responsive in integrating the weak and vulnerable populations into the ever-expanding global economy are necessarily required. In order to encourage these kinds of growth and integration to take place, the redefinition of concepts of economic growth and social policy will also be required for stirring policy in right direction. Explicit policy objectives on human dimensions of development have to be clearly stated, and here the

examples of the welfare states suffixes. Concepts of economic growth policies in every nation state must be clearly stated in ways that indicate that economic growth is for human well-being. The most important policy areas in each concrete situation that determine development possibilities are the policies that focus upon improvements in achieving the challenges on the links between economic growth, and human well-being.

The study therefore recommends that the following policy areas be considered and incorporated as necessary to improve social policy making, and guide the integration of the economy with human dimensions of development, especially when policy intends to link and translate economic growth with human well-being. These recommendations will strengthen policy objectives to achieve the stated policy outcome in the following areas:

(a) Global division of labour:

While the industrialised countries concentrate primarily on high value-adding industrial production, the developing countries should be allowed to develop low value-added manufacturing as a collective step taken by the industrial and the developing nations in stabilising international economic co-operation through a full participation of the developing countries in global export markets. Processing and production in extractive industries by the developing countries also enlarge access to global trade.

(b) Participation:

Government policy for active participation of every citizen in an economy must eliminate discrimination and improve the links between economic growth and human well-being. People must be given access to productive economic opportunities, world-wide information systems, and other necessities for active participation in the global economy. Governments can achieve most of these objectives by targeting the poor directly, and by removing certain constraints on the acquisition of land, credit, and physical infrastructure, which debar people from engaging in small production plants, private businesses or working on the land.

(c) The opportunity to earn income:

Policy in this area will aim at giving citizens adequate opportunities to earn income. Government policy therefore, must focus on improvement of the employment systems, and encourage better patterns of economic growth. Policy here must encourage competent individuals to contribute to economic growth, by offering low interest rates for the privatisation of businesses, building of co-operatives, and the expansion of income-earning opportunities to all citizens.

(d) Equality:

Policy in this area would require government policy-actions to be focused on equal distribution of public and private resources, so that the links between economy and human well-being will be strengthened. Economic growth and human well-being will eventually converge with increases in HDI, when nations allow reasonable portions of the benefits from growth to be spent through the social systems (as a translation to well-being) aimed towards improvements on the individual lives of the citizens.

(e) Social spending on poverty alleviation:

This policy area would link gains from economic growth directly through benefits granted to the poor under various umbrellas as non-refundable subsidies, and these would be adopted as measures for improvements on human well-being. Allocations of resources to bridge poverty gaps in nations are controlled as translation of economic benefits to human well-being. Government spending through basic social services gives priority to helping those most in need.

(f) Good governance:

Policy areas for good governance require that governments' policy must guarantee civil equity of the legal systems, adequate participatory opportunities in public life of the citizens, and the opportunities for the population to share equitably in the social benefits offered by economic growth of the nation.

(g) Decentralisation:

The implementation of programmes on social development at the local grass-root levels is usually more effective with decision makers and implementation personnel, who live in close contact with users of the programmes in remote local government areas.

(h) Community action:

The policy areas for community action allows non-government organisations and community groups to supplement government activities, thereby extending the advocacy role, as well as other forms of social services to the unserved population within the nation. Such services that are run by institutions for private pension funds, private insurance companies, or charity organisations, mobilise positive public opinions and shape human well-being.

It is noteworthy that all the above stated policy areas, that concern the human being and his well-being, have separate state machineries for their domestic politics, administrative procedures, implementation processes, and legal justifications that

relate to their operations, and those are duties to be performed by the government administration. The numerous in-depth analyses of convergence and divergence in this study, elaborate that technical literacy of personnel is definitely required at each specific sector, to be able to operate and implement successful technology transfer, and for further successful development of indigenous technological capabilities in nations. On the march into the future of globalisation, urban pattern of living and the provision of social services may be the hope for the survival of mankind, particularly for over populated developing countries.

The scientific research takes many years to yield results. More research on dynamics of globalisation as it relates to development activities would therefore be necessary. The nations, especially the developing nations, need more investments on research for monitoring and revealing the consequences of untested, but newly developed technologies. Governments in poor countries obviously would benefit from close relationship with scientific researchers in their nations. Technical education will improve national capacity to absorb and adapt certain improvements on science and technology that are necessary and suitable for the nations' climatic conditions. It will benefit the entire nations in a region, if governments in those nation states provide good environments for policies and regulatory machineries that could stimulate private firms to develop new technologies. The governments must assist firms to enhance specific and national technological capabilities in productions, investments, and further innovations wherever or whenever it is necessary, as is required by the repetitive and modernising imperatives of convergence and divergence mechanisms in economic development, for globalisation and growth.

The problems and weaknesses of the developing African nations are greater, in the sense that they had barely begun participation in global markets, to be able to translate gains significantly to well-being through their institutions for social development. The industrial nations are understood as being the rich countries that ought to give Africa some form of protection and assistance to development, as well as giving Africa some chance to compete at the global market economy. The nature of goals that would be sorted out by poor nations in global economy and the social spheres will be consistent if formulated in terms of what constitutes realistic attempts to meet the basic needs of half of the world's population living in absolute poverty particularly, in those developing countries.

The inefficient allocation of various resources, especially to the military by both industrial and the developing countries (Table app. 5.38), would have to be changed and made available for the well-being of human beings at the social sectors. These are additional reasons for the limited impact achieved by the developing countries on human well-being (Table 17) and social development across the globe. Well-being for humanity had already been identified as the true security for world nations. The growth of prosperity and wealth around few very wealthy individual nations around the world (Table 21), exacerbates poverty and alienate the rich from the poor nations. The main hopes for the future of mankind rely on the objectives of human well-being

that is spelt out in terms of social policy for translating benefits from the economy, to human well-being, and for the reduction of gaps on poverty between rich and poor nations.

The special needs of social development are the weak, and the vulnerable population in the context of translating benefits from the economy to human well-being, and thereby raising the levels of human development indices. These are to be specifically mentioned in the nations' policy statements. The ways ahead in the future, will be for issues of equity to figure prominently in legislative discussions, and these have to be related legally to questions of a good quality of life and social justice. Efficient administration and implementation of policies are as important, and even more difficult, as the careful formulation of social policy.

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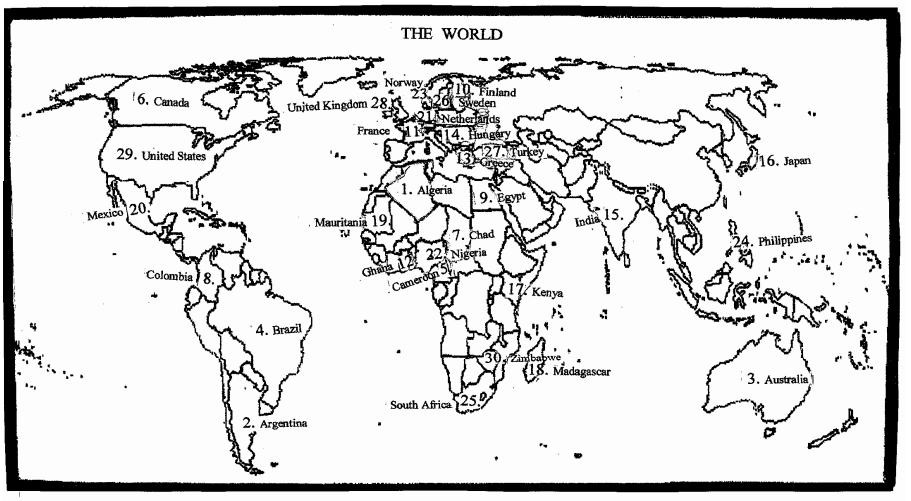
TABLE OF CONTENTS

APPENDIX 1: World map and spotlight on 30 countries in global sample

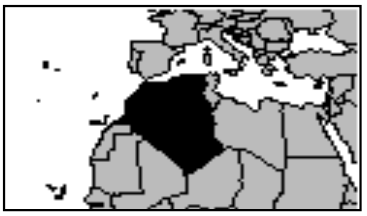
Appendix 1 includes a world map that indicates the global distribution of the 30 countries in the global sample; and Tables App. 1.1 - 1.30 review the spotlights on each country's specific cultural, political, economic, and social statistics. Notes on the appendix series are arranged in alphabetical order. The map of each particular country (Tables App. 1.1 - 1.30) was included for quick references, and these were high-lighted with black paints for easy reference on their geographical positions. The inclusion of this information is intended to support the global samples for quick reference on the location and statistics for the industrial and the developing nations within the study. Efforts had been made to minimise differences between weights in the data of the appendix, and those that are used within Tables in the study. It is believed that the inclusion of the spotlight-form of information would be useful, because they contain general knowledge on specific geographic, cultural, political, and other statistical information about the countries at a glance. The information on each country undoubtedly is specific about the particular country.



Global distribution of the 30 countries in the study

World map was modified from World Bank; World Development Indicators (CD - Rom 2000)
For educational purposes

App. 1.1. ALGERIA: Democratic and Popular Republic of Algeria - El Djemhouraria El Djazariria Democratic Echaabia



Area: 2,381,740 sq. km. (1995) (approx. 918,500 sq. ml.) (1995)
Population: 18,669,170 (1980) 28,058,000 (1995) 29,921,570 (1998)
Language: Arabic (official) 83%, French (official), Kabyle 8%, Tamazight 5%, other Berber dialects 4%

Capital: Algiers
Currency: Dinar
Religion: Muslim (Sunni)
Ethnic groups: Arab 75%, Berber 25%
Government: Military
Illiteracy rate: 61.3% (1980) - 38.5% (1995) 34.5 (1998)
Life expectancy at birth: Total, years 59.3 (1980) 67.4 (1990) 70.6 (1998)
Infant mortality, per 1,000 births: 98 (1980) 46 (1990) 35 (1998)
Gross domestic product: $58,083,340,288 (1980) $143,386,738,688 (1998)
GDP per capita: $3111 (1980) $4697 (1995) 4792 (1998)
Principal Industries: Petrochemicals, steel, textiles, fertilisers, plastic
Principal crops: Wheat, barley, grapes, fruits, and olive

App. 1.2. ARGENTINA: Argentine Republic - Republica Argentina

Area: 2,780,400 (1995) (approx. 1,072,069-sq. ml.) (1995)
Population: 28,094,000 (1980) 34,768,000 (1995) 36,125,000 (1998)
Language: Spanish (official) 96%, other 4%
Capital: Buenos Aires
Currency: Peso
Religion: Roman Catholic 92%, other 8%
Ethnic groups: European descent 85% (Spanish, Italian), Native American & mestizo 5%
Government: Republic (democracy)
Illiteracy: 6.6% (1980) 3.7% (1995) 3.3% (1998)
Life expectancy at birth: Total, years 69.6 (1980) 71.6 (1990) 73.3 (1998)
Infant mortality, per 1,000births: 35 (1980) 25 (1990) 19 (1998)
Gross domestic product: $180,606,500,864 (1980) $434,033,491,968 (1998)
GDP per capita: $6429 (1980) $10736 (1995) 12013 (1998)
Principal Industries: Meat processing, cement, motor vehicles, textiles, Chemicals
Principal crops: Wheat corn, cotton, beef cattle, grapes, sugar, tobacco, rice

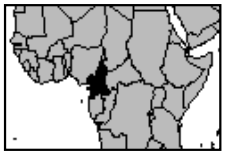
App. 1.3. AUSTRALIA: Commonwealth of Australia
Area: 7,741,220 sq. km. (approx. 2,966,150-sq. ml.) (1995)

Population: 14,692,000 (1980) 18,063,000 (1995) 18,751,000 (1998)
Language: English 89%, aboriginal languages 1%, other 10%
Capital: Camberra
Currency: Australian dollar
Religion: Protestant 55%, Roman Catholic 31%, and other 14%
Ethnic group: White 95%, Asian 4%, and aboriginal 2%
Government: Parliamentary democracy in the Commonwealth
Literacy: 90% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total years 74.4 (1980) 77 (1990) 78.6 (1998)
Infant mortality, per 1,000 births: 11(1980) 8 (1990) 5 (1998)
Gross domestic product: $139,921,719,296 (1980) $420,991,401,984 (1998)
GDP per capita: $9524 (1980) - $21,268 (1995) $22,452 (1998)
Principal Industries: Iron, steel, textiles, electrical equipment, chemicals, Automobiles, aircraft, ships, machinery
Principal crops: Wheat, barley, oats, corn, hay, sugar, wine, fruits, vegetables

App. 1.4. BRAZIL: Federative Republic of Brazil - Republica Federative do Brasil

Area: 8,547,400 sq. km. (approx. 3,286,470-sq. ml.) (1995)
Population: 121,672,000 (1980) 159,346,000 (1995) 165,873,632 (1998)
Language: Portuguese (official)
Capital: Brasilia
Currency: Real
Religion: Roman Catholic 90%, Protestant 6%, others 4%
Ethnic groups: White (primarily Portuguese descent) 53%, mulatto 22%, mestizo 12%, black 11%
Government: Federal democratic republic
Illiteracy: 24.5% (1980) 16.8% (1995) 15.5% (1998)
Life expectancy at birth: Total, years 62.7 (1980) 65.4 (1990) 67.1 (1998)
Infant mortality, per 1,000 births: 70 (1980) 48 (1990) 33 (1998)
Gross domestic product: $475,097,956,352 (1980) $1,097,705,324,544 (1998)
GDP per capita: $3917 (1980) $6572 (1995) $6625 (1998)
Principal Industries: Steel, automobiles, ships, appliances, petrochemicals, machinery.
Principal crops: coffee, cotton, rice, corn, fruits

App. 1.5. CAMEROON: Republic of Cameroon - Republique du Cameroun

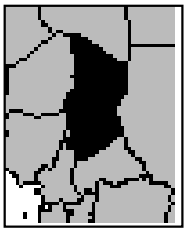


Area: 475,440 sq. km. (approx.183, 570-sq. ml.) (1995)
Population: 8,655,000 (1980) 13,182,000 (1995) 14,303,010 (1998)
Language: French, English (both official), Beti, Fula, Hausa, Tiv, Cameroon Pidgin, over 20 other African languages
Capital: Yaoundé
Currency: Franc CFA
Religion: Local animist 51%, Christian 33%, Muslim 16%,
Ethnic groups: Around 200 tribes largest of which are Bamileke and Fulani
Government: Republic (democratic)
Illiteracy: 52.3% (1980) 37.6% (1995) 35.1% (1998)
Life expectancy at birth: Total years 50 (1980) 54.2 (1990) 54 (1998)
Infant mortality, per 1,000 births: 103 (1980) 81 (1990) 77 (1998)
Gross domestic product: $8,536,224,768 (1980) $21,085,607,936 (1998)
GDP per capita: $986 (1980) $1415 (1995) 1474 (1998)
Principal Industries: Aluminium processing, oil production, palm products
Principal crops: Cocoa, coffee, cottons

App. 1.6. CANADA:

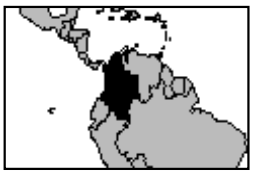
Area: 9,970,610 sq. km. (approx.3, 851,810-sq. ml.) (1995)
Population: 24,593,000 (1980) 29,354,000 (1995) 30,301,000 (1998)
Language: English 62%, French 25%, and other 13%
Capital: Ottawa
Currency: Canadian dollar
Religion: Roman Catholic 46%, Protestant 41%, and other 13%
Ethnic groups: British 25%, French 24%, other European descent 16%, mixed 28%, Native American 7%
Government: Democracy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total years 74.7 (1980) 77.2 (1990) 79 (1998)
Infant mortality, per 1,000 births: 10 (1980) 7 (1990) 5 (1998)
Gross domestic product: $274,797,608,960 (1980) $714,559,651,840 (1998)
GDP per capita: $11174 (1980) $23085 (1995) $23582 (1998)
Principal Industries: Manufacturing, mining, agriculture, forestry
Principal crops: Beef cattle, wheat, milk, barley, corn, vegetables, fruits

App. 1.7. CHAD: Republic of Chad - Republique du Tchad



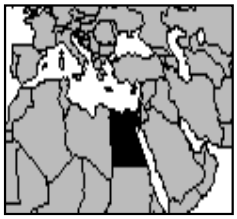
Area: 1,284,000 sq. km. (approx.495, 750-sq. ml.) (1995)
Population: 4,477,000 (1980) 6,707,000 (1995) 7,282,870 (1998)
Language: French, Arabic 30% (both official), Ngambai 12%, other African Languages 58%
Capital: N'djamena
Currency: Franc CFA
Religion: Muslim 44%, Christian 33%, and animist 23%
Ethnic groups: Sudanese Arab 30%, Sudanic tribes 25%, Nilotic, Saharan tribes, Over 200 other African tribes
Government: Military
Illiteracy rate: 83.3% (1980) 65.4% (1995) 60.6% (1998)
Life expectancy at birth: Total years 42.2 (1980) 46.2 (1990) 48.5 (1998)
Infant mortality, per 1,000 births: 123 (1980) 118 (1990) 99 (1998)
Gross domestic product: $1,718,662,656 (1980) $6,237,102,080 (1998)
GDP per capita: $384 (1980) $817 (1995) $856 (1998)
Principal Industries: Agriculture
Principal crops: Cotton, sugar, peanuts, and livestock

App. 1.8. COLOMBIA: Republic of Colombia - Republic de Colombia



Area: 1,138,910 sq. km. (approx. 439,735-sq. ml.) (1995)
Population: 28,447,000 (1980) 38,558,000 (1995) 40,804,000 (1998)
Language: Spanish (official)
Capital: Bogota
Currency: Peso
Religion: Roman Catholic 95%, other 5%
Ethnic groups: Mestizo 58%, European descent 20%, mulatto 14, black 4%, Native American 1%, other 3%
Government: Republic
Illiteracy: 15.8% (1980) 9.7% (1995) 8.8% (1998)
Life expectancy at birth: Total, years 65.9 (1980) 69.9 (1990) 70.3 (1998)
Infant mortality, per 1,000 births: 41 (1980) 30 (1990) 21 (1998)
Gross domestic product: $93,542,440,960 (1980) $245,051,408,384 (1998)
GDP per capita: $3288 (1980) $6151 (1995) $6006 (1998)
Principal Industries: Textiles, steel, hides, chemicals
Principal crops: Coffee, rice, tobacco, cotton, sugar, bananas

App. 1.9. EGYPT: Arab Republic of Egypt - Jumhuriyah Misr al-Arabiya

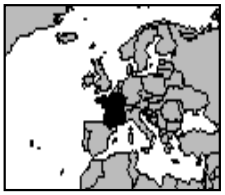


Area: 1,001,450 sq. km. (approx. 386,900-sq. ml.) (1995)
Population: 40,875,000 (1980) 58,180,000 (1995) 61,401,300 (1998)
Language: Arabic
Capital: Cairo
Currency: Egyptian pound
Religion: Muslim (Sunni) 94%, Christian (mostly Coptic) 6%
Ethnic groups: Eastern Hermitic stock 90%, Bedouin, and Nubian 10%
Government: Republic
Illiteracy: 60.8% (1980) 48.8% (1995) 46.3 (1998)
Life expectancy at birth: Total, years 55.3 (1980) 62.8 (1990) 66.5 (1998)
Infant mortality, per 1,000 births: 120 (1980) 69 (1990) 49 (1998)
Gross domestic product: $44,018,499,584 (1980) $186,691,862,528 (1998)
GDP per capita: $1077 (1980) $2870 (1995) $3041 (1998)
Principal Industries: Textiles, chemicals, and cement
Principal crops: Cotton, rice, grains, vegetables, sugar, corn

App. 1.10. FINLAND: Republic of Finland - Suomen Tasavalta

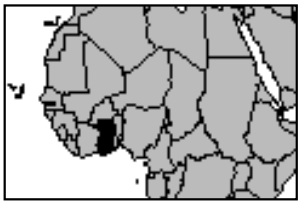
Area: 338,150 sq. km. (approx.130, 119 square miles) (1995)
Population: 4,780,000 (1980) 5,108,000 (1995) 5,153,000 (1998)
Language: Finnish 94%, Swedish 6% (both official)
Capital: Helsinki
Currency: Euro (Markka)
Religion: Lutheran 97%, others 3%
Ethnic groups: Finn 94%, Swede / Lapp 6%
Government: Republic (democratic)
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 73.2 (1980) 75.1 (1990) 77.1 (1998)
Infant mortality, per 1,000 births: 8 (1980) 6 (1990) 4 (1998)
Gross domestic product: $41,773,637,632 (1980) $107,426,029,568 (1998)
GDP per capita: $8739 (1980) $16764 (1995) $20847 (1998)
Principal Industries: Machinery, metals, shipbuilding, and textiles
Principal crops: Grains, potatoes, dairy products

App. 1.11. FRANCE: French Republic - Republique Francaise



Area: 551500 sq. km. (approx. 212,900-sq. ml.) (1995)
Population: 53,880,000 (1980) 58,139,000 (1995) 58,847,000 (1998)
Language: French 87%, Basque 7%, Provencal 3%, other 3%
Capital: Paris
Currency: Euro (French franc)
Religion: Roman Catholic 92%, Muslim 3%, and other 5%
Ethnic groups: French 87%, Arab 3%, and other 10%
Government: Republic (democratic)
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 74.3 (1980) 76.8 (1990) 78.3 (1998)
Infant mortality, per 1,000 births: 10 (1980) 7 (1990) 5 (1998)
Gross domestic product: $518,612,658,176 (1980) $1,246,083,678,208 (1998)
GDP per capita: $9551 (1980) $20492 (1995) $21175 (1998)
Principal Industries: Chemicals, automobiles, iron and steel, aircraft, textiles, Wine, perfume
Principal crops: Grains, grapes, other fruits and vegetables

App. 1.12. GHANA: Republic of Ghana

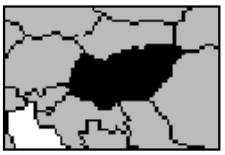


Area: **238,540 sq. km. (approx. 92,100 square miles) (1995)**
Population: 10,740,000 (1980) 17,075,000 (1995) 18,459,550 (1998)
Language: English (official), Akan 44%, Ewe 13%, Ga-Adangme 6%, Twi Fante (Akan) and other African languages 37%
Capital: Accra
Currency: Cedi
Religion: Traditional 46%, Muslim 30%, and Christian 24%
Ethnic groups: Akan 44%, Moshi- Dagomba 16%, Ewe 13%, Ga 8%, others 19%
Government: Military
Illiteracy: 55.3% (1980) 34.9% (1995) 30.9 (1998)
Life expectancy at birth: Total, years 53.2 (1980) 57.2 (1990) 60 (1998)
Infant mortality, per 1,000 births: 94 (1980) 77 (1990) 65 (1998)
Gross domestic product: $11,053,241,344 (1980) $32,021,532,672 (1998)
GDP per capita: $1029 (1980) $1685 (1995) $1735 (1998)
Principal Industries: Agriculture, mining
Principal crops: Cocoa, coffee, coconuts, cassava, rice, palm kernels

App. 1.13. GREECE: Hellenic Republic - Elliniki Dimokratia

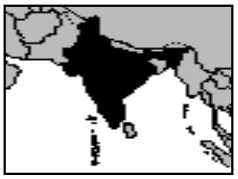
Area: 131,960 sq. km. (approx. 50,960-sq. ml.) (1995)
Population: 9,643,000 (1980) 10,458,000 (1995) 1,051,000 (1998)
Language: Greek 95%, other 5%
Capital: Athens
Currency: Drachma
Religion: Greek Orthodox 97%, other 3%
Ethnic groups: Greek 98.5%, other 3%
Government: Parliamentary republic
Illiteracy: 8.8% (1980) 3.7% (1995) 3.1% (1998)
Life expectancy at birth: Total, years 74.4 (1980) 76.9 (1990) 77.8 (1998)
Infant mortality, per 1,000 births: 18 (1980) 10 (1990) 6 (1998)
Gross domestic product: $63,420,170,240 (1980) $103,489,224,704 (1998)
GDP per capita: $6577 (1980) $13147 (1995) $13943 (1998)
Principal Industries: Textiles, chemicals, metals, wine, processed foods
Principal crops: Grains, rice, corn, cotton, olives, citrus fruits, tobacco, grapes

App. 1.14. HUNGARY: Republic of Hungary - Magyar Kozgaztarsasag



Area: 93,030 sq. km. (approx. 35,913 square miles) (1995)
Population: 10,707,000 (1980) 10,230,000 (1995) 10,114,000 (1998)
Language: Magyar (Hungarian) 98%, others 2%
Capital: Budapest
Currency: Forint
Religion: Roman Catholic 67%, Protestant 25%, others 8%
Ethnic groups: Magyar 92%, Gypsy 3%, and German 2.5%, others 2.5%
Government: Republic (democratic)
Illiteracy: 1.4% (1980) 0.8% (1990) 0.7% 1998
Life expectancy at birth: Total, years 69.5 (1980) 69.3 (1990) 70.5 (1998)
Infant mortality, per 1,000 births: 23 (1980) 15 (1990) 10 (1998)
Gross domestic product: $55,241,334,784 (1980) $103,489,224,704 (1998)
GDP per capita: $5159 (1980) $9315 (1995) $10232 (1998)
Principal Industries: **Steel, chemicals, machinery, pharmaceuticals, textiles vehicles**
Principal crops: Grains, potatoes, beets, vegetables, grapes

App. 1.15. INDIA: Republic of India - Bharat



Area: 3,287,590 sq. km. (approx. 1,266,595, sq. ml.) (1995)
Population: 687,331,968 (1980) 929,358,016 (1995) 979,672,896 (1998)
Language: Hindu, English, Assamese, Bengali, Bihili, Bihari, Bhojpuri, Braj Bhasha, Bundeli, Gondi, Gujarti, Kannada (Kanarese), Kashmiri, Konkani, Kurux (Oraon), Malayalam, Marathi, Nepali, Oriya, Rajasthani, Sindhi, Telugu, Urdu, other
Capital: New Delhi
Currency: Rupee
Religion: Hindu 83%, Muslim 11%, Christian 3%, and Sikh 2%
Ethnic groups: Indo-Aryan 72%, Dravidian 25%, Mongoloid 3%
Government: Republic (democracy)
Illiteracy: 59% (1980) 46.7% (1995) 44.3 (1998)
Life expectancy at birth: Total, years 54.4 (1980) 59.8 (1990) 63.1 (1998)
Infant mortality, per 1,000 births: 115 (1980) 80 (1990) 70 (1998)
Gross domestic product: $441,270,075,392 (1980) $2,034,634,588,160 (1998)
GDP per capita: $642 (1980) $1877 (1995) $2077 (1998)
Principal Industries: Textiles, steel, cement, machinery, chemicals, fertilisers
Principal crops: Rice, grains, cotton, jute, tea, sugarcane, spices

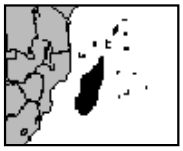
App. 1.16. JAPAN: Nippon

Area: 377,800 sq. km. **(approx. 145,860 square miles) (1995)**
Population: 116,782,000 (1980) 125,439,000 (1995) 126,410,000 (1998)
Language: Japanese
Capital: Tokyo
Currency: Yen
Religion: Shinto Buddhist 87%, others 13%
Ethnic groups: Japanese 99.5%, Korean 0.5%
Government: Parliamentary democratic monarchy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 76 (1980) 78.8 (1990) 80.5 (1998)
Infant mortality, per 1,000 births: 8 (1980) 7 (1990) 4 (1998)
Gross domestic product: $1,054,423,121,920 (1980) $2,939,974,582,272 (1998)
GDP per capita: $9029 (1980) $23212 (1995) $23257 (1998)
Principal Industries: Electrical and electronic equipment, automobiles, machinery, chemicals
Principal crops: Rice, grains, vegetables, fruits

