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REDISTRIBUTION AND RISK SHARING IN EMU

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Abstract: This study analyses possibilities for independent national redistribution and risk sharing policy in EMU by reviewing literature on fiscal federalism. The currency union will not directly affect the national welfare policy. It might increase mobility of people and capital, which would tighten tax competition and cause pressures for harmonising. The main effect on national policy comes from losing the national monetary policy and from pressures for fiscal policy coordination. For countries which are especially prone to asymmetric shocks the strict budget constraints of the stability pact might cause problems in national policy. There is also one chapter about Finland as an example of a small open welfare economy, which has traditionally used active exchange rate policy as an instrument of adjustment. Special emphasis is placed on the unique agreement between employees and employers on ”buffer funds” for stabilising labour costs and employment in case of external economic shocks.

Key words: Redistribution, Risk Sharing, Stabilisation, Fiscal Federalism, European Integration

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Tiivistelmä: Tutkimuksessa tarkastellaan talousteoreettisen kirjallisuuden valossa, minkälaiset mahdollisuudet yksittäisellä EMU-jäsenellä on harjoittaa itsenäistä tulonjako- ja riskinjakopolitiikkaa. Harmonisointipaineita verotukseen ja sosiaalietuuksiin voi aiheuttaa ihmisten ja pääomien liikkuvuuden lisääntyminen valuuttaunionissa. EMUn suurin vaikutus kansalliseen hyvinvointipolitiikkaan aiheutuu siitä, että finanssipolitiikkaa koordinoiva vakaussopimus asettaa rajoituksia budjettialijäämille ja säätelee siten kansallisen verotuksen ja julkisten menojen tasoa. Tämän merkitys riippuu siitä, kuinka valuuttaunioni onnistuu ja mikä on yksittäisen maan alttius epäsymmetrisille häiriöille. Jos EMU lisää häiriöitä, kasvaa tarve tulon- ja riskinjakamiseen samalla kun mahdollisuudet siihen vähenevät. Lopuksi on pohdittu Suomen erityistapausta esimerkkinä pienen avoimen talouden ja pitkälle kehittyneen hyvinvointivaltion sopeutumisesta valuuttaunioniin. Suomessa ulkoisia häiriöitä on perinteisesti torjuttu devalvaatioin, jotka ovat jakaneet tuloja ja riskejä avoimen ja suljetun sektorin välillä. Nyt korvaavaa sopeutumismekanismia on haettu kansainvälisesti ainutlaatuisesta puskurirahastojärjestelmästä.

Asiasanat: Tulonjako, riskinjako, stabilisaatio, fiskaalinen federalismi Euroopan integraatio

Finnish Summary/ Suomenkielinen tiivistelmä

Tutkimuksessa on tarkasteltu talousteoreettisen kirjallisuuden valossa, minkälaiset mahdollisuudet yksittäisellä valuuttaunionin jäsenmaalla on harjoittaa itsenäistä tulonjako- ja riskinjakopolitiikkaa.

Suomen erityisasemaa on pohdittu siitä lähtökohdasta, että Suomi on pitkälle kehittynyt pohjoismainen hyvinvointivaltio, joka on riippuvainen vientituloista, mutta on yksipuolisen tuotantorakenteensa vuoksi erityisen altis ulkoisille taloudellisille häiriöille. Suomi on myös noudattanut aktiivista valuuttakurssipolitiikkaa koko toisen maailmansodan jälkeisen ajan, mikä tekee valuuttaunionin jäsenyydestä Suomen kohdalla erityisen suuren kysymyksen. Suomessa toimialatason tulonjakoa ja riskinjakoa erityisesti avoimen ja suljetun sektorin välillä on perinteisesti harjoitettu valuuttakurssipolitiikan avulla. Tämän kansallisen tason instrumentin poistuminen valuuttaunionissa on herättänyt Suomessa keskustelua korvaavista järjestelyistä ja tuloksena on ollut kansainvälisesti ainutlaatuinen sopimus puskurirahastoista.

Varsinainen sosiaalipolitiikka on subsidiariteettiperiaatteen mukaisesti kansallisen tason kysymys ja jäsenmaat ovat vapaat järjestämään yksilötason tulon- ja riskinjakopolitiikkansa haluamallaan tavalla. Käytännössä sitä kuitenkin rajoittavat kansainvälinen verokilpailu sekä EMUn vakaussopimukseen liittyvät vaatimukset budjettitasapainolle.

EMUn vaikutuksia *liikkuvuuteen* ja liikkuvuuden vaikutuksia tulonjako- ja riskinjakopolitiikkaan on erittäin vaikea arvioida. EMU saattaa lisätä ihmisten liikkuvuutta EU:n sisällä, kun palkkojen, verotuksen ja sosiaalietuuksien vertailu helpottuu yhteisen valuutan myötä. Mahdollisesti myös yritystoiminnan kansainvälistyminen ja alueellisen kehityksen eriytyminen voivat lisätä liikkuvuutta EMUssa. Teoreettisessa kirjallisuudessa tarkastellaan yleensä joko puhtaasti *työmarkkinaperusteista* liikkuvuutta tai nk. *fiskaalista* liikkuvuutta, joka on seurausta maiden välisistä eroista vero- ja sosiaalipolitiikassa. Se, kumpaa liikkuvuuden muotoa korostetaan, johtaa teoreettisissa malleissa usein päinvastaisiin johtopäätöksiin siitä, tulisiko tulonjakopolitiikkaa EU:ssa keskittää ja yhtenäistää vai tulisiko kunnioittaa kansallisen tason päätöksentekoa ja alueellisesti erilaisia ratkaisuja.

Työmarkkinoiden tehokkaan toiminnan katsotaan vaativan suurempaa harmonisoimista, sillä fiskaaliset motiivit voivat jopa vääristää työvoiman kohdentumista yhteisillä markkinoilla. Tämä olisi omiaan kiihdyttämään verokilpailua maiden välillä sekä lisäämään tulonsiirtojen valumista yli rajojen. Nk. Tiebout-kirjallisuus olettaa, että alueet kilpailevat hyvistä veronmaksajista paitsi alhaisen verotuksen, myös laadukkaiden julkisten palvelujen avulla. Tämän seurauksena voi olla yhtä hyvin hyvinvointijärjestelmien yhtenäistyminen kuin niiden eriytyminenkin. Jos ihmisillä on erilaisia preferenssejä julkisen sektorin roolista hyvinvointipolitiikassa, se johtaisi siihen, että alueet erikoistuvat ja sen seurauksena valittavissa olisi erilaisia verojen ja hyvinvointipalvelujen yhdistelmiä.

Kansallista vastuuta EMUn sisäisessä riskinjaossa korostetaan vakaussopimuksessa erityisesti nk. *no-bail-out* säännöllä. Se tarkoittaa, että muut EMU-maat eivät auta ylivelkaantunutta jäsenvaltiota, jotta ei kannustettaisi holtittomaan kansalliseen finanssipolitiikkaan (moral hazard -ongelma). Toinen näkemys korostaa EU-tason yhteisvastuuta, jotta vältettäisiin ongelmien leviäminen muihin valuuttaunionin jäsenmaihin.

Suomi on perinteisesti jakanut riskejä avoimen ja suljetun sektorin välillä sekä tehnyt tulonsiirtoja työ- ja pääomatulojen välillä devalvaatioiden avulla, mikä on osaltaan johtanut Suomen vientirakenteen yksipuolistumiseen ja altistanut Suomen taloutta ulkoisille häiriöille. Suomen valuuttakurssipolitiikassa on pitkällä aikavälillä noudatettu nk. *kilpailukykynormia.* Jos Euroopan keskuspankki tulee noudattamaan tiukkaa vakaan valuutan politiikkaa tai jopa inflaationormia (vahvan valuutan politiikkaa ulkoisen inflaation torjumiseksi), olisi se Suomen kannalta suuri muutos pitkän aikavälin politiikkaperinteeseen. Suomi onkin 1990-luvulla jossain määrin jo sopeutunut alhaiseen inflaatioon.

Menetettävän valuuttakurssi-instrumentin korvikkeena Suomeen on päätetty luoda puskurirahastojärjestelmä, jolla pyritään tasaamaan työvoimakustannusten vaihteluja ja siten pehmentämään ulkoisten shokkien vaikutuksia erityisesti työllisyyteen. *Työttömyysvakuutusmaksuista* kootaan 4-6 vuoden aikana noin 3 miljardia markkaa työttömyysvakuutusrahastoksi (joka voi myös velkaantua). Toinen puskurirahasto koostuu *työeläkemaksuista* ja on osa TEL-järjestelmää. Sen tavoiteltu koko on 3,5 miljardia markkaa. Yhteensä rahastot olisivat noin 2,5 prosenttia palkkasummasta. Rahastojen tavoitteena on pehmentää talouden ulkoisten häiriöiden vaikutuksia työvoimakustannuksiin ja siten työllisyyteen. Tutkimuksessa on käyty läpi myös puskurirahastoja kohtaan osoitettua kritiikkiä. Yleensä kriittisten arvioiden taustalla on näkemys, että työttömyys on Suomessa pääosin rakenteellista, kun taas rahastoja puolustavat tahot korostavat työllisyyden riippuvuutta hintakilpailukyvystä ja ulkoisista häiriöistä.

Yhteisen valuutan myötä syvenevä taloudellinen integraatio voi nostaa esille vaatimuksia yhdenmukaisesta kohtelusta yksilötason verotuksessa ja sosiaalietuuksissa koko EMU-alueella. Se lisäisi tulonjako- ja riskinjakopolitiikan keskittämispaineita, jolloin vastuuta hyvinvointipalvelujen tarjoamisesta, tuottamisesta ja rahoittamisesta jaettaisiin uudelleen paitsi alueellisesti, myös eri päätöksentekotasojen välillä. Tosin oikeudenmukaisuuskäsitteisiin vaikuttavat kulttuurierot, mikä voi johtaa erojen säilymiseen EMUssa samalla tavalla kuin erot ovat säilyneet myös USA:n osavaltioiden välillä työvoiman aktiivisesta liikkuvuudesta huolimatta.

Subsidiariteettiperiaate voi toimia myös EMUssa siten, että perhe- ja työmarkkinarakenteiden kulttuuriset erot voidaan ottaa huomioon tulon- ja riskinjakopolitiikan yksityiskohdissa. Kuitenkin suuret linjat sekä verotuksessa että julkisen kulutuksen tasossa määräytyvät EMUssa entistä enemmän finanssipolitiikan koordinaation tarpeesta ja budjettitasapainolle asetetuista rajoitteista. Eräs peruskysymys EMUssa on erilaisten päätöksentekotasojen (erityisesti paikallisen, kansallisen ja EU-tason) välisen työnjaon organisointi. Suomen sopeutuminen niin EMUn konvergenssikriteereihin kuin myöhemmin vakaussopimuksen vaatimuksiin edellyttää monenlaisten, sekä rakenne- että suhdannepoliittisten toimenpiteiden yhteiskäyttöä ja sovittamista EU-tason politiikkaan.

