

***Report from the VATT
evaluation panel 2007***

Helsinki 2007

Valtion taloudellinen tutkimuskeskus

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Foreword

The Science and Technology Policy Council of Finland issued in 1994 a recommendation to carry out international evaluations of the state research institutes and organisations. The evaluations would give an objective view of the organisations to help improving their operational efficiency.

The first evaluation of the Government Institute for Economic Research was finalised in 1995. It was carried out by domestic experts. Four years later the evaluation was complemented with an interview study. The target group for this case was interest groups inside and outside of the government.

The current evaluation was launched in spring 2007. The Ministry of Finance invited Professor Tor Eriksson from Aarhus School of Business, Aarhus University (chairman), Denmark, Professor Simon Burgess from University of Bristol, Great Britain, Professor Anni Huhtala from Agrifood Research Finland (MTT), Helsinki, Finland and Professor Pentti Vartia from the Research Institute of the Finnish Economy (ETLA), Helsinki, Finland, to carry out the evaluation. This report is the result of the independent evaluation panel.

The Ministry wishes to express its sincere gratitude for the evaluators for the work, which gives new perspectives and a good basis for future development of the Government Institute for Economic Research. The Ministry also wishes to thank the interviewed expert groups for their input in the evaluation. Finally the Ministry wishes to extend its appreciation to the staff and management of the Government Institute for Economic Research for their efforts during the course of the evaluation process.

September 10, 2007

Jukka Pekkarinen

Director General

Preface

For the second time during its almost two decades long existence, the research of VATT has been assessed by a group of external evaluators. In early 2007 the Ministry of Finance asked a group of independent economists to assess the quantity and quality of research at VATT, the organisation of the institute's research activities as well as its dissemination activities, and to identify areas for improvement. This report summarizes the findings of the VATT Evaluation Panel 2007.

The Panel was impressed by the motivation of the staff of VATT to participate in the evaluation. In this report we recommend that VATT should develop clearer strategies for improving the quality of its research and that it should also strengthen its links to national as well as international academic research. We are confident that thanks to a qualified and motivated staff, the institute can successfully contribute to the research and policy debate in the areas of public economics, including labour markets, environmental issues and infrastructure.

The evaluation process was greatly facilitated by the support of the staff and the management of VATT, especially Dr Seija Ilmakunnas, the Director General, and project manager Tuomo Heikkilä who helped us in all practical matters during the assessment process. Of invaluable help were also several individuals from outside the institute representing other research institutes, research partners as well as clients and who were willing to share with us their experiences and views regarding the work carried out at VATT. The discussions within the panel were intensive, stimulating and always constructive. I very much enjoyed working with the members of the panel and I am grateful for having had the opportunity to learn from the expertise.

Tor Eriksson

The Chairman of the Panel

Executive summary

VATT has a prominent position in Finnish economic analysis of the public sector and its impact on the economy. During the 12 years since the previous evaluation, the institute has strengthened the quantity and quality of its research and improved its dissemination activities. During this period also an increasing portion of the institute's staff is trained as researchers. VATT has recently moved to Economicum and become part of the largest local research community in economics in Finland. The focus of the research carried out has increasingly shifted towards applied work using micro data on topics related to environmental problems, efficiency of public services provision, taxation and labour market policies.

The Panel sees three key future challenges for the institute. First, although research output has improved both quantitatively and regarding quality, there is still considerable scope for further improvement. Especially the levels of international publications remain relatively low. Here, continuous improvement is called for. Second, VATT, like other major Finnish economics research institutes, need to prepare for changes in research funding, and in particular for increased competition for external, project-based funding. Third, the institute needs to become more strongly integrated both in the Finnish and the international research communities.

Owing to its special position, VATT is expected both to carry out research and to provide expert tasks for ministries and other governmental bodies. Thus, it has at the same time to be broad in order to meet demands for expert tasks and to be deep to improve research quality and develop skills and competencies of the institute's staff. Improving research quality and quantity, coping with changes in the funding situation and increasing the institute's national as well as international cooperation, all imply that VATT in the future has to trade off some breadth for more depth. In other words, a stronger focus of activities will become key. This in turn means that the institute needs a clearer research strategy than before.

Recommendations

In order to meet the challenges mentioned above, the Panel:

- Advises VATT to consider reshuffling some of the current research themes and/or reducing the number of research areas to gain more flexibility and adaptability. There is no need for changes in the overall research themes: the public sector and impacts of changes therein on the Finnish economy. Rather, the need for change is within research areas. This implies concentrating on core topics and cutting small, individual, rather unrelated projects, which have no positive externalities. It also means a

stronger emphasis on building competencies and skills that are complementary within groups. To improve the quality of research, and increase the institute's adaptability and reactivity to changes in demand, investments in skills with broad applicability are crucial. Competencies and skills we have in mind are related to efficiency measurement and analysis of efficiency differences, and to policy evaluation studies. Policy making in Finland is seldom informed by ex ante assessments, nor are ex post policy evaluations common, either. VATT can make an important contribution by filling some of these gaps.

- Suggests improving upon the currently too low level of international publications by developing better research strategies and by providing stronger incentives for the researchers to publish in higher quality outlets. Currently the "value chain" is often too short; research reports remain working papers or international conference presentations, and the value added by subjecting the work to international refereeing is exploited to a too little extent. The same can also be said about national publications; there are conspicuously fewer articles from researchers affiliated with VATT in leading Finnish outlets than from other major economic research institutes.
- Suggests improving the impact of the institute's research by more ambitious publication strategies. This would also have a positive effect on recruitment of good researchers as the institute's publication record is an important signal about the quality of co-workers and the reliability and visibility of the work carried out.
- Recommends that research strategies are complemented by an elaborated recruitment strategy. Human resources management should be strengthened by more career planning and by policies that mitigate the negative consequences of low employee turnover. Additional flexibility can be met by a visitors programme and by creating fixed-term (part- or full-time) research professorships.
- Recommends a complete restructuring of VATT's own publications series and in particular moving to a clearer and more user friendly division of labour among the different series.
- Advises the institute to strengthen its links with both academic research and other Finnish applied economics research institutes. Also cooperation with similar research institutes in other countries needs to be developed. In developing its research, VATT should seek strategic partnerships in academia and also more actively benchmark itself to other research institutions in its field.