App. 1.17. KENYA: Republic of Kenya - Jamhuri ya Kenya

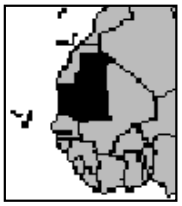
Area: 580,370 sq. km. (approx. 224, 960 square miles) (1995)
Population: 16,632,000 (1980) 27,216,000 (1995) 29,294,910 (1998)
Language: English, Swahili (official), Gusii, Kamba, Kikuyu, Luhya, Luo Somali, Teso, several other African
Capital: Nairobi
Currency: Kenyan shilling
Religion: Protestant 38%, Roman catholic 28%, traditional 27%, Muslim 6%
Ethnic groups: Kikuyu 21% Luhya 14%, Luo 13%, Kelenjin 11%, Kamba 11%, others 30%
Government: Republic
Illiteracy: 43.7% (1980) 22.9% (1995) 19.5% (1998)
Life expectancy at birth: Total, years 54.8 (1980) 57.1 (1990) 51 (1998)
Infant mortality, per 1,000 births: 75 (1980) 62 (1990) 76 (1998)
Gross domestic product: $9,705,505,792 (1980) $28,698,746,880 (1998)
GDP per capita: $584 (1980) $997 (1995) $980 (1998)
Principal industries: Agriculture, textiles, food processing, and tourism
Principal crops: Coffee, corn, tea, cereals, cotton, sisal

App. 1.18. MADAGASCAR: Democratic Republic of Madagascar - Repoblika Demokratika Malagasy



Area: 587,040 (approx. 226,600 square miles) (1995)
Population**: 8,873,000 (1980) 13,300,000 (1995) 14,592,380 (1998)**
Language: Malagasy 99%, French (official) 1%
Capital: Antananarivo
Currency: Malagasy Franc
Religion: Animist 52%, Christian 41%, and Muslim 7%
Ethnic groups: Merina 27%, Malagasy 27%, Betsimisaraka 15%, Bestial 12%, Tsimihery 7%, Antandray 5%, others 1%
Government: Republic
Literacy: 52.3% (1980) 37.6% (1995) 35.1% (1998)
Life expectancy at birth: Total, years 50.7 (1980) 54.7 (1990) 57.8 (1998)
Infant mortality, per 1,000 births: 119 (1980) 103 (1990) 92 (1998)
Gross domestic product: $5,711,901,696 (1980) $11,029,223,424 (1998)
GDP per capita: $644 (1980) $777 (1995) $756 (1998)
Principal industries: Agriculture, textiles, processed foods, fishing
Principal crops: Coffee, cloves, vanilla, and chromite

App. 1.19. MAURITANIA: Islamic Republic of Mauritania - Republique Islamique De Mauritanie

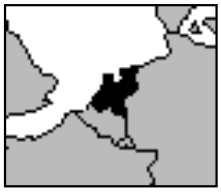


Area: 1,025,520 sq. km. (approx. 397,950-sq. ml.
Population: 1,551,000 (1980) 2,329,000 (1995) 2,529,010 (1998)
Language: Arabic 80%, French (both official), Wolof 8%, Tukolor 6%, Soninke 3% other 3%
Capital: Nouakchott
Currency: Ouguiya
Religion: Muslim (Sunni)
Ethnic groups: Arab-Berber 80%, African 20%
Government: Islamic republic
Illiteracy: 69.3% (1980) 60.6% (1995) 58.8% (1998)
Life expectancy at birth: Total, years 46.7 (1980) 50.7 (1990) 53.7 (1998)
Infant mortality, per 1,000 births: 120 (1980) 105 (1990) 90 (1998)
Gross domestic product: $1,440,185,856 (1980) $3,952,874,240 (1998)
GDP per capita: $929 (1980) $1534 (1995) $1563 (1998)
Principal industries: Agriculture, fish processing
Principal crops: Millet, corn, rice, dates

App. 1.20. MEXICO: United Mexican States - Estados Unidos Mexicanos

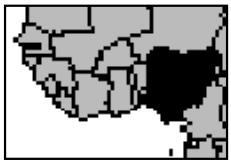
Area: 1,958,200 sq. km. (approx.761, 600-sq. ml.) (1995)
Population: **67,570,000 (1980) 91,145,000 (1995) 96,845.880 (1998)**
Language: Spanish 91% (official), various indigenous 6%, other 1%
Capital: Mexico City
Currency: Peso
Religion: Roman Catholic 97%, other 3%
Ethnic groups: Mestizo 60%, Native American 29%, white or European descent 9%, other 2%
Government: Federal Republic
Illiteracy: 17.8% (1980) 10.2% (1995) 9.2% (1998)
Life expectancy at birth: Total, years 66.8 (1980) 70.4 (1990) 72.1 (1998)
Infant mortality, per 1,000 births: 51 (1980) 36 (1990) 30 (1998)
Gross domestic product: $286,583,914,496 (1980) $738, 387,230720 (1998)
GDP per capita: $4241 (1980) – $7061 (1990) $7704 (1998)
Principal industries: Agriculture, mining, food processing, chemicals, textiles, Petroleum
Principal crops: Cotton, coffee, wheat, rice, sugar cane, vegetables, corn

App. 1.21. NETHERLANDS: Kingdom of the Netherlands- Koninkrijk der Nederlanden



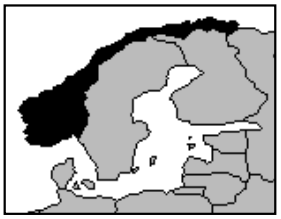
Area: 40,840 sq. km. (approx. 16,000-sq. ml.) (1995)
Population: **14,150,000 (1980) 15,460,000 (1995) 15,698,000 (1998)**
Language: Dutch 93%, Frisan 5%, other 2%
Capital: Amsterdam (seat of government, The Hague)
Currency: Guilder
Religion: Roman Catholic 36%, Protestant 27%, other 4%, unaffiliated 33%
Ethnic groups: Dutch 97%, other 3%
Government: Parliamentary democracy monarchy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 75.7 (1980) 76.9 (1990) 77.6 (1998)
Infant mortality, per 1,000 births: 9 (1980) 7 (1990) 5 (1998)
Gross domestic product: $134,515,499,008 (1980) $348,124,086,272 (1998)
GDP per capita: $9506 (1980) $20812 (1995) $22176 (1998)
Principal industries: Metals, machinery, chemicals, oil refinery, diamond cutting, electronics, tourism
Principal crops: Grains, potatoes, sugar beets, vegetables, fruits, flowers

App. 1.22. NIGERIA: Federal Republic of Nigeria



Area: 923,770 sq. km**. (approx. 356,700 square miles) (1995)**
Population: 71,148,000 (1980) 111,270,000 (1995) 120,817,264 (1998)
Language: English (official), Hausa 21%, Yoruba 20%, Ibo 17%, Fulani 9%, Efik (Ibibio) 5%, Kanuri 4%, Edo, Fula, Ijaw, Tiv 24%
Capital: Abuja
Currency: Naira
Religion: Muslim (mostly in the north) 50%, Christians (mostly in the south) 40%, indigenous 10%
Ethnic groups: Hausa 20%, Yoruba 20%, Ibo 17%, and Fulani 9%, others33%
Government: Republic in transition
Illiteracy: 67.1% (1980) 43.6% (1995) 38.9% (1998)
Life expectancy at birth: Total, years 45.9 (1980) 49.5 (1990) 53.4 (1998)
Infant mortality, per 1,000 births: 99 (1980) 85 (1990) 76 (1998)
Gross domestic product: $35, 175,519016 (1980) $96,028,459,008 (1998)
GDP per capita: $494 (1980) $832 (1995) $795 (1998)
Principal industries: Oil, food processing, assemble of vehicles, textiles
Principal crops: Cocoa, peanuts, cotton, and tobacco

App. 1.23. NORWAY: Kingdom of Norway - Kongeriket Norge



Area: 323,880 sq. km. (approx. 125,050-sq. ml.) (1995)
Population: 4,091,000 (1980) 4,360,000 (1995) 4,432,000 (1998)
Language: Norwegian 99%, other 1%
Capital: Oslo
Currency: Krone
Religion: Lutheran 94%, other 6%
Ethnic groups: Norwegian 97%, other 3%
Government: Parliamentary democracy monarchy
Literacy: 100% (1990) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 75.7 (1980) 76.5 (1990) 78.3 (1998)
Infant mortality, per 1,000 births: 8 (1980) 7 (1990) 4 (1998)
Gross domestic product: $40,654,872,576 (1980) $714,559,651,840 (1998)
GDP per capita: $9983 (1980) $24694 (1995) $26342 (1998)
Principal industries: Fishing, fore's shipbuilding, engineering, metals, chemicals, oil, gas
Principal crops: grain, potatoes

App. 1.24. PHILIPPINES: Republic of the Philippines

Area: 300,000 sq. km. (approx. 115,830 sq., ml.) (1995)
Population: **48,317,000 (1980) 70,267,000 (1995) 75,174,000 (1998)**
Language: **Filipino (based on Tagalog) 24%, English (both official), Cebuano 24%, locano 11%, Bikol 7%, Samar-Leyte (Waray-Waray) 5%, other including Panay-Hiligayon 29%**
Capital: Manila
Currency: Peso
Religion: Roman Catholics 83%, Protestants 9%, and Muslim 5%, other 3%
Ethnic groups: Malay 96%, Chinese 2%, other2%
Government: Republic
Illiteracy: 11% (1980) 6% (1995) 5.2% (1998)
Life expectancy at birth: Total, years 61.1 (1980) 65.4 (1990) 68.6 (1998)
Infant mortality, per 1,000 births: 52 (1980) 37 (1990) 32 (1998)
Gross domestic product: $108,182,855,680 (1980) $267,267,833,856 (1998)
GDP per capita: $2239 (1980) $3083 (1995) $3555 (1998)
Principal industries: Food processing, textiles, clothing, drugs, wood products, appliances
Principal crops: Sugar, rice, corn, pineapple, and coconut

App. 1.25. SOUTH AFRICA: **Republic of South Africa - Republiek van Suid Afrika**

Area: 1,221,040 sq. km. (approx. 471,440-sq. ml.) (1995)
Population: 27,576,000 (1980) 39,120,000 (1995) 41,402,392 (1998)
Language: Afrikaans 16%, English 9% (both official), Xhosa 25%, Zulu 20%, Sotho 15%, Tswana 8%, Tsonga (Thonga) 3%, othe4%
Capital: Pretoria (legislative capital, Cape Town)
Currency: Rand
Religion: Mostly Christian, Muslim, and Hindu
Ethnic groups: Black 75%, white 14%, coloured 8%, Asian 3%
Government: Democratic Republic
Illiteracy: 23.8% (1980) 16.7% (1995) 15.4% (1998)
Life expectancy at birth: Total, years 57.1 (1980) 61.9 (1990) 63.4 (1998)
Infant mortality, per 1,000 births: 67 (1980) 55 (1990) 51 (1998)
Gross domestic product: $162,424,995,840 (1980) $351,416,221,696 (1998)
GDP per capita: $5890 (1980) $8582 (1995) $8488 (1998)
Principal industries: Mining, steel, tires, motors, textiles, and plastics
Principal crops: Corn, wool, dairy products, grain, tobacco, sugar, fruit, peanuts, grapes

App. 1.26. SWEDEN: Kingdom of Sweden - Konungariket Sverige

Area: 449,960 sq. km. (approx. 173,800 square miles) (1995)
Population: 8,310,000 (1980) 8,831,000 (1995) 8,851,800 (1998)
Language: Swedish 93%, Finn 3%, others 4%
Capital: Stockholm
Currency: Krona
Religion: Lutheran 95%, others 5%
Ethnic groups: Swedish 91%, Finnish 3%, Lapp, and European immigrants6%
Government: Constitutional democratic monarchy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, year 75.9 (1980) 77.5 (1990) 79.2 (1998)
Infant mortality, per 1,000 births: 7 (1980) 6 (1990) 4 (1998)
Gross domestic product: $81,522,917,376 (1980) $182,873,210,880 (1998)
GDP per capita: $9810 (1980) $20031 (1995) $20659 (1998)
Principal industries: **Steel machinery, instruments, autos, shipbuilding, shipping, paper**
Principal crops: Grains, potatoes, sugar, beets

App. 1.27. TURKEY: Republic of Turkey - Turkiye Cumhuriyeti

Area: 774,820 sq. km. (approx. 300, 945 Square miles) (1995)
Population: 44,484,000 (1980) 60,614,000 (1995) 63,451,000 (1998)
Language: **Turkish 90% (official), Kurdish 9%, others 1%**
Capital: Ankara
Currency: Turkish lira
Religion: Muslim (Sunni)
Ethnic groups: Turk 80%, Kurd 17%, others 3%
Illiteracy: 31.3% (1980) 18% (1995) 16% (1998)
Life expectancy at birth: Total, years 61.4 (1980) 66.1 (1990) 69.3 (1998)
Infant mortality, per 1,000 births: 109 (1980) 58 (1990) 38 (1998)
Gross domestic products: $103,352,180,736 (1980) $407,786,618,880 (1998)
GDP per capita: $2328 (1980) $5804 (1995) $6422 (1998)
Principal industries: Textiles, coal, mineral, processed food, steel petroleum
Principal crops: Tobacco, cereals, cotton, barley, corn, fruits, potatoes, sugar, beets

App. 1.28. UNITED KINGDOM: **United Kingdom of Great Britain and Northern Ireland**

Area: 244,880 sq. km. (approx. 94,247 square miles) (1995)
Population: 56,330,000 (1980) 58,606,000 (1995) 59,055,000 (1998)
Language: English 98%, Welsh (spoken in Western Wales), Scots, and Gaelic2%
Capital: London
Currency: Pound Sterling
Religion: **Anglican 57%, other Protestant 15%, Roman Catholic 13%, other 15%**
Ethnic groups: English 81.5%, Scottish 9.6%, Irish 2.4%, Welsh 2.9%, Ulster 1.8%, West Indian, Indian, Pakistan 2%, others 2.6%
Government: Constitutional democratic monarchy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 73.8 (1980) 75.6 (1990) 77.2 (1998)
Infant mortality, per 1,000 births: 12 (1980) 8 (1990) 6 (1998)
Gross domestic product: $474,704,609,280 (1980) $1,200,961,880,064 (1998)
GDP per capita: $8427 (1980) $19465 (1995) $20336 (1998)
Principal industries: Steel, metals, vehicles, shipbuilding, banking, textiles, chemicals, electronics, aircraft, machinery, distilling
Principal crops: Grains, sugar, beets, fruits, vegetables

App. 1.29. UNITED STATES OF AMERICA: The United States of America

Area: **9,363,520 sq. km. (approx. 3, 532,341 square miles) (1995)**
Population: 227,224,992 (1980) 262,764,992 (1995) 270,299,008 (1998)
Language: English 89%, Spanish 6%, others 5%
Capital: Washington D. C.
Currency: Dollar
Religion: Protestant 61%, Roman Catholic 25%, Jewish 2%, others 12%
Ethnic groups: White or European descent 71.3%, African-American 12%, Latino / Chicano 9%, Asian 3%, Native American and Eskimo 1%, others 3.7%
Government: Democracy
Literacy: 100% (1980) 100% (1995) 100% (1998)
Life expectancy at birth: Total, years 73.7 (1980) 75.2 (1990) 76.5 (1998)
Infant mortality, per 1,000 births: 13 (1980) 9 (1990) 7 (1998)
Gross domestic product: $2,879,764,824,064 (1980) $8,002,218,754,048 (1998)
GDP per capita: $12674 (1980) $27395 (1995) $29605 (1998)
Principal industries: Petroleum products, cement, iron and steel, plastics, newsprint, motor vehicles, machinery
Principal crops: grains, sugar, potatoes, soybeans, fruits

App. 1.30. ZIMBABWE: Republic of Zimbabwe

Area: 390,760-sq. km. (approx. 150,700-sq. ml.) (1995)
Population: 7,009,000 (1980) 11,011,000 (1995) 11,689,010 (1998)
Language: English 7% (official), shona 55%, Ndeble 15%, Nyanja 5%, other African 18%
Capital: Harare
Currency: Zimbabwean dollar
Religion: Predominantly traditional Christian
Ethnic groups: Shona 80%, Ndebele 19%, other 1%
Government: Republic
Illiteracy: 30% (1980) 15.2% (1995) 12.8% (1998)
Life expectancy at birth: Total, years 54.9 (1980) 56.2 (1990) 50.9 (1998)
Infant mortality, per 1,000 births: 80 (1980) 52 (1990) 73 (1998)
Gross domestic product: $10,070,476,800 (1980) $31,201,019,904 (1998)
GDP per capita: $1437 (1980) $2512 (1995) $2669 (1998)
Principal industries: Steel, textiles, chemicals, vehicles, gold, and copper
Principal crops: Tobacco, sugar, cotton, corn, wheat

The structural pattern that was adopted for the spotlights on all the thirty sampled countries was replicated from Webster's New Encyclopaedic Dictionary 1995 / 1996 Ps. 1499-1524, and enlarged-upon with latest data, figures, and more recent but vital information. Other sources of the latest data and information on various indicators (for example: surface area, population, literacy / illiteracy rates, GDP per capita, life expectancy, and infant mortality rates) were compiled from World Development Indicators, World Bank CD-ROM 2000 - all for educational purposes only. All data within the appendixes were stated with precision; and they indicate the years and sources of their collection.

Appendix 2: Main indicators for computing human development index. (Samples)

Table app. 2.1.

Actual life expectancy at birth 1980 - 1998 (years) (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	59	63	67	68	69	69	69	70	70	70	71
Argentina	70	69	72	72	72	72	73	73	73	73	73
Australia	74	76	77	77	78	78	78	78	78	78	79
Brazil	63	64	65	66	66	66	66	67	67	67	67
Cameroon	75	76	77	78	78	78	78	79	79	79	79
Canada	50	52	54	55	55	55	55	55	55	55	54
Chad	42	44	46	46	47	47	47	48	48	49	49
Colombia	66	67	69	67	69	70	70	70	70	70	70
Egypt	56	59	63	63	64	64	65	65	66	66	67
Finland	73	74	75	75	75	76	76	76	77	77	77
France	74	76	77	77	77	77	78	78	78	78	78
Ghana	53	55	57	58	58	58	59	59	60	60	60
Greece	74	75	77	77	77	77	77	78	78	78	78
Hungary	70	70	69	69	69	69	69	70	70	71	71
India	54	57	60	61	61	62	62	62	63	63	63
Japan	76	78	79	79	79	79	80	80	80	80	81
Kenya	55	56	57	57	57	56	55	54	53	52	51
Madagascar	51	53	55	55	56	56	56	57	57	58	58
Mauritania	47	49	51	51	52	52	52	53	53	54	54
Mexico	67	69	70	71	71	71	71	72	72	72	72
Netherlands	76	76	77	77	77	77	77	77	77	78	78
Nigeria	46	48	50	50	50	51	52	52	53	54	53

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Norway	76	76	77	77	77	78	78	78	78	78	78
Philippines	61	63	65	66	66	67	67	68	68	68	69
South Africa	57	60	62	62	63	63	64	64	65	65	63
Sweden	76	77	78	78	78	78	78	79	79	79	79
Turkey	61	64	66	67	67	68	68	68	69	69	69
United Kingdom	74	75	75	75	76	75	76	76	76	76	77
Unted States	74	75	76	76	76	76	77	77	77	77	77
Zimbabwe	55	56	56	56	56	55	54	54	53	52	51

Table app. 2.2.

Adult literacy rate % **(in alphabetic order)**

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	38,7	46,7	54,3	55,9	57,4	58,8	60,2	61,5	62,9	64,2	65,5
Argentina	94,4	95,1	95,7	95,9	96,0	96,1	96,2	96,3	96,5	96,6	96,7
Australia	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Brazil	75,5	78,4	80,9	81,4	81,9	82,4	82,8	83,2	83,7	84,1	84,5
Cameroon	46,8	54,9	62,6	64,1	65,6	67,0	68,4	69,7	71,1	72,4	73,6
Canada	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Chad	16,7	21,8	27,7	29,0	30,3	31,7	33,1	34,6	36,1	37,7	39,4
Colombia	84,2	86,7	88,6	89,0	89,3	89,7	90,0	90,3	90,6	90,9	91,2
Egypt	39,2	43,2	47,1	47,9	48,7	49,5	50,3	51,2	52,0	52,9	53,7
Finland	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
France	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	43,7	51,1	58,4	59,8	61,2	62,5	63,8	65,1	66,5	67,8	69,1
Greece	91,2	93,3	95,0	95,3	95,6	95,8	96,1	96,3	96,5	96,7	96,9
Hungary	98,6	98,8	99,1	99,1	99,1	99,2	99,2	99,2	99,2	99,3	99,3
India	41,0	45,2	49,3	50,2	50,9	51,7	52,5	53,3	54,1	54,9	55,7
Japan	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Kenya	56,3	63,9	70,8	72,2	73,6	74,8	76,0	77,1	78,3	79,4	80,5
Madagascar	47,7	52,9	58,0	58,9	59,8	60,7	61,5	62,4	63,2	64,0	64,9
Mauritania	30,7	33,6	36,4	37,0	37,7	38,1	38,8	39,4	39,9	40,5	41,2
Mexico	82,2	85,2	87,8	88,2	88,7	89,1	89,4	89,8	90,1	90,4	90,8
Netherlands	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Nigeria	32,9	40,8	48,6	50,2	51,8	53,4	54,9	56,4	58,0	59,6	61,1
Norway	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Philippines	89,0	91,0	92,5	92,8	93,1	93,4	93,8	94,0	94,3	94,6	94,8
South Africa	76,2	78,9	81,3	81,7	82,1	82,6	83,0	83,3	83,8	84,2	84,6
Sweden	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Turkey	68,7	74,1	78,0	78,9	79,7	80,5	81,3	82,0	82,7	83,4	84,0
United Kingdom	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United States	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Zimbabwe	70,0	75,7	80,7	81,7	82,5	83,3	84,0	84,8	85,6	86,4	87,2

Table app. 2.3.

	Combined gross enrolment Index (in alphabetic order)										
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	0,056	0,300	0,419	0,408	0,405	0,406	0,402	0,419	0,438	0,459	0,488
Argentina	0,443	0,632	0,810	0,792	0,767	0,742	0,717	0,788	0,860	0,931	1,000
Australia	0,483	0,620	0,711	0,756	0,785	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	0,100	0,112	0,124	0,150	0,164	0,160	0,180	0,245	0,311	0,311	0,311
Cameroon	0,197	0,236	0,282	0,288	0,285	0,281	0,275	0,280	0,285	0,290	0,300
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chad	0,070	0,071	0,092	0,101	0,101	0,089	0,095	0,099	0,103	0,108	0,114
Colombia	0,090	0,193	0,295	0,306	0,368	0,382	0,409	0,425	0,494	0,513	0,549
Egypt	0,457	0,556	0,676	0,660	0,671	0,670	0,689	0,698	0,699	0,704	0,710
Finland	0,914	0,966	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	0,623	0,736	0,920	0,992	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	0,341	0,329	0,307	0,307	0,324	0,341	0,358	0,375	0,392	0,409	0,420
Greece	0,543	0,704	0,879	0,898	0,910	0,949	0,922	0,982	1,000	1,000	1,000
Hungary	0,566	0,599	0,682	0,709	0,762	0,879	0,920	0,973	1,000	1,000	1,000
India	0,304	0,375	0,420	0,423	0,449	0,452	0,449	0,457	0,465	0,474	0,481
Japan	0,808	0,801	0,845	0,843	0,841	0,952	0,965	1,000	1,000	1,000	1,000
Kenya	0,208	0,214	0,235	0,259	0,254	0,242	0,234	0,230	0,230	0,230	0,230
Madagascar	0,212	0,212	0,212	0,197	0,201	0,190	0,178	0,179	0,170	0,163	0,157
Mauritania	0,109	0,160	0,149	0,156	0,171	0,178	0,182	0,190	0,198	0,205	0,214
Mexico	0,217	0,260	0,303	0,293	0,300	0,324	0,357	0,402	0,445	0,507	0,576
Netherlands	0,793	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	0,214	0,332	0,262	0,269	0,292	0,311	0,323	0,330	0,350	0,370	0,380
Norway	0,772	0,860	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	0,541	0,567	0,687	0,697	0,715	0,733	0,753	0,737	0,788	0,788	0,788

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	0,400	0,450	0,505	0,545	0,571	0,640	0,704	0,755	0,799	0,851	0,902
Sweden	0,777	0,793	0,798	0,835	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	0,062	0,109	0,279	0,299	0,349	0,394	0,415	0,422	0,454	0,492	0,522
United Kingdom	0,587	0,609	0,712	0,788	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	0,113	0,401	0,458	0,481	0,456	0,432	0,434	0,453	0,462	0,470	0,490

Table app. 2.4.

GDP per capita (in alphabetic order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	3 111	4 082	4 546	4 507	4 669	4 564	4 503	4 697	4 802	4 753	4 792
Argentina	6 429	6 535	7 448	8 408	9 586	10 180	10 869	10 736	11 290	11 944	12 013
Australia	9 524	12 355	16 484	16 807	17 945	19 076	20 163	21 268	21 771	22 083	22 452
Brazil	3 917	4 444	5 346	5 442	5 726	5 877	6 218	6 572	6 751	6 828	6 625
Cameroon	986	1 597	1 556	1 494	1 483	1 423	1 371	1 415	1 458	1 471	1 474
Canada	11 174	14 496	19 672	19 577	20 385	21 140	22 202	23 085	23 296	23 625	23 582
Chad	384	613	751	817	896	749	818	817	831	832	856
Colombia	3 288	3 938	5 629	5 826	3 413	4 516	6 006	6 151	6 131	6 278	6 006
Egypt	1 077	1 602	2 343	2 380	2 541	2 617	2 722	2 870	2 981	3 054	3 041
Finland	8 739	11 697	17 172	16 321	16 353	16 447	17 466	18 764	19 525	20 414	20 847
France	9 551	12 005	17 278	17 804	18 708	18 776	19 614	20 492	20 889	21 056	21 175
Ghana	1 029	1 026	1 394	1 465	1 545	1 610	1 619	1 685	1 730	1 740	1 735
Greece	6 577	8 145	11 049	11 615	12 128	12 132	12 577	13 147	13 544	13 790	13 943
Hungary	5 159	6 802	9 009	8 181	8 300	8 459	8 913	9 315	9 550	9 914	10 232

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
India	642	893	1 382	1 399	1 513	1 592	1 721	1 877	1 996	2 036	2 077
Japan	9 029	12 300	19 062	20 282	21 350	21 841	22 357	23 212	24 511	24 520	23 257
Kenya	584	662	930	939	945	948	953	997	1 021	1 006	980
Madagascar	644	620	784	741	761	772	765	777	774	767	756
Mauritania	929	1 179	1 273	1 305	1 347	1 412	1 471	1 534	1 578	1 585	1 563
Mexico	4 241	4 990	6 225	6 544	6 953	7 117	7 451	7 061	7 357	7 637	7 704
Netherlands	9 506	11 796	16 848	17 579	18 601	19 035	19 918	20 812	21 550	21 961	22 176
Nigeria	494	496	701	742	778	812	817	832	813	813	795
Norway	9 938	13 648	18 389	19 410	20 829	21 749	23 284	24 694	26 114	26 573	26 342
Philippines	2 239	2 215	3 083	3 079	3 154	3 217	3 349	3 519	3 668	3 727	3 555
South Africa	5 890	6 444	7 934	7 913	7 924	8 029	8 279	8 582	8 829	8 783	8 488
Sweden	9 810	12 702	17 537	17 708	18 129	18 028	18 877	20 031	20 424	20 546	20 659
Turkey	2 328	3 108	4 663	4 749	5 178	5 663	5 340	5 804	6 146	6 461	6 422
United Kingdom	8 427	11 007	16 144	16 202	16 776	17 449	18 511	19 465	20 006	20 380	20 336
United States	12 674	16 304	22 537	22 698	24 102	24 969	26 166	27 395	28 513	29 406	29 605
Zimbabwe	1 437	1 774	2 385	2 508	2 317	2 346	2 499	2 512	2 686	2 713	2 669

Appendix 3. Data on setting-up indices to be processed for the construction of human development index (Samples)

Table app. 3.1

Life Expectancy Index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
Brazil	,628	,651	,674	,678	,682	,685	,689	,692	,696	,699	,701
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Finland	,803	,819	,834	,837	,840	,849	,857	,857	,862	,864	,868
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
India	,490	,535	,580	,591	,602	,609	,616	,622	,629	,636	,636
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432
**********											
HDI Ranking Order based on 1995 calculations											
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
Finland	,803	,819	,834	,837	,840	,848	,857	,857	,862	,864	,868
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
Brazil	,628	,651	,674	,678	,682	,685	,689,	692	,696	,699	,701
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432
India	,490	,535	,580	,591	,602	,609,	616	,622	,629	,636	,636
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391

Table app. 3.2.