EMUn merkittävimmät vaikutukset suomalaiseen hyvinvointivaltioon aiheutuvat toisaalta talouspolitiikan instrumenttivalikoiman muutoksista, toisaalta EMUn vaikutuksista taloudelliseen kehitykseen. Mikäli yhteiseen valuuttaan siirtyminen lisää ulkoisia häiriöitä Suomen taloudessa nykyisestä, korostaa se aktiivisen tulonjaon ja riskinjaon tarvetta samalla kun se rajoittaa niiden harjoittamisen taloudellisia mahdollisuuksia. Suomalainen tulonsiirtojärjestelmä on rakennettu ruotsalaisen mallin mukaan matalan työttömyyden oloihin. Ongelmia aiheutuu, mikäli työttömyysaste jää pysyvästi korkealle tasolle tai mikäli työttömyysasteen vaihtelut kasvavat. Jos sen sijaan valuuttaunioni osoittautuu toimivaksi ja edistää taloudellista kasvua ja vakautta, on se omiaan lisäämään myös hyvinvointijärjestelmän resursseja.

Contents

1. Introduction

This is a survey of the theoretical literature on income redistribution and risk sharing in fiscal federalism. A currency union with free mobility of labour and capital has some common features with traditional federations and confederations. Therefore the literature can be applied for the discussion about the future of welfare policy in EMU. The main interest here is in the questions, whether EMU would change the national welfare policy aims and instruments and if there is need for EU level risk sharing and redistribution arrangements.

Those constraints arising from increasing mobility of people and tax competition with other EMU countries are here called *horisontal restrictions* for national redistribution and risk sharing policy. We do not discuss capital mobility, because in most EU countries capital taxation has already approached the interational level and in fact income taxation is an important source of social security financing. These horisontal restrictions do not arise from EMU, though a common currency can strengthen this development which has started already in the early phase of European integration.

Macroeconomic limitations for national redistribution and risk sharing policy which arise directly from the common currency are here called *vertical restrictions.* A country which joins EMU can no longer devalue its currency or use interest rate changes to activate growth and employment. Its use of public debt to finance increasing unemployment costs or tax reductions in a recession is limited. Public expenditure is more closely linked to tax income than before. The EU-level monetary policy reacts mainly to symmetric, union-level shocks. The real problem is to find instruments against asymmetric shocks, which are typically caused by a country specific decrease in export prices, collapse in export demand, etc. There have been calls for EU-level regional transfers as well as purely national arrangements to smoothen the effects of such shocks on employment especially.

In the third part of the study we have a look at *Finland*. It represents a small open economy with an advanced welfare system, which has traditionally pursued a very active exchange rate policy. Numerous special stabilising arrangements like export deposits, investment reserves etc. have in the last few decades often complemented devaluations. Finland is also considered prone to asymmetric economic shocks because of its small size and specific structure of exports. An interesting phenomenon in the Finnish EMU policy is the introduction of national stabilisation funds ("buffer funds") which aim to smoothen the adjustment of labour markets on external shocks. As far as is known, such arrangements have not been even seriously discussed in other EMU candidate countries. These new instruments should in future substitute for devaluations. In the end we discuss about the structural changes in public economy and welfare systems that can take place as a result of the deepening integration process.

2. Horisontal Constraints: Tax Competition and Factor Mobility

Much of the theoretical discussion on multilevel fiscal systems has taken place in the context of traditional federations or metropolitan areas and is strongly influenced by US experiences. Early writings of Buchanan, Samuelson, Tiebout, Stigler and R. Musgrave are the foundations of this literature. Buchanan (1950) presented one of the very first economic analysis of redistribution policy in fiscal federalism as he discussed about applying the "equal treatment of equals" principle of Pigou to a multilevel economic system. A few years later Samuelson (1954) defined the concept of a public good. He discussed about the problem of getting people to reveal their preferences on public goods and getting them to pay accordingly.

Two years later Tiebout (1956) offered a solution to the problem by emphasising the local nature of many public goods as well as mobility of households among different localities. His idea was that people would reveal their preferences by simply moving to that locality where public good provision best reflects their preferences. This simple and unformalised model of Tiebout has been very influential in the literature of fiscal federalism and still, more than forty years later, inspires much discussion. Although it deals with resource allocation, the basic idea of Tiebout cannot be ignored in the redistribution literature either. It raises the question of whether international migration flows react to social security levels and income tax rates or to employment situations and wage levels.

Stigler (1957) first presented the basic arguments for centralised redistribution policy. Musgrave (1959) discussed in the late 1950s about different public sector functions and the right assignment of them between central and lower level governments. Just like stabilisation, and unlike allocation, redistribution was strongly considered as a responsibility of the central government. This has since then been the dominating view the literature over the decades. It has been referred as "a common theme, the standard argument, the basic insight, the traditional view, the orthodox literature, the conventional wisdom" etc. This view is well presented in a classic book by Oates on fiscal federalism published in 1972.

The first real counter-argument against the conventional approach was presented by Pauly (1973). He argued that preferences on redistribution can vary across regions and therefore redistribution should be decentralised. Since Pauly's article there has been continuous discussion between the two schools, the "centralists" and the "decentralists", of redistribution. These approaches are widely based on different assumptions, not only on mobility of people, but also on preferences, utility interdependence etc.

In the late 1980s and in the 1990s the deepening of European integration, especially progress in EMU, inspired a wide body of literature on fiscally induced mobility of people and other problems related to redistribution in a currency union. Mobility of people is an important determinant of the optimal redistribution policy as it causes externalities, affects the political decision making process and definition of the welfare function as the size of the population becomes endogenous. Different assumptions on the structure of mobility lead to different recommendations on the optimal assignment of responsibility between the central (EU) and the national level. The special interest here lies in the different conclusions of models based on labour mobility and of those based on pure fiscal mobility. Some discussion is also raised about the position of those who move within the EU for other than fiscal (tax or social benefit) reasons and about the question which authority should take responsibility for them in the risk sharing and redistribution policy.

2.1 Equal Treatment of Equals, Preferences and Utility Interdependence

One of the very basic arguments against decentralised redistribution is the principle of *equal treatment of equals*[1]. Buchanan (1950) uses it in the meaning of geographical neutrality of the fiscal structure so that “an individual should have the assurance that where ever he would desire to reside in the nation, the over-all fiscal treatment should be the same”. He emphasises that equal tax treatment of people with the same income level is not enough, but the benefit side should be taken into account as well: “The balance between the contributions made and the value of public services returned to the individual should be the relevant figure.” When local governments have different fiscal capacities, it means that people in a poor region have to pay higher taxes for the same public good than elsewhere or they simply get less public goods and services for the amount of taxes paid.

An important question arises of whether redistribution itself is a public good[2]. Pauly (1973) applied Tiebout’s idea of local public goods on redistribution and argued that “there is substantial evidence that tastes for redistribution vary across jurisdiction in the same way as they vary on any other local public goods”. When

[1] First presented by Pigou in 1929.

[2] Buchanan (1974) analyses three different cases: redistribution as a private good, as a local public good and as a national public good.

that is the case, decentralisation of redistribution to the local level would be the efficient solution.[3]

These taste differences in redistribution are based on *utility interdependence,* which means that individuals value positively income gains by at least some other individuals. Pauly also used the concept of *spatial dimension,* which can be described as the importance of geographical distance with respect to the utility interdependence.

Different tastes of redistribution can be due to different degrees of altruism or e.g. externalities that affect utility interdependence. These can be, for instance, the effects of inequality on criminality or on general economic development of the society. The spatial dimension as regards the motivation for redistribution means that the rich tend to be more concerned about the poor of their own community than of other areas. The spatial dimension of utility interdependence is discussed also by Ladd and Doolittle (1982).

These are important concepts for Pauly's final conclusions, as the *optimal assignment* of redistribution depends on the spatial effect. If people are strictly concerned about the poor of their own area only, then decentralised redistribution is Pareto-superior compared to a centralised solution. When the geographic distance of the rich from the poor does not affect the degree of utility interdependence between them, then the central government should take care of redistribution. Finally, when there is only some spatial effect, the efficient mechanism is "a federal system, with payments between communities to reflect the interest of the members of one in the poor in another".

If we assume the spatial dimension of utility interdependence, we could apply the concept of *perfect correspondence* coined by Oates (1972) or *perfect mapping* addressed by Breton (1965) on redistribution. That means such a structure of governments that the jurisdiction which determines the level of provision of each public good includes precisely the set of those individuals who consume that good. In redistribution perfect correspondence might be defined so that the optimal decision making unit covers the area within which the utility interdependence is so strong that there is political willingness for transfers from the rich to the poor.

In 1977 Oates argued, as part of the active Tiebout discussion of the 1970s, that if mobility of people was taken into account, the problem looks different. The

[3] Cremer et al. (1995) note that the case for decentralising redistribution is strongest the less immobile are individuals, the more dissimilar are tastes for redistribution over regions, and the more redistribution is implied by Pareto efficiency. Burbidge and Myers (1994) conclude that only if regional authorities have similar preferences for redistribution should the redistribution function be decentralised.

capitalisation effect of mobility ensures that equals will be treated equally, as whatever fiscal advantages are enjoyed they will be paid for in the form of a higher actual rent.

However, Buchanan (1950) assumes that people choose their place of residence by other criteria than preferences about public goods. Actually the main argument for equal treatment of equals in different parts of the federation is that fiscal mobility causes distortions to resource allocation: “If ’equals’ are thus pressed more in one area than in another, provided an incentive for migration of both human and non-human resources into the areas of least fiscal pressures. A considerable distortion of resources from the allocation arising as a result of economic criteria alone might result”, he argues.

The equal-treatment-of-equals principle seems to assume that equals have the same preferences regarding public expenditure and taxation as well as their redistributive effects. If that is not the case, then there is a trade-off between Buchanan’s arguments for centralisation and Pauly’s arguments for decentralisation of fiscal decision making.

2.2 Tiebout Discussion and Fiscal Competition

Tiebout (1956) proclaimed, that in an area with several local units, people (consumer-voters) reveal their preferences on public goods by moving to the community which can best satisfy their needs with the lowest tax rates. The aim of local jurisdictions is to reach an optimal amount of residents. This would lead to efficiency, as the localities would supply the optimal level of public goods. The distribution of the population between localities would be efficient as well.

The Tiebout model is based on the following assumptions. People are fully mobile and will move to the community which best satisfies their preferences. They have full knowledge of differences in public good provision and taxation of different communities. There is a large number of alternative communities for residence. Restrictions due to employment opportunities are not considered. All people are living on dividend income. There are no externalities (“no external economies or diseconomies”) between communities. The policymaker satisfies preferences of permanent residents. For every pattern of public services set this way, there is an optimal community size. There is, however, some fixed factor which limits community size. This assumption is necessary in order to get a determinate number of communities. Finally, communities which are smaller than the optimum size try to attract new residents to lower average costs. Those which are bigger than the optimum size try to diminish their number of residents. Those having just the optimum size try to keep their population constant.

Tiebout's model offered a solution for Samuelson's problem of public goods provision and financing. Tiebout simply argued that the mobility of residents offered a market-like solution and it alone was enough to bring efficiency. If there are no significant mobility costs, then the result should lead to internally homogenous communities, as people with the same preferences move to the same communities. Atkinson and Stiglitz (1980) remark that one result of the Tiebout mechanism can be the strong polarisation of the population so that the rich and the poor could settle down in different communities and regional income differences could grow. This is opposite to the general assumption that labour mobility would equalise wage and productivity levels.