- Recommends that VATT in general should seek more collaboration with other researchers and research groups. Because of the institute's quasi-monopoly position in some areas of Finnish economic research, this is also important for safeguarding high quality standards and continuous improvement. Some public goods produced at VATT, like large data sets and the micro simulation model TUJA, should be open and accessible to many users. Openness and collaboration is the key to continuous innovation and improvements.
- Recommends that the institute exploits its strengths: its good models, rich, longitudinal data sets, good research facilities and location in Economicum, in improving its national as well as international networks and collaboration.
- Suggests that the institute's dissemination activities could be improved further with the help of more systematic training of the younger staff.
- The Panel notes that the activities at VATT are well recognised by its clients and the other research institutes in Helsinki. Also its impartiality is widely recognised. Assessing the institute's social and scientific impact as well as its influence on economic policy-making is difficult as this kind of influence is hard to quantify and is often gradual by nature. Nevertheless, there is ample evidence of more qualitative nature that the work carried out at VATT has had significant influence on policies related to e.g., provision of public services, environmental problems and labour market policies. Distinguishing the impact of research, expert tasks and various kinds of dissemination activities aimed at raising public awareness of economic problems will remain a difficult task, however.

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1 Assignment

1.1 Terms of reference

The Ministry of Finance appointed a Panel for the evaluation of research activities at the Government Institute of Economic Research (henceforth: VATT) consisting of Professors Tor Eriksson from Aarhus School of Business, Aarhus University (chairman), Simon Burgess from University of Bristol, Anni Huhtala from Agrifood Research Finland (MTT), Helsinki, and Pentti Vartia from the Research Institute of the Finnish Economy (ETLA), Helsinki. The contract period was 1.5.–31.8.2007.

The Panel was asked to judge VATT's research over the last five years (2002–2006) in view of its mission to provide independent economic research in addition to its expert services to the Ministry of Finance. VATT seeks to be a widely trusted research institute carrying out work independently and impartially and by reporting in a balanced way. The Panel has been asked to make a general assessment of:

- The quantity and quality of the research carried out and its scientific relevance and excellence focussing on:
 - the quantity and quality of national and international publications
- The organisation of research at the institute, research strategies and leadership:
 - national as well as international collaboration,
 - doctoral training and other forms of skills development,
 - the balance between research and other activities,
 - the focus of the research programmes,
 - the organisation's adaptability and reactivity to changes
- The dissemination activities of VATT and the impact of the institute's research and expert activities:
 - in informing economic policy planning and making,
 - on public awareness of economic problems and the community at large

Finally, the Panel was also asked to assess the importance of external funding for the operations of the institute.

1.2 The procedure

Before the site visit at the institute, the Panel received a background material package (see [Annex 1](#)) providing an overall picture of VATT and its resources as well as the institute's annual reports and research, publications and activities lists for the assessment period years.

In addition the four research areas were also asked to carry out SWOT analyses of the work and to prepare a list of what they considered as their ten best publications during the assessment period (see [Annex 2](#)).

The Panel visited VATT from May 28 until May 31, 2007. During these four days the Panel had the opportunity to speak with a large number of persons from both inside and outside VATT. During the first two days, the Panel met and discussed with the researchers working in the four research areas at VATT. During the two last days Panel members met with representatives from other Finnish economic research institutes and economics departments in Helsinki and with representatives from "users" of the research and expertise at VATT. The Panel also had a separate meeting and discussion with the Director General and the research directors for the four research areas. Finally, the Panel also had a meeting with the institute's Advisory Board. See [Annexes 3](#) and [4](#) for the programme of the visit and a list of people consulted by the Panel, respectively.

1.3 Structure of report

This report is structured as follows. Chapter 2 contains some background information about VATT and some general perceptions of the Panel regarding the changes in VATT since the previous evaluation carried out in 1995. In chapter 3 the report discusses the scientific relevance and excellence of research at VATT.

That is followed in chapter 4 by the assessment of the quality of the research activities and a section discussing the institute's collaboration with other research institutes and groups. Chapter 5 is concerned with the institute's dissemination activities and an assessment of the impact of the research carried out at VATT.

2 Background

2.1 VATT's tasks and resources

In assessing the activities at VATT it is important to note a few distinguishing features of the institute. First, it is not a pure research institute. A considerable proportion of the activities are expert tasks for the ministries, notably the Ministry of Finance. An evaluation of these activities is not, however, the task of this Panel. In the following, we will therefore concentrate our discussion on the quality of research. Second, when the institute was created a substantial share of the employees were transferred from the Ministry of Finance's planning secretariat and from the earlier Economic Planning Centre (TASKU). Thus, many employees did not have a background as a researcher, not to speak of training for research work. This clearly affected the early years of the functioning of the institute, and to some extent some traces of the old civil servant culture remains in the organisation. Third, VATT is quite well resourced; it has a budget of about 5 million Euros for this year. About 20 per cent of this comes from external funding. This share has increased steadily since the previous evaluation. Consequently, one can expect to obtain a considerable amount of research and expert services output from the institute. Another considerable asset is the institute's location in the Economicum building which hosts three academic economics departments.