Educational Attainment Index 1980 - 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	,978
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745
**********											
HDI Ranking Order based on 1995 calculations											
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	978
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301

Table app. 3.3.

Adjusted real GDP (PPP$) index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548

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HDI Ranking based on 1995 calculations

Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358

Table app. 3.4.

Sum of life expectancy, educational attainment, and adjusted real GDP indices (in alphabetic HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
Chad	,645	,791	,904	,934	, 963	, 944	,976	,994	1,015	1,034	1,050
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Mauritania	, 974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725

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HDI Ranking Order based on 1995 calculations

Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354
Mauritania	,974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Chad	,645	,791	,904	,934	,963	,944	,976	,994	1,015	1,034	1,050

Table app. 3.5.

Human Development Index

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,846	,872	,907	,912	,915	,929	,934	,939	,946	,947	,945
Norway	,846	,875	,910	,915	,920	,924	,929	,934	,938	,939	,940
Canada	,872	,895	,917	,919	,923	,926	,930	,933	,935	,937	,937
United States	,873	,892	,914	,915	,920	,921	,924	,927	,931	,934	,936
Sweden	,846	,867	,890	,896	,917	,917	,922	,927	,929	,930	,931
Australia	,804	,841	,874	,882	,890	,918	,922	,925	,928	,929	,932

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Netherlands	,845	,884	,907	,910	,915	,916	,919	,922	,924	,925	,926
United Kingdom	,805	,828	,866	,876	,903	,905	,910	,913	,916	,919	,919
Finland	,840	,867	,898	,896	,897	,900	,906	,910	,914	,917	,920
Greece	,770	,808	,859	,866	,872	,876	,876	,886	,891	,893	,894
Hungary	,749	,768	,793	,790	,795	,810	,819	,830	,837	,841	,842
Argentina	,738	,757	,802	,808	,814	,816	,818	,827	,839	,851	,861
Mexico	,647	,677	,711	,714	,721	,727	,735	,739	,748	,759	,769
South Africa	,619	,649	,685	,693	,700	,712	,724	,735	,745	,754	,748
Colombia	,619	,654	,698	,692	,682	,701	,721	,726	,735	,741	,743
Philippines	,631	,650	,697	,701	,708	,714	,721	,725	,736	,740	,739
Turkey	,537	,583	,646	,655	,670	,684	,687	,696	,706	,717	,722
Brazil	,592	,615	,640	,646	,653	,656	,663	,676	,687	,689	,689
Algeria	,474	,556	,615	,620	,628	,632	,636	,645	,654	,660	,668
Egypt	,440	,502	,565	,569	,579	,585	,594	,602	,609	,615	,619
Zimbabwe	,482	,542	,580	,586	,579	,575	,577	,577	,580	,580	,575
India	,392	,442	,496	,502	,515	,522	,530	,540	,548	,554	,558
Ghana	,421	,447	,489	,497	,507	,517	,524	,533	,542	,550	,554
Cameroon	,392	,453	,485	,489	,493	,493	,493	,498	,503	,506	,507
Kenya	,412	,443	,486	,491	,493	,490	,486	,486	,484	,481	,476
Madagascar	,376	,396	,432	,431	,437	,441	,443	,448	,451	,454	,456
Nigeria	,302	,343	,382	,391	,402	,414	,422	,431	,439	,449	,451
Mauritania	,325	,361	,382	,387	,394	,401	,408	,414	,420	,425	,428
Chad	,215	,264	,301	,311	,321	,315	,325	,331	,338	,345	,350

Appendix 4. Processing data related to the construction of human development index (Samples)

Table app.4.1.

Actual life Expectancy at birth 1980 – 1998 (years) (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	59,3	63,3	67,4	67,9	68,5	68,8	69,2	69,6	70,0	70,3	70,6
Argentina	69,6	68,7	71,6	71,8	72,1	72,3	72,5	72,7	72,9	73,1	73,3
Australia	74,4	75,7	77,0	77,3	77,6	77,7	77,8	77,9	78,1	78,2	78,6
Brazil	62,7	64,1	65,4	65,7	65,9	66,1	66,3	66,5	66,7	67,0	67,1
Cameroon	50,0	52,1	54,2	54,5	54,8	54,7	54,6	54,6	54,5	54,5	54,0
Canada	74,7	76,3	77,2	77,6	77,8	78,0	78,3	78,5	78,7	78,9	79,0
Chad	42,2	44,2	46,2	46,4	46,7	47,0	47,4	47,8	48,2	48,6	48,5
Colombia	65,9	67,4	68,9	67,1	69,3	69,5	69,7	69,8	70,0	70,2	70,3
Egypt	55,5	59,2	62,8	63,4	64,0	64,4	64,9	65,3	65,8	66,3	66,5
Finland	73,2	74,1	75,1	75,2	75,4	75,9	76,4	76,4	76,7	76,9	77,1
France	74,3	75,5	76,8	76,9	77,2	77,2	77,7	77,8	78,0	78,4	78,3
Ghana	53,2	55,2	57,2	57,6	58,0	58,4	58,8	59,2	59,6	60,0	60,0
Greece	74,4	75,0	76,9	77,1	77,4	77,3	77,4	77,5	77,7	77,7	77,8
Hungary	69,5	69,5	69,3	69,3	69,0	69,0	69,4	69,8	70,3	70,6	70,5
India	54,4	57,1	59,8	60,5	61,1	61,5	61,9	62,3	62,7	63,1	63,1
Japan	76,0	77,7	78,8	79,0	79,1	79,3	79,7	79,5	80,2	80,4	80,5
Kenya	54,8	56,0	57,1	57,0	56,8	55,9	54,9	53,9	53,0	52,0	51,0
Madagascar	50,7	52,7	54,7	55,1	55,5	55,9	56,3	56,7	57,1	57,5	57,8
Mauritania	46,7	48,7	50,7	51,1	51,5	51,9	52,3	52,7	53,1	53,5	53,7
Mexico	66,8	68,5	70,4	70,6	70,8	71,0	71,3	71,5	71,7	72,0	72,1
Netherlands	75,7	76,3	76,9	77,1	77,3	77,4	77,4	77,4	77,4	77,5	77,6
Nigeria	45,9	47,7	49,5	49,9	50,3	50,9	51,6	52,2	52,9	53,5	53,4

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Norway	75,7	76,1	76,5	77,0	77,2	77,5	77,7	77,9	78,2	78,1	78,3
Philippines	61,1	63,2	65,4	65,8	66,3	66,7	67,1	67,5	67,9	68,3	68,6
South Africa	57,1	59,5	61,9	62,4	62,9	63,4	63,8	64,3	64,8	65,2	63,4
Sweden	75,9	76,7	77,5	77,7	77,9	78,1	78,4	78,8	78,9	79,1	79,2
Turkey	61,4	63,8	66,1	66,7	67,3	67,6	68,0	68,3	68,7	69,0	69,3
United Kingdom	73,8	74,7	75,6	75,9	76,2	76,2	76,5	76,6	76,8	77,1	77,2
United States	73,7	74,6	75,2	75,4	75,6	75,4	75,6	75,6	76,0	76,1	76,5
Zimbabwe	54,9	55,5	56,2	55,9	55,7	55,0	54,3	53,7	53,0	52,4	50,9

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HDI Ranking order based on 1995 calculations

Japan	76,0	77,7	78,8	79,0	79,1	79,3	79,7	79,5	80,2	80,4	80,5
Norway	75,7	76,1	76,5	77,0	77,2	77,5	77,7	77,9	78,2	78,1	78,3
Canada	74,7	76,3	77,2	77,6	77,8	78,0	78,3	78,5	78,7	78,9	79,0
United States	73,7	74,6	75,2	75,4	75,6	75,4	75,6	75,6	76,0	76,1	76,5
Sweden	75,9	76,7	77,5	77,7	77,9	78,1	78,4	78,8	78,9	79,1	79,2
Australia	74,4	75,7	77,0	77,3	77,6	77,7	77,8	77,9	78,1	78,2	78,6
France	74,3	75,5	76,8	76,9	77,2	77,2	77,7	77,8	78,0	78,4	78,3
Netherlands	75,7	76,3	76,9	77,1	77,3	77,4	77,4	77,4	77,4	77,5	77,6
United Kingdom	73,8	74,7	75,6	75,9	76,2	76,2	76,5	76,6	76,8	77,1	77,2
Finland	73,2	74,1	75,1	75,2	75,4	75,9	76,4	76,4	76,7	76,9	77,1
Greece	74,4	75,0	76,9	77,1	77,4	77,3	77,4	77,5	77,7	77,7	77,8
Hungary	69,5	69,5	69,3	69,3	69,0	69,0	69,4	69,8	70,3	70,6	70,5
Argentina	69,6	68,7	71,6	71,8	72,1	72,3	72,5	72,7	72,9	73,1	73,3
Mexico	66,8	68,5	70,4	70,6	70,8	71,0	71,3	71,5	71,7	72,0	72,1
South Africa	57,1	59,5	61,9	62,4	62,9	63,4	63,8	64,3	64,8	65,2	63,4

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Colombia	65,9	67,4	68,9	67,1	69,3	69,5	69,7	69,8	70,0	70,2	70,3
Philippines	61,1	63,2	65,4	65,8	66,3	66,7	67,1	67,5	67,9	68,3	68,6
Turkey	61,4	63,8	66,1	66,7	67,3	67,6	68,0	68,3	68,7	69,0	69,3
Brazil	62,7	64,1	65,4	65,7	65,9	66,1	66,3	66,5	66,7	67,0	67,1
Algeria	59,3	63,3	67,4	67,9	68,5	68,8	69,2	69,6	70,0	70,3	70,6
Egypt	55,5	59,2	62,8	63,4	64,0	64,4	64,9	65,3	65,8	66,3	66,5
Zimbabwe	54,9	55,5	56,2	55,9	55,7	55,0	54,3	53,7	53,0	52,4	50,9
India	54,4	57,1	59,8	60,5	61,1	61,5	61,9	62,3	62,7	63,1	63,1
Ghana	53,2	55,2	57,2	57,6	58,0	58,4	58,8	59,2	59,6	60,0	60,0
Cameroon	50,0	52,1	54,2	54,5	54,8	54,7	54,6	54,6	54,5	54,5	54,0
Kenya	54,8	56,0	57,1	57,0	56,8	55,9	54,9	53,9	53,0	52,0	51,0
Madagascar	50,7	52,7	54,7	55,1	55,5	55,9	56,3	56,7	57,1	57,5	57,8
Nigeria	45,9	47,7	49,5	49,9	50,3	50,9	51,6	52,2	52,9	53,5	53,4
Mauritania	46,7	48,7	50,7	51,1	51,5	51,9	52,3	52,7	53,1	53,5	53,7
Chad	42,2	44,2	46,2	46,4	46,7	47,0	47,4	47,8	48,2	48,6	48,5

Table app. 4, 2.

Life Expectancy Index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
Brazil	,628	,651	,674	,678	,682	,685	,689	,692	,696	,699	,701
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Finland	,803	,819	,834	,837	,840	,849	,857	,857	,862	,864	,868
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
India	,490	,535	,580	,591	,602	,609	,616	,622	,629	,636	,636
Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432

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HDI Ranking Order based on 1995 calculations

Japan	,850	,879	,897	,901	,901	,905	,912	,909	,920	,924	,926
Norway	,846	,852	,859	,866	,870	,874	,878	,882	,886	,886	,889
Canada	,829	,855	,870	,877	,880	,884	,888	,891	,895	,898	,899
United States	,811	,826	,837	,839	,844	,840	,843	,844	,850	,852	,858
Sweden	,848	,862	,876	,879	,882	,885	,891	,896	,899	,901	,903
Australia	,824	,845	,867	,872	,876	,878	,880	,882	,884	,886	,894
France	,821	,842	,863	,865	,870	,870	,878	,880	,883	,889	,888
Netherlands	,845	,855	,865	,868	,872	,873	,873	,874	,874	,875	,876
United Kingdom	,813	,828	,844	,848	,853	,853	,858	,861	,863	,868	,869
Finland	,803	,819	,834	,837	,840	,848	,857	,857	,862	,864	,868
Greece	,823	,834	,866	,869	,873	,872	,873	,876	,878	,879	,880
Hungary	,742	,742	,738	,738	,734	,734	,740	,746	,755	,761	,759
Argentina	,743	,728	,777	,781	,784	,788	,791	,795	,798	,802	,806
Mexico	,696	,725	,757	,760	,763	,767	,771	,775	,779	,783	,784
South Africa	,535	,576	,615	,624	,632	,640	,647	,655	,663	,670	,639

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Colombia	,682	,707	,731	,701	,738	,741	,744	,747	,751	,754	,755
Philippines	,601	,637	,673	,681	,688	,695	,702	,708	,715	,722	,727
Turkey	,607	,646	,685	,695	,705	,711	,717	,722	,728	,734	,738
Brazil	,628	,651	,674	,678	,682	,685	,689,	692	,696	,699	,701
Algeria	,571	,639	,706	,715	,724	,731	,737	,743	,749	,756	,760
Egypt	,509	,570	,630	,640	,649	,657	,665	,672	,680	,688	,692
Zimbabwe	,498	,509	,519	,515	,511	,500	,489	,478	,467	,456	,432
India	,490	,535	,580	,591	,602	,609,	616	,622	,629	,636	,636
Ghana	,470	,503	,536	,543	,549	,556	,563	,570	,577	,583	,584
Cameroon	,416	,451	,486	,491	,496	,495	,494	,493	,492	,491	,483
Kenya	,497	,516	,535	,533	,530	,514	,498	,482	,466	,450	,434
Madagascar	,428	,461	,494	,501	,508	,514	,521	,528	,534	,541	,546
Nigeria	,348	,378	,408	,415	,421	,432	,443	,453	,464	,475	,474
Mauritania	,361	,394	,428	,434	,441	,448	,454	,461	,468	,474	,478
Chad	,286	,319	,353	,357	,361	,367	,374	,380	,386	,393	,391

Table app. 4.3.

Actual Adult Literacy rate 1980 - 1998 (%) (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	38,7	46,7	54,3	55,9	57,4	58,8	60,2	61,5	62,9	64,2	65,5
Argentina	94,4	95,1	95,7	95,9	96,0	96,1	96,2	96,3	96,5	96,6	96,7
Australia	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Brazil	75,5	78,4	80,9	81,4	81,9	82,4	82,8	83,2	83,7	84,1	84,5
Cameroon	46,8	54,9	62,6	64,1	65,6	67,0	68,4	69,7	71,1	72,4	73,6
Canada	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Chad	16,7	21,8	27,7	29,0	30,3	31,7	33,1	34,6	36,1	37,7	39,4
Colombia	84,2	86,7	88,6	89,0	89,3	89,7	90,0	90,3	90,6	90,9	91,2
Egypt	39,2	43,2	47,1	47,9	48,7	49,5	50,3	51,2	52,0	52,9	53,7
Finland	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
France	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Ghana	43,7	51,1	58,4	59,8	61,2	62,5	63,8	65,1	66,5	67,8	69,1
Greece	91,2	93,3	95,0	95,3	95,6	95,8	96,1	96,3	96,5	96,7	96,9
Hungary	98,6	98,8	99,1	99,1	99,1	99,2	99,2	99,2	99,2	99,3	99,3
India	41,0	45,2	49,3	50,2	50,9	51,7	52,5	53,3	54,1	54,9	55,7
Japan	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Kenya	56,3	63,9	70,8	72,2	73,6	74,8	76,0	77,1	78,3	79,4	80,5
Madagascar	47,7	52,9	58,0	58,9	59,8	60,7	61,5	62,4	63,2	64,0	64,9
Mauritania	30,7	33,6	36,4	37,0	37,7	38,1	38,8	39,4	39,9	40,5	41,2
Mexico	82,2	85,2	87,8	88,2	88,7	89,1	89,4	89,8	90,1	90,4	90,8
Netherlands	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Nigeria	32,9	40,8	48,6	50,2	51,8	53,4	54,9	56,4	58,0	59,6	61,1
Norway	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Philippines	89,0	91,0	92,5	92,8	93,1	93,4	93,8	94,0	94,3	94,6	94,8

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	76,2	78,9	81,3	81,7	82,1	82,6	83,0	83,3	83,8	84,2	84,6
Sweden	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Turkey	68,7	74,1	78,0	78,9	79,7	80,5	81,3	82,0	82,7	83,4	84,0
United Kingdom	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United States	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Zimbabwe	70,0	75,7	80,7	81,7	82,5	83,3	84,0	84,8	85,6	86,4	87,2

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HDI Ranking Order based on 1995 calculations

Japan	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Norway	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Canada	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United States	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Sweden	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Australia	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
France	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Netherlands	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
United Kingdom	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Finland	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Greece	91,2	93,3	95,0	95,3	95,6	95,8	96,1	96,3	96,5	96,7	96,9
Hungary	98,6	98,8	99,1	99,1	99,1	99,2	99,2	99,2	99,2	99,3	99,3
Argentina	94,4	95,1	95,7	95,9	96,0	96,1	96,2	96,3	96,5	96,6	96,7
Mexico	82,2	85,2	87,8	88,2	88,7	89,1	89,4	89,8	90,1	90,4	90,8
South Africa	76,2	78,9	81,3	81,7	82,1	82,6	83,0	83,3	83,8	84,2	84,6
Colombia	84,2	86,7	88,6	89,0	89,3	89,7	90,0	90,3	90,6	90,9	91,2

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	89,0	91,0	92,5	92,8	93,1	93,4	93,8	94,0	94,3	94,6	94,8
Turkey	68,7	74,1	78,0	78,9	79,7	80,5	81,3	82,0	82,7	83,4	84,0
Brazil	75,5	78,4	80,9	81,4	81,9	82,4	82,8	83,2	83,7	84,1	84,5
Algeria	38,7	46,7	54,3	55,9	57,4	58,8	60,2	61,5	62,9	64,2	65,5
Egypt	39,2	43,2	47,1	47,9	48,7	49,5	50,3	51,2	52,0	52,9	53,7
Zimbabwe	70,0	75,7	80,7	81,7	82,5	83,3	84,0	84,8	85,6	86,4	87,2
India	41,0	45,2	49,3	50,2	50,9	51,7	52,5	53,3	54,1	54,9	55,7
Ghana	43,7	51,1	58,4	59,8	61,2	62,5	63,8	65,1	66,5	67,8	69,1
Cameroon	46,8	54,9	62,6	64,1	65,6	67,0	68,4	69,7	71,1	72,4	73,6
Kenya	56,3	63,9	70,8	72,2	73,6	74,8	76,0	77,1	78,3	79,4	80,5
Madagascar	47,7	52,9	58,0	58,9	59,8	60,7	61,5	62,4	63,2	64,0	64,9
Nigeria	32,9	40,8	48,6	50,2	51,8	53,4	54,9	56,4	58,0	59,6	61,1
Mauritania	30,7	33,6	36,4	37,0	37,7	38,1	38,8	39,4	39,9	40,5	41,2
Chad	16,7	21,8	27,7	29,0	30,3	31,7	33,1	34,6	36,1	37,7	39,4

Table app. 4.4.

Adult literacy Index (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,387	,467	,543	,559	,574	,588	,602	,615	,629	,642	,655
Argentina	,944	,951	,957	,959	,960	,961	,962	,963	,965	,966	,967
Australia	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	,755	,784	,809	,814	,819	,824	,828	,832	,837	,841	,845
Cameroon	,468	,549	,626	,641	,656	,670	,684	,697	,711	,724	,736
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Chad	,167	,218	,277	,290	,303	,317	,331	,346	,361	,377	,394
Colombia	,842	,867	,886	,890	,893	,897	,900	,903	,906	,909	,912
Egypt	,392	,432	,471	,479	,487	,495	,503	,512	,520	,529	,537
Finland	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	,437	,511	,584	,598	,612	,625	,638	,651	,665	,678	,691
Greece	,912	,933	,950	,953	,956	,958	,961	,963	,965	,967	,969
Hungary	,986	,988	,991	,991	,991	,992	,992	,992	,992	,993	,993
India	,410	,452	,493	,502	,509	,517	,525	,533	,541	,549	,557
Japan	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Kenya	,563	,639	,708	,722	,736	,748	,760	,771	,783	,794	,805
Madagascar	,477	,529	,580	,589	,598	,607	,615	,624	,632	,640	,649
Mauritania	,307	,336	,364	,370	,377	,381	,388	,394	,399	,405	,412
Mexico	,822	,852	,878	,882	,887	,891	,894	,898	,901	,904	,908
Netherlands	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	,329	,408	,486	,502	,518	,534	,549	,564	,580	,596	,611
Norway	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	,890	,910	,925	,928	,931	,934	,938	,940	,943	,946	,948
South Africa	,762	,789	,813	,817	,821	,826	,830	,833	,838	,842	,846
Sweden	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	,687	,741	,780	,789	,797	,805	,813	,820	,827	,834	,840
United Kingdom	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	,700	,757	,807	,817	,825	,833	,840	,848	,856	,864	,872

HDI Ranking Order based on 1995 calculations

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Norway	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,912	,933	,950	,953	,956	,958	,961	,963	,965	,967	,969
Hungary	,986	,988	,991	,991	,991	,992	,992	,992	,992	,993	,993
Argentina	,944	,951	,957	,959	,960	,961	,962	,963	,965	,966	,967
Mexico	,822	,852	,878	,882	,887	,891	,894	,898	,901	,904	,908
South Africa	,762	,789	,813	,817	,821	,826	,830	,833	,838	,842	,846
Colombia	,842	,867	,886	,890	,893	,897	,900	,903	,906	,909	,912
Philippines	,890	,910	,925	,928	,931	,934	,938	,940	,943	,946	,948
Turkey	,687	,741	,780	,789	,797	,805	,813	,820	,827	,834	,840
Brazil	,755	,784	,809	,814	,819	,824	,828	,832	,837	,841	,845
Algeria	,387	,467	,543	,559	,574	,588	,602	,615	,629	,642	,655
Egypt	,392	,432	,471	,479	,487	,495	,503	,512	,520	,529	,537
Zimbabwe	,700	,757	,807	,817	,825	,833	,840	,848	,856	,864	,872
India	,410	,452	,493	,502	,509	,517	,525	,533	,541	,549	,557
Ghana	,437	,511	,584	,598	,612	,625	,638	,651	,665	,678	,691

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Cameroon	,468	,549	,626	,641	,656	,670	,684	,697	,711	,724	,736
Kenya	,563	,639	,708	,722	,736	,748	,760	,771	,783	,794	,805
Madagascar	,477	,529	,580	,589	,598	,607	,615	,624	,632	,640	,649
Nigeria	,329	,408	,486	,502	,518	,534	,549	,564	,580	,596	,611
Mauritania	,307	,336	,364	,370	,377	,381	,388	,394	,399	,405	,412
Chad	,167	,218	,277	,290	,303	,317	,331	,346	,361	,377	,394

Table app. 4.5.

Combined gross primary, secondary and tertiary school enrolment index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,056	,300	,419	,408	,405	,406	,402	,419	,438	,459	,488
Argentina	,443	,632	,810	,792	,767	,742	,717	,788	,860	,931	1,000
Australia	,483	,620	,711	,756	,785	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	,100	,112	,124	,150	,164	,160	,180	,245	,311	,311	,311
Cameroon	,197	,236	,282	,288	,285	,281	,275	,280	,285	,290	,300
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chad	,070	,071	,092	,101	,101	,089	,095	,099	,103	,108	,114
Colombia	,090	,193	,295	,306	,368	,382	,409	,425	,494	,513	,549
Egypt	,457	,556	,676	,660	,671	,670	,689	,698	,699	,704	,710
Finland	,914	,966	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	,623	,736	,920	,992	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	,341	,329	,307	,307	,324	,341	,358	,375	,392	,409	,420
Greece	,543	,704	,879	,898	,910	,949	,922	,982	1,000	1,000	1,000

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Hungary	,566	,599	,682	,709	,762	,879	,920	,973	1,000	1,000	1,000
India	,304	,375	,420	,423	,449	,452	,449	,457	,465	,474	,481
Japan	,808	,801	,845	,843	,841	,952	,965	1,000	1,000	1,000	1,000
Kenya	,208	,214	,235	,259	,254	,242	,234	,230	,230	,230	,230
Madagascar	,212	,212	,212	,197	,201	,190	,178	,179	,170	,163	,157
Mauritania	,109	,160	,149	,156	,171	,178	,182	,190	,198	,205	,214
Mexico	,217	,260	,303	,293	,300	,324	,357	,402	,445	,507	,576
Netherlands	,793	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	,214	,332	,262	,269	,292	,311	,323	,330	,350	,370	,380
Norway	,772	,860	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	,541	,567	,687	,697	,715	,733	,753	,737	,788	,788	,788
South Africa	,400	,450	,505	,545	,571	,640	,704	,755	,799	,851	,902
Sweden	,777	,793	,798	,835	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	,062	,109	,279	,299	,349	,394	,415	,422	,454	,492	,522
United Kingdom	,587	,609	,712	,788	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	,113	,401	,458	,481	,456	,432	,434	,453	,462	,470	,490

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HDI Ranking Order based on 1995 calculations

Japan	,808	,801	,845	,843	,841	,952	,965	1,000	1,000	1,000	1,000
Norway	,772	,860	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,777	,793	,798	,835	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,483	,620	,711	,756	,785	1,000	1,000	1,000	1,000	1,000	1,000

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
France	,623	,736	,920	,992	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,793	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,587	,609	,712	,788	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,914	,966	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,543	,704	,879	,898	,910	,949	,922	,982	1,000	1,000	1,000
Hungary	,566	,599	,682	,709	,762	,879	,920	,973	1,000	1,000	1,000
Argentina	,443	,632	,810	,792	,767	,742	,717	,788	,860	,931	1,000
Mexico	,217	,260	,303	,293	,300	,324	,357	,402	,445	,507	,576
South Africa	,400	,450	,505	,545	,571	,640	,704	,755	,799	,851	,902
Colombia	,090	,193	,295	,306	,368	,382	,409	,425	,494	,513	,549
Philippines	,541	,567	,687	,697	,715	,733	,753	,737	,788	,788	,788
Turkey	,062	,109	,279	,299	,349	,394	,415	,422	,454	,492	,522
Brazil	,100	,112	,124	,150	,164	,160	,180	,245	,311	,311	,311
Algeria	,056	,300	,419	,408	,405	,406	,402	,419	,438	,459	,488
Egypt	,457	,556	,676	,660	,671	,670	,689	,698	,699	,704	,710
Zimbabwe	,113	,401	,458	,481	,456	,432	,434	,453	,462	,470	,490
India	,304	,375	,420	,423	,449	,452	,449	,457	,465	,474	,481
Ghana	,341	,329	,307	,307	,324	,341	,358	,375	,392	,409	,420
Cameroon	,197	,236	,282	,288	,285	,281	,275	,280	,285	,290	,300
Kenya	,208	,214	,235	,259	,254	,242	,234	,230	,230	,230	,230
Madagascar	,212	,212	,212	,197	,201	,190	,178	,179	,170	,163	,157
Nigeria	,214	,332	,262	,269	,292	,311	,323	,330	,350	,370	,380
Mauritania	,109	,160	,149	,156	,171	,178	,182	,190	,198	,205	,214
Chad	,070	,071	,092	,101	,101	,089	,095	,099	,103	,108	,114

Table app. 4.6.