There has been much discussion also on the efficiency of the Tiebout equilibrium, where people can no longer improve their welfare by moving to any other community. According to Wildasin (1986) the efficiency of the Tiebout equilibrium means that mobility leads to efficient allocation of people and to efficient provision of public goods. Efficient allocation does not refer to labour markets but to the size and composition of the local population only.

There has been much criticism against the Tiebout model and especially against its very restrictive assumptions (e.g. Bewley 1981 and Keen 1993). The model ignores externalities and labour market effects, although normally employment opportunities are an important determinant of mobility. Therefore the model works best in a metropolitan area where people can change their community of residence without changing jobs.

2.2.1 Empirical Testing

There exists a large body of literature on testing the Tiebout hypothesis. Rubinfeld (1987) divides these tests into two categories. The first type tests whether the Tiebout model gives an efficient outcome so that in every community each person gets the mixture of public good provision which best reflects his needs. The other type tests if people would really be allocated to communities formed according to different mixtures of public good provision.

A considerable part of the Tiebout tests are based on the capitalisation hypothesis, whereby migration affects housing prices. The prices are expected to rise if there are new residents moving in. If mobility really is induced by differences in public services and taxes between communities, then the housing prices should react to these differences as well. The first test of the Tiebout model based on the capitalisation hypothesis was presented by Oates (1968). He compared trends in school expenditures and housing prices in New Jersey in 1960. If the Tiebout hypothesis were right, then housing prices should be higher in those communities which offered the best public services like schools. So the housing prices would reflect some kind of "entrance fees" to the communities. His results gave support to the Tiebout model.[4]

Actually nobody seems to have tested the Tiebout model directly in its original form asking if people really move as a reaction to fiscal incentives and does fiscal mobility really lead to equilibrium and homogenous communities. Gramlich and Rubinfeldt (1982) made a questionnaire study in Michigan about what kind of public services people prefer. That information was used to estimate demand functions and to analyse if there is bigger regional homogeneity in areas with more alternative communities (like Detroit with numerous suburbs) than in the countryside. If the Tiebout model works, then people should have more homogenous preferences in the metropolitan suburbs.

Most of the empirical research is carried out with US data. Several studies use data on the AFDC (Aid to Families with Dependent Children) beneficiaries. For example, Gramlich and Laren (1984) study the importance of migration of AFDC beneficiaries as a determinant of state benefit levels in the US states. Their data is from years 1974-1981 and they use a pooled cross-section time-series model. The conclusion is that benefit levels of other states have a positive influence on their own state benefits and a negative influence on the number of recipients. The AFDC households are not considered very mobile between states, but when they move they are much more likely to go to a high-benefit state than to a low-benefit state. They saw their results of "very strong, statistically significant migration effect" as an argument for a more centralised redistribution policy in the US.

Another example of using the AFDC data for the US is the study of Schroder (1995). He makes econometric estimates of the price elasticity of welfare benefits and the elasticity of the recipiency ratio. He tested if states will behave strategically in welfare programs because voter demand for welfare is sensitive to the tax price, while the tax price itself changes because of welfare induced migration. They had panel data for the years 1982-1988. It did not give evidence for any substantial tax price elasticity of demand for welfare. Estimates of migration effects on tax price turned out to be very sensitive to specification. The price elasticity of welfare benefits was in most models found to be small, in some cases positive. Contrary to the study of Gramlich and Laren (1984) his research gave no support for centralised redistribution.

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[4] After Oates many authors got similar results and the capitalisation hypothesis was widely accepted as the right way to test Tiebout's idea. However, many critical approaches arose as well. E.g. Edel and Sclar (1974), Hamilton (1976) and Pauly (1976) argued, that in the long term capitalisation was better evidence of the lack of a Tiebout equilibrium. The time dimension (difference between short and long-term effects) was emphasised by Rubinfeld (1987); in the long term the housing markets should react to changes in demand.

Cebula (1990) examined empirically the impact of states' income tax policy on the mobility of people in the US. The data covered years 1975-1980. He wanted to concentrate on purely fiscal mobility and focused therefore on the elderly people only (defined as persons age 65 years or older). The income in this group is generally something else than wage income, which excludes the labour market effect. It so follows the Tiebout model, in which location has no impact on the gross income of the resident.

Few studies have taken place on fiscal mobility of people in Europe. One reason is that intra-EU mobility has been very moderate compared to immigration from non-EU countries to the EU. Another reason might be lack of data or poor comparability of national statistics.

2.2.2 Fiscal Competition

One important argument for decentralisation is that it makes local units compete with each other, which leads to efficiency. In fact competition means that local governments choose such a policy that attracts mobile production factors. Another definition of tax competition is offered by Wilson (1986): it is a situation where public service outputs and tax rates are 'too low' in the sense that the federal government could raise the nation's welfare by requiring each region to increase its public service output. Fiscal competition does not necessarily abolish all redistribution. It can, however, essentially change its structure. When all local governments lower their taxes on mobile tax bases, in the end the only taxes left are benefit taxes.[5] (See also Kanbur and Keen 1993.)

In Tiebout competition localities compete for residents by public good provision, but only to the extent they have reached an optimal size of population. When discussing about the applicability and efficiency of the Tiebout model on redistribution we have to return to the question, of whether redistribution is a *public good* by nature, and especially, if it is a *local* public good.

There are two different attitudes to tax competition in the literature, based on different assumptions on the type of local government. Those who assume that government is a "benevolent social planner" see competition as a negative thing, an impediment for active redistributive policy (see e.g. Sinn 1990 and Wildasin 1992). But those who see a local government as a selfish bureaucrat who just maximises tax income for its own purposes, consider tax competition as a welcome constraint for the government (e.g. Brennan and Buchanan 1980 and Oates and Schwab 1989). Leviathan governments are discussed also by Keen (1993, 1995) and Edwards and Keen (1996).

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[5] Benefit taxes are directly determined by the benefits the taxpayer receives from the public sector. So they are like the "price" to be paid for the services "bought".

Discussion on tax competition and other forms of fiscal competition means basically discussion on the efficiency of the market mechanism vs. efficiency of the political process. Schroder (1995) remarks that the fiscal federalism theory predicts that states will behave in welfare programs strategically because voter ’demand’ for welfare is sensitive to the tax price, while the tax price itself changes because of welfare-induced migration. Politicians agree to pay whatever level of benefits maximises their political support among voters (taxpayers only). Political support for the representative politician is a function of voter utility. Thus the politician solves the problem of maximising the utility of a representative voter.

2.3 Mobility and Externalities

One of the very basic arguments against a decentralised redistribution policy is the view that in the case of free mobility of people there would be strong externalities. This would make it in practise very difficult to pursue a different policy than in other areas.

The special interest in this chapter lies in the comparison of labour mobility and the pure fiscal mobility of taxpayers and social beneficiaries. Pure fiscal mobility models are presented by e.g. Tiebout (1956) as well as Brown and Oates (1987). Pauly (1973) analyses three different cases: first there is *fixed population* jurisdiction and second, *taxpayers* can move, but *welfare recipients* cannot. In the third case only welfare recipients are mobile. In the model of Wildasin (1991) the main emphasis is on labour mobility.

In fact it is not easy to separate *labour mobility* and *fiscal mobility*. The poverty of social beneficiaries is often caused by unemployment. On the other hand, taxpayers might be more concerned about their net income (net wages) after taxes than the level of taxes only. Labour market conditions are very important determinants of migration by middle- and high-income households in response to interjurisdictional tax differentials (Wildasin 1991). Also migration of young poor is often associated with unemployment resulting from losing a job or difficulties in finding the first job.

The ability of local governments to pursue an active redistribution policy strongly depends on the mobility of taxpayers and social beneficiaries. If each local government pursued a different redistribution policy, then the rich (the taxpayers) would move to regions with the lowest tax rates and the poor (the beneficiaries) would move to regions which offer the most generous benefits (adverse selection problem). The outflow of the tax base and the inflow of the beneficiaries would lead to an disastrous fiscal situation. This question was first raised in the literature by Stigler (1957) and has since then been studied and discussed very actively (e.g. Oates 1968, 1972, 1977, Wildasin 1992, 1995, Sinn 1990, 1994).

Models which try to describe local level redistribution in case of free mobility should have some basic characteristics. The number of local units should be greater than one, so that mobility between local jurisdictions and competition among jurisdictions could be possible. People should be heterogeneous so that redistribution makes sense. The model must define who are mobile and who are immobile, whether mobility is a function of fiscal incentives only or of employment situation and wage differences as well and, finally, are there mobility costs.

Mobility of people causes many problems for formalising local level redistribution. Measuring welfare becomes complicated when the population in endogenous. This affects the definition of the objective function of a local government. As Burbidge and Myers (1994) note, many alternatives have been used in local public economics: for example, average utility maximisation, total utility maximisation, net-of-public rent maximisation, median voter decision making, majority decision making, and bureaucratic decision making.

Most models assume that the local government is benevolent, i.e. it maximises some kind of social utility function. A utilitarian social welfare function is used by e.g. Gordon (1983), Hercowitz and Pines 1991, Christiansen, Hagen and Sandmo (1994) and Raff and Wilson (1997). In Lejour and Verbon (1994) the local government maximises the weighted average of high and low risk resident workers.

In a model of Raff and Wilson (1997) local governments are unable to affect the income of the poor. Any subsidy given to the poor immediately leads to an inflow of poor people from other jurisdictions, depressing wages by exactly the amount of the subsidy and leaving the welfare of the poor unchanged. The problem in this kind of analysis is that it ignores mobility costs and expects migration to be extremely sensitive to changes in redistribution policy.[6] Johnsson (1988) remarks that the effects of migration on redistribution policy depends on the *elasticity of migration* responses compared with the *elasticity of labour supply* responses.

Taxes and welfare benefits are determined by majority voting in e.g. Epple and Romer (1991) as well as in Janeba and Raff (1995). In their partial equilibrium model Brown and Oates (1987) have median voting. In Pauly (1973) the poor households have no role in determining the level of benefits. Also in Brown and

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[6] In these conditions the optimal tax rate on mobile households would be zero. Mobility costs are normally ignored, or actually mobility is assumed to be costless. Wildasin (1995) uses, however, a model of costly factor mobility. He also studies the impact of variations in the mobility cost parameter.

Oates (1987) and Wildasin (1991) only the immobile rich control the political process. However, the difference is that in Pauly's model the rich only maximise the welfare of the rich, whereas in the two other models the rich care about the utility of the mobile poor residents of their region, too.

Michel et al. (1995) introduce a dynamic dimension[7] into the analysis on how to define the population entering welfare maximisation or, in case of majority voting, who has the right to vote. In their model immigrants have no voting rights immediately. They become full-fledged citizens only after some time. During the first period of transition, transfers increase and then decrease up to their steady-state level. The welfare of an unskilled national reaches a maximum during the first transition period and then decreases. In the long run, immigration has a negative effect on the welfare of unskilled nationals.

2.3.1 Factors Affecting Migration

What makes mobility of people different from mobility of capital? Are capital owners more rational in their decision making in pure economic terms than workers? Persons have typically private preferences and there are many non-economic factors affecting their mobility decisions. They often have to take into account other people like family members, whereas capital can easily move despite the capital owners' location.

The traditional approach to migration is the *push-pull view*. It emphasises the importance of simultaneous negative push effects of the source country and positive pull-effects of the host country. For instance, differences between domestic and foreign real income levels do not alone explain migration. The expected future return to migration costs is essential. Potential unemployment abroad can weaken the pull effect of higher wages. Changes in the weight of push and pull effects can change the roles between the source and the host countries. In practise this change often means the return of former immigrants back to their home country. (A good example is migration from Finland to Sweden in the 1960s and the 1970s and return migration from Sweden to Finland in the 1980s.)