Characteristic of economic research in Finland is that academic research is not organised in form of larger research groups specialising in certain areas. As a consequence, academic research is rather scattered. Moreover, several departments are mainly theoretically orientated. A large share of the applied economic research is done at various research institutes like VATT, which is independent sectoral research institute under the Ministry of Finance.

An important future challenge for the institute will be a change in the funding situation for the so called sectoral research institutes. The background is briefly as follows. Each year about 300 million Euros are allocated from different ministries' budgets for research purposes. Some ministries have a clear "partner research institute", while others do not. VATT for instance receives its basic funding from the Ministry of Finance. As a result, cross-ministerial fields of research are suffering from the current situation. The purpose of the reform is to change and improve upon this situation. Thus, in the coming years a larger share of ministerial research funding will be merged and allocated to the best bidders to tenders. However, not all of the ministries' research money will be open for competition. It should also be pointed out that the new funding situation will not imply a dramatic change for VATT as the institute in recent years has gained ex-

perience in rising funding from several ministries, TEKES, the Academy of Finland and other non-governmental organisations.

2.2 Twelve years since last evaluation

Many things have changed and many things have also improved since the previous evaluation, which was carried out in 1995. First of all, a considerably higher proportion of the institute's personnel, although still far from all the employees, are now trained as researchers, that is, have a PhD degree. Partly thanks to this, research productivity has increased. Another contributing factor is that VATT is not anymore serving as the secretariat for the Economic Council, which has freed up more time for research for the institute. Also other monitoring and related (non-research) activities have decreased. The magnitude of research output, especially in terms of international publications, still remains relatively low, however. On the other hand, the employees continue to be involved in an impressive amount of dissemination activities.

As a consequence of these developments, the content of the research work carried out at the institute has changed markedly. There are now very little standard macro analyses and more work in applied micro analyses of the provision and efficiency of public services, environmental issues, labour market policies, taxation and social security. In this respect, research at VATT has followed international trends in economic research.

Since the previous evaluation, the institute has also moved into new premises in Economicum which in addition to VATT hosts three academic economics departments in Helsinki: Those of University of Helsinki, Helsinki School of Economics and the Swedish Business School. Thus, the institute has physically become part of a relatively large and high quality research community, and has taken some steps to come out of the isolation it was criticised for in the evaluation twelve years ago. As will be explained more in detail below, a further integration of VATT into the Finnish and international research community is necessary and would contribute to the improvement of the quality of research at VATT.

3 The organisation of research and the basis for scientific excellence and relevance

The main fields of research at VATT are the public sector (interpreted broadly) and the impact of public sector policies on the economy. The bulk of the work carried out in these research areas is relevant both scientifically and from a policy perspective. These include the analyses of labour markets and labour market policies, the interplay between taxation, income transfers and income distribution, tax policy analysis, evaluation studies of environmental policies, energy economy and infrastructures, provision of welfare services and the impacts of governmental policies on the municipal and regional economies.

3.1 Relevance and process of choosing research topics

At every research institute there is a continuous need to evaluate and to reconsider its activities and to identify areas that seem less promising in the future. At VATT, standard macroeconomic analyses used to account for a sizable share in the past, but they have decreased considerably in recent years and this tendency should be accelerated further. However, a research institute with a profile like VATT's still needs to pay attention to growth and the structural transformation of the Finnish economy and their determinants. In our view, VATT should strengthen its work on welfare services, their efficiency and organisation. Our view was also shared by the representatives of "user institutions" we interviewed during our visit in Helsinki. In general, the institute should focus its research on economic analysis of the public sector in a broader sense. This implies that also issues related to taxation and social security, environmental issues and the efficiency of the Finnish infrastructure should remain core research areas.

Although choices of research topics are currently to a considerable extent demand-driven, it seems to us that there is a non-negligible scope also for individual researchers to make some choices of their own. As a consequence, the research plans include several small individual and rather unrelated research projects. (It should be noted, however, that their share differs across the research areas.) This freedom to choose research topics can be considered as a form of reward that the employees receive for doing the demand-driven expert tasks. To some extent these "free", individually driven projects can also act as pilot studies for possible larger studies, which may be useful. Nevertheless, this kind of uncoordinated research efforts is not likely to have considerable positive externalities, but is rather likely to make the research groups less coherent and consequently more vulnerable to changes. In individual projects with external funding, priority should be given to long-term projects with international cooperation rather than short-term consulting.

Thus, some more coherence in the research projects is called for. A relatively focussed portfolio of research projects that complement each other has been achieved by making use of common methodologies such as CGE models, efficiency and productivity measurement in research areas 3 and 4. In these areas, the choices and the investments in the necessary skills of employees have largely been decided within the groups. This could well serve as a model also for the other research areas, naturally complemented with coordination by the management of the research institute.

3.2 Organisation and execution of research

The institute's research is organised in four research areas, each one led by a research director:

- Area 1: Labour markets, taxation and social security;
- Area 2: Tax policy and economic growth;
- Area 3: Environment and infrastructures;
- Area 4: Welfare services and regional development.

A short description of the research areas is given in [Annex 5](#).

The current definition of research areas does not exclude some overlaps. Thus, for example, areas 1 and 4 both utilise modern micro econometric techniques for programme evaluation and areas 1 and 2 both analyze the changes in tax policies. Although the organisation of research activities at VATT does not appear to be extremely "siloed", it should be noted that the research groups are relatively small which creates some inflexibility. Due to their smallness the groups are also vulnerable to employee turnover. This is potentially a serious problem as the distribution of research output per capita is quite skewed within each of the research groups and outward mobility is typically higher at the top of the productivity distribution. In order to achieve somewhat more flexibility and adaptability it may therefore be worthwhile to consider the possibility to either reshuffle some themes (and hence, also employees) across research areas and/or to reduce the number of research areas.