Two-third weight of combined adult literacy index (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,258	,311	,362	,373	,383	,392	,401	,410	,419	,428	,437
Argentina	,629	,634	,638	,639	,640	,641	,641	,642	,643	,644	,645
Australia	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Brazil	,503	,523	,539	,543	,546	,549	,552	,555	,558	,561	,563
Cameroon	,312	,366	,417	,427	,437	,447	,456	,465	,474	,483	,491
Canada	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Chad	,112	,145	,185	,193	,202	,211	,221	,231	,241	,251	,263
Colombia	,561	,578	,591	,593	,595	,598	,600	,602	,604	,606	,608
Egypt	,261	,288	,314	,319	,325	,330	,335	,341	,347	,353	,358
Finland	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
France	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Ghana	,291	,341	,389	,399	,408	,417	,425	,434	,443	,452	,461
Greece	,608	,622	,633	,635	,637	,639	,641	,642	,643	,645	,646
Hungary	,657	,659	,661	,661	,661	,661	,661	,661	,661	,662	,662
India	,273	,301	,329	,335	,339	,345	,350	,355	,361	,366	,371
Japan	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Kenya	,375	,426	,472	,481	,491	,499	,507	,514	,522	,529	,537
Madagascar	,318	,353	,387	,393	,399	,404	,410	,416	,421	,427	,432
Mauritania	,205	,224	,243	,247	,251	,254	,259	,263	,266	,270	,275
Mexico	,548	,568	,585	,588	,591	,594	,596	,599	,601	,603	,605
Netherlands	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Nigeria	,219	,272	,324	,335	,345	,356	,366	,376	,387	,397	,407
Norway	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Philippines	,593	,607	,617	,619	,621	,623	,625	,627	,629	,631	,632
South Africa	,508	,526	,542	,545	,547	,551	,553	,555	,559	,561	,564

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Sweden	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Turkey	,458	,494	,520	,526	,531	,537	,542	,547	,551	,556	,560
United Kingdom	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
United States	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Zimbabwe	,467	,505	,538	,545	,550	,555	,560	,565	,571	,576	,581

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HDI Ranking Order based on 1995 calculations

Japan	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Norway	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Canada	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
United States	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Sweden	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Australia	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
France	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Netherlands	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
United Kingdom	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Finland	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667	,667
Greece	,608	,622	,633	,635	,637	,639	,641	,642	,643	,645	,646
Hungary	,657	,659	,661	,661	,661	,661	,661	,661	,661	,662	,662
Argentina	,629	,634	,638	,639	,640	,641	,641	,642	,643	,644	,645
Mexico	,548	,568	,585	,588	,591	,594	,596	,599	,601	,603	,605
South Africa	,508	,526	,542	,545	,547	,551	,553	,555	,559	,561	,564
Colombia	,561	,578	,591	,593	,595	,598	,600	,602	,604	,606	,608

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	,593	,607	,617	,619	,621	,623	,625	,627	,629	,631	,632
Turkey	,458	,494	,520	,526	,531	,537	,542	,547	,551	,556	,560
Brazil	,503	,523	,539	,543	,546	,549	,552	,555	,558	,561	,563
Algeria	,258	,311	,362	,373	,383	,392	,401	,410	,419	,428	,437
Egypt	,261	,288	,314	,319	,325	,330	,335	,341	,347	,353	,358
Zimbabwe	,467	,505	,538	,545	,550	,555	,560	,565	,571	,576	,581
India	,273	,301	,329	,335	,339	,345	,350	,355	,361	,366	,371
Ghana	,291	,341	,389	,399	,408	,417	,425	,434	,443	,452	,461
Cameroon	,312	,366	,417	,427	,437	,447	,456	,465	,474	,483	,491
Kenya	,375	,426	,472	,481	,491	,499	,507	,514	,522	,529	,537
Madagascar	,318	,353	,387	,393	,399	,404	,410	,416	,421	,427	,432
Nigeria	,219	,272	,324	,335	,345	,356	,366	,376	,387	,397	,407
Mauritania	,205	,224	,243	,247	,251	,254	,259	,263	,266	,270	,275
Chad	,112	,145	,185	,193	,202	,211	,221	,231	,241	,251	,263

Table app. 4.7.

One-third weight of combined gross primary, secondary and tertiary school enrolment index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,019	,100	,140	,136	,135	,135	,134	,140	,146	,153	,163
Argentina	,148	,211	,270	,264	,256	,247	,239	,263	,287	,310	,333
Australia	,161	,207	,237	,252	,262	,333	,333	,333	,333	,333	,333
Brazil	,033	,037	,041	,050	,055	,053	,060	,082	,104	,104	,104
Cameroon	,066	,079	,094	,096	,095	,094	,092	,093	,095	,097	,100
Canada	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Chad	,023	,024	,031	,034	,034	,030	,032	,033	,034	,036	,038
Colombia	,030	,064	,098	,102	,123	,127	,136	,142	,165	,171	,183
Egypt	,152	,185	,225	,220	,224	,223	,230	,233	,233	,235	,237
Finland	,305	,322	,333	,333	,333	,333	,333	,333	,333	,333	,333
France	,208	,245	,307	,331	,333	,333	,333	,333	,333	,333	,333
Ghana	,114	,110	,102	,102	,108	,114	,119	,125	,131	,136	,140
Greece	,181	,235	,293	,299	,303	,316	,307	,327	,333	,333	,333
Hungary	,189	,200	,227	,236	,254	,293	,307	,324	,333	,333	,333
India	,101	,125	,140	,141	,150	,151	,150	,152	,155	,158	,160
Japan	,269	,267	,282	,281	,280	,317	,322	,333	,333	,333	,333
Kenya	,069	,071	,078	,086	,085	,081	,078	,077	,077	,077	,077
Madagascar	,071	,071	,071	,066	,067	,063	,059	,060	,057	,054	,052
Mauritania	,036	,053	,050	,052	,057	,059	,061	,063	,066	,068	,071
Mexico	,072	,087	,101	,098	,100	,108	,119	,134	,148	,169	,192
Netherlands	,264	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
Nigeria	,071	,111	,087	,090	,097	,104	,108	,110	,117	,123	,127
Norway	,257	,287	,333	,333	,333	,333	,333	,333	,333	,333	,333
Philippines	,180	,189	,229	,232	,238	,244	,251	,246	,263	,263	,263
South Africa	,133	,150	,168	,182	,190	,213	,235	,252	,266	,284	,301
Sweden	,259	,264	,266	,278	,333	,333	,333	,333	,333	,333	,333
Turkey	,021	,036	,093	,100	,116	,131	,138	,141	,151	,164	,174
United Kingdom	,196	,203	,237	,263	,333	,333	,333	,333	,333	,333	,333
United States	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
Zimbabwe	,038	,134	,153	,160	,152	,144	,145	,151	,154	,157	,163

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HDI Ranking Order based on 1995 calculations

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,269	,267	,282	,281	,280	,317	,322	,333	,333	,333	,333
Norway	,257	,287	,333	,333	,333	,333	,333	,333	,333	,333	,333
Canada	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
United States	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
Sweden	,259	,264	,266	,278	,333	,333	,333	,333	,333	,333	,333
Australia	,161	,207	,237	,252	,262	,333	,333	,333	,333	,333	,333
France	,208	,245	,307	,331	,333	,333	,333	,333	,333	,333	,333
Netherlands	,264	,333	,333	,333	,333	,333	,333	,333	,333	,333	,333
United Kingdom	,196	,203	,237	,263	,333	,333	,333	,333	,333	,333	,333
Finland	,305	,322	,333	,333	,333	,333	,333	,333	,333	,333	,333
Greece	,181	,235	,293	,299	,303	,316	,307	,327	,333	,333	,333
Hungary	,189	,200	,227	,236	,254	,293	,307	,324	,333	,333	,333
Argentina	,148	,211	,270	,264	,256	,247	,239	,263	,287	,310	,333
Mexico	,072	,087	,101	,098	,100	,108	,119	,134	,148	,169	,192
South Africa	,133	,150	,168	,182	,190	,213	,235	,252	,266	,284	,301
Colombia	,030	,064	,098	,102	,123	,127	,136	,142	,165	,171	,183
Philippines	,180	,189	,229	,232	,238	,244	,251	,246	,263	,263	,263
Turkey	,021	,036	,093	,100	,116	,131	,138	,141	,151	,164	,174
Brazil	,033	,037	,041	,050	,055	,053	,060	,082	,104	,104	,104
Algeria	,019	,100	,140	,136	,135	,135	,134	,140	,146	,153	,163
Egypt	,152	,185	,225	,220	,224	,223	,230	,233	,233	,235	,237
Zimbabwe	,038	,134	,153	,160	,152	,144	,145	,151	,154	,157	,163
India	,101	,125	,140	,141	,150	,151	,150	,152	,155	,158	,160
Ghana	,114	,110	,102	,102	,108	,114	,119	,125	,131	,136	,140

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Cameroon	,066	,079	,094	,096	,095	,094	,092	,093	,095	,097	,100
Kenya	,069	,071	,078	,086	,085	,081	,078	,077	,077	,077	,077
Madagascar	,071	,071	,071	,066	,067	,063	,059	,060	,057	,054	,052
Nigeria	,071	,111	,087	,090	,097	,104	,108	,110	,117	,123	,127
Mauritania	,036	,053	,050	,052	,057	,059	,061	,063	,066	,068	,071
Chad	,023	,024	,031	,034	,034	,030	,032	,033	,034	,036	,038

Table app. 4.8.

Educational Attainment Index 1980 – 1998 (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	,978
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745

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HDI Ranking Order based on 1995 calculations

Japan	,936	,934	,948	,948	,947	,984	,988	1,000	1,000	1,000	1,000
Norway	,924	,953	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Canada	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United States	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sweden	,926	,931	,933	,945	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Australia	,828	,873	,904	,919	,928	1,000	1,000	1,000	1,000	1,000	1,000

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
France	,874	,912	,973	,997	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Netherlands	,931	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
United Kingdom	,862	,870	,904	,929	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Finland	,971	,989	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Greece	,789	,857	,926	,935	,941	,955	,948	,969	,977	,978	,979
Hungary	,846	,858	,888	,897	,915	,954	,968	,986	,995	,995	,995
Argentina	,777	,845	,908	,903	,896	,888	,880	,905	,930	,954	978
Mexico	,620	,655	,686	,686	,691	,702	,715	,733	,749	,772	,797
South Africa	,641	,676	,710	,726	,738	,764	,788	,807	,825	,845	,865
Colombia	,591	,642	,689	,695	,718	,725	,736	,744	,769	,777	,791
Philippines	,774	,796	,846	,851	,859	,867	,876	,872	,891	,893	,895
Turkey	,479	,530	,613	,626	,648	,668	,680	,687	,703	,720	,734
Brazil	,537	,560	,581	,593	,601	,603	,612	,636	,662	,664	,667
Algeria	,277	,411	,502	,509	,518	,527	,535	,550	,565	,581	,599
Egypt	,414	,473	,539	,539	,548	,553	,565	,574	,580	,587	,595
Zimbabwe	,504	,638	,691	,705	,702	,699	,705	,716	,725	,733	,745
India	,375	,426	,469	,476	,489	,495	,500	,508	,516	,524	,532
Ghana	,405	,450	,492	,501	,516	,530	,545	,559	,574	,588	,601
Cameroon	,378	,445	,511	,523	,532	,540	,548	,558	,569	,579	,591
Kenya	,445	,497	,550	,568	,575	,579	,585	,591	,599	,606	,613
Madagascar	,389	,424	,458	,459	,466	,468	,469	,475	,478	,481	,485
Nigeria	,291	,383	,411	,424	,443	,460	,474	,486	,503	,521	,534
Mauritania	,241	,277	,292	,299	,308	,313	,319	,326	,332	,338	,346
Chad	,135	,169	,215	,227	,235	,241	,252	,264	,275	,287	,301

Table app. 4.9.

GDP per capita (PPP$) (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	3111,2	4082,3	4546,0	4507,0	4669,1	4564,4	4502,8	4697,3	4802,2	4753,1	4792,1
Argentina	6428,6	6534,6	7448,1	8407,6	9585,9	10179,6	10868,6	10736,1	11289,7	11944,0	12013,2
Australia	9523,7	12355,4	16483,8	16807,1	17944,5	19075,6	20162,7	21267,7	21771,1	22082,6	22451,7
Brazil	3916,7	4443,9	5345,6	5441,8	5725,7	5876,6	6218,4	6572,0	6750,6	6828,3	6624,6
Cameroon	986,3	1597,2	1556,2	1494,3	1482,7	1422,8	1371,1	1414,7	1458,1	1471,3	1474,2
Canada	11173,8	14495,9	19672,2	19577,2	20385,2	21140,0	22202,4	23085,3	23295,6	23624,7	23582,1
Chad	383,9	613,5	750,7	817,1	896,4	749,4	817,9	817,0	830,6	832,2	856,4
Colombia	3288,3	3937,9	5628,7	5826,2	3413,4	4515,8	6006,0	6151,4	6131,1	6278,2	6005,6
Egypt	1076,9	1601,8	2343,0	2379,6	2540,8	2617,4	2721,6	2869,6	2981,0	3054,3	3040,5
Finland	8739,3	11696,5	17172,3	16321,0	16353,4	16447,5	17465,7	18764,2	19524,8	20414,1	20847,3
France	9551,1	12005,0	17278,1	17804,1	18707,9	18776,1	19614,3	20492,3	20889,3	21056,5	21175,0
Ghana	1029,2	1026,2	1393,9	1465,2	1545,5	1610,1	1618,5	1684,8	1730,4	1739,7	1734,7
Greece	6576,8	8144,6	11049,2	11614,8	12128,2	12131,7	12576,9	13147,5	13544,2	13789,9	13943,2
Hungary	5159,4	6801,8	9009,0	8181,2	8300,1	8459,1	8913,4	9315,3	9550,3	9914,2	10232,3
India	642,0	892,7	1382,3	1399,2	1512,7	1591,8	1721,0	1877,3	1995,9	2036,0	2076,9
Japan	9029,0	12300,3	19062,2	20282,3	21349,5	21840,9	22356,9	23211,6	24511,4	24519,8	23257,4
Kenya	583,5	662,1	930,3	939,0	945,3	948,3	952,7	996,9	1021,2	1006,2	979,7
Madgasca	643,7	619,8	783,6	740,5	761,0	772,1	765,5	776,6	773,6	767,2	755,8
Mauritan	928,5	1179,2	1273,0	1304,6	1346,8	1412,3	1471,4	1534,5	1578,1	1585,1	1563,0
Mexico	4241,3	4989,5	6224,8	6544,4	6953,3	7117,1	7451,2	7061,2	7357,1	7636,5	7703,9
Ntherlands	9506,4	11796,2	16847,9	17578,8	18601,3	19034,9	19917,8	20812,4	21549,8	21960,5	22176,3
Nigeria	494,4	496,1	701,3	741,8	777,5	811,8	817,0	832,2	812,7	813,1	794,8
Norway	9937,6	13647,6	18389,1	19410,1	20829,2	21748,6	23284,1	24693,8	26114,2	26573,4	26341,9
Philippi	2239,0	2214,9	3082,9	3078,9	3153,8	3216,6	3349,2	3518,8	3668,5	3727,0	3555,3
South Af	5890,1	6443,5	7934,5	7913,2	7923,7	8029,3	8279,4	8581,6	8828,5	8783,3	8487,8
Sweden	9 810,2	12702,1	17537,0	17708,3	18129,1	18027,6	18877,4	20030,5	20423,9	20546,3	20659,4
Turkey	2 327,8	3108,0	4662,6	4748,8	5178,4	5663,2	5340,3	5803,7	6146,0	6460,7	6421,8
U K	8 427,2	11007,3	16144,0	16201,6	16776,3	17448,8	18511,2	19465,5	20005,6	20380,5	20336,3
U S A	12 673,6	16303,7	22537,1	22697,9	24102,4	24969,1	26166,3	27395,4	28513,2	29405,9	29605,1
Zimbabwe	1 436,8	1773,7	2384,5	2507,8	2316,9	2345,7	2498,5	2511,9	2686,0	2713,4	2669,3

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HDI Ranking Order based on 1995 calculations

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	9029,0	12300,3	19062,2	20282,3	21349,5	21840,9	22356,9	23211,6	24511,4	24519,8	23257,4
Norway	9937,6	13647,6	18389,1	19410,0	20829,2	21748,6	23284,1	24693,8	26114,2	26573,4	26341,9
Canada	11173,8	14495,9	19672,2	19577,2	20385,2	21140,0	22202,4	23085,3	23295,6	23624,7	23582,0
Utd States	12673,6	16303,7	22537,0	22697,9	24102,4	24969,1	26166,3	27395,4	28513,1	29405,9	29605,1
Sweden	9810,2	12702,1	17537,0	17708,3	18129,1	18027,6	18877,4	20030,5	20423,9	20546,3	20659,4
Australia	9523,7	12355,4	16483,8	16807,1	17944,5	19075,6	20162,7	21267,7	21771,1	22082,6	22451,7
France	9551,1	12004,9	17278,1	17804,1	18707,9	18776,1	19614,3	20492,3	20889,3	21056,5	21175,0
Netherlands	9506,4	11796,1	16847,9	17578,8	18601,3	19034,9	19917,8	20812,4	21549,8	21960,5	22176,3
U. K.	8427,2	11007,3	16143,9	16201,6	16776,2	17448,8	18511,2	19465,5	20005,6	20380,5	20336,3
Finland	8739,2	11696,5	17172,3	16321,0	16353,4	16447,5	17465,7	18764,3	19524,8	20414,1	20847,3
Greece	6576,8	8144,6	11049,2	11614,8	12128,2	12131,7	12576,9	13147,5	13544,2	13789,9	13943,2
Hungary	5159,4	6801,8	9009,0	8181,2	8300,1	8459,1	8913,4	9315,3	9550,3	9914,2	10232,3
Argentina	6428,6	6534,6	7448,1	8407,6	9585,9	10179,6	10868,6	10736,1	11289,6	11944,0	12013,2
Mexico	4241,1	4989,5	6224,8	6544,4	6953,3	7117,1	7451,2	7061,2	7357,1	7636,5	7703,9
South Afri	5890,1	6443,5	7934,5	7913,2	7923,7	8029,3	8279,4	8581,6	8828,5	8783,3	8487,8
Colombia	3288,3	3937,9	5628,7	5826,2	3413,4	4515,8	6006,0	6151,4	6131,1	6278,2	6005,6
Philippines	2239,0	2214,9	3082,9	3078,9	3153,8	3216,6	3349,2	3518,8	3668,5	3727,0	3555,3
Turkey	2327,7	3108,0	4662,6	4748,8	5178,4	5663,2	5340,3	5803,7	6146,0	6460,7	6421,8
Brazil	3916,7	4443,9	5345,6	5441,8	5725,7	5876,6	6218,4	6572,0	6750,6	6828,3	6624,6
Algeria	3111,2	4082,3	4546,0	4507,0	4669,1	4564,4	4502,8	4697,2	4802,2	4753,1	4792,1
Egypt	1076,9	1601,8	2343,0	2379,6	2540,8	2617,4	2721,6	2869,6	2981,0	3054,3	3040,5
Zimbabwe	1436,8	1773,7	2384,5	2507,8	2316,9	2345,7	2498,5	2511,9	2686,0	2713,3	2669,3
India	642,0	892,7	1382,3	1399,2	1512,7	1591,7	1721,0	1877,3	1995,9	2036,0	2076,8
Ghana	1029,2	1026,2	1393,9	1465,2	1545,5	1610,1	1618,5	1684,8	1730,4	1739,7	1734,7
Cameroon	986,3	1597,1	1556,2	1494,3	1482,7	1422,8	1371,1	1414,7	1458,0	1471,2	1474,2
Kenya	583,5	662,1	930,3	939,0	945,3	948,3	952,7	996,9	1021,2	1006,1	979,6
Madagascar	643,7	619,8	783,6	740,6	761,0	772,1	765,5	776,6	773,6	767,2	755,8
Nigeria	494,4	496,1	701,4	741,8	777,5	811,8	817,0	832,2	812,7	813,1	794,8
Mauritania	928,6	1179,2	1273,0	1304,6	1346,8	1412,3	1471,4	1534,5	1578,1	1585,1	1563,0
Chad	383,9	613,5	750,7	817,1	896,4	749,4	817,9	817,0	830,6	832,2	856,4

Table app. 4.10.

Adjusted real GDP per capita (PPP$) index 1980 – 1998 (in alphabetic /HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548

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HDI Ranking based on 1995 calculations

Japan	,752	,803	,876	,887	,895	,899	,903	,909	,918	,918	,909
Norway	,768	,821	,870	,879	,891	,898	,910	,919	,929	,932	,930
Canada	,787	,831	,882	,881	,887	,894	,902	,908	,910	,912	,912
United States	,808	,850	,904	,905	,915	,921	,929	,937	,944	,949	,950
Sweden	,765	,809	,862	,864	,868	,867	,875	,885	,888	,889	,890
Australia	,760	,804	,852	,855	,866	,876	,886	,895	,898	,901	,904
France	,761	,799	,860	,865	,873	,874	,881	,888	,892	,893	,894
Netherlands	,760	,796	,856	,863	,872	,876	,884	,891	,897	,900	,902
United Kingdom	,740	,785	,849	,849	,855	,862	,871	,880	,884	,887	,887
Finland	,746	,795	,859	,850	,851	,852	,862	,874	,880	,888	,891
Greece	,699	,734	,785	,794	,801	,801	,807	,814	,819	,822	,824
Hungary	,658	,704	,751	,735	,738	,741	,749	,757	,761	,767	,772
Argentina	,695	,698	,719	,740	,762	,772	,783	,780	,789	,798	,799
Mexico	,625	,653	,690	,698	,708	,712	,720	,711	,717	,724	,725
South Africa	,680	,695	,730	,730	,730	,732	,737	,743	,748	,747	,741
Colombia	,583	,613	,673	,678	,589	,636	,684	,688	,687	,691	,684
Philippines	,519	,517	,572	,572	,576	,579	,586	,594	,601	,604	,596

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Turkey	,525	,574	,641	,644	,659	,674	,664	,678	,687	,696	,695
Brazil	,612	,633	,664	,667	,676	,680	,689	,699	,703	,705	,700
Algeria	,574	,619	,637	,636	,642	,638	,635	,643	,646	,644	,646
Egypt	,397	,463	,526	,529	,540	,545	,551	,560	,567	,571	,570
Zimbabwe	,445	,480	,529	,538	,525	,527	,537	,538	,549	,551	,548
India	,310	,365	,438	,440	,453	,462	,475	,489	,500	,503	,506
Ghana	,389	,389	,440	,448	,457	,464	,465	,471	,476	,477	,476
Cameroon	,382	,462	,458	,451	,450	,443	,437	,442	,447	,449	,449
Kenya	,294	,315	,372	,374	,375	,375	,376	,384	,388	,385	,381
Madagascar	,311	,304	,344	,334	,339	,341	,340	,342	,341	,340	,338
Nigeria	,267	,267	,325	,334	,342	,350	,351	,354	,350	,350	,346
Mauritania	,372	,412	,425	,429	,434	,442	,449	,456	,460	,461	,459
Chad	,225	,303	,336	,351	,366	,336	,351	,351	,353	,354	,358

Table 4.11.

Sum of life expectancy, educational attainment, and adjusted real GDP indices (in alphabetic / HDI ranking order)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
Chad	,645	,791	,904	,934	,963	,944	,976	,994	1,015	1,034	1,050

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Mauritania	,974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725

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HDI Ranking Order based on 1995 calculations

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	2,538	2,616	2,722	2,735	2,744	2,788	2,803	2,818	2,839	2,842	2,835
Norway	2,537	2,626	2,729	2,746	2,761	2,772	2,788	2,802	2,815	2,817	2,819
Canada	2,616	2,686	2,752	2,758	2,768	2,778	2,789	2,799	2,805	2,810	2,811
United States	2,619	2,676	2,741	2,745	2,759	2,762	2,772	2,781	2,794	2,801	2,808
Sweden	2,539	2,601	2,671	2,688	2,750	2,752	2,765	2,781	2,787	2,790	2,793
Australia	2,412	2,523	2,622	2,645	2,671	2,754	2,766	2,776	2,783	2,787	2,797
France	2,456	2,553	2,697	2,727	2,743	2,744	2,759	2,768	2,775	2,782	2,782
Netherlands	2,536	2,651	2,720	2,731	2,744	2,749	2,757	2,765	2,771	2,775	2,778
United Kingdom	2,415	2,483	2,597	2,627	2,708	2,715	2,729	2,740	2,748	2,756	2,757
Finland	2,521	2,602	2,693	2,687	2,691	2,700	2,718	2,730	2,742	2,752	2,759
Greece	2,310	2,425	2,577	2,597	2,615	2,628	2,628	2,659	2,674	2,679	2,683
Hungary	2,246	2,304	2,378	2,370	2,386	2,429	2,457	2,489	2,511	2,523	2,527
Argentina	2,215	2,270	2,405	2,424	2,442	2,448	2,454	2,480	2,517	2,554	2,583
Mexico	1,942	2,032	2,132	2,143	2,162	2,181	2,205	2,218	2,245	2,278	2,307
South Africa	1,857	1,947	2,056	2,080	2,100	2,136	2,173	2,205	2,236	2,262	2,245
Colombia	1,856	1,962	2,093	2,075	2,045	2,103	2,164	2,179	2,206	2,222	2,229
Philippines	1,894	1,950	2,091	2,104	2,124	2,141	2,164	2,175	2,208	2,219	2,217
Turkey	1,611	1,750	1,939	1,965	2,011	2,052	2,061	2,088	2,118	2,150	2,166
Brazil	1,777	1,844	1,919	1,938	1,958	1,968	1,990	2,027	2,060	2,068	2,068
Algeria	1,422	1,669	1,845	1,859	1,883	1,896	1,908	1,935	1,961	1,981	2,005
Egypt	1,319	1,506	1,696	1,708	1,738	1,755	1,781	1,807	1,826	1,846	1,857
Zimbabwe	1,447	1,627	1,739	1,758	1,737	1,726	1,731	1,732	1,741	1,740	1,725
India	1,175	1,327	1,487	1,507	1,545	1,566	1,590	1,619	1,644	1,663	1,674
Ghana	1,264	1,342	1,467	1,492	1,522	1,550	1,572	1,600	1,626	1,649	1,661
Cameroon	1,176	1,358	1,456	1,466	1,478	1,479	1,479	1,493	1,508	1,519	1,522
Kenya	1,236	1,329	1,458	1,474	1,480	1,469	1,459	1,457	1,453	1,442	1,428

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Madagascar	1,127	1,189	1,296	1,294	1,312	1,323	1,330	1,345	1,354	1,362	1,368
Nigeria	,905	1,028	1,145	1,173	1,206	1,241	1,267	1,293	1,317	1,346	1,354
Mauritania	,974	1,083	1,145	1,162	1,183	1,203	1,223	1,243	1,260	1,274	1,283
Chad	,645	,791	,904	,934	,963	,944	,976	,994	1,015	1,034	1,050

Table app. 4.12.
Human Development Index 1980 – 1998 (Ranking based on 1995 calculus)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	,846	,872	,907	,912	,915	,929	,934	,939	,946	,947	,945
Norway	,846	,875	,910	,915	,920	,924	,929	,934	,938	,939	,940
Canada	,872	,895	,917	,919	,923	,926	,930	,933	,935	,937	,937
United States	,873	,892	,914	,915	,920	,921	,924	,927	,931	,934	,936
Sweden	,846	,867	,890	,896	,917	,917	,922	,927	,929	,930	,931
Australia	,804	,841	,874	,882	890	,918	,922	,925	,928	,929	,932
France	,819	,851	,899	,909	,914	,915	,920	,923	,925	,927	,927
Netherlands	,845	,884	,907	,910	,915	,916	,919	,922	,924	,925	,926
United Kingdom	,805	,828	,866	,876	,903	,905	,910	,913	,916	,919	,919
Finland	,840	,867	,898	,896	,897	,900	,906	,910	,914	,917	,920
Greece	,770	,808	,859	,866	,872	,876	,876	,886	,891	,893	,894
Hungary	,749	,768	,793	,790	,795	,810	,819	,830	,837	,841	,842
Argentina	,738	,757	,802	,808	,814	,816	,818	,827	,839	,851	,861
Mexico	,647	,677	,711	,714	,721	,727	,735	,739	,748	,759	,769
South Africa	,619	,649	,685	,693	,700	,712	,724	,735	,745	,754	,748
Colombia	,619	,654	,698	,692	,682	,701	,721	,726	,735	,741	,743

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Philippines	,631	,650	,697	,701	,708	,714	,721	,725	,736	,740	,739
Turkey	,537	,583	,646	,655	,670	,684	,687	,696	,706	,717	,722
Brazil	,592	,615	,640	,646	,653	,656	,663	,676	,687	,689	,689
Algeria	,474	,556	,615	,620	,628	,632	,636	,645	,654	,660	,668
Egypt	,440	,502	,565	,569	,579	,585	,594	,602	,609	,615	,619
Zimbabwe	,482	,542	,580	,586	,579	,575	,577	,577	,580	,580	,575
India	,392	,442	,496	,502	,515	,522	,530	,540	,548	,554	,558
Ghana	,421	,447	,489	,497	,507	,517	,524	,533	,542	,550	,554
Cameroon	,392	,453	,485	,489	,493	,493	,493	,498	,503	,506	,507
Kenya	,412	,443	,486	,491	,493	,490	,486	,486	,484	,481	,476
Madagascar	,376	,396	,432	,431	,437	,441	,443	,448	,451	,454	,456
Nigeria	,302	,343	,382	,391	,402	,414	,422	,431	,439	,449	,451
Mauritania	,325	,361	,382	,387	,394	,401	,408	,414	,420	,425	,428
Chad	,215	,264	,301	,311	,321	,315	,325	,331	,338	,345	,350

Appendix 5. Economic and social indicators relevant for comparisons and analysis of convergent and divergent phenomena amongst countries

Table app. 5.1.