Elements of *human capital theory* are added to the push-pull view in the *new economics of labour migration,* introduced by Stark and Bloom (1985). The modern approach emphasises the importance of *family* as a decision making unit in migration. The importance of different factors for the migration decision can be different for workers who are single and for those who are bread winners for a family. In general, the marital status has effects on the probability of migration. Net family gains rather than net personal gains motivating migration of families are emphasised by Mincer (1978). Families tend to be less mobile than single

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[7] Also Hercowitz and Pines (1991) model migration among regions as a dynamic setup.

persons, because in families the returns from migration increase less than costs as household size increases. The high labour market participation rate of women lowers family migration probabilities, especially if the working wife has a high education.

Unemployment is one of the most important push effects in labour mobility. However, there is a difference if only the general unemployment rate is high or if it is experienced personally (Holmlund 1984). Pissarides and Wadsworth (1989) found that households living in regions of high unemployment are not more likely to move than households of better regions, although areas with above-average unemployment seem to have a bigger outflow than regions with below-average unemployment. That reflects reactions of each household to their own situation, not to regional unemployment rates. High unemployment seems to reduce general sensitivity to economic incentives and so it decreases general propensities regarding mobility. Regional reallocation of labour functions better in a favourable employment situation than in a high unemployment situation. (High European unemployment can be one reason for the very low rates of intra-EU labour mobility.)

Strong progressivity in taxation can reduce potential wage gains associated with mobility. A less progressive tax system would promote job mobility. Da Vanzo (1978) in turn found that the likelihood of migration is not decreased by relatively high levels of welfare services. Epple and Romer (1991) emphasize the importance to separate house owners and renters in the analysis, as they argue that this is an important determinant in mobility. Wildasin (1995) considers immobile factors essential for any model in this field. He argues that some degree of immobility is necessary for redistribution policy to have any real effects on income distribution. The interplay between mobile and immobile factors can be an important feature as well.

The modern literature still often uses an assumption that the poor are mobile and the rich are immobile (e.g. Brown and Oates 1987; Wildasin 1991; Raff and Wilson 1995), although opposite approaches have become more common (e.g. Wildasin 1993). In earlier decades emigration was generally a result of fast population growth and oversupply of labour force. Today the highly educated often face restricted demand for their special skills on the local labour market. They are also supposed to be more effective in their job search. This could be well understood especially on the international labour market, where knowledge of foreign languages is increasingly important. (See Holmlund 1984 and Straubhaar 1988).

Age in particular matters in labour mobility. The economic life cycle explanation for the younger persons being more mobile than older ones is related to the fact that at the end of a working career, the period over which moving costs can be recovered is declining. So the hypothetical income gains from mobility radically decrease over the life-cycle. However, some new forms of mobility are changing the age structure of migrants (e.g. pensioners moving from Northern Europe to Spain).

Mobility decisions are largely consequences of cost and benefit comparisons between the home country and the potential new host region, but also between the personal income level and the general income level in the home area. Schlottman and Herzog (1981) emphasise motives to change the relative position in the same reference group. This gives one explanation for the welknown phenomenon of *chain migration*. Emigration of one person changes the relative position of those who stay, which can induce persons whose relative position decreases to migrate.

Current migration flows can be explained also by lags to former migration experiences. So migration could be seen as a dynamic process, as previous migration experience can influence migration decisions. Each person makes his decision with more or less incomplete information. After moving, the final decision on staying or moving again can be made only after some time spent in the new host region. Therefore the recent migrants searching for work are much more likely to emigrate than other job seekers (Da Vanzo 1978).

One more explanation for chain migration is the migration tradition in the sending country (see Lundborg 1988 and Straubhaar 1988). A host country with a large community of countrymen often lowers the psychological as well as the economic costs of moving and can even help in finding a job. Therefore migration flows are often continuously directed to the same host countries.

Distance between the origin and the destination has been typically used as a proxy for moving costs (Holmlund 1984 and Lundborg 1988). It is also more difficult and costly to get information on conditions of more distant regions, although the meaning of this factor has recently decreased thanks to the Internet and other highly developed new information channels.

Recent theoretical analysis on individual decision making is given by Janeba and Raff (1995). In their model individuals first choose where to reside, then vote in the jurisdiction of their choice and finally decide how long to work and how much to consume. When deciding on moving to another jurisdiction, individuals consider how their residential choice will affect the political process, which then affects the consumption/labour tradeoff. In the models of Hercowitz and Pines (1991) and Lejour and Verbon (1994) people move if their expected utility (income) in the host country outweights their expected utility (income) in the home country plus migration costs. This extreme conclusion is based on the assumption of high fiscal elasticity of migration. Even in case there are no migration costs, people do not necessarily move just because of fiscal motives.[8]

2.3.2 New Forms of European Mobility

Free mobility of labour within the EC was introduced in 1957. Since then, citizens of EC member states have been allowed to work in any other member country in principle without facing legal restrictions, provided they find a job. However, international labour mobility between the EC countries has been on a low and very balanced scale during the last two decades[9]. Following the hypothesis derived from international economics, differences in the economic fundamentals of countries induce changes in net migration.

Traditional migration from Europe to North America and Australia was typically family migration and more or less permanent. During the last few decades immigration from developing countries to the EU has typically first concerned only the head of the family and has been intended to be temporary. Nevertheless, it has often turned into permanent settlement in the host country. As a result reunification of families has become an important phenomenon and has kept the migration flows high although many European countries started regulating labour inflow already in early 1970s (Maillat 1987).

Intra-EU mobility in the 1990s has been more temporary by nature than the traditional migration flows. Many of the migrants nowadays are students and trainees who intend to return home after one or a few terms. Internationalisation of companies has promoted intra-firm international mobility, which is also typically temporary of the project type. Foreign direct investment and expansion of international subcontracting increases international mobility of well educated, professional ’key persons’ especially.

When mobility patterns are changing, also the determinants of labour mobility get new forms. This can change reactions to fiscal incentives. Temporary and repeated migration of the same people make redistribution policy complicated. Especially social benefits related to the place of residence rather than nationality

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8 There has been very little discussion in the literature on the importance of fiscal factors compared to many other factors determining the migration decision.

9 Unfortunately there is practically no international data available where labour mobility is separated from migration. Somewhat more detailed data exist for European countries on the size of the foreign population. Stock data are often the only way to get more insight into the patterns of labour mobility relative to total migration.The share of labour in the total foreign population of the European countries analysed has been decreasing within the last few decades. Thus, an increasing part of migration seems to have been for other than strictly economic reasons (e.g. reunification of families, educational purposes and asylym seeking) (Fischer and Parviainen 1994).

become difficult to allocate. The mobile group of people spending their lives in several different countries can lose some of the benefits they would have received if staying permanently in the same country.

Economic theory expects that labour flows are influenced by differences in marginal labour productivity. In competitive markets, real wage rates or employee compensation per hours worked should be a reasonable proxy for marginal productivity. Although making progress in the formation of the Internal Market, Europe has not achieved very deep economic integration if we measure the degree of integration by factor price equalisation. Real wage differentials are still large and have converged very slowly only from the 1970s to the 1980s. So, labour mobility within Europe has remained surprisingly low[10]. Liberalisation of international trade in services and public procurements generates an increasing need for labour mobility. Moreover, the development promotes mobility from developed to less developed areas, contrary to the traditional direction of labour flows. At the same time the roles of surrenders and receivers are changing in Europe so that most countries nowadays play both roles.

2.3.3 Externalities

The main problem of decentralised redistribution is that it causes spill-over effects which affect other jurisdictions. Gordon (1983) lists the following examples of externalities (not all of which are necessarily related to migration only). Non-residents pay some of the taxes and they may receive some of the benefits from public services. Congestion costs faced by non-residents may change. Tax revenues received in other communities may change due to the spillover of economic activity. Resource costs for public services in other communities may change. Output and factor price changes may favour residents over non-residents. Distributional effects among non-residents would be ignored.

In some cases there can be similar externalities in both directions between two regions so that they offset. There can also be both positive and negative externalities at the same time. By presenting the list of different kind of externalities Gordon (1983) shows how strong the assumptions must be to get a Tiebout result. The sum of seven sources of externalities listed above must be zero.

Petchey (1993) refers to the general view in the externality literature that contrary to Tiebout's conjecture, free migration will not necessarily lead to an efficient allocation of resources because it generates a benefit for residents in the region receiving migrants and a cost for residents in the region they leave. (This is, however, often seen in the opposite way as well.) Hercowitz and Pines (1991)

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[10] Indeed, for the observed small migration flows, the explanatory power of international economics in general and of marginal productivity differentials in particular turns out to be very limited.

remark that immigration can cause a positive externality by reducing the per capita tax burden of the pure public good born by the population. In the same way, in principle, immigration can impose a negative fiscal externality by reducing the share of each local residents in the tax revenue.

The kind of externalities pure fiscal mobility causes are related to the *cost of redistribution*. (Oates 1972 discusses the loss in welfare from externalities, which tend to vary inversely with the size of the jurisdiction.) Schroder (1995) argues that part of the price of welfare is the *recipiency ratio*, the ratio of social beneficiaries to taxpayers.

There has been also some discussion on the concept of *marginal excess burden* (see Wildasin 1993). It refers to the theoretical conclusion that taxation of mobile workers shifts the real burden of taxation to the owners of immobile factors of production and immobile workers. Wildasin argues that the marginal excess burden from taxation provides a measure of the extent to which the mobility of taxed factors makes them less suitable objects of taxation.[11]

Externalities related to labour mobility can differ from those of fiscal mobility. Wildasin (1991)[12] remarks that an important feature of the common labour market is the endogenous determination of wages in all jurisdictions. Wages adjust in response to a change in labour supply, and these adjustments serve to equilibrate migratory flows. On the common labour market mobility can change productivity and the wage level in both the source and the host country.

In a general-equilibrium analysis of Wildasin (1994) output is a function of the amount of labour employed in the area. An increase in the size of the labour force lowers labour productivity but simultaneously raises returns to the fixed factor. This leads to a conclusion that “mobility itself affects the distribution of income, since it changes factor supply, factor productivity and factor prices”. Labour mobility can also provide insurance against income risk (Wildasin 1995). Especially in case of shocks which are not perfectly correlated, the increasing wage differences induce migration, which again equalises the wage level. In this way the region-specific risk is pooled.

Different externalities related to pure fiscal mobility and labour mobility lead to different conclusions on the optimal assignment of redistribution policy. In some of the old literature based of the assumption of pure fiscal mobility (Tiebout 1956

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[11] Garfinkel (1993) criticises his analysis for the assumption that local high income residents gain nothing from income redistribution and for the assumption that the net fiscal burden is equal to taxes paid. He considers these very unrealistic.

[12] In addition to these clearly labour market related externalities, Wildasin (1991) notices that redistributive transfers alter the net income of the rich both directly and through general-equilibrium effects. Transfers increase the net income of the poor, which benefits the rich in all jurisdictions. (So Wildasin seems to assume no spatial dimension of utility interdependence.)

and Pauly 1973) the conclusion is that decentralised redistribution is preferred because it makes it possible to vary the level of redistribution in accordance with heterogeneous tastes. In Wildasin's (1991) model "the externalities that are propagated through the common labour market are responsible for the conclusion that all jurisdictions undertake the same amount of redistribution when the structure of intergovernmental grants is optimal." This could also be interpreted as an argument for centralised redistribution in the sense that at least the outcome should be the same.