An additional argument for moving in this direction is the simultaneous needs to focus more within research groups, to concentrate on core topics and to build within-group complementary competencies and skills. As specialisation inevitably implies some additional risks, it could be a good idea to balance the increased risks by creating fewer research areas as a form of insurance. It seems to us that there are several potential scope economies that could be exploited at VATT. One example is the methodological similarities in the research on efficiency measurement of public sector services and labour market and social policy evaluation studies, another is the resemblance of research on infrastructure and

environmental issues and the provision of public services and analysis of differences therein. Much of policy making in Finland is not informed by ex ante assessments of the policy changes under consideration. Ex post policy evaluations are also quite rare in Finland. Clearly, here is a potential demand for research activities at a research institute like VATT with an applied profile and experience in policy studies.

3.3 Balance between research and other activities

In order to improve quality and to meet the international standards of good applied economic research, the researchers have to become deeper with respect to both the focus in their research and the development of their skills and competencies. In an environment characterised by an increasing competition with other research institutes for funding, VATT has to focus on continuous skills development, the quality of its research and its adaptability and reactivity to changes in demand for its services.

Thus, irrespective of the exact implementation of the plans for the restructuring of the funding of Finnish research institutes, it seems clear to us that in the years ahead, focus and developments of strategies will become the key. In preparation for what hopefully will be a gradual transition period, a clarification from the Ministry of Finance regarding the role of VATT as a provider of expert tasks to the Ministry and as an independent research institute, would be helpful in deciding on the balance between breadth and depth. The new funding will in all likelihood be in areas that are cross-ministerial and therefore have had less resources for research in the past. The opportunities for VATT to capture a sizable share of this funding look promising because some of these areas – the public sector, labour markets, economic issues related to environmental and health problems – are currently within the institute's core research areas.

As economists we of course know that there is no such thing as a free lunch. One of the key, but also difficult, trade-offs, an applied and policy-orientated, mainly government funded research institute such as VATT faces is to strike the right balance between breadth and depth. The former is necessary in order to successfully meet the varying demands for expert tasks from ministries. In general, ministries' needs for policy advice should be relatively easy to anticipate and meet by a competent senior staff. Issues that appear on the policy agenda have often been investigated and debated in the research community for years. For this very reason, due to their expertise gained from research, researchers devoted to studying public economics and governmental policies are regularly invited to give high-level policy advice.

As a rule, the best researchers are usually also the best experts. Consequently, one should not strive for a too strong division between expert and research tasks,

nor between individual employees performing them. In an organisation like VATT it is therefore important to have some flexibility in order to spread expert tasks more evenly between employees as well as over time. Moreover, it should be noticed that in practice it is quite difficult to separate research from expert tasks. As an example consider the CGE modelling done at VATT. The expert, policy planning tasks can for instance be rather routine runs to consider the distributional effects of different policy instruments. But the maintenance and development of the model used for this ostensibly simple exercise is only possible if the personnel are engaged in high-quality international research. Thus, in order to “buy” expert tasks, one needs to ensure there is a high-quality supplier of those services. In sum, improving the quality of research also leads to an improvement of the quality of expert services. And, as research and expert tasks are complements rather than substitutes, striking a balance between them is not a key issue.

3.4 Strategic planning and management – means to improve relevance and excellence of research

Staying focussed is important in choosing topics and issues for research. VATT therefore needs to think more carefully about its research strategy choices as well as about its recruitment strategies. Serving simultaneously the tasks of providing expertise services to policy-makers and carrying out publishable research is associated with the difficult trade-off between being broad and deep. Focusing is nevertheless a good strategy because if the operating culture, systems and practices are aligned with the strategic focus, there are better prospects for improving quality of research. Basic leadership and managerial skills are required to establish coherence and collaboration in research agendas; to build visions for research in public economics in Finland, and to identify areas of complementarities, and potential synergies between research institutes and academia. Strategic planning tools – carefully prepared SWOT analyses and alike – help in managing the organization. A mapping exercise would enable staff at VATT to develop a shared vision and strategic agenda for research that would assist decision making regarding actions at the national level and in finding areas with potential for international cooperation and collaboration.

4 The quality of research and collaboration

4.1 Research quality

The average quality of the research reports has been improving over time, but there is still plenty of room for improvement. Quality, as measured by the quality of both the international and national outlets the research is published in, differs between research areas; it is lowest in area 2 and highest in areas 1 and 4. Area 3 lies in between these and has done too little to enhance its visibility through publications in international journals although the potential is there. To some extent the differences between areas reflect differences in the age structure of the members of the research groups. At VATT, like in most other research institutions, a considerable amount of the productivity emanates from junior researchers who have recently finished their doctoral theses. This explains part, but not all, of the quite large spread in productivity within research groups. The fact that far from the whole staff contributes to the research output of the groups should obviously be a cause of concern. The good news is that as in the coming years there will be more employees trained as researchers, productivity as well as quality is likely to continue to increase. On the other hand, as employee turnover has been relatively low, and if this continues to be the case also in the future, mid- to long-term productivity prospects look less bright.

As was mentioned above, the coherence of the research topics varies between research areas, but in all areas there appears to be some freedom to pursue also individually driven research projects which are relatively independent of the other work carried out within the area. Some “academic freedom” is probably motivating, but then this should be more equally distributed. More coherence is also called for from a quality perspective. Our impression from the discussions with the research groups is that the areas that have the most coherent research programmes were those where this was the result of a strategy developed at the level of the research area.

A major weakness of the research output is the dearth of publications in other outlets, and economics journals in particular, than the institute’s own publication series. From the 10 best publications lists we received from each research area (see Annex 2), it is clear that some researchers at the institute have published in journals of internationally good standard. But given the size and the budget of the institute one could expect more. And the high quality publications are too much concentrated on a few researchers.