Surface area (sq. km.)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	377800	377800	377800	377800	377800	377800	377800	377800	377800	377800	..
Norway	323880	323880	323880	323880	323880	323880	323880	323880	323880	323880	..
Canada	9970610	9970610	9970610	9970610	9970610	9970610	9970610	9970610	9970610	9970610	..
United States	9363520	9363520	9363520	9363520	9363520	9363520	9363520	9363520	9363520	9363520	..
Sweden	449960	449960	449960	449960	449960	449960	449960	449960	449960	449960	..
Australia	7741220	7741220	7741220	7741220	7741220	7741220	7741220	7741220	7741220	7741220	..
France	551500	551500	551500	551500	551500	551500	551500	551500	551500	551500	..
Netherlands	40840	40840	40840	40840	40840	40840	40840	40840	40840	40840	..
United Kingdom	244880	244880	244880	244880	244880	244880	244880	244880	244880	244880	..
Finland	338150	338150	338150	338150	338150	338150	338150	338150	338150	338150	..
Greece	131960	131960	131960	131960	131960	131960	131960	131960	131960	131960	..
Hungary	93030	93030	93030	93030	93030	93030	93030	93030	93030	93030	..
Argentina	2780400	2780400	2780400	2780400	2780400	2780400	2780400	2780400	2780400	2780400	..
Mexico	1958200	1958200	1958200	1958200	1958200	1958200	1958200	1958200	1958200	1958200	..
South Africa	1221040	1221040	1221040	1221040	1221040	1221040	1221040	1221040	1221040	1221040	..
Colombia	1138910	1138910	1138910	1138910	1138910	1138910	1138910	1138910	1138910	1138910	..
Philippines	300000	300000	300000	300000	300000	300000	300000	300000	300000	300000	..
Turkey	774820	774820	774820	774820	774820	774820	774820	774820	774820	774820	..
Brazil	8547400	8547400	8547400	8547400	8547400	8547400	8547400	8547400	8547400	8547400	..
Algeria	2381740	2381740	2381740	2381740	2381740	2381740	2381740	2381740	2381740	2381740	..
Egypt, Arab Rep.	1001450	1001450	1001450	1001450	1001450	1001450	1001450	1001450	1001450	1001450	..
Zimbabwe	390760	390760	390760	390760	390760	390760	390760	390760	390760	390760	..
India	3287590	3287590	3287590	3287590	3287590	3287590	3287590	3287590	3287590	3287590	..
Ghana	238540	238540	238540	238540	238540	238540	238540	238540	238540	238540	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Cameroon	475440	475440	475440	475440	475440	475440	475440	475440	475440	475440	..
Kenya	580370	580370	580370	580370	580370	580370	580370	580370	580370	580370	..
Madagascar	587040	587040	587040	587040	587040	587040	587040	587040	587040	587040	..
Nigeria	923770	923770	923770	923770	923770	923770	923770	923770	923770	923770	..
Mauritania	1025520	1025520	1025520	1025520	1025520	1025520	1025520	1025520	1025520	1025520	..
Chad	1284000	1284000	1284000	1284000	1284000	1284000	1284000	1284000	1284000	1284000	..

Table app. 5.2.

Population, total

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	116782000	120754000	123537000	123921000	124229000	124536000	124961000	125439000	125761000	126091000	126410000
Norway	4091000	4153000	4241500	4261700	4286400	4312000	4336600	4360000	4381000	4404100	4432000
Canada	24593000	25942000	27791000	28171680	28519600	28833410	29111910	29354000	29672000	30011000	30301000
United States	227224992	237924000	249440000	252124000	254995008	257746000	260288992	262764992	265190000	267744000	270299008
Sweden	8310000	8350000	8559000	8617400	8668000	8718600	8780700	8831000	8843000	8849440	8851800
Australia	14692000	15758000	17065100	17284000	17492000	17662000	17847000	18063000	18312000	18532200	18751000
France	53880000	55170000	56735000	57055000	57374000	57667000	57928000	58139000	58375000	58607072	58847000
Netherlands	14150000	14492000	14952000	15070000	15178000	15279100	15381130	15460000	15517000	15607000	15698000
U.K.	56330000	56685000	57561000	57808000	58006000	58191000	58395000	58606000	58802000	59009000	59055000
Finland	4780000	4902000	4986000	5014000	5042000	5066000	5089000	5108000	5125000	5139840	5153000
Greece	9643000	9934000	10161000	10247000	10322000	10378000	10426000	10458000	10475000	10497000	10515000
Hungary	10707000	10579000	10365000	10346000	10324000	10294000	10261000	10230000	10193000	10154900	10114000
Argentina	28094000	30305000	32527000	32959970	33400410	33848460	34304272	34768000	35220000	35672000	36125000
Mexico	67570000	75465000	83226000	84842920	86431880	88004280	89571520	91145000	92717120	94280280	95845880
South Africa	27576000	31307880	35200000	35933112	36690740	37473800	38283220	39120000	39912000	40670328	41402392
Colombia	28447000	31659000	34970000	35662592	36363420	37076740	37806848	38558000	39285000	40042000	40804000
Philippines	48317000	54668000	62598000	64061728	65559680	67092660	68661488	70267000	71899000	73527000	75174000
Turkey	44484000	50286000	56126000	57064000	57931000	58812000	59706000	60614000	61536000	62510000	63451000
Brazil	121672000	135224000	147940000	150337152	152680032	154964912	157188096	159346000	161513168	163689184	165873632

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria	18669170	21879000	25010000	25628000	26254000	26852840	27454320	28058000	28675280	29300400	29921570
Egypt	40875000	46511000	52442000	53616928	54780088	55929592	57063528	58180000	59272000	60348128	61401300
Zimbabwe	7009000	8319000	9747000	10016960	10278560	10531360	10775350	11011000	11242160	11468330	11689010
India	687331968	765147008	849515008	866530432	882300032	898200000	913600000	929358016	945611776	962377664	979672896
Ghana	10740000	12620000	14870000	15314820	15758580	16200450	16639550	17075000	17523210	17984590	18459550
Cameroon	8655000	9970000	11472000	11796560	12129630	12471420	12822140	13182000	13548750	13922420	14303010
Kenya	16632000	19871000	23552000	24304080	25048670	25783620	26506790	27216000	27918100	28611580	29294910
Madagascar	8873000	10123000	11632000	11893360	12201280	12545320	12915040	13300000	13717550	14148200	14592380
Nigeria	71148000	83196000	96203000	98983000	101883520	104891872	108012568	111270000	114495512	117680752	120817264
Mauritania	1551000	1766000	2026000	2083260	2142140	2202690	2264960	2329000	2394350	2461010	2529010
Chad	4477000	5116000	5746000	5891080	6057950	6248250	6463870	6707000	6893710	7085620	7282870

Table app. 5.3.

Labour Force, total

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	57223180	60377000	64239240	64438920	65841368	66004080	66229328	66482672	66653328	68089136	68261400
Norway	1963680	2034970	2120750	2130850	2186064	2199120	2211666	2223600	2234310	2290132	2304640
Canada	12296500	13230420	14729230	14930990	15115388	15281707	15429312	15557620	15726160	15905830	16362540
United States	109068000	116582760	124720000	126062000	130047448	131450464	132747392	134010152	135246896	136549440	137852496
Sweden	4238100	4342000	4621860	4653396	4680720	4708044	4741578	4768740	4775220	4778698	4779972
Australia	6758320	7563840	8532550	8642000	8746000	8831000	8923500	9212130	9339120	9451422	9563010
France	23707200	24274800	24963400	25104200	25244560	25373480	25488320	26162550	26268750	26373182	26481150
Netherlands	5660000	6231560	6877920	6932200	6981880	7028386	7229131	7266200	7292990	7335290	7378060
United Kingdo	27038400	27775650	28780500	28904000	29003000	29095500	29197500	29303000	29401000	29504500	29527500
Finland	2390000	2500020	2592720	2557140	2571420	2583660	2595390	2605080	2613750	2621319	2628030
Greece	3760770	3973600	4166010	4201270	4335240	4358760	4378920	4392360	4399500	4513710	4521450
Hungary	5139360	4972130	4767900	4759160	4749040	4735240	4822670	4808100	4790710	4772803	4854720
Argentina	10675720	11515900	12360260	12524789	12692156	12862415	13378665	13559520	13735800	14268800	14450000
Mexico	22298100	26412750	30793620	31391880	32844114	33441626	34932892	35546552	37086848	37712112	38338352

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	10478880	11896994	13728000	14013913	14309389	14614782	14930456	15256800	15565680	15861429	16146932
Colombia	9387510	11713830	13988000	14265036	14909002	15201463	15500808	16194360	16499700	17218060	17545720
Philippines	18843630	21867200	25039200	25624692	26879468	27507990	28151210	28809470	29478590	30881340	31573080
Turkey	18683280	21622980	24134180	25108160	25489640	26465400	26867700	27882440	28306560	29379700	29821970
Brazil	47452080	56794080	65093600	67651720	68706016	69734208	70734648	73299160	74296056	75297024	76301872
Algeria	4853984	5907330	7002800	7432120	7613660	8055852	8236296	8697980	8889337	9376128	9874118
Egypt, Arab R	14306250	16278850	18354700	18765926	19173032	20134652	20542870	20944800	21930640	22328808	22718480
Zimbabwe	3154050	3826740	4483620	4607802	4728138	4844426	4956661	5065060	5171394	5275432	5376945
India	302426080	329013216	356796288	372608064	379388992	386225984	392848000	399623936	406613056	423446176	431056064
Ghana	5047800	5931400	6988900	7197966	7406533	7614212	7820589	8025250	8235909	8452757	8675988
Cameroon	3635100	4087700	4588800	4718624	4851852	4988568	5128856	5272800	5419500	5708192	5864234
Kenya	7817040	9339370	11304960	11665958	12273848	12633974	12988327	13608000	13959050	14591906	14940404
Madagascar	4347770	4859040	5467040	5589879	5734602	5896301	6070069	6251000	6447249	6649654	6858419
Nigeria	29170680	34110360	38481200	39593200	40753408	41956748	43205028	44508000	45798204	47072300	48326904
Mauritania	744480	830020	911700	937467	985384	1013237	1041882	1071340	1101401	1132065	1163345
Chad	2238500	2506840	2758080	2827719	2907816	2999160	3102658	3219360	3308981	3401098	3495778

Table app. 5.4.

School enrolment primary (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	101	102	100	101	101	102	103	103	102	101	..
Norway	100	97	100	100	100	99	99	99	100	..	..
Canada	99	103	103	103	102	102	101	102	..	..	..
United States	99	99	102	102	102	101	102	102	..	..	..
Sweden	97	98	100	100	104	105	105	106	107	..	..
Australia	112	107	108	108	108	107	106	101	101	101	..
France	111	109	109	107	106	106	106	106	105	..	..
Netherlands	100	99	102	98	97	108	107	107	108	..	..
United Kingdom	103	104	104	103	113	114	114	115	116	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Finland	96	103	99	99	99	100	99	99	99	..	..
Greece	103	104	98	96	95	94	96	94	93	..	..
Hungary	96	99	95	94	94	102	103	103	..	..	..
Argentina	106	105	106	108	..	..	112	113	113	111	..
Mexico	120	118	114	114	114	114	115	115	114	..	..
South Africa	90	..	122	124	127	129	132	133	..	..	..
Colombia	112	102	102	103	108	109	109	109	113	..	..
Philippines	112	107	111	111	110	109	109	114	116	117	..
Turkey	96	113	99	100	100	102	105	107	107	..	..
Brazil	98	100	106	106	109	110	112	118	120	125	..
Algeria	95	94	100	103	104	105	106	107	108	..	..
Egypt, Arab Rep	73	85	94	93	94	97	98	100	101	101	..
Zimbabwe	85	136	116	122	118	117	111	114	113	112	..
India	83	96	97	98	100	101	101	100	100	..	..
Ghana	79	75	75	75	80	81	79	..	..	..	..
Cameroon	98	102	101	96	93	90	89	87	85	..	..
Kenya	115	99	95	93	92	91	87	85	..	..	..
Madagascar	130	..	103	96	93	92	89	92	..	..	..
Nigeria	109	104	91	90	94	98	98	..	..	..	..
Mauritania	37	48	49	54	61	67	71	75	79	..	..
Chad	..	44	54	57	53	50	49	51	58	..	..

Table app. 5.5.

School enrolment, primary, female (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	101,2	101,8	99,9	100,6	101,2	102,2	102,8	102,6	102,0	101,4	..
Norway	99,5	96,8	100,4	100,5	99,8	99,2	98,8	99,1	100,3	..	..
Canada	99,1	102,1	102,0	101,8	101,2	100,5	100,3	100,9	..	..	..
United States	99,1	98,9	101,4	100,9	100,5	100,5	101,7	101,1	..	..	..
Sweden	96,6	98,5	99,9	100,5	105,1	105,3	105,8	106,6	107,3	..	..
Australia	111,4	106,2	107,4	107,7	107,6	107,0	106,1	100,8	100,9	100,8	..
France	110,0	107,5	107,6	106,2	104,8	104,9	105,0	105,2	104,4	..	..
Netherlands	101,2	100,2	104,0	99,0	98,9	106,6	106,4	106,3	106,7	..	..
United Kingdom	103,2	104,5	105,5	104,4	114,4	114,7	115,1	116,0	116,5	..	..
Finland	95,8	102,5	98,5	98,9	99,2	99,5	99,3	99,3	98,6	..	..
Greece	102,8	104,4	97,5	96,1	94,2	93,8	96,1	93,5	93,0	..	..
Hungary	96,7	99,3	94,5	93,7	94,1	101,6	102,3	102,4	..	..	..
Argentina	106,0	105,3	..	..	..	..	..	..	112,7	110,7	..
Mexico	119,1	116,2	112,4	112,6	112,8	112,6	113,3	113,2	113,1	..	..
South Africa	..	..	120,6	123,1	125,5	127,8	128,7	130,8	..	..	..
Colombia	113,6	103,6	109,4	104,0	110,5	109,8	108,6	108,4	112,2	..	..
Philippines	109,9	106,9	109,3	..	..	109,7	..	113,1	..	..	..
Turkey	90,4	109,9	96,0	97,1	97,4	98,9	101,7	103,4	103,7	..	..
Brazil	95,6	..	..	..	..	..	..	..	..	..	..
Algeria	80,7	83,5	91,6	94,7	96,1	98,0	98,8	100,4	101,6	..	..
Egypt, Arab Rep.	61,0	76,2	85,8	85,1	86,6	88,9	90,9	93,1	93,7	94,3	..
Zimbabwe	..	131,3	114,8	119,0	117,2	113,3	109,4	112,6	111,3	..	..
India	67,1	80,3	83,5	84,7	88,3	90,0	89,6	89,7	89,7	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	70,7	..	68,4	68,9	73,8	74,9	73,7	..	..	..	..
Cameroon	89,5	93,4	93,4	91,9	87,9	85,5	83,7	..	..	..	..
Kenya	110,1	96,1	93,3	91,5	90,5	89,8	86,6	84,9	..	..	..
Madagascar	129,0	..	103,1	92,9	92,6	91,6	92,0	91,4	..	..	..
Nigeria	95,0	91,8	79,0	78,8	83,1	86,1	86,6	..	..	..	..
Mauritania	25,8	38,7	41,3	46,3	54,2	60,5	64,4	69,0	74,5	..	..
Chad	..	24,7	33,6	36,1	33,9	32,4	31,8	33,8	39,3	..	..

Table app. 5.6.

School enrolment, primary, male (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	101	102	100	100	101	102	103	102	102	101	..
Norway	100	97	101	100	99	99	99	99	100	..	..
Canada	99	104	104	104	103	103	102	103	..	..	..
United States	100	99	103	103	102	101	103	103	..	..	..
Sweden	97	97	100	100	104	104	104	105	106	..	..
Australia	113	107	108	108	108	107	107	101	101	101	..
France	112	110	109	108	107	107	107	107	106	..	..
Netherlands	99	98	101	97	96	109	108	108	109	..	..
United Kingdom	103	104	103	102	113	113	113	114	115	..	..
Finland	97	103	99	99	100	100	100	99	99	..	..
Greece	103	104	98	97	95	95	96	94	93	..	..
Hungary	96	99	95	94	94	103	104	104	..	..	..
Argentina	106	105	..	..	..	..	..	..	114	111	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	122	119	115	116	116	116	116	116	116	..	..
South Africa	..	..	123	126	128	131	135	135	..	..	..
Colombia	110	100	95	102	105	108	110	109	113	..	..
Philippines	114	108	113	..	..	109	..	115	..	..	..
Turkey	102	117	102	103	103	104	107	110	111	..	..
Brazil	100	..	..	..	..	..	..	..	..	..	..
Algeria	108	103	108	111	111	112	112	113	113	..	..
Egypt, Arab Rep.	84	94	101	101	101	104	104	106	107	108	..
Zimbabwe	..	141	117	124	120	121	113	116	115	..	..
India	98	111	110	110	111	112	111	110	109	..	..
Ghana	88	..	82	81	85	86	84	..	..	..	..
Cameroon	107	111	109	100	98	95	93	..	..	..	..
Kenya	120	102	97	95	93	91	87	85	..	..	..
Madagascar	131	..	103	98	94	91	85	92	..	..	..
Nigeria	123	115	104	101	105	110	109	..	..	..	..
Mauritania	48	58	56	61	67	74	78	81	84	..	..
Chad	..	63	75	77	72	68	67	69	76	..	..

Table app. 5.7.

School enrolment, secondary, female (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	94	97	98	97	97	100	100	104	..	..	..
Norway	96	100	105	106	111	123	113	113	116	..	..
Canada	89	..	101	102	103	104	104	105	..	..	..
United States	92	..	94	95	97	98	98	97	..	..	..
Sweden	93	93	92	94	129	136	141	148	153	..	..
Australia	72	81	83	84	85	133	131	142	148	155	..
France	92	94	101	104	104	110	111	111	111	..	..
Netherlands	90	115	115	117	120	135	136	134	129	..	..
United Kingdom	85	86	88	92	136	140	145	144	139	..	..
Finland	105	114	127	133	128	128	124	125	125	..	..
Greece	77	89	92	95	93	92	95	96	96	..	..
Hungary	67	72	79	81	86	96	97	99	..	..	..
Argentina	60	..	..	..	..	..	..	..	81	77	..
Mexico	46	..	54	53	54	56	59	61	64	..	..
South Africa	..	..	80	84	87	92	97	103	..	..	..
Colombia	40	..	53	55	61	63	65	66	69	..	..
Philippines	69	65	73	74	76	77	79	78	78	..	..
Turkey	24	30	37	38	41	43	45	46	48	..	..
Brazil	36	..	..	..	..	..	..	..	..	..	..
Algeria	26	44	54	55	55	57	58	59	62	..	..
Egypt, Arab Rep.	39	50	68	67	68	70	71	71	70	73	..
Zimbabwe	7	34	46	46	42	39	40	43	45	..	..
India	20	26	33	34	37	38	38	38	39	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	31	30	28	28	..	..	..	..	..	..	..
Cameroon	13	18	23	24	23	23	22	..	..	..	..
Kenya	16	16	21	24	24	23	23	22	..	..	..
Madagascar	..	..	18	16	16	16	16	16	..	..	..
Nigeria	12	28	21	22	26	29	30	..	..	..	..
Mauritania	4	8	9	9	10	11	11	11	..	..	..
Chad	..	2	3	3	3	3	3	4	4	..	..

Table app. 5.8.

School enrolment, secondary, male (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	92	94	96	96	95	98	99	103	..	..	..
Norway	92	95	101	105	114	126	119	119	121	..	..
Canada	87	..	101	102	104	105	105	105	..	..	..
United States	91	..	93	94	98	99	97	98	..	..	..
Sweden	83	89	88	90	113	120	123	126	128	..	..
Australia	70	79	80	82	83	132	131	143	149	150	..
France	77	86	96	99	100	110	112	112	112	..	..
Netherlands	95	120	124	125	126	145	143	141	134	..	..
United Kingdom	82	82	83	86	119	121	123	123	120	..	..
Finland	94	98	106	109	108	109	108	107	110	..	..
Greece	85	92	94	96	93	97	95	95	95	..	..
Hungary	72	72	78	80	83	93	94	96	..	..	..
Argentina	52	..	..	..	..	..	..	..	73	70	..
Mexico	51	..	53	54	54	55	58	61	64	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	..	..	69	72	75	79	85	88	..	..	..
Colombia	39	..	47	46	51	53	55	57	65	..	..
Philippines	60	64	74	75	77	77	78	77	77	..	..
Turkey	44	52	58	59	62	63	67	67	68	..	..
Brazil	31	..	..	..	..	..	..	..	..	..	..
Algeria	40	59	67	66	66	66	66	66	65	..	..
Egypt, Arab Rep	61	72	84	82	82	82	82	82	80	83	..
Zimbabwe	9	50	53	59	54	50	50	52	52	..	..
India	39	48	55	55	59	59	59	59	59	..	..
Ghana	50	49	45	44	..	..	..	..	..	..	..
Cameroon	24	28	33	34	34	33	32	..	..	..	..
Kenya	23	26	28	32	31	29	27	26	..	..	..
Madagascar	..	..	18	17	17	16	16	16	..	..	..
Nigeria	24	40	29	30	32	34	36	..	..	..	..
Mauritania	18	22	19	19	19	19	20	21	..	..	..
Chad	..	11	13	15	16	13	15	15	15	..	..

Table app. 5.9.

School enrolment, secondary (% gross)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	93	95	97	96	96	99	100	103	..	..	..
Norway	94	97	103	105	113	125	116	116	119	..	..
Canada	88	..	101	102	104	105	104	105	..	..	..
United States	91	..	93	95	97	99	97	97	..	..	..
Sweden	88	91	90	92	121	127	132	137	140	..	..
Australia	71	80	82	83	84	132	131	143	148	153	..
France	85	90	99	101	102	110	111	111	111	..	..
Netherlands	93	117	120	121	123	140	139	137	132	..	..
United Kingdom	84	84	86	89	127	130	134	133	129	..	..
Finland	100	106	116	121	118	118	116	116	118	..	..
Greece	81	91	93	96	93	95	95	95	95	..	..
Hungary	70	72	79	80	84	94	96	98	..	..	..
Argentina	56	..	71	72	..	..	69	73	77	73	..
Mexico	49	..	53	53	54	56	58	61	64	..	..
South Africa	..	..	74	78	81	86	91	95	..	..	..
Colombia	39	..	50	50	56	58	60	61	67	..	..
Philippines	64	64	73	75	76	77	78	78	77	78	..
Turkey	35	42	47	49	52	53	56	57	58	..	..
Brazil	34	..	38	41	43	43	45	..	56	62	..
Algeria	33	51	61	61	61	62	62	63	63	..	..
Egypt, Arab Rep.	51	61	76	75	75	76	77	77	75	78	..
Zimbabwe	8	42	50	52	48	45	45	47	49	50	..
India	30	38	44	45	49	49	49	49	49	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	41	40	36	36	..	..	..	..	..	..	..
Cameroon	18	23	28	29	28	28	27	..	..	..	..
Kenya	20	21	24	28	27	26	25	24	..	..	..
Madagascar	..	..	18	16	17	16	16	16	..	..	..
Nigeria	18	34	25	26	29	31	33	..	..	..	..
Mauritania	11	15	14	14	15	15	16	16	..	..	..
Chad	..	6	8	9	10	8	9	9	10	..	..

Table app. 5.10.

Pupil-teacher ratio, primary

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	25	24	21	20	..	19	19	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..	..
Canada	..	17	15	15	16	16	..	16	..	..	..
United States	..	14	..	..	16	16	16	16	..	..	..
Sweden	..	..	6	6	10	10	11	..	1	..	..
Australia	..	..	..	17	17	17	..	..	18	..	..
France	24	..	..	12	19	19	19	..	..	..	..
Netherlands	23	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..
Finland	14	..	..	..	..	..	..	17	18	..	..
Greece	24	23	19	18	..	..	..	15	14	..	..
Hungary	15	15	12	12	12	10	11	..	..	..	..
Argentina	..	..	..	..	..	..	18	..	16	17	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	39	34	31	30	30	29	29	28	28	..	..
South Africa	..	..	..	27	..	..	37	36	..	..	..
Colombia	31	30	30	30	28	28	26	25	25	..	..
Philippines	32	31	..	33	34	33	..	..	35	..	..
Turkey	27	31	30	29	28	27	28	..	..	..	..
Brazil	26	24	23	23	23	23	23	..	..	..	..
Algeria	35	28	28	28	27	27	27	27	27	..	..
Egypt, Arab Rep.	..	32	..	..	..	..	..	..	23	..	..
Zimbabwe	44	40	36	39	38	40	42	39	39	39	..
India	55	58	..	..	63	64	64	..	..	..	..
Ghana	30	..	29	28	..	..	..	..	..	..	..
Cameroon	52	51	51	..	..	..	..	..	..	..	..
Kenya	38	34	31	32	31	31	31	30	..	..	..
Madagascar	38	..	40	38	38	40	38	37	..	..	..
Nigeria	..	42	41	39	39	37	37	..	..	..	..
Mauritania	41	51	45	47	51	53	52	..	50	..	..
Chad	..	71	66	62	..	61	62	63	67	..	..