2.3.4 Grants and Decentralised Welfare Policy

Problems related to decentralised redistribution do not necessarily lead to another extreme, centralisation. They can be solved (or at least smoothened) by coordination or by dividing responsibility between the central and local levels. Many authors also see, that if local level governments undertake a redistributive policy despite all the problems related to that, then a central government should provide fiscal assistance to the lower level governments through a program of lump-sum or matching grants (e.g. Wildasin 1994).

Grants can also be used to reach *horisontal equity*. Already Buchanan (1950) envisioned an equalising role for transfer policy: "An intergovernmental transfer system can be worked out which would allow state units originally unequal in fiscal capacity to provide equal services at equal rates of taxation."

Oates (1968) raises the problem of a negative over-all impact of multilevel redistribution. Problems can arise even if the central level treats equals equally. If at the same time each local government sets the same taxes and benefits for equals in its area, the over-all impact of central and local government actions can be against the horisontal-equity criterion. He remarks that the difficulty is that in the wealthy jurisdiction the same output of public goods and services is reached by a lower level of tax rates. So from the standpoint of the whole system, equals do not tend to be treated equally.

The central government can operate either on an individual level or on a regional level. Oates (1968) sees two solutions to this problem. Geographically discriminating federal tax rates would equalise the total tax bill for equals. Another solution is redistributive payments among communities (grants) to equalise the fiscal capacity of all communities.

Grants can be also used to *internalise externalities*. Wildasin (1991) remarks that the subsidy rate that must be offered to lower level jurisdictions to internalise redistributive externalities is higher the higher the elasticity of labour demand is in each jurisdiction.

Raff and Wilson (1997) analyse a case where spill-over effects are so strong that no redistribution takes place on the local level without central level intervention. Interjurisdictional differences in tastes for redistribution have no influence on the central government's optimal policy intervention because they do not provide the central government with any additional ability to induce local governments to self-select across the available grant and subsidy policies. However, differences in productivity levels provide the means for inducing desirable forms of self selection. Raff and Wilson conclude that the great emphasis given in the literature on different tastes instead of different productivities is misplaced.

Grants are also a measure to *change the task allocation* between different level governments so that e.g. financing is decided on a different level than expenditure. When the central government collects all income taxes, but the local governments decide the use of money, two problems seem to be solved: the externality problem of local level taxation and the information problem of central level allocation.

Boadway and Keen (1994) discuss *the fiscal gap*, by which they mean that higher levels of government collect more revenues than they need for their own expenditure requirements and transfer funds to lower levels. This is an example of an asymmetric assignment of task, so that the financing and expenditure can be divided on different levels.

There can be cooperation between the local and the central government so that the central government would define the main principles of redistribution policy, but the local governments could adjust these principles for their local needs and preferences. Wildasin (1994) remarks that the grant system can include such an incentive system which makes the local governments follow the kind of policy desired by the central government but still keep redistribution policy on the local level.

There are many dimensions and forms of centralisation and decentralisation in fiscal affairs. Tax design could be highly centralised, for instance, in the sense that tax rates and bases are determined centrally, whilst the collection of those same taxes could be decentralised to lower-level jurisdictions. In most of the theoretical literature optimal tax assignment is seen to include the following elements (Keen 1993): 1) the central government should take primacy in equity aspects of tax policy, 2) the tax bases assigned to each level of government should be relatively immobile across jurisdictions at that level, 3) taxes that derive from access to the common market of the federation should accrue to the central government.

Grant policy can also be used to *solve the information problem*. Raff and Wilson (1997) have analysed a case where local governments have information on local preferences concerning redistribution policy and on local productivity, which is important in determining the financial contributions. One problem of the central government is that the local governments do not want to reveal their real ability to contribute. Another problem is that preferences might be different on the local and on the central level. For example, from the central level point of view there is no difference between mobile and immobile portions of the population, whereas it might be in the interest of the local government to maximise the welfare of the immobile (rich) residents only and discriminate against the mobile poor. The central government has in this case better access to the information on the overall situation and comparison of more local level units. *Coordination and regulation* of local redistribution policy is also one of grant policy aims.

Raff and Wilson (1997) and Wildasin (1991) have very different views over the objectives of optimal grant policy. The solution of Raff and Wilson is "to return redistribution to local governments and then to design a type of matching grant policy under which jurisdictions *self-select* . This means that the demanded level of subsidies for the poor depends on the level of grant payments the local government receives from the central government; higher grants mean higher subsidies to the poor. Jurisdictions can choose their *combination of grants and subsidies.* The central government would not directly support the mobile poor, but it would tax them as well. However, the central government would return the tax revenue to the local level as grants and would oblige the local governments to support their poor residents. So the central government can interfere with the local redistribution and guarantee regionally equal treatment but still benefit from the better information available for the local governments.

Wildasin (1991) has quite an opposite approach for an optimal outcome. In his view the optimal grants induce all lower-level governments to choose *identical levels of transfer payments* to the poor, even if the tastes of their residents for redistribution vary widely. This means that those with a weak taste for redistribution are provided with sufficiently generous subsidies so that they provide a level of transfer payments that is just as high as any other jurisdiction. Finally, Wildasin's conclusion is that with optimal subsidies the *tax rates on mobile* taxpayers should be equalised across regions. An important motivation for the unification of local redistribution policy is the willingness to minimise fiscal incentives for migration if they are seen to have distortive effects on the labour market. So the structure of *grants* (not the structure of redistribution) should reflect the heterogeneous local preferences. However, even Wildasin himself finds it strange if the decentralised system can be efficient only if it is forced to work in the same way as a fully centralised system. So he asks, what sense is there any more to have it decentralised.

Much the same kind of solution is presented by Pfingsten and Wagener (1997), who propose dividing income transfers into two parts: to a local and to a central part. This would mean that the central government collects a lump-sum tax from all rich people and returns the tax income back to the local level as grants. The support for a local government would be the higher the more sensitively labour mobility reacts to regional differences in redistribution policies.

It can sometimes be in the interest of a local jurisdiction to make voluntary transfers to another jurisdiction. Wildasin (1994) describes a situation, where all residents of the destination region may gain if transfer payments are also paid to workers in the source region so as to reduce the level of immigration.

2.4 Farewell to the Welfare State?

This chapter deals with the general fear that increasing mobility of people can lead to the fall of national welfare standards. “Most economists assert that income redistribution should be a function of the highest possible level of government”, Ladd and Doolittle (1982) note. However, according to Sinn (1990) “Most European economists seem to favour a decentralised solution via a competition of tax systems of Tiebout type”.

Ladd and Doolittle seem to refer to the discussion about national federations and local economies, whereas Sinn refers to the discussion on the EU as an international confederation. Views differ especially between the old and the modern discussion. Even those who emphasize problems related to national-level redistribution in the EU do not seriously recommend centralisation of redistribution for some central EU authority.

But often the theoretical literature of fiscal federalism does not make a clear distinction between different kinds of multilevel systems. For instance Oates (1972) defines in his classic treatment of fiscal federalism only that “the society under consideration is understood to be a nation with a single currency and with an absence of restrictions on movements of goods and services within a system”. This definition perfectly suits EMU as well. However, generalisations to international confederations should be made with care. This raises the question of whether the same arguments of the old literature for and against decentralisation are relevant at all in European integration.

Is “equal treatment of equals” sooner or later an issue in the EU? Are heterogeneous preferences and “perfect correspondence” arguments strong enough against that? Utility interdependence, which is largely based on altruism, is very hard to measure. At the moment there are big differences in tax rates, social insurances and welfare services among EU countries.

Oates (1968) writes that “the degree of immobility necessary to allow an effective and substantial program of income redistribution is usually present only at the national level”. But is even that level high enough any more in Europe under free international mobility? That much depends on the actual mobility, not only on the formal freedom to move and work in other member countries of the union. Mobility of people has been an important issue in the EU discussion, although in reality there has been quite little migration within the EU since 1957, when the free labour market was announced in the Treaty of Rome.

This fact leads to the question of whether the Tiebout hypothesis is relevant on international context at all. Oates (1972) argues that the model makes such strong assumptions on consumer responses to local public sector differentials that it seems an unlikely description of the behaviour of a typical household. It is unrealistic that households would move just to satisfy their demand for local public services. The model works only in metropolitan areas. Oates remarks that the case for the mobility model is much weaker in a regional context as the constraint imposed by employment opportunities restricts the scope of choice among residential communities to a single metropolitan areas. In an international context the model could work even worse.[13]

Sinn (1990, 1994) has raised discussion about the future of welfare policy in the EU. He argues that because of mobility and tax competition the future scope for efficient tax policy will be reduced. Redistribution would not be able to survive in Europe where the single countries compete with one another. ”Europe with free migration is like an insurance market where the customers can choose the company ex post, after the insurance period is over and everyone knows whether he has incurred a loss or not. In the end all countries will settle at an equilibrium where only benefit taxes are charged, and no redistribution policies are carried out”, Sinn argues.

Sinn explains that redistribution and risk sharing can be seen as “two sides of the same coin”, the only difference being in the time period. That means that such contracts which can be interpreted as insurance, involve redistribution from an ex post perspective. And redistribution can turn out to be insurance from an ex ante perspective. Sinn considers this very problematic in areas with free mobility of people like the EU, where people can choose their “insurance” ex ante, when they know already if they are lucky or unlucky. Also Persson and Tabellini (1996a, 1996b) deal with this problem on a regional level.

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[13] Kindleberger (1986) analyses the changes that would be needed if the Tiebout model were be applied in an international context. He emphasises especially higher mobility costs.

One solution suggested by Sinn is to introduce binding redistribution contracts with the government of choice. This would mean e.g. that income taxation is based on a nationality principle rather than a residence principle and that only young people would be allowed to change their nationality. Older people could change their residence, not their citizenship. The redistributive taxes they pay and the benefits they receive would continue to be determined by the country they chose when young. The other alternative is to harmonise tax rates via collective agreements or to allocate all redistribution activities to a central European government.

Sinn’s final conclusion that in the long term the winners of tax competition are the mobile people and the losers are the immobile ones is in line with Wildasin’s (1993) analysis about excess burden on immobile factor owners. But which is more fair: the nationality related or place of residence related system? The mixture of systems within the EU might cause increasing problems especially for people who spend much time in other EU countries. Mobile citizens of generous welfare states can be losers. This much depends on how staying abroad is allocated on the life cycle.

Gordon (1993) does not see the EU future as dramatically as Sinn. He remarks that the optimal tax literature forecasts this outcome only if mobility costs are zero, if there exist alternative taxes on immobile factors which have the same incidence as taxes on the mobile factors, and if wealthy households do not receive any altruistic benefits from transfer payments. Gordon argues that there are reasons to doubt the validity of each of these conditions. Especially he emphasises that “the survival of moderately progressive tax and expenditure policies among the US states, where mobility pressures should be much greater than would be faced by member countries of the EC, suggest that the theoretical forecasts are far too strong”.