More specifically the problems connected to publishing in journals are two. First, the number and to some extent also the level of publications in international refereed journals is relatively low. The number is especially low in view of the fact

that the number of papers accepted for presentation at good international conferences is considerably larger. There seem to be some missed opportunities here. The step from a conference paper to a journal article is not always a small one. But the extra effort it takes to make it is something that becomes shorter with experience. At the same time the quality of both the conference papers and the articles improves, too.

Second, also regarding the national journals is there scope for improvement. It is conspicuous that there are significantly fewer articles in the leading Finnish journal – *Kansantaloudellinen aikakauskirja* – from researchers at VATT than from the other major economic research institutes. Several applied research papers from VATT are, and should be, concerned with economic problems that are specific to Finland. They are, therefore, not always easy to publish in international outlets. Of course, that does not necessarily mean that they are of poorer quality. But as for the international publications, publishing in the higher ranked refereed journals is a certificate that the research has been subjected to a quality check. Moreover, the better journals have a wider readership, and publishing in them creates more visibility. In competition for funding, but most likely also in competing for the recruitment of good researchers, a good publications record of the institute constitutes an important competition parameter as it provides positive signals about the quality, reliability and visibility of the work carried out. International and national exposure and recognition are also key parameters in the competition for collaboration parties. Thus, also for national publications, aiming at higher quality outlets should have high priority. Again, our impression is that several of the research papers produced by researchers at VATT have the potential to be published in better domestic journals. This should be exploited more efficiently.

So, why does this not occur? One prime suspect is that the institute's researchers lack incentives to publish well.

The immediate economic rewards for the individual researcher(s) are rather modest and incentive pay schemes as such are not used, although we experienced some confusion regarding the latter among the employees. As far as we can tell on the basis of our interviews, for career concerns publishing in good quality outlets is not conceived of as very important, either. In fact, careers within VATT appear rather unclear. Nor has the basic funding of the institute been much affected (if at all) by the quality of its publications records. On the other hand, researchers at VATT face to a less extent some of the problems found at other research institutes where many employees are working on externally funded and often also rather short-term projects, and therefore have less time to make the extra effort to create the value added necessary for good publications. With a tendency towards a higher share of external funding, there is a danger that this leads to too high turnover of research projects which works against the logic that research knowledge is cumulative by nature.

The weights used in constructing the measure for the output of VATT – see VATT in brief, 15.3.2007 – reflect the (expected) labour input for the different activities. Although this output measure is used only for evaluating the overall productivity of the institute, whereas in personnel performance reviews focus is on individual productivity, giving the same weights to the preparation of an international publication as to “other domestic publications” and discussion papers is still sending a rather clear signal that aiming for higher quality does not pay off.

All this implies that creating stronger incentives to publish well should be one of the cornerstones of a strategy for improving quality of research at VATT. Currently, the institute may be giving the impression that it is not a good employer for economists who want to combine policy orientation with an academic level of research, when it actually should be doing the opposite: showing it is a good place to work for those who want to combine these two elements. This is particularly important in Finland where there are only a few good places like this in academia.

The institute differs from academic economics departments. There the primary goal of research work is to contribute to the research-based knowledge and the performance measure for success is quite straightforward: the number and quality of good publications. Researchers at VATT are often in addition to research asked to do expert tasks for a ministry and also to take part in several dissemination activities. Simplifying a bit, one can say that whereas an academic researcher only has to write up the journal article, researchers at VATT in addition have to write a report to the ministry (or some other governmental body) and a newspaper type of report (or prepare a talk or a lecture). These are complementary tasks (not substitutes) and so, it is not impossible to have all three of them included in the publication strategy for each project. Consequently, what is needed is a more explicit publication strategy which is supported by an incentive scheme which encourages publication in higher quality outlets.

The institute has four different publications series of its own:

- “VATT-julkaisuja” which is basically books or booklets;
- “VATT-tutkimuksia” which is larger research reports;
- “VATT-keskustelualoitteita” which in direct translation is discussion papers;
- “VATT-muistioita” which translates into memos.

The division of labour between the series is rather confusing and needs to be clarified. Currently, the discussion paper series in fact includes both working papers and expert task reports. Moreover, several other papers in this series seem not to be real working papers aiming at publication elsewhere but are more like research reports that have reached their end-station. There is need for a complete

restructuring of VATT's own publication series in order for interested readers to find what they are interested in. As an increasing share of the work is published elsewhere, establishing a reprint series or something else (for example links to the "final destinations" on the website) accounting for this should be considered as well.

4.2 Collaboration with other researchers and research groups

As mentioned in the introduction, researchers at VATT have been, partly for historical reasons, rather isolated from the rest of Finnish economics research community. This has gradually changed but continues to be a weakness of the research culture at the institute. And yet, feedback to and discussion from the academic and research communities regarding the work at VATT are essential for safeguarding high quality standards, especially given that the institute in some fields has something of a (local) quasi-monopoly position.

Lamentably, the move to Economicum and being located in the same building as the Helsinki Center of Economic Research has not led to a marked improvement in this respect. There is some collaboration between junior researchers at VATT and its neighbouring economics departments, but not much. This collaboration is not a significant part of major projects. This state of affairs is partly due to the fact that one of the major players at HECER, the University of Helsinki's economics department, has a rather weak tradition in applied research and hence, has only built limited competencies in this field. But it is obviously also partly due to a tradition of doing things "in-house" at VATT. An indication of this is the low level of cooperation with the other major economic research institutes in Helsinki (in particular ETLA, PT and PTT) also in common research areas. This is of course not good as these institutes also have applied research profiles and therefore are the most natural candidates for cooperation. Moreover, collaboration with these institutes would also facilitate focussing and specialising on core competencies, as VATT would not have to have all of them "in-house". Naturally, the current state of affairs implies that new ideas and competencies spread more slowly into the organisation than it otherwise would.