Table app. 5.11

Public spending on education, total (% of GNP, UNESCO)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	5,8	5,0	..	..	3,6	3,8	3,6	..	..	..	..
Norway	6,5	5,9	7,3	7,4	7,7	8,2	8,3	8,1	7,4	..	..
Canada	6,9	6,5	6,8	7,3	7,5	7,2	6,9	..	..	..	..
U S A	6,7	4,9	5,3	..	5,4	5,3	5,4	..	..	..	..
Sweden	9,0	7,7	7,7	8,0	8,4	..	8,0	8,1	8,3	..	..
Australia	5,5	5,6	5,3	5,5	5,9	5,6	5,4	5,4	..	..	..
France	5,0	5,8	5,4	5,8	5,7	5,8	5,9	6,1	6,0	..	..
Netherlands	7,7	6,4	5,9	5,8	..	5,4	5,2	5,2	5,1	..	..
U K	5,6	4,9	4,9	5,2	5,4	5,5	5,4	5,3	..	..	..
Finland	5,3	5,4	5,7	6,8	7,2	8,3	7,6	7,5	7,5	..	..
Greece	..	2,4	2,5	2,3	..	2,8	2,4	2,9	3,1	..	..
Hungary	4,7	5,5	6,1	6,4	6,8	6,7	6,6	5,3	4,6	..	..
Argentina	2,7	1,5	1,1	3,4	3,1	3,3	3,8	3,3	3,5	..	..
Mexico	4,7	3,9	3,7	3,9	4,4	5,1	4,7	4,9	..	..	..
South Africa	..	..	6,5	..	7,0	7,1	7,3	6,8	7,9	..	..
Colombia	1,9	2,9	2,5	2,5	3,5	2,9	3,4	3,7	4,1	..	..
Philippines	1,7	1,4	2,9	3,0	2,3	2,4	..	3,0	3,2	3,4	..
Turkey	2,2	1,8	2,1	2,3	2,8	3,3	3,4	2,2	..	..	..
Brazil	3,6	3,8	..	..	..	..	1,7	5,1	..	..	..
Algeria	7,8	8,6	5,5	5,3	6,1	6,8	6,0	5,8	5,1	..	..
Egypt	..	6,3	3,8	4,7	4,4	4,7	4,7	4,8	..	..	..
Zimbabwe	5,3	7,0	8,0	6,8	7,4	7,1	..	..	..	..	..
India	3,0	3,5	3,9	3,7	3,7	3,6	3,5	3,3	3,2	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	3,1	2,6	3,3	..	4,5	4,3	4,3	4,8	4,2	..	..
Cameroon	3,8	2,9	3,4	2,9	..	..	..	..	..	..	..
Kenya	6,8	6,4	7,1	6,7	6,7	6,5	7,1	6,7	6,5	..	..
Madagascar	4,4	2,9	2,2	2,7	2,3	2,2	..	..	..	1,9	..
Nigeria	..	1,2	1,0	0,5	0,5	0,9	0,9	0,7	..	..	..
Mauritania	..	..	..	4,9	4,9	5,1	5,2	5,1	..	..	..
Chad	..	..	..	1,7	..	..	1,7	..	..	..	..

Table app. 5.12.

Illiteracy rate, adult total (% of people aged 15 and above)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	..	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..	..
Canada	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..	..
Australia	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..
Finland	..	..	..	..	..	..	..	..	..	..	..
Greece	9	7	5	5	4	4	4	4	4	3	3
Hungary	1	1	1	1	1	1	1	1	1	1	1
Argentina	6	5	4	4	4	4	4	4	4	3	3
Mexico	18	15	12	12	11	11	11	10	10	10	9

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	24	21	19	18	18	17	17	17	16	16	15
Colombia	16	13	11	11	11	10	10	10	9	9	9
Philippines	11	9	8	7	7	7	6	6	6	5	5
Turkey	31	26	22	21	20	20	19	18	17	17	16
Brazil	25	22	19	19	18	18	17	17	16	16	16
Algeria	61	53	46	44	43	41	40	39	37	36	35
Egypt, Arab Rep.	61	57	53	52	51	51	50	49	48	47	46
Zimbabwe	30	24	19	18	18	17	16	15	14	14	13
India	59	55	51	50	49	48	48	47	46	45	44
Ghana	56	49	42	40	39	38	36	35	34	32	31
Cameroon	53	45	37	36	34	33	32	30	29	28	26
Kenya	44	36	29	28	26	25	24	23	22	21	20
Madagascar	52	47	42	41	40	39	38	38	37	36	35
Nigeria	67	59	51	50	48	47	45	44	42	40	39
Mauritania	69	66	64	63	62	62	61	61	60	60	59
Chad	83	78	72	71	70	68	67	65	64	62	61

Table app. 5.13.

Mortality rate, infant (per 1,000 live births)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	8	6	5	4	5	4	4	4	4	4	4
Norway	8	9	7	6	6	5	5	4	4	4	4
Canada	10	8	7	6	6	6	6	6	5	5	5
United States	13	11	9	9	9	8	8	8	7	7	7
Sweden	7	7	6	6	5	5	4	4	4	4	4
Australia	11	10	8	7	7	6	6	6	6	5	5
France	10	8	7	7	7	6	6	5	5	5	5
Netherlands	9	8	7	7	6	6	6	6	6	5	5
United Kingdom	12	9	8	7	7	6	6	6	6	6	6
Finland	8	6	6	6	5	4	5	4	4	4	4
Greece	18	14	10	9	8	9	8	8	7	7	6
Hungary	23	20	15	16	14	13	12	11	11	10	10
Argentina	35	..	25	..	24	23	..	22	21	19	19
Mexico	51	..	36	..	34	..	..	..	..	31	30
South Africa	67	..	55	..	53	..	..	..	..	48	51
Colombia	41	..	30	..	28	..	..	..	..	24	23
Philippines	52	46	37	..	36	..	..	35	..	33	32
Turkey	109	..	58	55	52	49	47	44	40	40	38
Brazil	70	..	48	..	43	..	39	..	..	34	33
Algeria	98	..	46	..	42	..	..	..	37	35	35
Egypt, Arab Rep.	120	..	69	..	63	..	..	..	..	51	49
Zimbabwe	80	..	52	..	53	..	..	..	..	69	73
India	115	97	80	80	79	74	74	74	72	71	70

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	94	..	77	..	74	..	..	..	..	66	65
Cameroon	103	..	81	..	83	..	..	..	..	77	77
Kenya	75	..	62	..	61	..	..	74	..	74	76
Madagascar	119	117	103	..	98	..	..	96	..	94	92
Nigeria	99	..	85	..	84	..	..	..	..	77	76
Mauritania	120	..	105	..	101	..	..	..	..	92	90
Chad	123	118	118	..	110	..	..	103	..	100	99

Table app. 5.14.

Life expectancy at birth, total (years)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	76	78	79	79	79	79	80	80	80	80	81
Norway	76	..	77	77	77	..	78	..	78	78	78
Canada	75	76	77	78	78	..	..	..	..	79	79
United States	74	75	75	75	76	75	76	76	76	76	77
Sweden	76	..	78	..	78	78	..	79	79	79	79
Australia	74	..	77	..	78	..	..	78	78	78	79
France	74	..	77	77	77	77	78	78	78	78	78
Netherlands	76	..	77	..	77	..	77	77	77	78	78
United Kingdom	74	..	76	76	76	76	76	..	77	77	77
Finland	73	..	75	75	75	..	76	76	77	77	77
Greece	74	75	77	77	77	77	77	..	78	78	78
Hungary	70	70	69	69	69	69	69	70	70	71	71
Argentina	70	..	72	..	72	..	..	..	..	73	73

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	67	..	70	..	71	..	..	..	..	72	72
South Africa	57	..	62	..	63	..	..	..	..	65	63
Colombia	66	..	69	..	69	..	..	..	..	70	70
Philippines	61	..	65	..	66	..	..	..	..	68	69
Turkey	61	..	66	..	67	..	..	..	..	69	69
Brazil	63	..	65	..	66	..	..	..	..	67	67
Algeria	59	..	67	..	68	..	..	..	..	70	71
Egypt, Arab Rep.	56	..	63	..	64	..	..	..	..	66	67
Zimbabwe	55	..	56	..	56	..	..	..	..	52	51
India	54	..	60	..	61	..	..	..	..	63	63
Ghana	53	..	57	..	58	..	..	..	..	60	60
Cameroon	50	..	54	..	55	..	..	..	..	54	54
Kenya	55	..	57	..	57	..	..	..	..	52	51
Madagascar	51	..	55	..	55	..	..	..	..	57	58
Nigeria	46	..	49	..	50	..	..	..	..	54	53
Mauritania	47	..	51	..	51	..	..	..	..	53	54
Chad	42	..	46	..	47	..	..	..	..	49	48

Table app. 5.15.

Health expenditure, total (% of GDP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	..	..	6,1	6,1	6,3	6,6	6,9	7,2	7,1	7,1	..
Norway	..	..	7,8	8,1	8,2	8,1	8,0	8,0	7,8	7,5	..
Canada	..	..	9,2	9,9	10,2	10,1	9,8	9,4	9,3	9,2	..
United States	..	..	12,6	13,4	13,9	14,2	14,1	14,1	14,1	13,9	..
Sweden	..	..	8,8	8,7	8,8	8,9	8,7	8,5	8,6	8,6	..
Australia	..	..	8,2	8,5	8,6	8,4	8,5	8,4	8,6	8,4	..
France	..	..	8,9	9,1	9,4	9,8	9,7	9,8	9,8	9,6	..
Netherlands	..	..	8,3	8,6	8,8	9,0	8,8	8,8	8,7	8,5	..
United Kingdom	..	..	6,0	6,5	6,9	6,9	6,9	6,9	6,9	6,8	..
Finland	..	..	8,0	9,1	9,3	8,5	7,9	7,7	7,8	7,4	..
Greece	..	..	6,3	6,4	6,8	7,3	7,6	7,8	8,7	8,9	..
Hungary	..	..	..	..	7,2	6,8	7,3	6,9	6,6	6,4	..
Argentina	..	..	10,5	10,6	10,6	11,5	10,6	10,8	9,5	9,8	9,6
Mexico	..	..	3,6	4,2	4,4	4,5	4,7	4,9	4,6	4,7	..
South Africa	..	..	..	..	..	7,1	..	..	..	..	..
Colombia	..	..	4,8	4,5	4,8	4,1	5,9	6,8	8,0	9,4	..
Philippines	..	..	2,9	2,7	2,8	2,9	3,0	3,2	3,3	3,4	3,7
Turkey	..	..	4,4	4,8	5,1	4,9	5,0	4,7	5,4	5,8	..
Brazil	..	..	7,0	5,8	5,6	5,9	6,8	6,2	6,6	7,3	..
Algeria	..	..	4,2	..	..	4,6	..	4,6	..	..	..
Egypt, Arab Rep.	..	..	4,3	..	..	..	..	3,7	..	3,8	..
Zimbabwe	..	..	..	4,7	..	..	..	..	..	..	6,4
India	..	..	5,5	5,2	..	..	..	..	..	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	..	..	4,0	3,8	4,2	3,9	3,9	3,9	3,8	3,0	4,7
Cameroon	..	..	1,7	1,9	2,2	2,6	2,7	3,9	3,6	5,0	..
Kenya	..	..	..	..	1,0	..	..	..	..	..	..
Madagascar	..	..	..	..	..	..	..	..	..	2,1	..
Nigeria	..	..	..	..	..	..	1,0	..	..	0,7	..
Mauritania	..	..	..	5,2	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	3,0	..	3,1	..

Table app. 5.16.

Health expenditure, public (% of GDP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	..	..	4,7	4,8	4,9	5,2	5,4	5,6	5,7	5,7	5,9
Norway	..	..	6,5	6,8	7,0	6,7	6,6	6,7	6,5	6,2	..
Canada	..	..	6,8	7,4	7,6	7,3	7,0	6,7	6,6	6,4	6,4
United States	..	..	5,1	5,6	5,9	6,1	6,3	6,5	6,5	6,5	..
Sweden	..	..	7,9	7,6	7,7	7,7	7,4	7,1	7,2	7,2	7,2
Australia	..	..	5,5	5,7	5,7	5,7	5,6	5,7	5,7	5,6	5,5
France	..	..	6,6	6,8	7,0	7,3	7,2	7,3	7,3	7,1	..
Netherlands	..	..	6,1	6,4	6,8	7,0	6,8	6,7	6,2	6,2	6,1
United Kingdom	..	..	5,1	5,4	5,9	5,8	5,8	5,8	5,8	5,8	5,9
Finland	..	..	6,5	7,4	7,4	6,5	6,0	5,8	5,9	5,7	5,7
Greece	..	..	3,5	3,4	3,4	3,8	4,1	4,3	5,2	5,3	..
Hungary	..	..	..	..	6,6	4,8	5,2	4,8	4,5	4,4	4,1
Argentina	..	..	4,2	4,2	4,2	4,6	4,7	4,8	4,0	4,2	4,0
Mexico	..	..	2,1	2,4	2,6	2,6	2,7	2,8	2,7	2,8	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	..	..	3,1	..	..	3,2	..	..	..	..	..
Colombia	..	..	1,0	1,0	1,0	1,0	2,9	3,5	4,1	4,9	..
Philippines	..	..	1,5	1,4	1,3	1,4	1,5	1,5	1,6	1,7	1,7
Turkey	..	..	2,2	2,4	2,5	2,5	2,5	2,4	2,7	2,9	..
Brazil	..	..	3,0	1,9	1,6	2,0	2,8	2,2	2,6	3,4	..
Algeria	..	..	3,0	..	..	3,3	..	3,3	..	..	..
Egypt, Arab Rep.	..	..	1,8	..	..	..	..	1,6	..	1,8	..
Zimbabwe	..	..	..	1,7	1,6	..	..	1,9	..	..	3,1
India	..	..	1,2	1,1	..	0,7	0,7	0,6	..	..	..
Ghana	..	..	1,3	1,2	1,4	1,5	1,5	1,5	1,5	1,4	1,8
Cameroon	..	..	0,9	0,9	0,9	0,8	0,7	0,7	0,9	1,0	1,0
Kenya	..	..	1,7	1,7	..	2,2	..	..	..	..	..
Madagascar	..	..	..	..	1,4	..	1,0	1,2	1,4	1,1	..
Nigeria	..	..	1,0	0,9	1,0	0,6	0,2	..	..	0,2	..
Mauritania	..	..	..	1,1	1,1	1,2	1,5	1,8	..	..	..
Chad	..	..	..	..	..	2,5	1,4	2,4	2,5	2,4	..

Table app. 5.17.

Radios (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	678	787	898	899	900	906	909	912	953	955	..
Norway	661	778	792	795	796	795	796	803	913	915	..
Canada	721	896	1051	1073	1060	1043	1053	1054	1078	1077	..
United States	1996	2097	2118	2118	2116	2119	2122	2125	2147	2146	..
Sweden	842	868	873	876	875	878	881	878	905	932	..
Australia	1089	1235	1266	1273	1281	1287	1288	1289	1365	1376	..
France	741	868	887	890	891	892	894	894	942	937	..
Netherlands	650	828	906	906	906	908	910	935	962	978	..
United Kingdom	950	1007	1390	1401	1405	1409	1421	1421	1429	1436	..
Finland	837	985	993	992	993	994	1010	1314	1383	1496	..
Greece	343	403	418	419	422	424	427	431	477	477	..
Hungary	499	581	605	606	608	611	618	634	685	689	..
Argentina	427	597	670	672	672	673	6745	676	677	681	..
Mexico	134	201	260	250	251	252	254	256	316	325	..
South Africa	271	298	303	309	304	314	315	318	316	317	..
Colombia	124	135	173	457	557	566	574	575	578	581	..
Philippines	43	137	142	142	144	144	145	146	157	159	..
Turkey	112	138	159	160	161	160	161	160	172	180	..
Brazil	313	363	394	398	398	402	407	408	443	444	..
Algeria	197	219	232	233	234	235	235	235	236	241	..
Egypt, Arab Rep	137	249	319	322	325	328	329	330	330	324	..
Zimbabwe	34	60	84	85	85	86	86	91	92	93	..
India	38	66	79	93	97	100	104	120	121	121	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	158	195	228	228	229	229	229	234	238	238	..
Cameroon	88	120	143	146	146	146	148	150	162	163	..
Kenya	39	80	87	86	87	82	82	85	100	104	..
Madagascar	184	195	190	191	193	194	198	192	192	192	..
Nigeria	97	175	194	195	200	204	209	213	218	223	..
Mauritania	97	142	145	146	147	148	148	149	149	151	..
Chad	168	229	240	242	243	241	245	248	249	242	..

Table app. 5.18.

Daily newspapers (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	567	566	587	585	577	578	576	574	578	..	..
Norway	462	510	610	592	607	608	605	592	588	..	..
Canada	221	215	209	206	203	192	189	166	159	..	..
United States	274	264	250	241	236	232	228	221	215	..	..
Sweden	528	526	526	515	510	485	473	464	445	..	..
Australia	320	273	302	278	263	266	299	296	293	..	..
France	192	193	208	205	174	158	236	210	218	..	..
Netherlands	326	310	301	302	303	309	334	307	306	..	..
United Kingdom	417	397	388	384	381	336	349	343	329	..	..
Finland	505	543	558	552	511	490	473	464	455	..	..
Greece	120	122	123	127	136	145	156	153	..	..	..
Hungary	247	257	237	223	213	206	182	198	186	..	..
Argentina	142	130	123	137	143	77	137	124	123	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	123	132	135	112	118	116	116	102	97	..	..
South Africa	51	46	38	36	34	34	35	33	32	..	..
Colombia	49	57	57	57	58	49	41	39	46	..	..
Philippines	41	40	54	52	49	66	62	60	79	..	..
Turkey	56	60	71	74	78	80	84	92	111	..	..
Brazil	45	48	43	55	56	41	46	41	40	..	..
Algeria	24	26	51	50	48	47	46	51	38	..	..
Egypt, Arab Rep	42	51	46	45	44	45	47	41	40	..	..
Zimbabwe	19	24	21	20	19	19	18	17	19	..	..
India	21	26	..	..	..	..	..	..	..	..	..
Ghana	47	40	13	15	18	18	19	18	14	..	..
Cameroon	8	7	7	5	4	4	4	6	7	..	..
Kenya	13	14	14	14	14	14	14	10	9	..	..
Madagascar	6	7	4	4	4	4	4	4	5	..	..
Nigeria	15	17	18	18	18	18	18	18	24	..	..
Mauritania	..	..	0	0	0	0	0	0	0	..	..
Chad	0	0	0	0	0	0	0	0	0	..	..

Table app. 5.19.

Television sets (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	539	580	611	624	635	649	671	681	699	707	..
Norway	350	395	422	424	425	424	553	562	571	579	..
Canada	432	541	628	632	631	636	651	703	710	715	..
United States	562	650	772	764	752	779	810	825	836	847	..
Sweden	461	464	466	468	468	469	472	476	532	531	..
Australia	381	443	522	544	566	594	622	697	666	639	..
France	370	434	539	556	567	579	589	597	600	601	..
Netherlands	399	462	482	484	488	491	500	494	532	543	..
United Kingdom	401	433	433	432	433	447	603	612	635	642	645
Finland	414	469	494	497	500	502	510	512	526	534	640
Greece	171	191	194	195	203	212	443	443	458	466	..
Hungary	310	402	417	419	421	424	424	427	431	437	..
Argentina	183	215	249	259	263	266	268	276	284	289	..
Mexico	57	114	150	145	146	184	187	213	231	254	261
South Africa	68	89	97	100	98	101	121	127	123	125	..
Colombia	85	92	118	116	126	205	207	208	126	217	..
Philippines	22	27	49	64	78	101	103	105	107	108	..
Turkey	78	158	230	253	256	267	227	240	309	286	..
Brazil	124	185	213	214	214	220	225	250	289	316	..
Algeria	52	69	73	74	76	78	78	88	103	105	..
Egypt, Arab Rep	32	80	107	112	113	116	116	117	124	122	..
Zimbabwe	10	21	26	27	27	27	27	29	29	30	..
India	3	5	32	35	40	50	55	61	64	69	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	5	12	16	20	40	59	89	94	93	94	99
Cameroon	0	0	23	24	24	24	24	24	29	32	..
Kenya	5	7	15	16	16	16	16	18	19	21	..
Madagascar	5	5	19	19	19	19	20	20	20	21	..
Nigeria	6	7	36	37	38	40	41	59	62	66	..
Mauritania	0	0	14	16	23	37	45	81	82	92	91
Chad	..	..	1	1	1	1	1	1	1	1	..

Table app. 5.20.

Mobile phones (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	0,0	0,5	7,0	11,1	13,8	17,1	34,6	93,3	213,8	303,2	373,8
Norway	0,0	15,2	46,4	55,0	66,0	86,1	135,7	225,1	287,9	380,7	473,9
Canada	0,0	0,5	21,6	28,4	36,5	46,0	64,3	88,2	115,3	144,9	175,6
United States	0,0	1,4	21,1	29,9	43,2	62,0	92,6	128,4	165,9	206,5	256,0
Sweden	0,0	8,7	53,7	65,9	75,6	88,9	158,1	227,4	281,8	358,2	464,0
Australia	0,0	0,0	10,8	16,9	28,4	39,1	68,3	127,5	217,9	264,0	285,5
France	0,0	0,0	5,0	6,6	7,6	9,9	15,3	22,4	42,2	98,5	187,8
Netherlands	0,0	0,3	5,3	7,6	10,9	14,1	20,9	34,8	65,1	109,8	212,9
United Kingdom	0,0	0,9	19,4	21,8	26,0	39,0	67,5	98,0	123,3	150,2	252,3
Finland	0,0	6,6	45,2	57,1	70,1	90,4	127,3	196,6	289,2	420,2	571,8
Greece	0,0	0,0	0,0	0,0	0,0	4,6	16,0	26,1	52,5	89,1	194,1
Hungary	0,0	0,0	0,3	0,8	2,3	4,4	13,9	25,9	46,3	69,4	105,0
Argentina	0,0	0,0	0,4	0,8	1,4	3,4	7,0	9,8	18,9	56,3	78,1
Mexico	0,0	0,0	0,8	1,8	3,5	4,2	6,2	7,3	10,7	18,2	35,0

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	0,0	0,0	0,1	0,2	0,3	1,0	8,4	13,0	22,5	36,9	56,4
Colombia	0,0	0,0	0,0	0,0	0,0	0,0	2,5	7,8	14,7	35,0	49,1
Philippines	0,0	0,0	0,0	0,6	0,9	1,6	2,6	7,2	13,7	18,0	21,9
Turkey	0,0	0,0	0,6	0,8	1,0	1,4	2,9	7,0	12,6	25,6	52,5
Brazil	0,0	0,0	0,0	0,0	0,2	1,2	3,7	8,3	15,8	27,5	46,8
Algeria	0,0	0,0	0,0	0,2	0,2	0,2	0,0	0,2	0,4	0,5	0,6
Egypt, Arab Rep	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	1,0	1,4
Zimbabwe	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,9	4,3
India	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,3	0,9	1,2
Ghana	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,4	0,7	1,2	..
Cameroon	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,3	0,3	..
Kenya	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,2	..
Madagascar	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,3	0,8
Nigeria	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,2
Mauritania	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Chad	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Table app. 5.21.

Telephone mainlines (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	342	375	441	454	463	471	479	487	502	503	503
Norway	293	423	503	516	529	541	554	568	591	621	660
Canada	406	481	565	579	578	578	594	605	608	621	634
United States	414	486	545	552	561	574	589	607	622	644	661
Sweden	580	628	681	691	683	678	683	681	682	679	674
Australia	323	392	456	466	472	484	496	492	501	505	512
France	295	417	495	510	525	536	547	557	564	571	570
Netherlands	346	402	464	476	487	500	511	524	540	566	593
United Kingdom	322	374	441	448	457	470	486	502	522	542	557
Finland	364	447	534	540	542	544	549	543	554	556	554
Greece	235	314	389	408	436	457	477	494	509	516	522
Hungary	58	70	96	109	125	145	173	211	260	304	336
Argentina	67	90	95	97	110	118	137	159	174	191	203
Mexico	40	50	65	69	75	84	92	94	93	97	104
South Africa	55	68	87	90	87	91	93	97	100	107	115
Colombia	41	57	75	80	85	92	102	110	130	149	173
Philippines	9	9	10	10	10	13	17	21	26	29	37
Turkey	26	44	121	142	161	183	200	212	224	250	254
Brazil	41	53	65	69	73	75	80	85	96	107	121
Algeria	17	25	32	34	37	40	41	41	44	48	53
Egypt, Arab Rep.	..	18	30	33	37	40	43	46	50	55	60
Zimbabwe	13	12	12	12	12	12	12	14	15	17	..
India	3	4	6	7	8	9	11	13	15	19	22

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	4	3	3	3	3	3	3	4	4	6	8
Cameroon	2	3	3	4	4	5	5	5	5	5	..
Kenya	4	6	8	8	8	8	8	8	9	9	..
Madagascar	2	2	2	3	3	2	2	2	3	3	3
Nigeria	1	2	3	3	3	3	4	4	4	4	4
Mauritania	2	2	3	3	3	3	4	4	4	5	6
Chad	..	0	1	1	1	1	1	1	1	1	1

Table app. 5.22.

Personal computers (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	..	17	60	65	69	78	92	120	162	202	237
Norway	..	..	..	145	163	189	230	274	318	361	373
Canada	4	35	107	128	146	169	196	218	246	273	330
United States	..	106	217	234	253	272	297	328	364	407	459
Sweden	..	..	105	128	138	149	183	249	294	339	361
Australia	..	..	150	160	184	208	240	276	317	362	412
France	..	..	71	74	84	97	116	134	151	173	208
Netherlands	..	..	94	113	132	144	169	200	231	281	318
United Kingdom	..	37	108	125	145	165	170	202	216	243	263
Finland	..	..	100	113	129	142	159	232	273	311	349
Greece	..	..	17	19	22	26	29	33	35	45	52
Hungary	..	..	10	12	19	27	34	39	44	49	59
Argentina	..	..	7	9	10	14	19	24	34	39	44

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	..	..	8	10	15	18	23	26	31	38	47
South Africa	..	..	7	9	11	14	22	27	34	42	47
Colombia	..	..	..	..	10	11	14	18	26	34	28
Philippines	..	..	3	4	5	6	8	10	12	13	15
Turkey	..	..	5	7	9	11	13	15	17	21	23
Brazil	..	..	3	4	6	9	12	17	22	26	30
Algeria	..	..	1	2	2	2	3	3	3	4	..
Egypt, Arab Rep.	..	..	..	..	..	..	3	4	6	7	9
Zimbabwe	..	..	0	0	1	2	2	3	7	9	..
India	..	..	0	0	0	1	1	1	2	2	3
Ghana	..	0	0	0	0	1	1	1	1	2	..
Cameroon	..	..	1	..	..	..	..	1	..	..	..
Kenya	..	..	0	0	0	0	1	1	2	3	..
Madagascar	..	..	..	..	..	..	..	..	..	1	..
Nigeria	..	..	..	..	..	4	4	5	5	6	..
Mauritania	..	..	..	..	..	..	..	..	6	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..

Table app. 5.23.