What actually is the crucial criteria for the local unit’s possibilities to pursue an independent redistribution policy: is it the size of jurisdiction or the elasticity of migration? Both Oates (1972) and Epple and Romer (1991) emphasise the meaning of size so that the smaller the jurisdiction, the more difficult it is to internalise externalities, which leaves less scope for local redistribution. But certainly mobility matters as well. Maybe a country that does not attract immigrants for other reasons (geographical distance, language, climate etc.), could have more freedom with its policy than other countries, which are more attractive to immigrants.

If factor mobility makes budgetary redistribution difficult, some other forms of redistribution could be easier. Pauly saw redistribution as a public good. We could as well see public goods, especially some public services, as a part of redistributive policy. Externalities of such forms of public expenditure might be smaller. In the long term the development could lead to new forms of national redistribution.

One of the very fundamental differences in the old and the new literatures is the starting point. When we discuss about traditional federations or unitary economies, the main question is why decentralise. In the EU context the question is why centralise. Keen (1993) remarks that the common arguments for centralised decision making are based on the assumption that the central government is a benevolent dictator.

In the EU the objective function of the central level is very unclear. Is the aim of EU to promote Tiebout-type fiscal competition between member countries? Or is it to promote labour market balance by minimizing fiscal factors in mobility? Pestieau (1977) remarks that Tiebout-type mobility leads to homogenous ghettos, whereas heterogeneity and differences have their virtues. It gives little weight to the value of stable communities and close social ties. These ties would be even more seriously broken in international mobility.

3. Vertical Constraints: a Common Currency and the Stability Pact

The traditional literature on fiscal federalism, which focused on national and federal governments, considered redistribution and risk sharing as central level tasks. The reasons given were the negative externalities and inefficiency of lower level policy. Even when there were arguments for localized redistribution, problems arose from the fact that both taxation and public expenditure are essential instruments of stabilisation policy as well.

The modern literature is directly linked to the European integration process. The EMU studies discuss two degrees of central level interference on national fiscal policy. There is quite wide unanimity on the necessity of *coordination* in the convergence phase as well as in the actual functioning of the currency union, although views differ on the type and degree of coordination required. There is much more disagreement on the future need for *centralisation* of taxation and some forms of public expenditure (like unemployment benefits). This discussion is closely linked to the question of efficient forms of stabilisation, especially the treatment of asymmetric shocks in EMU, and is largely based on the example of US stabilisation mechanisms. In the end we also refer to the Finnish history of active exchange rate policy and compensating arrangements for stabilising the effects of asymmetric shocks in EMU, especially the "buffer funds".

3.1 Coordination of Budget Deficits and Public Debt

Coordination is a mechanism for *preventing* as well as *internalising externalities*. For the success of EMU it was seen important that the economies joining it are on a similar economic phase from the very beginning. The EMU convergence criteria for member candidates serve this purpose. The criteria include limits for e.g. inflation, exchange and interest rates[14]. The main emphasis here, however, is in the two fiscal restrictions. Budget deficit must be below 3 % of GDP and public debt below 60 % of GDP.[15] When the monetary union is finally

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[14] The inflation limit is determined so that it may be only 1.5 percentage points higher than the average inflation rate in the three member countries with the lowest inflation during the last year before entering the currency union. Also interest rate limits are set by the level in these three countries so that the rate in the candidate country may not exceed 2 percentage points of their average during the last one year. Exchange rates must be stable and stay within the ERM limits for at least two years before entering the currency union.

[15] The so-called Weigell proposal calls for clear limits on national budget deficits and public debt in EMU as well. The country which does not fulfill these requirements would be punished by forcing them

functioning, there is still need to control national budget deficit in order to guarantee stability of the currency union.

There has been some discussion and criticism of these criteria. They are seen to lack a coherent theoretical background and seem to be determined more by political factors. Buiter et al. (1993) ask if there is any economic logic behind the 3 % budget deficit limit. They refer to the “golden rule of public finance” behind the criteria. According to this rule current expenditure must be covered by current revenue. Borrowing can be used for financing capital expenditure only. They note that the long-term public investment rate in the EU has been about 3 % of GDP. However, it should be the inflation-adjusted deficit that must not exceed public investment, they remark. It is also difficult to distinguish consumption from investment (e.g. in case of education). They conclude that the principle used “is not merely hard to monitor, it makes no economic sense and therefore can lead to bad policy choices”.

Masson and Taylor (1993) ask if there is bigger incentive for an excessive budget deficit in a currency union than in a system of national, flexible currencies. A currency union may reduce the ability of countries to raise revenues as tax bases could become even more mobile and increase tax competition. Therefore it gets more difficult to react to increasing costs by raising taxes. In a recession this leads to stronger pressure towards budget deficit.

If a country has its own currency, exchange rate changes function as a buffer which restricts the spread of crises to other countries. In a currency union short-term stabilisation measures of one country can lead to revaluation of the common currency. This would weaken the price competitiveness of all countries on markets outside the EU. (See Bayoumi and Eichengreen 1992 as well as Masson and Taylor 1993.) In addition, the debt of one country restricts possibilities of other countries (and even of the private sector) to get financing and raises interest rates on the whole area (see e.g. von Hagen 1992a).

The main purpose of the fiscal criteria is to avoid moral hazard problems and to strengthen the so-called *no-bail-out rule,* which means that no country can expect other EU countries or the European Central Bank to help if they run into troubles due to a loose economic policy. The rule refers to article 104b of the Maastricht Treaty, which says that if a member country fails to service its debt, there will be no bail-out by the EC or its member states; the defaulting country and its creditors will bear the consequences of such a fiscal crises.

There is, however, the question of the credibility of this rule (see e.g. Buiter et al. 1993, Repullo 1993). Other EMU members might be forced to carry out a fiscal

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to make a deposit to a special fund. If the country is unable to improve its situation within a certain time, the deposit will become a fine.

bail-out when one of the members runs into serious fiscal problems, even despite opposite precommitments. If they would not bail out the country, the financial crisis might spread to other EMU countries. This can sooner or later raise the question of whether coordination alone is enough or should even stronger country measures (like risk-sharing transfers) take place to guarantee stability of the currency union.

A serious future problem related to the budget restriction is seen in the unfunded pension liabilities. Some are worried that they will increase debt, which is a risk for stability of the currency union. There is also the moral hazard problem that only some countries might collect funds large enough for their future needs.

3.2 Centralisation of Fiscal Policy Measures: the US Example

If the EU forms an *optimum currency area*, the economic shocks should be mainly symmetric, which means that they should hit all member countries at same time and in the same way. In this case central level actions, especially the centralised monetary and exchange rate policy, should be enough to deal with these crises. There is, however, wide disagreement whether in fact also asymmetric shocks would be a problem. So far, the member countries can still decide on their taxation and public expenditure within the budget limits. There are however strong doubts whether these measures are enough in stabilising national (asymmetric) economic shocks. This would mean that coordination of national policies is not enough, but even some degree of centralisation of fiscal policy instruments might be needed to take care of risk sharing among the member countries. Some intraregional or central-level transfers might be needed as well.

The possibilities of EU countries to form a well functioning currency union are often estimated by comparing them to the US states. Many studies have given results by which economic shocks in the US are more symmetric than in the EU. The US states also adjust to the shocks faster than the EU countries. This is seen as a result of better internal labour mobility in the US. The general conclusion has been that a currency union in Europe would not function as well as it does in the US. (See e.g. Eichengreen 1990 and Bayoumi and Eichengreen 1992.) Along with the progress in the EMU process, interest in the internal stabilisation mechanisms of the US have increased.

The US states have large fiscal independence, but regional shocks are balanced by the central-level progressive tax system, which functions as an automatic stabiliser. In addition to this there is a state-level unemployment insurance fund, in which the states make payments in good times. The amount paid depends on the unemployment history of the state. High unemployment means higher insurance fees in future. States can get subsidies from the fund when their unemployment rate rises more than elsewhere in the US on average. According to Inman and Rubinfeld (1992) this system helps to control asymmetric economic shocks well.

Sala-i-Martin and Sachs (1992) have studied to which *extent* the central (federal) government in the US actually offers insurance against income shocks. They found that a one dollar decrease in regional income per capita means a 34 cent decrease in tax revenues collected by the central government and an increase by about 6 cents in subsidies paid by the central government. This means that actually the regional income decreases by only 60 cents per each dollar decrease before taxes and transfers. So the central government manages to eliminate even 40 % of the original shock.

Bayoumi and Masson (1995) got figures more similar to those of Sala-i-Martin and Sachs. In their study the US stabilisation degree is 30 %, but the different components of stabilising, however, got different weights. They wanted to make a clear distinction regarding to which extent the stabilising effect is a result of central-level progressive income taxation and to which extent income transfers (e.g. unemployment insurance). In Sala-i-Martin's and Sachs's study the whole stabilisation was a result of the tax system and the effect of transfers was much smaller.

Many other authors consider Sala-i-Martin's and Sachs's figures too high. Their study is criticized for not making a clear distinction between *redistribution* and *stabilisation* and not therefore showing the pure stabilisation effect (see e.g. Italianer and Pisani-Ferry 1992, von Hagen 1992b and Bayoumi and Masson 1995). By separating the pure stabilisation effect of the US system turned out to be only 17 %. An even lower rate (10 %) was found in a study by von Hagen (1992).

Italianer and Pisani-Ferry (1992) try to distinguish between redistribution and stabilising by defining the concepts of *primary income* (gross income before taxes and transfers) and *secondary income* (net income after taxes and transfers). As a result of redistribution the relation of secondary income to primary income is higher in the poor areas than in the rich areas. Stabilisation affects so that in all areas changes in secondary income are smaller than changes in primary income.

Persson and Tabellini (1996b) show how transfers which are *risk sharing ex ante* can turn out to be *redistributive ex post*. This causes problems if countries participating in the system are very heterogeneous and have different risk for economic shocks. So their expected benefits from the transfer system would be different. This can be balanced by a non-state-contingent lump-sum transfer, risk premium which depends on the history of each region so that the bigger risk, the bigger the risk premium the region has to pay. If the regional risks can be affected by national policy, e.g. by public investment in infrastructure, education and structural changes, there can be a moral hazard problem which arises from the fact that investments cost money and risks are shared with other countries, which leave little motivation for national actions to diminish the risk. (See also Persson and Tabellini 1996a.)

The authors have shown that the outcome depends much on the institutional structure of the decision making system. They compare a traditional federation of a US type with a more loose confederation like the present EU. They find that there is a big difference if decisions are made by federation wide *majority voting* or by *bargaining* between "median voters".

A US-type stabilising system is based on federal progressive taxation and federal unemployment benefit system and the policy is decided by voting. The alternative is a system based on regional transfers which are decided by bargaining between the member countries. Persson and Tabellini (1996a and 1996b) have compared these systems from an insurance and moral hazard point of view. If a system of intergovernmental transfers redistributes income across regions only, then the rich and the poor regions have opposite interests. However, a centralised social insurance system redistributes at the same time both regionally between the rich and the poor regions and between the rich and poor individuals as well. Their model predicts that federal social insurance schemes decided on by voting will oversupply regional risk sharing, because in the voting system voters can have collusions across borders. However, in a bargaining system the stronger country with smaller risk is unwilling to pay the insurance costs as its expected benefits are smaller. It can threaten the others about leaving the federation and turning to autarky. This easily leads to underinsurance.