Some of the research areas are involved in more collaboration than others, but on the whole it seems as if the existing collaboration is rather outcomes of "random" events and factors than of a well developed strategy. This is in particular true for international collaboration. VATT clearly needs a strategy for its collaboration with other researchers and research groups that is based on benchmarking. To the best of our knowledge, there are no other research institute the profile of which exactly matches that of VATT, but there are several research groups, both in the other Nordic countries and in the rest of Europe (for example, AKF in Copenhagen, IFAU in Uppsala, IFS in London, CMPO in Brighton, and part of CPB in the Hague), that carry out similar types of analyses to inform policy discussions

and decision making directed at the public sector. Two excellent groups of researchers in environmental economics and energy analysis worthwhile considering as benchmarks are the environmental economists groups at the Frisch Centre for Economic Research in Oslo and at ZEW in Mannheim.

Although the Panel has not carried out a formal benchmarking exercise, our report is to a high extent based on lengthy discussions in which we compared VATT to other research institutes, especially those mentioned above. Benchmarking is important and is an integrated part of the management of successful research institutes. Thus, in the future VATT needs to do more benchmarking; for its own management purposes, but also for future evaluations.

In searching for improved national as well as international collaboration, the research groups at the institute should exploit much more some of the strengths they have:

- good and sometimes even unique models,
- rich, longitudinal micro data sets that are continuously maintained,
- good computing and other facilities for applied work, and
- the location: three economics departments as its neighbour.

These are all valuable assets, the returns to which the institute should be able to boost with a reasonable effort and a well planned strategy. Success is more likely if the initiative comes from the institute. VATT should encourage its members to take a more active and leading role in expanding and improving their networks.

A more formalised way of taking initiatives in this direction could for instance be to create visitors' positions: fixed-term part- or full-time research professorships for senior researchers that work on similar topics and who are willing to contribute to VATT's research and/or to collaborate with the institute's personnel. Such a programme would also add some flexibility and could be used to expand areas which temporarily are in greater demand.

In the past years some of this flexibility has come via young researchers who have been completing their PhD alongside working at VATT. This is less likely to be the case in the future. It is often a bad idea anyway as thesis papers are most of the time not the best way to inform ministries and policymakers and it is seldom easy to transform papers originally written as expert papers into parts of a good dissertation manuscript. As a matter of fact, it should be the other way round. A researcher knowing who is knowing what s/he is doing when choosing a topic for a thesis first prepares a thesis and learn adequate skills for analyzing the problems at hand. These are later used in advising others in the subject matter that sooner or later will appear on policy agendas. Hence, scientific relevance does not exclude policy relevance.

One motivation for a research institute like VATT is that it constitutes a correction for market failures. Thus, there needs to be an institute that creates and maintains high quality (panel) micro data sets and that builds and continuously develops more complicated models for e.g., policy analyses and policy simulations. In other words, or more precisely in economic terminology, this implies that one important task of VATT is to act as a provider of public goods. These are rather expensive to produce but their use is associated with marginal costs close to zero. Therefore, it is important that these public goods, such as for example the micro simulation model TUJA which has been developed and is maintained at VATT, should be open and accessible to many users. This is, however, currently not the case, and has given rise to problems familiar from monopoly situations such as lack of incentives to improve and to exploit the latest advances in the field of micro simulation. Here, too, openness and extended collaboration is the way forward. Naturally, this also applies to the large, and often unique, micro data sets created.

5 The dissemination and the impact of VATT's output

5.1 Dissemination activities

Under this heading we briefly discuss other dissemination activities than publishing in scientific journals and books.

Many researchers at VATT have established strong links to the ministries, and to the Ministry of Finance, in particular. They are also frequently engaged in dissemination activities directed not only to ministries and other governmental bodies, but also to a broad range of NGOs. This implies that the work at VATT is likely to have an impact also on public awareness of the economic problems analysed. Overall, the dissemination activities are many and of good quality. This is how it should be and is to be applauded. The Panel was somewhat surprised to find that there is little formal training for dissemination activities. Learning-by-doing appears to be the most common way of acquiring dissemination skills. Here is probably some scope for further improvement. Of course, dissemination is a two-way street. Dissemination could also be facilitated by government authorities by investing in competences to make use of research findings.

5.2 Impact of the institute's research and expert activities

As have been pointed out in earlier sections, the scientific impact of VATT's research has improved but is rather modest and can and should be improved. As regards the impacts on economic policy-making and the societal impact in general, it should be noted that measuring the impact of VATT's research activities in these respects is hard, given the information available to us. The institute does not collect information on this in a formalised manner, nor does it seem to have system for regular feedback ("customer satisfaction surveys") from its clients. Consequently, our evaluation of the impact is mainly based on the more qualitative information obtained from discussions with several experts from client organisations and other research institutes the Panel had during its visit in Helsinki. In the future it would also be useful if the institute would be more explicit on the amount of resources that it uses on research, expert tasks and informing the public. Some form of registration of use of time and resources is also likely to be helpful in monitoring the balance between different activities and how these are distributed among the institute's employees.

The research done at VATT is well recognised by its "clients" and by the other research institutes in Helsinki. The institute has a prominent position in economic policy analyses and policy-making. Although the institute operates under the

Ministry of Finance, it is seen as an independent part of government and its research and expert services are widely considered as impartial. This was clear from the Panel's discussions with the other research institutes as well as the "clients" of the institute's work and contributions.