Internet hosts (per 10,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	..	..	..	..	..	..	7,73	21,47	58,40	75,79	106,97
Norway	..	..	..	..	..	..	111,53	193,33	342,68	474,64	704,97
Canada	..	..	..	..	..	..	64,14	127,03	203,33	230,02	339,12
United States	..	..	..	..	..	..	122,14	230,43	381,35	441,83	974,97
Sweden	..	..	..	..	..	..	84,35	164,02	268,95	321,46	430,01
Australia	..	..	..	..	..	..	90,30	171,38	281,11	381,83	400,15
France	..	..	..	..	..	..	14,39	26,00	40,58	49,84	73,25
Netherlands	..	..	..	..	..	..	55,88	111,10	174,33	218,85	327,85
United Kingdom	..	..	..	..	..	..	38,72	75,04	122,33	148,83	0,01
Finland	..	..	..	..	..	..	134,14	422,29	612,96	653,63	996,56
Greece	..	..	..	..	..	..	3,37	7,40	15,98	18,78	38,10
Hungary	..	..	..	..	..	..	6,65	15,44	29,27	33,30	73,15
Argentina	..	..	..	..	..	..	0,37	1,53	3,60	5,32	15,93
Mexico	..	..	..	..	..	..	0,74	1,51	3,22	3,74	8,76
South Africa	..	..	..	..	..	..	7,06	12,34	24,88	28,88	33,95
Colombia	..	..	..	..	..	..	0,30	0,59	2,30	1,72	2,91
Philippines	..	..	..	..	..	..	0,05	0,25	0,50	0,59	1,01
Turkey	..	..	..	..	..	..	0,32	0,92	2,85	3,67	4,39
Brazil	..	..	..	..	..	..	0,38	1,26	4,78	4,20	9,88
Algeria	..	..	..	..	..	..	0,00	0,01	0,01	0,01	0,01
Egypt, Arab Rep.	..	..	..	..	..	..	0,03	0,10	0,33	0,31	0,33
Zimbabwe	..	..	..	..	..	..	0,02	0,08	0,16	0,24	0,72
India	..	..	..	..	..	..	0,00	0,01	0,03	0,05	0,11

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	..	..	..	..	..	..	0,00	0,00	0,12	0,15	0,13
Cameroon	..	..	..	..	..	..	0,00	0,00	0,00	0,05	0,00
Kenya	..	..	..	..	..	..	0,00	0,01	0,10	0,16	0,24
Madagascar	..	..	..	..	..	..	0,00	0,00	0,02	0,03	0,01
Nigeria	..	..	..	..	..	..	0,00	0,00	0,00	0,00	0,01
Mauritania	..	..	..	..	..	..	0,00	0,00	0,00	0,00	0,09
Chad	..	..	..	..	..	..	0	0	..	..	0

Table app. 5.24.

Two-wheelers (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	102	..	146	137	135	131	127	124	121	118	115
Norway	36	..	48	47	47	46	45	45	46	49	52
Canada	19	..	12	12	11	11	11	11	10	11	..
United States	30	..	17	17	16	15	14	14	15	14	..
Sweden	2	..	11	28	28	28	27	27	27	28	29
Australia	24	..	18	16	17	17	17	16	16	..	..
France	97	..	..	55	53	52	..	..	..	..	..
Netherlands	61	..	44	42	44	44	48	62	64	68	67
United Kingdom	24	..	14	13	12	11	11	10	10	11	12
Finland	36	..	12	12	13	13	13	12	32	32	33
Greece	12	..	120	132	138	153	166	174	184	195	203
Hungary	..	..	16	16	16	15	15	15	15	14	14
Argentina	..	..	1	1	1	1	1	1	1	..	..
Mexico	..	..	3	3	3	3	3	3	3	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	7	..	8	8	8	8	7	7	7	..	..
Colombia	17	..	8	..	..	..	..	..	..	..	..
Philippines	..	..	6	6	7	8	9	10	11	13	14
Turkey	..	..	10	10	11	13	13	14	14	14	15
Brazil	3	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	..	..	..	..	..	..	..	..
Egypt, Arab Rep.	..	..	6	7	6	6	7	7	7	..	..
Zimbabwe	..	..	..	..	..	34	34	33	32	..	..
India	..	..	15	16	18	19	21	22	24	..	..
Ghana	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..
Kenya	1	..	1	1	1	1	1	1	1	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..
Nigeria	4	..	..	5	5	5	4	4	4	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	0	0	0	0	0	0	1	..	..

Table app. 5.25.

Passenger cars (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	203	..	283	298	316	329	344	359	376	385	394
Norway	302	..	380	378	377	378	380	386	378	398	402
Canada	417	..	496	488	476	464	466	457	458	445	..
United States	536	..	570	564	494	492	489	487	487	483	..
Sweden	347	..	422	419	413	408	408	411	413	418	428
Australia	401	..	449	446	453	456	457	479	487	..	..
France	355	..	406	419	421	422	431	433	439	442	456
Netherlands	322	..	367	369	372	349	354	362	366	373	391
United Kingdom	268	..	351	350	352	356	361	360	371	..	375
Finland	256	..	385	380	383	369	367	371	379	379	392
Greece	91	..	171	173	177	189	199	211	223	238	251
Hungary	95	..	187	195	202	204	212	224	239	225	233
Argentina	..	..	..	..	..	..	130	134	136	137	..
Mexico	60	..	84	87	89	89	90	93	93	95	97
South Africa	85	..	111	92	91	108	94	92	85	..	..
Colombia	11	..	..	..	..	22	22	21	21	..	..
Philippines	..	..	7	7	7	8	8	9	10	10	10
Turkey	..	..	33	37	43	54	49	52	54	58	64
Brazil	75	..	..	..	..	84	..	..	..	..	..
Algeria	..	..	..	..	..	..	26	25	25	..	..
Egypt, Arab Rep.	8	..	19	19	19	19	21	21	22	..	..
Zimbabwe	..	..	..	..	..	28	28	28	28	..	..
India	..	..	2	3	4	4	4	4	4	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	..	..	..	..	..	..	5	5	5	..	..
Cameroon	..	..	6	6	6	7	7	7	7	..	..
Kenya	7	..	11	11	11	11	11	11	11	..	..
Madagascar	..	..	3	4	4	4	4	4	4	..	..
Nigeria	3	..	..	13	11	12	8	8	9	..	..
Mauritania	..	..	6	7	7	7	7	7	8	..	..
Chad	..	..	2	2	2	3	3	3	3	..	..

Table app. 5.26.

Vehicles (per 1,000 people)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	323	..	469	483	499	511	524	537	552	555	560
Norway	342	..	457	456	456	458	465	473	468	491	498
Canada	548	..	644	638	623	594	594	578	585	560	..
United States	..	..	753	742	737	745	753	759	770	767	..
Sweden	370	..	462	404	450	444	444	447	450	457	468
Australia	502	..	530	532	569	574	598	592	605	..	..
France	402	..	495	511	509	502	519	519	526	530	..
Netherlands	343	..	403	406	413	386	393	400	404	413	421
United Kingdom	303	..	412	391	393	397	402	406	411	434	439
Finland	288	..	440	434	437	420	418	426	431	431	448
Greece	134	..	248	253	257	271	280	295	310	328	..
Hungary	108	..	212	219	227	229	240	284	274	262	268
Argentina	155	..	..	..	..	..	166	170	172	176	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	..	..	122	133	130	131	134	137	138	140	144
South Africa	133	..	160	132	132	157	134	132	121	..	..
Colombia	..	..	..	..	..	42	41	40	40	..	..
Philippines	..	..	10	10	10	11	25	27	29	31	31
Turkey	23	..	49	54	61	70	62	65	68	71	81
Brazil	85	..	88	93	86	95	85	84	77	..	..
Algeria	..	..	..	..	..	..	54	53	52	..	..
Egypt, Arab Rep.	..	..	26	27	27	26	28	28	30	..	..
Zimbabwe	..	..	..	..	..	31	31	31	31	..	..
India	2	..	4	6	6	6	6	7	7	..	..
Ghana	..	..	..	..	..	..	8	7	7	..	..
Cameroon	8	..	10	10	10	11	11	12	12	..	..
Kenya	8	..	13	14	14	14	14	14	14	..	..
Madagascar	..	..	6	5	5	5	5	5	5	..	..
Nigeria	4	..	..	33	32	32	24	28	26	..	..
Mauritania	..	..	9	10	10	10	11	11	12	..	..
Chad	..	..	5	5	6	7	7	8	8	..	..

Table app. 5.27.

GDP, PPP (current international $)

	1980	1990	1995	1998
Japan	$1 054 423 121 920,0	$2 354 885 165 056,0	$2 911 641 010 176,0	$2 939 974 582 272,0
Norway	$40 654 872 576,0	$77 997 375 488,0	$107 664 908 288,0	$116 747 337 728,0
Canada	$274 797 608 960,0	$546 710 814 720,0	$677 646 696 448,0	$714 559 651 840,0
United States	$2 879 764 824 064,0	$5 621 641 904 128,0	$7 198 564 417 536,0	$8 002 218 754 048,0
Sweden	$81 522 917 376,0	$150 099 574 784,0	$176 889 626 624,0	$182 873 210 880,0
Australia	$139 921 719 296,0	$281 298 436 096,0	$384 158 859 264,0	$420 991 401 984,0
France	$514 612 658 176,0	$980 270 710 784,0	$1 191 402 143 744,0	$1 246 083 678 208,0
Netherlands	$134 515 499 008,0	$251 910 586 368,0	$321 759 019 008,0	$348 124 086 272,0
United Kingdom	$474 704 609 280,0	$929 261 748 224,0	$1 140 793 933 824,0	$1 200 961 880 064,0
Finland	$41 773 637 632,0	$85 621 293 056,0	$95 847 710 720,0	$107 426 029 568,0
Greece	$63 420 170 240,0	$112 270 606 336,0	$137 496 477 696,0	$146 612 797 440,0
Hungary	$55 241 334 784,0	$93 378 519 040,0	$95 295 627 264,0	$103 489 224 704,0
Argentina	$180 606 500 864,0	$242 264 702 976,0	$373 273 493 504,0	$434 033 491 968,0
Mexico	$286 583 914 496,0	$518 066 274 304,0	$643 593 601 024,0	$738 387 230 720,0
South Africa	$162 424 995 840,0	$279 294 148 608,0	$335 710 486 528,0	$351 416 221 696,0
Colombia	$93 542 440 960,0	$196 834 312 192,0	$237 185 499 136,0	$245 051 408 384,0
Philippines	$108 182 855 680,0	$192 983 760 896,0	$247 257 759 744,0	$267 267 833 856,0
Turkey	$103 352 180 736,0	$261 570 134 016,0	$351 706 513 408,0	$407 786 618 880,0
Brazil	$475 097 956 352,0	$791 150 198 784,0	$1 046 263 627 776,0	$1 097 705 324 544,0
Algeria	$58 083 340 288,0	$113 695 416 320,0	$131 795 419 136,0	$143 386 738 688,0
Egypt, Arab Rep.	$44 018 499 584,0	$122 872 324 096,0	$166 955 548 672,0	$186 691 862 528,0
Zimbabwe	$10 070 476 800,0	$23 241 984 000,0	$27 658 678 272,0	$31 201 019 904,0
India	$441 270 075 392,0	$1 174 306 947 072,0	$1 744 705 159 168,0	$2 034 634 588 160,0

	1980	1990	1995	1998
Ghana	$11 053 241 344,0	$20 727 728 128,0	$28 768 008 192,0	$32 021 532 672,0
Cameroon	$8 536 224 768,0	$17 852 680 192,0	$18 649 049 088,0	$21 085 607 936,0
Kenya	$9 705 505 792,0	$21 910 018 048,0	$27 132 241 920,0	$28 698 746 880,0
Madagascar	$5 711 901 696,0	$9 115 036 672,0	$10 329 198 592,0	$11 029 223 424,0
Nigeria	$35 175 510 016,0	$67 472 125 952,0	$92 596 035 584,0	$96 028 459 008,0
Mauritania	$1 440 185 856,0	$2 579 135 232,0	$3 573 765 376,0	$3 952 874 240,0
Chad	$1 718 662 656,0	$4 313 376 768,0	$5 479 841 792,0	$6 237 102 080,0

Table app. 5.28.

GDP growth rate (% annual)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	2.8	4.4	5.1	3.8	1.0	0.3	0.6	1.5	5.0	1.4	-2.8
Norway	5.0	5.2	2.0	3.1	3.3	2.7	5.5	3.8	5.5	3.4	2.0
Canada	1.3	5.4	0.2	-1.9	0.9	2.5	3.9	2.1	1.2	3.7	3.0
United States	-0.6	3.3	1.2	-1.0	2.8	2.4	3.7	2.9	4.2	5.3	3.9
Sweden	1.7	1.9	1.4	-1.1	-1.4	-2.2	3.3	3.9	1.3	1.8	2.9
Australia	3.8	4.4	-0.7	0.4	3.4	5.0	4.7	4.0	3.0	3.8	5.1
France	1.6	1.9	2.5	0.8	1.2	-1.3	2.8	2.1	1.6	2.3	3.2
Netherlands	1.2	3.1	4.1	2.3	2.0	0.8	3.2	2.3	3.1	3.6	3.8
United Kingdom	-1.6	3.5	0.4	-2.0	-0.5	2.1	4.3	2.8	2.3	3.4	2.1
Finland	5.3	3.4	0.0	-7.1	-3.6	-1.2	4.5	5.1	3.6	6.0	4.7
Greece	1.8	3.1	0.0	3.1	0.7	-1.6	2.0	2.1	2.4	3.2	3.5
Hungary	-0.3	-0.3	-3.5	-11.9	-3.1	-0.6	2.9	1.5	1.3	4.6	5.1
Argentina	4.2	-7.6	-2.4	12.7	11.9	5.9	5.8	-2.8	5.5	8.1	3.9
Mexico	9.2	2.6	5.1	4.2	3.6	2.0	4.4	-6.2	5.2	6.8	4.8

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	9.2	-4.0	-0.3	-1.0	-2.1	1.2	3.2	3.1	4.2	2.5	0.5
Colombia	4.1	3.1	4.0	2.4	3.9	5.4	5.8	5.2	2.0	2.8	0.6
Philippines	5.1	-7.3	3.0	-0.6	0.3	2.1	4.4	4.7	5.8	5.2	-0.5
Turkey	-0.8	4.8	9.3	1.0	5.8	8.3	-5.8	7.3	6.8	7.7	2.8
Brazil	9.1	7.9	-4.3	1.3	-0.5	4.9	5.9	4.2	2.8	3.2	0.2
Algeria	0.9	5.6	-1.3	-1.2	1.6	-2.2	-1.2	3.8	3.8	1.1	5.1
Egypt, Arab Rep.	10.0	6.6	5.7	1.1	4.4	2.9	3.9	4.7	5.0	5.5	5.6
Zimbabwe	14.4	6.9	7.0	5.5	-9.0	1.3	6.8	-0.5	8.7	3.7	2.5
India	6.6	5.5	5.7	0.4	5.4	5.0	7.9	8.0	7.3	5.0	6.1
Ghana	0.5	5.1	3.3	5.3	3.9	5.0	3.3	4.0	4.6	4.2	4.6
Cameroon	-2.0	8.1	-6.1	-3.8	-3.1	-3.2	-2.5	3.3	5.0	5.1	5.0
Kenya	5.6	4.3	4.2	1.4	-0.8	0.4	2.6	4.4	4.1	2.1	1.8
Madagascar	0.8	1.2	3.1	-6.3	1.2	2.1	0.0	1.7	2.1	3.6	3.9
Nigeria	4.2	9.7	8.2	4.8	2.9	2.2	0.1	2.5	4.3	3.6	1.8
Mauritania	3.4	3.0	-1.8	2.6	1.7	5.5	4.6	4.5	4.7	4.5	3.5
Chad	-6.0	21.8	-4.2	8.5	8.0	-15.7	10.2	1.0	3.7	4.1	8.1

Table app. 5.29.

Trade (% of GDP, PPP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	23,8	19,9	21,0	20,7	20,4	20,8	22,5	24,9	23,3	23,2	21,3
Norway	87,1	62,4	78,0	72,2	70,2	61,4	61,9	70,6	76,0	73,8	68,3
Canada	46,3	44,7	45,9	45,6	45,2	46,7	49,4	53,3	54,9	59,0	59,0
United States	16,5	14,3	15,8	15,9	15,9	16,3	17,2	18,4	18,7	19,8	19,9
Sweden	77,9	54,6	73,5	67,3	66,2	58,0	66,9	81,3	83,5	81,6	83,5
Australia	30,3	24,0	28,1	28,0	26,8	25,3	27,2	28,8	30,5	31,3	27,8
France	45,4	30,0	44,0	42,1	42,2	36,1	40,0	45,8	45,0	43,8	46,3
Netherlands	109,1	76,0	98,4	94,2	92,9	82,1	86,5	102,1	98,7	91,9	93,2
United Kingdom	45,5	33,0	42,8	41,1	41,3	38,0	39,9	44,1	46,2	48,4	48,1
Finland	69,0	45,1	61,2	53,5	53,6	48,9	58,5	71,7	70,1	67,4	69,2
Greece	21,9	17,0	20,5	20,0	18,9	16,5	16,7	19,1	19,2	18,3	18,8
Hungary	34,6	23,2	19,0	22,5	23,6	23,3	20,8	29,6	31,9	41,0	42,4
Argentina	9,6	6,0	6,6	7,1	8,2	8,4	9,7	10,7	11,7	12,9	12,9
Mexico	13,6	12,0	15,9	16,7	18,0	18,7	21,0	23,6	27,2	30,6	32,9
South Africa	27,1	13,2	14,4	14,4	14,7	14,4	15,2	17,1	16,4	16,8	16,1
Colombia	8,8	5,9	6,2	5,8	10,7	9,9	9,0	10,0	10,0	10,7	10,4
Philippines	12,5	8,0	10,6	10,6	11,8	13,4	15,1	17,7	19,9	22,5	22,1
Turkey	10,1	12,5	13,6	12,8	12,7	13,6	12,9	16,3	20,0	20,0	18,8
Brazil	9,1	6,5	6,6	6,4	6,4	7,1	7,9	9,2	9,3	10,1	9,9
Algeria	40,1	24,5	19,1	16,6	15,9	15,2	14,8	16,6	16,7	17,2	16,4
Egypt, Arab Rep.	24,2	17,3	11,6	11,0	9,0	9,2	9,0	10,1	10,2	10,7	10,2
Zimbabwe	27,6	13,8	14,0	13,3	13,9	12,5	14,0	16,3	15,7	15,8	15,5
India	5,0	3,6	3,6	3,2	3,2	3,2	3,5	4,0	4,1	4,2	3,9

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	18,2	10,0	10,1	10,3	10,0	10,7	10,5	10,8	11,6	11,6	13,0
Cameroon	38,4	17,3	19,9	17,4	16,5	14,2	14,3	15,3	15,3	15,3	14,6
Kenya	38,9	17,2	14,1	12,6	11,5	11,3	13,1	16,9	16,4	17,4	17,6
Madagascar	21,0	10,0	9,7	8,9	8,6	8,8	10,1	11,0	10,7	11,1	11,2
Nigeria	115,6	49,8	27,4	27,3	23,9	19,5	18,1	21,6	24,2	25,8	18,9
Mauritania	35,9	33,9	32,1	30,7	30,1	25,8	22,6	21,5	21,9	19,0	17,2
Chad	7,3	7,3	11,3	9,2	7,8	7,8	6,6	7,6	7,6	7,7	7,2

Table app. 5.30.

Foreign direct investment, net inflows (current US$)

	1980	1985	1990	1995	1997	1998
Japan	$280,000,000	$637,715,968	$1,777,360,000	$39,332,000	$3,200,079,872	$3,268,100,096
Norway	$59,816,000	($426,467,008)	$1,003,129,984	$2,392,770,048	$3,571,670,016	$3,596,659,968
Canada	$5,813,309,952	$1,356,649,984	$7,580,599,808	$9,319,140,352	$11,466,000,384	$16,514,499,584
United States	$16,929,999,872	$20,010,000,384	$48,953,999,360	$59,643,998,208	$109,263,003,648	$193,372,995,584
Sweden	$250,912,000	$392,953,984	$1,982,419,968	$14,939,400,192	$10,271,099,904	$19,412,899,840
Australia	$1,869,830,016	$2,062,589,952	$7,464,690,176	$12,800,700,416	$7,512,529,920	$6,164,839,936
France	$3,282,769,920	$2,595,490,048	$13,183,299,584	$23,732,699,136	$23,044,900,864	$27,997,599,744
Netherlands	$2,278,380,032	$1,504,630,016	$12,352,000,000	$12,081,800,192	$12,674,799,616	$33,346,199,552
United Kingdom	$10,122,800,128	$5,476,469,760	$32,518,100,992	$20,318,199,808	$37,004,001,280	$67,480,600,576
Finland	$27,949,700	$112,512,000	$812,172,992	$1,044,129,984	$2,128,499,968	$12,028,600,320
Greece	$672,000,000	$447,000,000	$1,005,000,000	$1,053,000,000	$984,000,000	..
Hungary	$0	$0	$0	$4,518,600,192	$2,079,000,064	$1,936,000,000
Argentina	$678,000,000	$919,000,000	$1,836,000,000	$5,279,000,064	$8,094,000,128	$6,150,000,128

	1980	1985	1990	1995	1997	1998
Mexico	$2,156,000,000	$491,000,000	$2,633,999,872	$9,526,299,648	$12,830,999,552	$10,238,000,128
South Africa	..	..	..	$993,000,000	$3,811,000,064	$550,000,000
Colombia	$157,100,000	$1,023,000,000	$500,000,000	$969,000,000	$5,703,000,064	$3,038,000,128
Philippines	($106,000,000)	$12,000,000	$530,000,000	$1,478,000,000	$1,222,000,000	$1,712,999,936
Turkey	$18,000,000	$99,000,000	$684,000,000	$885,000,000	$805,000,000	$940,000,000
Brazil	$1,911,000,064	$1,348,000,000	$989,000,000	$4,858,999,808	$19,651,999,744	$31,913,000,960
Algeria	$348,700,000	$400,000	$0	$5,000,000	$7,000,000	$5,000,000
Egypt,	$548,300,032	$1,177,600,000	$734,000,000	$598,000,000	$891,000,000	$1,076,000,000
Zimbabwe	$1,600,000	$2,900,000	($12,000,000)	$40,000,000	$70,000,000	$76,000,000
India	$79,000,000	$106,000,000	$162,000,000	$2,143,600,000	$3,576,999,936	$2,635,000,064
Ghana	$15,600,000	$5,600,000	$15,000,000	$107,000,000	$83,000,000	$56,000,000
Cameroon	$129,800,000	$316,200,000	($113,000,000)	$7,000,000	$45,000,000	$50,000,000
Kenya	$79,000,000	$18,100,000	$57,000,000	$32,400,000	$20,000,000	$11,000,000
Madagascar	($1,000,000)	$0	$22,000,000	$9,700,000	$14,000,000	$16,000,000
Nigeria	($739,699,968)	$478,300,000	$588,000,000	$1,079,000,064	$1,539,000,064	$1,051,000,000
Mauritania	$27,100,000	$7,000,000	$7,000,000	$7,000,000	$3,000,000	$5,000,000
Chad	$0	$53,700,000	$0	$13,000,000	$15,000,000	$16,000,000

Table app. 5.31.

Foreign direct investment, net inflows (% of GDP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Norway	0.1	-0.7	0.9	-0.3	-0.5	0.9	2.2	1.6	2.0	2.3	2.5
Canada	2.2	0.4	1.3	0.5	0.8	0.9	1.5	1.6	1.6	1.9	2.8
United States	0.6	0.5	0.9	0.4	0.3	0.8	0.7	0.8	1.2	1.4	2.3
Sweden	0.2	0.4	0.9	2.7	0.0	2.0	3.2	6.5	2.2	4.5	8.6
Australia	1.2	1.2	2.5	1.4	1.7	1.4	1.4	3.5	1.3	1.9	1.7
France	0.5	0.5	1.1	1.3	1.7	1.7	1.2	1.5	1.4	1.7	2.0
Netherlands	1.3	1.2	4.4	2.2	2.4	2.7	2.1	3.0	3.7	3.5	8.7
United Kingdom	1.9	1.2	3.3	1.6	1.5	1.7	0.9	1.8	2.2	2.9	5.0
Finland	0.1	0.2	0.6	-0.2	0.4	1.0	1.5	0.8	0.9	1.8	9.7
Greece	1.4	1.1	1.2	1.3	1.2	1.1	1.0	0.9	0.9	0.8	..
Hungary	0.0	0.0	0.0	4.4	4.0	6.1	2.8	10.1	4.4	4.5	4.0
Argentina	0.9	1.0	1.3	1.3	1.9	1.2	1.3	2.0	2.4	2.8	2.1
Mexico	1.0	0.3	1.0	1.5	1.2	1.1	2.6	2.6	2.6	3.6	2.6
South Africa	..	..	..	..	..	..	0.2	0.7	0.6	2.6	0.4
Colombia	0.4	2.5	1.1	0.9	1.3	1.5	1.8	1.0	3.1	5.2	3.0
Philippines	-0.3	0.0	1.2	1.2	0.4	2.3	2.5	2.0	1.8	1.5	2.6
Turkey	0.0	0.1	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5
Brazil	0.8	0.6	0.2	0.3	0.5	0.3	0.6	0.7	1.4	2.4	4.1
Algeria	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Egypt, Arab Rep.	2.4	3.4	1.7	0.7	1.1	1.0	2.4	1.0	0.9	1.2	1.3
Zimbabwe	0.0	0.1	-0.1	0.0	0.2	0.4	0.5	0.6	0.7	0.8	1.2
India	0.0	0.0	0.1	0.0	0.1	0.2	0.3	0.6	0.6	0.9	0.6

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	0.4	0.1	0.3	0.3	0.4	2.1	4.3	1.7	1.7	1.2	0.7
Cameroon	1.9	3.9	-1.0	-0.1	0.3	0.0	-0.1	0.1	0.4	0.5	0.6
Kenya	1.1	0.3	0.7	0.2	0.1	0.0	0.1	0.4	0.1	0.2	0.1
Madagascar	0.0	0.0	0.7	0.5	0.7	0.5	0.2	0.3	0.3	0.4	0.4
Nigeria	-1.2	1.7	2.1	2.6	2.7	6.3	8.3	3.8	4.5	3.9	2.5
Mauritania	3.3	0.9	0.6	0.2	0.6	1.7	0.2	0.7	0.5	0.3	0.5
Chad	0.0	5.2	0.0	0.2	0.1	1.0	2.3	0.9	1.1	1.0	0.9

Table app. 5.32.