3.2.1 Is There a Need for EMU-wide Fiscal Stabilisation?

Very few conclusions can be made about the US experience for the optimal EMU risk sharing system. These two unions are very different, the US being a traditional federation and the EU (EMU) a confederation. There are opposite views on whether any similar fiscal systems would be needed in Europe and whether they would even work in the EMU environment.

van der Ploeg (1991) believes that in EMU it is necessary to have some kind of centralised income transfer system, which corresponds with both horisontal equity and subsidiarity principles. The system would transfer income from citizens of one country to citizens of another country and in this way it could substitute for the national unemployment insurance mechanisms. The system could include a union-level tax, which itself would have stabilisation effects. It is, however, difficult to see how this would fit in with the subsidiarity principle.

Wyplosz (1991) would see the EU-level fiscal mechanism as compensation for losing the national level exchange rate mechanism. The system must function as insurance and correspond to the risk increase caused by EMU. However, it must also try to maintain the decision making as far as possible on the local level. He emphasises that the shocks affect first of all individuals, not regions. The problem is how to find out on an individual level those who need compensation most.

The conclusion of Eichengreen (1991) as well as of Sala-i-Martin and Sachs (1992) was that a currency union cannot function in Europe successfully without a considerable EU budget. However, Bayoumi and Masson (1995) and Italianer and Pisani-Ferry (1992) concluded that no considerable EU-level fiscal arrangements are needed if some kind of stabilisation fund is used. von Hagen even saw the US system as an example of a common currency area which functions well without any considerable federalistic fiscal arrangements.

In the model of Italianer and Vanheukelen (1993) stabilising income transfers between countries are based on comparisons of development of member country unemployment rates each month. If unemployment increased in a certain month faster in one country than in others in average, that country would automatically get a one-shot transfer from the fund. If unemployment increased at the same time as much in other countries as well, there would be no compensation. The authors estimate that the stabilisation effect of this kind of system would be about 20 %.

There seem to be different approaches on which system has less moral hazard problems: the regional or the individual-level transfer system. If the risk sharing mechanism on the EU level gave too good insurance, that could lead to unoptimal behaviour of countries as well as individuals from the standpoint of the EU as a whole (Persson and Tabellini 1996a). This could mean a tendency to take excessive risks or exert insufficient efforts to improve their own situation. Italianer and Vanheukelen believe that their system would avoid moral hazard problems because it works on a regional level and so does not create incentive problems on the individual level. They also present another version of their model, where compensation would be paid only if the unemployment rate increases at least 0.3 percentage points faster than in other countries in average. On the other hand the upper limit is 1.5 percentage points. Differences bigger than that are not compensated any more.

Opposite to Italianer and Vanheukelen, Wyplosz (1991) believes that individual level unemployment insurance avoids moral hazard problems more efficiently than the regional insurance system by taking better into account those individuals who are affected by shocks. He proposes that the EMU stabilising mechanism should have the main emphasis on progressive taxation. A common tax base and centralised progressive taxation can function as automatic stabilisers. The average tax rate would deteriorate automatically in countries where the income level decreases as a result of a negative shock. Similarly, the average tax rate increases in countries which have experienced a positive shock. (See also Persson and Tabellini 1992).

To avoid moral hazard problems, Inman and Rubinfeld (1992) offer a solution where transfers depend on earlier development (e.g. the unemployment history of each country) or that the transfers have an upper limit. When participation in the system is made compulsory for all countries, this diminishes the adverse selection problem in which the “well behaving” countries would refuse to participate in the system when there is risk behaviour among some others.

The restrictive effect on national policies depends also on how the income transfers should be financed. One possibility is that the money is taken directly from those countries which have experienced a positive shock. An alternative is that the money comes from the EU budget. The bigger the EU budget, the more centralised is the fiscal system and the less freedom there is at the national level. Financing from the EU budget would be difficult also because EMU will at least in the beginning probably consist of only some EU countries. A third alternative is a fund outside the EU budget. So the main question remains, which kind of system would work best.

4. Finland as an Example of a Small Open Welfare Economy in EMU

Each EU country has its own traditions, not only in their welfare policy but also in their adjustment in asymmetric shocks. The three main measures have been budget deficits, exchange rate changes and labour mobility. To enrich the theoretical discussion above about the changes that EMU might bring to the national policy aims and instruments, we shortly analyse one concrete example here, namely Finland.

Finland is a small open economy with a special industrial structure. During the last few decades it has pursued an active exchange rate policy, mostly for marketing the competitiveness of main export industries. To understand the importance of this history for the EMU membership we first summarise the main events and arguments of the exchange rate policy in recent decades. Finland is also a typical Nordic welfare state with high income and consumption tax rate, wide supply of public services for the whole population and generous social insurance transfers. One more special characteristic is the experience of strong external economic shocks and the deep recession in the early 1990s which raised unemployment to a very high level. All these features make Finland an interesting case for analysing the adjustment of national risk sharing and redistribution policy to the EMU conditions.

Redistribution and risk sharing are typically carried out through taxation, social insurance transfers, public welfare services etc. However, also devaluations and special stabilising arrangements have had strong redistributive and risk sharing effects in Finland, not only directly between individuals but between groups of people as well as sectors and production factors.

4.1 End of Exchange Rate Policy and Adjustment to EMU Criteria

Finland has pursued an active exchange rate policy during the whole post-war period to promote exports, growth and employment or to correct external imbalances. Therefore membership in a currency union means an end of this economic policy tradition. Exchange rate policy has been an effective instrument in changing the income distribution between capital and labour as well as between the open and the domestic sectors at least in a short run. It has been an instrument of sharing risks between sectors and firms, even between countries which are competing on the same exports markets. This has been a common pattern between Finland and Sweden for decades.

In 1945-1996 Finland went through numerous big devaluations and some smaller revaluations plus a short period of floating of the markka.Views on the aims of these actions and even on their final effects have varied over time. Three main principles have been found in the general comments by politicians and economists as well as in the official central bank arguments. These are the *competitiveness norm*, the *inflation norm* and the *fixed rate norm*. The dominating norm in Finland has been the first one, emphasising economic growth and employment aims.

The main long-run aim has been to keep the external value of the markka stable. There was much discussion on the concept of "equilibrium exchange rate", the cornerstone of Bretton Woods. Exchange rate changes were accepted only in the case of "fundamental disequilibrium". In fact that was measured by the purchasing power parity rule and was used as an argument for the big devaluations in 1945, 1949 and 1957. In fact the 1957 devaluation (39 %) was later criticised as being too big and being actually offensive, not defensive by nature. It considerably improved the price competitivity of the pulp and paper industry especially. So in fact Finland followed already then the competitiveness norm.

In the 1960s a devaluation was seen not only as an instrument for stabilisation, but also for structural policy. The official explanation for the large devaluation of 1967 (31 %) was the aim to promote new export sectors like the metal and textile industries. Later there have been critical views on its structural effects because the new sectors used much imported materials and machines. According to many authors (e.g. Paunio 1969) this big devaluation just strengthened the existing one-sided industrial structure by artificially improving the relative position of pulp and paper industry.

In the early 1970s the collapse of the Bretton Woods system as well as strong external price shocks caused by the oil crisis radically changed the economic environment of exchange rate policy. There was increasing criticism of the long-term unstability effects of devaluations. Theories on devaluation cycles were presented (Paunio 1969, Korpinen and Kykkänen 1973, Korkman 1978 and Tanskanen 1981). Their idea was that devaluations induce faster inflation, which erodes the export competitiveness in a few years and a new devaluation is needed to correct the situation. One of the objectives of devaluations was to redistribute resources between the domestic and the open sector. This redistributive effect has been criticized as well.

As a result, exchange rate policy was seen more and more as a measure to regulate price developments. A more flexible policy of small but more frequent changes was recommended. Small devaluations in 1977, 1978 and 1982 (from 2 % to 8 % of size) as well as revaluations in 1979, 1980 and 1984 (from 1% to 2% of size) were seen as signals of a new policy norm.

Finally, in the 1980s the liberalisation of capital markets made capital flows much more sensitive to interest and exchange rates. That was seen as a serious constraint for active currency policy. Discussion returned to the old theme: the main principle of exchange rate policy should be the stable external value of the markka. The Bank of Finland showed readiness to defend this target by strong measures, like raising the overnight interest rate to even 40 % in the year 1986. Markka was devalued in autumn 1991. There was a new serious crisis in autumn 1992, when the Bank of Finland finally had to let the markka float freely. This was the end of the fixed rate norm. Since that the markka has depreciated strongly.

The history of Finnish exchange rate policy illustrates the importance of the currency union for the country. Devaluations have been an instrument to share risks between the open and the closed sectors, to redistribute income between labour and capital and to promote investments, economic growth and employment as well as adjustment to asymmetric shocks. Losing this important policy measure can cause adjustment problems in the future and new stabilisation policy measures may be needed. The Finnish markka has depreciated strongly during this decade, too, which is a sign of some vulnerability of the economy.

As a heritage of the problematic early 1990s Finland still has high unemployment rate and high public debt. This increases the economic vulnerability to economic shocks. Unemployment aims have been ignored in the convergence criteria of EMU member candidates, and only budgetary balance and monetary stability have been emphasised instead. On the other hand, the devaluation history is one of the main reasons why Finland has been so willing to join EMU: the common currency is seen to bring stability. The European Central Bank is expected to be conservative, although it is not quite clear whether it will follow the inflation norm (strong euro) or the fixed rate norm in relation to other currencies. What kind of risk sharing and redistribution policy effects this will cause in Finland as well as in the EU or between the EMU member countries, is unclear.

4.2 Buffer Funds : Substitutes for Devaluations?

According to the theory of optimum currency areas Finland has two main problems in EMU. The industrial structure is different in Finland than in most other EU countries. Therefore the country is especially vulnerable to asymmetric economic shocks and also the timing of shocks differs from them (e.g. Kajaste 1993 and Alajääskö 1996). Devaluations have often been an alternative to lowering of nominal wages. Holm and Tossavainen (1996) have compared the employment effects of these two instruments. The second problem is that the Finnish labour market, especially wages and labour supply, is considered by some authors (e.g. Viren 1997) to be more inflexible than in many other EU countries.

The long tradition of active exchange rate policy as well as the developed corporatist wage negotiation system initiated the search for new risk sharing instruments for EMU conditions to smoothen the effects of asymmetric shocks. As a result there is a unique Finnish innovation of "buffer funds". In November 1997 the trade unions, the employers' federation and the government agreed on two national funds for stabilising non-wage labour costs in order to smoothen (not to eliminate totally) the effects of asymmetric shocks.

The two main funds in the buffer system are the *unemployment insurance fund* and the *pension fund.* Both funds will be cumulated by the fees collected from both the employees and the employers. The aim is to collect 3 billion FIM for the unemployment insurance fund in 4-5 years by charging unemployment insurance fees (1.5 % of total wages from employees and of 2.8 % of total wages from the employers).

The planned size of the *pension fund* is 3.5 billion FIM. The sum of these funds would be about the same as that estimated of sufficient size by Holm et al. (1997). They argued that 3.5 % of wages should be collected during three years to reach a buffer of 7.7 billion FIM. That would be enough to smoothen the effects of about a 10 % export price decline.