During the discussions on the impact of VATT, the Panel was also reminded of the fact that some of the trust for the institute may be generated by being part of the government. On the other hand, because of the institute's special position, it is important to have controls that moderate the disadvantages from its quasi-monopoly position. Outside evaluations, like the current one, serve this purpose. Increasing competition for research funding contributes in the same direction. In general, subjecting the work done to outside review as in journal publishing, participation in international conferences and collaborating in major research projects with colleagues from other research institutions, all serve this purpose, too.

In summary, we find that since the previous evaluation both research and dissemination activities have clearly improved – dissemination activities probably more than research. In the longer run it is important to find a balance between the various activities, and to remember that the "true" impact of a research institute is based on high quality research.

Annex 1: List of content of background material package

Information package for the evaluators

1. VATT in general
 - 1.1. VATT research programme 2006–2008
 - 1.2. VATT in brief (15.3.2007)
2. Abstracts of VATT publication series (starting 2003) and access to full reports
3. Annual reports 2004 and 2005
4. Financial statement 2006 (in Finnish)
5. Finnish Economy – Structural Indicators 2006
6. Miscellaneous
 - 6.1. Kokemuksia virastojen ja laitosten arvioinnista, VM 9/2000 (in Finnish only)
 - 6.2. VATT evaluation 1995 (in Finnish only)
 - 6.2.1. Pohjola
 - 6.2.2. Relander
 - 6.3. Sidosryhmäarvio 1999 (in Finnish only)

Annex 2: List of 10 best publications within each research areas (self-reported)

Research Area I

Sinko, Pekka (2004): Essays on Labour Taxation and Unemployment Insurance, VATT-tutkimuksia 111. (Doctoral Thesis). One paper published in *FinanzArchiv*, 2004, 60, 2, 186–204.

Böckerman, Petri – Hämäläinen, Kari – Maliranta, Mika (2004): Sources of Job and Worker Flows: Evidence from a Panel of regions. *Labour: Review of Labour Economics and Industrial Relations*, 18, 105–129.

Hämäläinen, Kari – Böckerman, Petri (2004): Regional Labor Market Dynamics, Housing, and Migration. *Journal of Regional Science*, 44, 543–568.

Kyyrä, Tomi – Wilke, Ralf (2004): Reduction in the Long-Term Unemployment of the Elderly: A Success Story from Finland, ZEW-Discussion Paper 04–63. Published in *Journal of European Economic Association*, March 2007, 5, 154–182

Loikkanen, Heikki – Riihelä, Marja – Sullström, Risto (2005): Regional Income Convergence and Inequality in Boom and Bust. Results from Micro Data in Finland 1971–2000, in Felsenstein, D. and Portnov, A.B. (eds.), *Regional Disparities in Small Countries*, Springer, Berlin-Heidelberg.

Riihelä, Marja – Sullström, Risto – Tuomala, Matti (2005): Trends in Top Income Share in Finland. Working Paper No. 42, University of Tampere. To be published in Atkinson and Piketty (eds.), *Top Incomes over the Twentieth Century: A Contrast Between European and English Speaking Countries*, Oxford University Press.

Korkeamäki, Ossi – Uusitalo, Roope (2006): Employment Effects of a Payroll-tax Cut – Evidence from a Regional Tax Exemption Experiment. Working Paper 2006:10, IFAU.

Korkeamäki, Ossi – Kyyrä, Tomi (2006): A Gender Wage Gap Decomposition for Matched Employer-Employee Data. *Labour Economics*, 13, 611–638.

Hämäläinen, Kari – Taimio, Heikki – Uusitalo, Roope (2006) (eds.): *Työttömyys – taloustieteellisiä puheenvuoroja*. Edita, Helsinki.

Ollikainen, Virve (2006): Gender Differences in Unemployment in Finland. *Jyväskylän Studies in Business and Economics* No. 51. University of Jyväskylä. (Doctoral Thesis) One paper published in *Labour*, 2006, 20, 159–198.

Research Area II

Hjerppe, Reino – Kari, Seppo – Kiander, Jaakko – Poutvaara, Panu (eds.) (2003): Verokilpailu ja Suomen verojärjestelmä. WSOY, Porvoo.

Hjerppe, Reino – Kari, Seppo – Kiander, Jaakko (eds.) (2006): Kasvumallin muutos ja veropolitiikan haasteet. VATT –julkaisuja 44.

Hjerppe, Reino – Kiander, Jaakko (eds.) (2004): Technology Policy and Knowledge-Based Growth in Small Countries. VATT Research Reports 110. (Final report of the KNOGG-project).

Kanniainen, Vesa – Kari, Seppo – Ylä-Liedenpohja, Jouko (2006): Nordic Dual Income Taxation of Entrepreneurs. Paper presented in the 62nd Congress of the IIPF in Cyprus, 28–31.8.2006. Forthcoming in *International Tax and Public Finance*, 4/14.

Kari, Seppo – Karikallio, Hanna (2006): Tax Treatment of Dividends and Capital Gains and the Dividend Decision under Dual Income Tax. Paper presented in the 62nd Congress of the IIPF 28–31.8.2006. Forthcoming in *International Tax and Public Finance*, 4/14.

Kari, Seppo – Ylä-Liedenpohja, Jouko (2005): The Effects of Equalization Tax on Multinational Investments and Transfer Pricing. *FinanzArchiv*, vol. 61, 45–61.

Kiander, Jaakko – Kilponen, Juha – Vilmunen, Jouko (2004): Taxes, growth and unemployment in the OECD countries – does collective bargaining matter? *European Journal of Political Economy* 2004:4.

Kiander, Jaakko – Kröger, Outi – Romppanen, Antti (eds.) (2006): Finnish Economy – Structural Indicators. VATT.