Agriculture, value added (% of GDP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	3.7	3.2	2.5	2.4	2.3	2.1	2.1	1.9	1.9	1.7	..
Norway	3.7	3.0	3.2	2.9	2.6	2.6	2.6	2.5	2.2	2.0	..
Canada	4.1	3.3	2.8	2.6	2.6	2.7	..	..	..	..	..
United States	2.5	2.1	2.0	1.8	1.9	1.7	1.8	1.6	1.8	1.7	..
Sweden	3.7	3.7	2.9	2.5	2.3	2.1	2.2	..	..	..	..
Australia	5.3	4.0	3.3	3.0	3.2	3.2	2.8	3.4	3.2	..	..
France	4.2	3.9	3.4	3.0	2.8	2.3	2.4	2.4	2.3	2.3	..
Netherlands	3.5	3.9	4.0	3.9	3.6	3.1	3.3	3.1	..	..	..
United Kingdom	2.2	2.0	1.9	1.8	1.9	1.8	1.8	1.9	1.8	..	..
Finland	9.8	8.3	6.4	5.6	5.1	5.2	5.6	4.5	4.0	..	..
Greece	14.2	13.8	11.3	12.6	11.2	10.5	11.2	10.6	..	..	..
Hungary	19.1	17.9	14.5	8.9	7.5	6.8	7.0	7.1	6.9	6.0	..
Argentina	6.4	7.6	8.1	6.7	6.0	5.5	5.4	5.7	6.0	5.6	5.7
Mexico	8.3	9.1	7.2	6.9	6.1	5.8	5.3	5.0	5.5	5.0	4.9

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	6.2	5.2	4.6	4.6	3.8	4.2	4.6	3.9	4.2	4.1	4.0
Colombia	22.3	19.6	18.7	19.6	17.8	15.6	14.8	14.0	12.9	13.0	13.5
Philippines	25.1	24.6	21.9	21.0	21.8	21.6	22.0	21.6	20.6	18.7	16.9
Turkey	26.4	20.4	18.3	15.7	15.3	16.1	15.9	16.4	17.4	15.1	17.6
Brazil	11.0	11.5	8.1	7.8	7.7	7.6	9.9	9.0	8.3	7.9	8.4
Algeria	10.1	10.1	13.7	12.3	14.3	13.0	11.5	11.9	11.8	10.3	12.1
Egypt, Arab Rep.	18.3	20.0	19.4	17.6	16.5	16.7	16.9	16.8	17.3	17.7	17.5
Zimbabwe	15.7	22.7	16.5	15.3	7.4	15.0	19.0	15.3	22.2	19.1	19.5
India	37.8	32.8	30.8	31.0	30.4	30.3	30.1	28.4	29.3	27.5	29.3
Ghana	57.9	44.9	44.8	45.5	44.8	36.9	28.8	20.5	15.1	11.7	10.4
Cameroon	31.3	21.6	24.6	24.8	27.3	27.9	39.6	40.2	41.3	42.1	42.4
Kenya	32.6	32.5	29.1	27.0	26.6	31.5	33.3	31.1	29.6	27.5	26.1
Madagascar	30.1	35.1	32.3	33.0	33.3	33.9	39.0	32.8	31.8	31.5	30.6
Nigeria	20.6	37.3	32.7	30.4	23.8	24.2	28.6	31.6	30.7	32.7	31.7
Mauritania	30.4	22.5	29.6	28.7	28.0	27.4	27.0	26.4	25.3	24.6	24.8
Chad	45.1	38.1	29.3	36.5	35.3	32.5	37.8	35.9	38.2	38.4	39.8

Table app. 5.33.

Services, etc., value added (annual % growth)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	3.3	3.5	3.9	3.5	2.1	2.5	1.1	0.9	5.0	2.1	..
Norway	5.0	6.9	2.1	2.6	2.3	2.6	4.4	2.3	4.6	4.0	..
Canada	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	1.5	-0.1	3.4	2.4	1.8	1.6	3.3	3.1	..
Sweden	..	..	..	..	..	..	..	..	..	..	..
Australia	5.2	5.4	-0.9	2.3	3.9	5.3	6.3	4.1	2.8	..	..
France	2.5	2.9	2.8	1.7	1.7	-0.1	3.1	1.7	1.6	2.1	..
Netherlands	1.9	3.6	4.3	2.9	2.9	0.9	2.8	2.4	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..
Finland	4.9	3.9	1.4	-3.7	-5.2	-0.4	1.7	3.1	4.3	..	..
Greece	2.3	3.6	1.7	2.6	2.4	0.7	0.8	3.9	..	..	..
Hungary	..	-0.6	0.6	-6.4	-2.2	1.1	1.9	-0.9	3.6	3.0	1.9
Argentina	9.2	-5.8	-1.2	10.8	9.4	5.8	6.3	-1.9	5.5	7.7	4.7
Mexico	9.9	1.6	4.4	4.7	3.8	2.5	4.6	-6.2	3.5	6.4	4.5
South Africa	6.4	-0.2	0.6	0.2	-0.1	0.7	2.9	4.5	4.3	2.4	1.5
Colombia	5.2	2.1	4.7	2.2	6.9	9.1	13.7	5.4	4.3	4.1	2.0
Philippines	6.1	-2.1	4.9	0.2	1.0	2.5	4.2	5.0	6.4	5.5	3.5
Turkey	-5.3	0.5	8.8	0.2	6.3	6.8	-3.4	6.2	7.2	6.9	3.3
Brazil	9.8	7.3	-1.6	1.2	0.3	3.3	5.2	5.6	2.2	3.4	1.3
Algeria	-1.6	8.7	-0.9	-0.8	3.4	-1.2	2.5	8.4	6.8	2.6	4.4
Egypt, Arab Rep.	10.8	7.0	5.0	3.0	2.2	2.7	3.0	5.0	5.6	6.4	4.7
Zimbabwe	34.9	2.4	7.6	5.1	0.5	0.6	3.3	6.1	7.9	2.4	2.0
India	3.5	7.3	5.2	4.1	5.4	8.0	8.5	9.8	8.0	8.2	6.3

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	-2.3	7.8	8.5	5.3	8.7	7.5	4.6	4.3	4.0	3.4	4.5
Cameroon	-12.4	9.3	-8.3	-2.3	-11.0	-5.7	13.1	5.9	-2.8	-0.9	-0.8
Kenya	5.5	5.6	4.5	3.6	2.9	2.2	3.4	5.3	5.2	3.1	2.1
Madagascar	1.2	1.1	4.0	-7.0	1.1	2.2	0.5	1.5	2.1	4.6	5.0
Nigeria	5.1	6.2	15.0	2.0	6.9	5.4	0.4	2.3	4.4	3.4	2.5
Mauritania	9.7	2.4	3.7	1.6	3.0	-2.4	3.9	3.4	9.6	10.8	5.4
Chad	-9.0	22.8	-4.6	7.7	5.7	-13.4	7.5	-2.3	1.7	1.4	4.0

Table app. 5.34.

Research and development expenditure (% of GNP)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	2.2	2.8	3.0	3.0	..	2.9	2.8	3.0	2.8	..	..
Norway	1.2	1.5	..	1.7	..	1.8	..	1.7	..	1.6	..
Canada	..	1.5	1.5	1.5	1.6	1.5	1.7	1.7	1.6	1.7	..
United States	2.3	2.9	2.8	2.8	2.7	2.6	2.5	2.6	2.6	2.6	..
Sweden	..	3.0	..	3.0	..	3.4	..	3.8	..	..	..
Australia	..	1.2	1.4	..	1.7	..	1.7	..	1.8	..	..
France	..	2.3	2.4	2.4	2.4	2.5	2.4	2.3	2.3	2.3	..
Netherlands	1.9	2.1	2.0	1.9	2.0	2.0	2.0	2.1	2.1	..	..
United Kingdom	..	2.2	2.2	2.2	2.1	2.2	2.1	2.0	2.0	..	..
Finland	..	1.6	2.0	2.2	2.3	2.3	2.4	2.5	2.7	2.8	..
Greece	..	..	..	0.4	..	0.5	..	..	..	..	..
Hungary	..	2.4	1.7	1.1	1.1	1.0	0.9	0.8	0.7	..	..
Argentina	..	..	..	..	..	..	..	0.4	..	..	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mexico	..	0.4	..	..	..	0.2	0.3	0.3	..	..	..
South Africa	..	0.9	..	0.9	..	0.7	..	..	..	..	..
Colombia	..	..	..	..	..	..	..	..	..	..	..
Philippines	..	..	..	..	0.2	..	..	..	..	..	..
Turkey	..	0.6	0.3	0.5	0.5	0.4	0.4	0.4	0.4	..	..
Brazil	..	..	..	..	..	..	0.8	0.8	0.8	..	..
Algeria	..	..	..	..	..	..	..	..	..	..	..
Egypt, Arab Rep.	..	..	..	..	0.2	0.2	0.2	0.2	0.2	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..
India	0.6	0.8	0.8	0.8	0.7	0.8	0.7	..	..	..	..
Ghana	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..
Kenya	..	..	..	..	..	..	..	..	..	..	..
Madagascar	0.2	..	..	..	..	..	..	0.2	..	..	..
Nigeria	..	0.1	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..

Table app. 5.35.

Labour force, female (% of total)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	37.9	38.8	39.8	40.0	40.2	40.4	40.6	40.8	40.9	41.0	41.2
Norway	40.5	42.7	44.9	45.1	45.2	45.4	45.5	45.7	45.8	46.0	46.1
Canada	39.5	41.8	44.0	44.2	44.4	44.5	44.7	44.9	45.1	45.3	45.4
United States	41.0	42.7	44.3	44.5	44.7	44.8	45.0	45.2	45.4	45.5	45.7
Sweden	43.8	45.8	47.7	47.7	47.7	47.8	47.8	47.8	47.8	47.9	47.9
Australia	36.8	39.0	41.3	41.6	41.8	42.1	42.3	42.6	42.8	43.0	43.3
France	40.1	41.8	43.4	43.6	43.8	43.9	44.1	44.3	44.5	44.6	44.8
Netherlands	31.5	35.2	38.9	39.1	39.2	39.4	39.5	39.7	39.9	40.1	40.2
United Kingdom	38.9	40.7	42.4	42.6	42.7	42.9	43.0	43.2	43.4	43.6	43.7
Finland	46.5	46.8	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	47.9
Greece	27.9	31.6	35.4	35.7	35.9	36.2	36.4	36.7	36.9	37.1	37.4
Hungary	43.3	43.7	44.0	44.1	44.2	44.3	44.4	44.5	44.5	44.6	44.6
Argentina	27.6	28.0	28.5	29.0	29.5	29.9	30.4	30.9	31.4	31.8	32.3
Mexico	26.9	28.5	30.0	30.3	30.7	31.0	31.4	31.7	32.0	32.3	32.6
South Africa	35.1	36.0	36.9	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.6
Colombia	26.2	31.0	35.9	36.2	36.5	36.8	37.1	37.4	37.7	37.9	38.2
Philippines	35.0	35.8	36.6	36.7	36.8	37.0	37.1	37.2	37.3	37.4	37.6
Turkey	35.5	35.0	34.6	34.9	35.2	35.5	35.8	36.1	36.4	36.7	37.0
Brazil	28.4	31.6	34.8	34.9	35.0	35.0	35.1	35.2	35.3	35.3	35.4
Algeria	21.4	21.3	21.1	21.8	22.5	23.1	23.8	24.5	25.1	25.7	26.4
Egypt, Arab Rep	26.5	26.8	27.0	27.3	27.7	28.0	28.4	28.7	29.0	29.4	29.7
Zimbabwe	44.4	44.3	44.2	44.2	44.3	44.3	44.4	44.4	44.4	44.4	44.5
India	33.7	32.5	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	32.1

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	51.0	51.0	50.9	50.9	50.8	50.8	50.7	50.7	50.7	50.6	50.6
Cameroon	36.8	36.9	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8
Kenya	46.0	46.0	45.9	45.9	46.0	46.0	46.1	46.1	46.1	46.1	46.1
Madagascar	45.2	45.1	45.0	45.0	44.9	44.9	44.8	44.8	44.8	44.8	44.7
Nigeria	36.2	35.8	35.4	35.5	35.6	35.7	35.8	35.9	36.0	36.1	36.3
Mauritania	45.0	44.7	44.3	44.2	44.2	44.1	44.1	44.0	43.9	43.8	43.8
Chad	43.4	43.7	44.0	44.1	44.2	44.2	44.3	44.4	44.5	44.5	44.6

Table app. 5.36.

High technology exports (current US$)

	1991	1992	1993	1994	1995	1996	1997	1998
Japan	71061389312	76684378112	83562061824	95225208832	110703493120	100708524032	103963279360	94776541184
Norway	1161978368	1328243456	1230453760	1262214656	1525136000	1606024192	1726215296	1888820992
Canada	11700963328	11679625216	12203066368	14121481216	17616738304	19600379904	20647911424	21735979008
United States	97387839488	104199061504	104633434112	114979266560	126349049856	137047728128	162076327936	170681303040
Sweden	5969303552	6100849664	5309246464	6539451904	9808575488	11776745472	12467691520	13724706816
Australia	862373184	952702720	1172656000	1735911936	1841206016	1938695040	1941678848	1564150400
France	30473527296	32829011968	30089973760	33895835648	42517463040	41994932224	47628607488	54183206912
Netherlands	13638313984	15842567168	17860839424	19345057792	26347491328	29279070208	34766774272	35376697344
United Kingdom	33964189696	34589630464	34634387456	41291132928	51515219968	55431348224	58772426752	64460845056
Finland	1359217792	1794756736	2158981888	3177586176	4927863296	5500604928	6542404096	8124388864
Greece	106223104	89800000	142121200	146564800	291173088	317395392	309302208	422175904
Hungary	..	277606016	318476992	347396000	591241984	513256000	2658033920	3891254016
Argentina	242063696	227900400	236958496	213963696	242092704	354577504	402292096	491362592
Mexico	1210681984	4002255872	4852922880	7017516544	9959225344	12013255680	15826820096	19266136064
South Africa	..	421996512	443734304	474724608	699510784	728352896	982040704	923056768
Colombia	125565104	150717200	154551008	160704800	231547008	243701792	280384384	303442592
Philippines	1987073408	1109122944	1409625728	1782473600	2439405312	9783952384	14238879744	18906904576

	1991	1992	1993	1994	1995	1996	1997	1998
Turkey	87408096	118006800	145319600	214596000	188959008	272572512	419007008	444565600
Brazil	862812288	900451392	861664576	1067646592	1154304256	1527518464	2066834944	2554166528
Algeria	..	4313400	5673800	1897400	1666400	2456800	4599400	..
Egypt, Arab Rep	..	..	..	4427500	6145700	5578700	3734600	2407100
Zimbabwe	3390300	3217700	3106200	6039400	6935000	13034200	13195300	..
India	395284992	352845184	430605184	641954496	1053282688	1302673152	1313690368	..
Ghana	..	1181000	..	..	..	..	..	..
Cameroon	12361600	..	..	..	3203200	2483500	..	..
Kenya	7028500	7552900	9011500	15756300	17811800	21031700	21546200	20291500
Madagascar	726400	393100	4380600	767700	595500	1002200	654100	..
Nigeria	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..

Table app. 5.37.

Unemployment, total (% of total labour force)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	2.0	2.6	2.1	2.1	2.2	2.5	2.9	3.2	3.4	3.4	..
Norway	1.7	2.7	5.1	5.4	5.9	6.0	5.4	5.0	4.8	4.1	..
Canada	7.5	10.5	8.1	10.4	11.3	11.2	10.4	9.5	9.7	9.2	..
United States	7.1	7.2	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	..
Sweden	2.0	2.8	1.6	2.9	5.2	8.1	7.8	7.6	8.0	7.9	..
Australia	5.9	7.9	7.0	9.5	10.5	10.7	9.2	8.1	8.5	8.4	..
France	6.1	10.2	9.2	9.1	10.1	11.1	12.4	11.6	12.1	12.3	..
Netherlands	4.6	13.1	7.4	6.9	5.5	6.1	6.8	7.0	6.5	5.5	..
United Kingdom	..	11.2	6.8	8.3	9.7	10.3	9.6	8.6	8.2	7.1	..

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Finland	4.6	5.0	3.4	7.5	13.1	17.6	18.2	17.0	16.1	14.4	..
Greece	2.4	7.8	7.0	7.7	7.8	9.4	8.9	9.1	9.7	9.6	..
Hungary	..	..	1.7	8.5	9.8	11.9	10.7	10.2	9.8	8.7	..
Argentina	2.3	5.3	9.2	6.3	7.2	9.1	11.7	15.9	16.3	..	..
Mexico	..	..	..	3.0	3.1	3.2	4.2	5.7	4.4	3.5	..
South Africa	..	..	..	..	..	..	4.4	4.5	5.1	..	..
Colombia	..	..	10.2	9.8	9.2	7.8	7.6	8.7	11.9	12.1	..
Philippines	4.8	6.1	8.1	9.0	8.6	8.9	8.4	8.4	7.4	..	..
Turkey	..	11.2	8.0	7.9	8.1	7.7	8.1	6.9	6.1	6.4	..
Brazil	2.8	3.4	3.7	..	6.5	6.2	..	..	6.9	..	..
Algeria	..	..	19.7	21.1	23.8	..	24.4	28.1	..	26.4	..
Egypt, Arab Rep.	5.2	..	8.6	9.6	9.0	10.9	11.0	11.3	..	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..
India	..	..	..	..	..	..	..	..	..	..	..
Ghana	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..
Kenya	..	..	..	..	..	..	..	..	..	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..

Table app. 5.38.

Military expenditure (% of central government expenditure)

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	5.6	6	6.2	6.3	6.4	6.4	6.7	6.5	6.6	..
Norway	7.5	6.9	6.2	6.4	6	6.6	6	6.1	4.8	..
Canada	8.6	8.4	7.7	7.5	7.4	7.1	..	..	..	..
United States	25.7	23.5	19.6	21.1	19.9	18.8	17.4	16.5	16.3	..
Sweden	6.1	6	6	5.3	5.1	5.2	5.3	5.2	5.4	..
Australia	9.4	9.4	9.6	9.2	9.7	9.5	9	8.9	8.6	..
France	8.8	8.4	8.1	7.6	7.3	7.2	6.5	6.3	6.4	..
Netherlands	5.4	7.3	6.7	6.9	6.2	6.6	5.6	6.7	6.4	..
United Kingdom	12.6	11.2	11	9.3	8.7	8.3	7.3	7.4	7.1	..
Finland	5.4	5	5.2	4.3	4.2	4.4	4.3	4.3	..	..
Greece	13.8	12.7	12.4	13.5	12.1	9.4	11.3	12.4	13.8	..
Hungary	15.3	4.1	4.1	3.8	3.5	3.3	2.9	3.5	4.3	..
Argentina	12.4	16.7	11.5	16	12.4	12.2	11.9	11.2	6.3	..
Mexico	2.6	2.5	3.1	3.7	3.8	4.3	3.9	3.5	6.2	..
South Africa	11.6	13.5	11.6	9.8	8.6	8.6	7.9	7.3	5.6	..
Colombia	10.3	17.6	17.3	14.7	18.8	17.3	17.9	19.2	19.9	..
Philippines	9.5	10.7	10.5	10.2	11.5	10.5	7.9	8.8	7.9	..
Turkey	17.9	20.3	17.9	18.8	15.8	17.4	17.5	15.4	14.7	..
Brazil	2.1	4.6	4.9	3.5	3.4	3.2	3.9	..	..	..
Algeria	6.3	7.7	..	5.9	8.1	9.5	9.4	10.6	12	..
Egypt, Arab Rep.	22.1	10.1	10	8.5	9.3	8.4	8.7	10.9	11	..
Zimbabwe	14.4	14.8	12.6	10.1	9.9	11.5	10.4	8.9	11.9	..
India	15.7	13.2	12.9	12.4	13.3	13.9	12.7	14.7	14.3	..

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Ghana	7.2	3.4	4.3	4.6	4.8	3.1	4.6	3	2.4	..
Cameroon	8.3	7.3	6.5	8.2	10.2	11.7	19.1	15.5	17.7	..
Kenya	8.4	9.8	8.4	9.9	6.6	5.4	6.2	6.3	7.2	..
Madagascar	8	6.9	7	5.4	6.1	5.1	5	7	8.5	..
Nigeria	9.4	9.5	13.4	15.6	10	16	13.3	14.4	12.3	..
Mauritania	25	12.3	12.1	13.3	8.7	10.3	10.9	10.1	9.8	..
Chad	6.1	16.5	19	17.3	..	11.1	12.2	9.7	12.6	..

Table app. 5.39.

GDP per capita, PPP (current international $)

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	9029	12300	19062	20282	21350	21841	22357	23212	24511	24520	23257
Norway	9938	13648	18389	19410	20829	21749	23284	24694	26114	26573	26342
Canada	11174	14496	19672	19577	20385	21140	22202	23085	23296	23625	23582
United States	12674	16304	22537	22698	24102	24969	26166	27395	28513	29406	29605
Sweden	9810	12702	17537	17708	18129	18028	18877	20031	20424	20546	20659
Australia	9524	12355	16484	16807	17945	19076	20163	21268	21771	22083	22452
France	9551	12005	17278	17804	18708	18776	19614	20492	20889	21056	21175
Netherlands	9506	11796	16848	17579	18601	19035	19918	20812	21550	21961	22176
United Kingdom	8427	11007	16144	16202	16776	17449	18511	19465	20006	20380	20336
Finland	8739	11697	17172	16321	16353	16447	17466	18764	19525	20414	20847
Greece	6577	8145	11049	11615	12128	12132	12577	13147	13544	13790	13943
Hungary	5159	6802	9009	8181	8300	8459	8913	9315	9550	9914	10232
Argentina	6429	6535	7448	8408	9586	10180	10869	10736	11290	11944	12013
Mexico	4241	4990	6225	6544	6953	7117	7451	7061	7357	7637	7704

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
South Africa	5890	6444	7934	7913	7924	8029	8279	8582	8829	8783	8488
Colombia	3288	3938	5629	5826	3413	4516	6006	6151	6131	6278	6006
Philippines	2239	2215	3083	3079	3154	3217	3349	3519	3668	3727	3555
Turkey	2328	3108	4663	4749	5178	5663	5340	5804	6146	6461	6422
Brazil	3917	4444	5346	5442	5726	5877	6218	6572	6751	6828	6625
Algeria	3111	4082	4546	4507	4669	4564	4503	4697	4802	4753	4792
Egypt, Arab Rep.	1077	1602	2343	2380	2541	2617	2722	2870	2981	3054	3041
Zimbabwe	1437	1774	2385	2508	2317	2346	2499	2512	2686	2713	2669
India	642	893	1382	1399	1513	1592	1721	1877	1996	2036	2077
Ghana	1029	1026	1394	1465	1545	1610	1619	1685	1730	1740	1735
Cameroon	986	1597	1556	1494	1483	1423	1371	1415	1458	1471	1474
Kenya	584	662	930	939	945	948	953	997	1021	1006	980
Madagascar	644	620	784	741	761	772	765	777	774	767	756
Nigeria	494	496	701	742	778	812	817	832	813	813	795
Mauritania	929	1179	1273	1305	1347	1412	1471	1534	1578	1585	1563
Chad	384	613	751	817	896	749	818	817	831	832	856

Table app. 5.40.

Unfulfilled human development indices of nations

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Japan	0.154	0.128	0.093	0.088	0.087	0.071	0.066	0.061	0.054	0.053	0.055
Norway	0.154	0.125	0.090	0.085	0.080	0.076	0.071	0.066	0.062	0.061	0.060
Canada	0.128	0.104	0.083	0.081	0.077	0.074	0.070	0.067	0.065	0.063	0.063
United States	0.127	0.108	0.086	0.085	0.080	0.079	0.076	0.073	0.069	0.066	0.064
Sweden	0.154	0.133	0.110	0.104	0.083	0.083	0.078	0.073	0.071	0.070	0.069
Australia	0.196	0.159	0.126	0.118	0.110	0.082	0.078	0.075	0.072	0.071	0.068
France	0.181	0.149	0.101	0.091	0.086	0.085	0.080	0.077	0.075	0.073	0.073
Netherlands	0.155	0.116	0.093	0.090	0.085	0.084	0.081	0.078	0.076	0.075	0.074
United Kingdom	0.195	0.172	0.134	0.124	0.097	0.095	0.090	0.083	0.084	0.081	0.081
Finland	0.160	0.133	0.102	0.104	0.103	0.100	0.094	0.090	0.086	0.083	0.080
Greece	0.230	0.192	0.141	0.134	0.128	0.124	0.124	0.114	0.109	0.107	0.106
Hungary	0.251	0.232	0.203	0.210	0.205	0.190	0.181	0.170	0.163	0.159	0.158
Argentina	0.262	0.243	0.198	0.192	0.186	0.184	0.182	0.173	0.161	0.149	0.139
Mexico	0.353	0.323	0.289	0.286	0.279	0.273	0.265	0.261	0.252	0.241	0.231
South Africa	0.381	0.351	0.315	0.307	0.300	0.288	0.276	0.265	0.255	0.246	0.252
Colombia	0.381	0.346	0.302	0.308	0.318	0.299	0.379	0.274	0.265	0.259	0.257
Philippines	0.369	0.350	0.303	0.299	0.292	0.286	0.279	0.275	0.264	0.260	0.261
Turkey	0.463	0.418	0.354	0.345	0.330	0.316	0.313	0.304	0.294	0.283	0.278
Brazil	0.408	0.385	0.360	0.354	0.347	0.344	0.337	0.324	0.313	0.311	0.311
Algeria	0.526	0.444	0.385	0.380	0.372	0.368	0.364	0.355	0.346	0.340	0.332

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Egypt	0.560	0.498	0.435	0.431	0.421	0.415	0.406	0.393	0.391	0.385	0.381
Zimbabwe	0.518	0.458	0.420	0.414	0.421	0.425	0.423	0.423	0.420	0.420	0.425
India	0.608	0.558	0.504	0.498	0.485	0.478	0.470	0.460	0.452	0.446	0.442
Ghana	0.579	0.553	0.517	0.503	0.493	0.483	0.467	0.453	0.458	0.550	0.446
Cameroon	0.608	0.547	0.515	0.511	0.507	0.507	0.507	0.502	0.497	0.494	0.493
Kenya	0.588	0.557	0.514	0.509	0.507	0.510	0.514	0.514	0.516	0.519	0.524
Madagascar	0.624	0.604	0.568	0.569	0.563	0.559	0.557	0.552	0.549	0.546	0.544
Nigeria	0.698	0.657	0.618	0.609	0.598	0.586	0.578	0.569	0.561	0.551	0.549
Mauritania	0.675	0.639	0.618	0.613	0.606	0.599	0.592	0.586	0.580	0.575	0.572
Chad	0.785	0.736	0.699	0.689	0.679	0.685	0.675	0.669	0.662	0.655	0.650

Abbreviations:

App/app	–	African Priority Programme for Economic Recovery
Approx.	–	Approximate/ly
EAI	–	Educational Attainment Index
et al	–	and others
etceteras	–	and so on
FDI	–	Foreign Direct Investment
GATT	–	General Agreement on Tariff and Trade
GDP	–	Gross Domestic Product
GDPI	–	Gross Domestic Product Index
GNP	–	Gross National Product
HDI	–	Human Development Index
HDR	–	Human Development Report
IBRD	–	International Bank for Reconstruction and Development or World Bank
ILO	–	International Labour Organisation
IMF	–	International Monetary Fund
ISCED	–	International Standard Classification of Education
LEI	–	Life Expectancy Index
Max	–	maximum
Min	–	minimum
NGOs	–	Non–Governmental Organisations
OECD	–	Organisation for Economic Co–operation and Development
PPP	–	Purchasing Power Parity
SIDA	–	Swedish International Development Authority
TV	–	Television Set
UN	–	United Nation/s
UNDP	–	United Nation Development Programme
UNIDO	–	United Nations Industrial Development Organization
UNICEF	–	United Nations International Children Emergency Fund
UNRISD	–	United Nations Research Institute for Social Development
USA	–	United States of America
USSR	–	Union of Soviet Socialist Republics
WHO	–	World Health Organisation

The contents of economic and social development policy and their effects on the rich and poor countries under the concepts of convergence and divergence in global economy and social development, is made relevant through empirical review of global capitalist trade which has a history that has lasted hundreds of years. Economic growth policy has constantly been in conflict with the objectives of social policy over the problems of eradicating global poverty. Empirical investigation and analysis indicate that economic growth policy ignores equal direct investments for human well-being in most nations. The accumulation of capital by nations, corporations, and rich individuals increased worldwide competitions for markets and profits. The development of these intense competitions that are associated with expertise and ownership of competitive resource in winning greater profits from the global economy have resulted in separating the world into 'the rich industrial', 'the semi-industrial' and 'the poor developing' nations. Each group of nations has different level of development, wealth, social provisions, technological capability in world economy, and these reflect the levels of human well-being in the nations. The existence of huge poverty gaps and inequalities between nations and individuals further necessitate the central role that social policy plays in ensuring that at all stages of programme design, resources allocation and programme implementation, the fundamental principles of development is upheld. Measurement and analysis become crucial to elucidate the effects of various economic and social development policies as they relate to unequal developments, poverty and problems in the translation of economic benefits to whole human population as envisaged by the promises of convergence and divergence that propel global economy and social development in the nations.

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