These systems are not totally new. Social insurance fees are already charged from the employers as well as from the employees in Finland. The unemployment insurance fee has been functioning against stabilisation, as high unemployment has let to rapidly increasing fees and rising labour costs (pay-as-you-go system). So the new buffer fund will change this effect by balancing the fees. The pension insurance fees have been used already for stabilising purposes. For example, in the late 1980s the fee was higher than was needed. During the worst years of recession in the 1990s the fees were not raised as much as should have been done in order to keep the fund in balance. In 1992 the fee was even lowered by 2 percentage points below the level actually needed. The pension buffer fund will work with the same idea. During a boom the pension insurance fee will exceed the needed level, but in a recession it will stay below it. The desired size of this fund is 3,5 billion FIM, which is about 2,5 % of the total national wage income.

The main problem related to this system is the present practise that the employee pension funds are statistically part of the public sector although the system is partly private. The stability pact restrictions for budget deficits limit its use for stabilisation. Another problem is ageing of the population, which will radically increase the pension costs (reduce the surplus of the social security system) after the mid-2010s (Parkkinen 1998) which of course will limit the buffer role of the pension funds.

A firm-level stabilising system could include *personnel funds,* which are already functioning in about 50 firms in Finland. They mean in practise a system in which part of the wage increases are invested in shares of the company. These funds, however, were excluded from the buffer fund system. Especially the big forest industry companies (like UPM-Kymmene and Enso) have been against such funds and are planning to discontinue their existing personnel funds. A bonus system is seen as an alternative for the personnel funds, but the problem is that the bonus system is procyclical.

There have been many fears and criticism related to the buffer funds during the negotations. The size of 6.5 billion FIM is seen inadequate for real stabilisation even in normal business cycles. In serious economic shocks it would have little practical importance. This shows some disagreement on the purpose of using the funds. The counterargument has been that the aim is not to eliminate the effects of serious shocks, but to only smoothen some smaller economic disturbances. Collecting the funds is considered expensive and is seen to have contractive effects on the economy and employment. The purpose is, however, not to raise any fees, but to keep them on the present level only. There have been doubts that the funds could discourage firms from taking care of their own insurance, which can cause moral hazard problems. That could even strengthen the vulnerability to shocks. Those who emphasize this danger, argue that the funds should react to exceptional external shocks only and never to ordinary business cycles, which are more easy to see beforehand and in which firms should get prepared by e.g. strengthening their balance sheets. In general those who are critical of the buffer funds emphasize structural problems of the labour market and those who are for them emphasize the meaning of shocks and labour costs on employment.

An essential question is if the asymmetric shocks are mainly sectoral or regional. In Finland they seem to be mainly sectoral (Kajaste 1993 and Haaparanta and Peisa 1997). An essential problem related to the buffer fund models presented so far is that they can affect the labour costs only. The problem is that the Finnish export industry is very capital intensive nowadays and labour costs have little effect on their exports prices in markka terms.

Discussion on stabilisation funds raises the question whether risk sharing in a currency union should take place on the EU, national, regional, sectoral, firm or individual level. Or if it took place on several levels, what kind of interaction might appear; could risk sharing on one level cause redistributive externalities on another level?

One interesting question is the difference in risk sharing and redistributive effects between the traditional devaluation instrument and the buffer funds. As devaluations meant beggar-thy-neighbour policy in relation to competing foreign countries, the buffer funds share risks only domestically. As the open sector is more vulnerable to external shocks, the buffer funds mean the same kind of risk sharing between the open and the closed sectors as before. The effects of buffer funds are the same as those of devaluations in the sense that they diminish the domestic production costs compared to foreign costs. The effects differ, however, in the sense that there is no redistribution of resources between sectors as much as over time.

4.3 Restructuring of the Welfare State

Finland is a typical Scandinavian welfare state, where income and consumption tax rates are high and strongly progressive. Public services are widely provided for the whole population and social security is generous. Active redistributive policy has reduced income differences. Also the high general education level has promoted equality in the society. Plans for membership in the EMU have raised wide concern in Finland on the future of the welfare state.

The welfare services are typically offered by the public sector, largely by the municipalities in Finland. In many other European welfare systems the private market, families, the trade union or the church and some charity organisations take much responsibility for the welfare of the poor. The Finnish system emphasises public services whereas direct transfers are more important in many other EU countries. This difference can have some importance in case of large fiscal mobility as they might have different spill-over effects.

In the 1990s extensive public sector changes have taken place in Finland. The serious recession in the early 1990s (output fell by 12 % in 1991-1993) led to a strong increase of unemployment and increase of unemployment insurance costs. At same time tax revenue declined automatically. In 1992-1995 there was a serious banking crisis in Finland and public support for the banks amounted to almost 10 % of GDP. Raising of income tax rates and wage-related social security fees were used to balance the increasing public expenditure and to slow the increase of public debt. (This widened the tax wedge and has been blamed for keeping unemployment high).

The third element in the development is the administrative reform that has included privatisation and other ways to add market mechanisms in the public sector (e.g. fees on public services). The aim has been to increase efficiency and to improve incentives. Direct cuts of public expenditure have been carried out in order to balance the budget and to stop the growth of public debt. As a result Finland has been one of the very first EMU candidates which fills all the convergence requirements.

Some of the public expenditure cuts are permanent once-for-all cuts on social benefits, some are just temporary cuts and can be easily raised back on the former level. Part of these actions have been explained by the integration development (tax competition) and some by adjustment to the EMU convergation criteria. Some cuts on public expenditure have been necessary to balance the automatic growth of the budget deficit. It is sometimes difficult to separate the permanent structural (ideological) changes and the more temporary contractive cuts related to business cycles.

The above public sector adjustment can be called shortly the *income strategy* (tax increases), *expenditure strategy* (cuts) and *efficiency strategy* (structural changes in the market, pricing and incentive mechanism). The long-term cumulative effects of these strategies can have fundamental changes in the basic character of the welfare state. The traditional *institutional* welfare state can turn out to be a more *marginalistic* structure in which the allocation of social benefits is much more restricted and the public sector responsibility is limited to such crises where no other help is available.

If EMU increases the mobility of people, this may affect different communities in different ways. Finland has its main experience regarding international migration from the 1970s when emigration to Sweden was extensive. In the 1990s immigration from Russia and Estonia has increased dramatically. The number of refugees from non-European countries has grown as well. However, Finland has never had serious migration with the potential EMU member countries. This is a good sign for tax competition but a bad sign for adjustment in asymmetric shocks.

EU membership raised worries of immigration of poor social beneficiaries from abroad and emigration of taxpayers from Finland. The problem of those Finns moving (temporarily) abroad has been totally ignored in the discussion. As the Finnish welfare system is more generous than most other EU systems, the residence principle can be costly for those Finns working abroad as they are provided the local, often lower level security and more restricted public services than at home. An essential question is how to define the population whose welfare the Finnish state should maximise: those Finns living in Finland, all Finns including those living abroad or all residents of Finland including foreigners.

5. Conclusions

The literature of fiscal federalism gives us some ideas how EMU could change the environment of the welfare states and the role of national governments in their income redistribution and risk sharing policy. The development depends on e.g. how successful the currency union will be, how EMU will affect the economic shocks and mobility of people. Part of the effect on welfare systems will come from EU-level political decisions concerning the regional tranfer policy, harmonising of taxation, etc. Although the social security arrangements officially belong to the national level according to the subsidiarity principle, many of the policy choices of EU and EMU authorities will still affect risk sharing, redistribution and the basic structure of welfare systems directly as well as indirectly.

EMU will not directly interfere with the national risk sharing and redistribution policy. However, EMU means the end of national monetary and exchange rate policy. Stability requirements of fiscal coordination set concrete restrictions for national budget deficits. A common currency might increase mobility of people and capital, which would accelerate tax competition. Along with deepening integration there might also arise increasing equality requirements on the EU level.

Although the European integration process has been deepening with increasing speed during this decade, the *union-level objectives* concerning the welfare systems within the EU are still very unclear. Is the aim *convergence* of national systems towards some common EU standard in order to follow the equal-treatment-of-equals principle and to guarantee efficient functioning of the European labour market? Or is the aim *divergence* respecting heterogeneous preferences and national traditions, allowing Tiebout-type fiscal mobility to lead to “market balance” between taxes and social benefits in each country? The first alternative could lead to stronger *centralisation* whereas the latter alternative respects more *decentralised* welfare arrangements.

If *equal treatment of equals* becomes an issue in EMU, it raises the interesting question whether we should look at equality ex ante or ex post. These alternatives have been considered as two different theoretical approaches in this thesis, based on different assumptions on the structure of human mobility. This could be an issue if countries have different risks as risk sharing also brings many problems from a redistribution point of view. When there are asymmetric shocks in the currency union, does ’equal treatment of equals’ in different regions mean equal treatment ex ante or ex post risk sharing.

Migration in forms of *labour mobility* and *fiscal mobility* also need more attention. In the literature there has been, however, little discussion on the differences between them. Labour mobility and fiscal mobility not only have different motives for moving, but also different externalities and lead to different conclusions on optimal transfer policy. One or another form is just assumed typically without much reasoning of the choice. It has an important role in the horisontal restrictions by promoting tax competition as well as in the vertical restrictions and macroeconomic adjustment.

Unfortunately, there is little empirical data on intra-EU mobility of people. We do not know yet whether the main motives for moving are related to labour markets or to social insurance. This is, however, crucial for the conclusions on the future of European welfare states. Mobility of labour is needed to balance asymmetric shocks (for risk sharing) but its externalities make it complicated to pursue national redistribution policy. It can happen that in order to promote labour mobility pressures for harmonising social security will increase.

Other essential questions for national independence in redistribution and risk sharing policies in EMU are whether the main stabilisation system of the monetary union is based on the *individual* or on the *regional* level, whether it is financed by a federal (progressive) income taxes or by intergovernmental transfers. More freedom for national policy could be left with a system that does not interfere with national taxation or (individual) unemployment benefits. When the central government operates only on the regional level, the system is closer to the subsidiarity principle.

There is much need for further research. Many big questions still remain open. To what extent does a single EMU member country have a need and possibilities for independent risk sharing and redistribution? Which level of government should take the main responsibility in income equalising among individuals and in sharing risks caused by asymmetric regional economic shocks within the union? If national and EU-level aims and instruments conflict directly or indirectly, what kind of multilevel fiscal mechanism would be optimal for reconciling the local and central level policies, for internalising externalities and for avoiding moral hazard problems?

Risks are always related to targets. As the aims might be different on each level, also the risks can differ. It is important to define well what is the risk that we want to share, who are the potential participants to share it and what are the long term redistributive effects of risk sharing in different fiscal levels. It seems that in EMU the individual-level risk is unemployment, on the firm and sectoral level it is loss of competitiveness, the main national-level risk could be the budget deficit and on EU level inflation. Economies can adjust to economic shocks in many different ways. Much of the outcome depends on the labour division regarding risk sharing between these level actors.

EMU creates quite a contradictory environment for national redistribution and risk sharing policies. On the other hand, the *need* for using national fiscal instruments for stabilisation increases when national monetary policy is lost along with the own currency. At the same time tax competition restricts the *possibilities* to raise tax revenue and the fiscal EMU criteria limit the use of public debt. The basic model of the Economic and Monetary Union is centralised monetary policy and decentralised fiscal policy. Stability of monetary union requires convergence of member economies and coordination of budget deficits and public debt. The future of national risk sharing and redistribution systems depends greatly on how deep in the welfare structures these requirements will go.

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