Kiander, Jaakko – Romppanen, Antti (eds.) (2005): Suomi 10 vuotta Euroopan unionissa – Taloudelliset vaikutukset. VATT-julkaisuja 42. (English summary: Finland's First 10 Years in the European Union - Economic Consequences. VATT Discussion Papers 377).

Venetoklis, Takis – Kiander, Jaakko (2006): Spending Preferences of Public Sector Officials: Survey Evidence from Finland. *Public Budgeting & Finance*, summer 2006, 20–44.

Research Area III

Hjerpe, Reino – Honkatukia, Juha (toim.) (2005): Suomi 2025 – Kestävän kasvun haasteet. Helsinki. VATT-Julkaisuja 43.

Honkatukia, Juha – Forsström, Juha – Tamminen, Eero (2003): Energiaverotuksen asema EU:n laajuisen päästökaupan yhteydessä. Loppuraportti. VATT-tutkimuksia 102.

Honkatukia, Juha – Mälkönen, Ville – Perrels, Adriaan (2006): Impacts of the European Emission Trade System on Finnish Wholesale Electricity Prices. VATT-keskustelualoitteita 405.

Kuusi, Osmo – Kinnunen, Juha – Ryyänen, Olli-Pekka – Myllykangas, Markku – Lammintakanen, Johanna (2006): Suomen Terveystieteiden tulevaisuudet. Teknologian arvioinnin perusraportti. Tulevaisuusvaliokunta teknologian arviointeja 24.

Marttila, Veikko – Granholm, Heikki – Laanikari, Jussi – Yrjölä, Tiia – Aalto, Aaimo – Heikinheimo, Pirkko – Honkatukia, Juha – Järvinen, Heikki – Liski, Jari – Merivirta, Raija – Paunio, Mikko (2005): Ilmastonmuutoksen kansallinen sopeutusstrategia. MMM julkaisuja 1/2005.

Mälkönen, Ville (2004): Essays environmental policy and strategic behavior in international trade. Kansantaloustieteen laitoksen tutkimuksia Nro 101: 2004.

Perrels, Adriaan – Himanen, Veli – Lee-Gosselin, Martin (2003): Identifying Building Blocks of Sustainable Transport – Lessons on External Effects from Both Sides of the Atlantic. *European Journal of Transport and Infrastructure Research*, Vol.2/3, pp.153–160. Special issue edited by A. Perrels– V. Himanen – M. Lee-Gosselin.

Perrels, Adriaan (2003): Reconciling competitiveness and environmental objectives. *Applied Energy*, Vol.76, pp.75–87.

Sulamaa, Pekka – Widgrén, Mika (2005): Asian Regionalism Versus Global Free Trade: A Simulation Study on Economic Effects. *Global Business & Economics Anthology (GBEA)*, ISSN: 1553–1392

Vaittinen, Risto (2004): Trade Policies and Integration – Evaluations with CGE Models. Helsinki. VATT-Tutkimuksia 109.

Research Area IV

Aaltonen, Juho – Kirjavainen, Tanja – Moisio, Antti (2006): Efficiency and Productivity in Finnish Comprehensive Schooling 1998–2004. VATT Research Reports 127. Helsinki.

Häkkinen, Ida – Kirjavainen, Tanja – Uusitalo, Roope (2003): School Resources and Student Achievement Revisited: New Evidence From Panel Data. *Economics of Education Review* 22: 329–335.

Kangasharju, Aki (2007): Do Wage Subsidies Increase Employment in Firms? *Economica*, 74, 51–64.

Kangasharju, Aki (2003): Maksako asumistuen saaja muita korkeampaa vuokraa? VATT-tutkimuksia 101. Helsinki. (A translated and re-written version titled "Housing Allowance and the Rent of assisted Households" submitted to *Scandinavian Journal of Economics*).

Kangasharju, Aki – Pekkala, Sari (2004): Increasing Regional Disparities in the 1990s: the Finnish Experience. *Regional Studies*, 38.3, 255–267.

Kirjavainen, Tanja (2007): Nuorten lukiokoulutuksen tehokkuus 2000–2004. VATT-tutkimuksia 131. Helsinki. ("Efficiency of High Schools 2000–2004", will be included in Kirjavainen's doctoral thesis).

Luoma, Kalevi – Rätty, Tarmo – Moisio, Antti – Parkkinen, Pekka – Vaarama, Marja – Mäkinen, Erkki (2003): Seniori-Suomi. Ikääntyvän väestön taloudelliset vaikutukset. *Sitran raportteja* 30, Helsinki. (Economic Effects of Ageing Population).

Moisio, Antti (2003): The Flypaper Effect: Evidence from Finnish Municipalities. In Jan Mønnesland (ed.). *Regional Public Finances. European research in regional science* 13, pp. 153–172.

Moisio, Antti – Uusitalo, Roope (2003): Kuntien yhdistymisten vaikutukset kuntien menoihin. Sisäasianministeriön kuntaosaston julkaisu nro 4/2003. (English version titled "The impact of municipality mergers on local public expenditures in Finland" will be submitted in some yet undefined academic journal).

Rätty, Tarmo – Luoma, Kalevi – Aaltonen, Juho – Järviö, Maija-Liisa (2005): Productivity and its drivers in Finnish primary care. VATT Research Reports 118. Helsinki.

Annex 4: List of persons consulted by the panel

Wednesday 30.5.2007, meeting with representatives from universities and research institutes

Kiander Jaakko	PT, Labour Institute for Economic Research
Kilpiö Eila	KTK, National Consumer Research Centre
Korkman Sixten	ETLA, Research Institute of the Finnish Economy
Ollikainen Markku	Helsinki University, Department of Economics and Management
Poutvaara Panu	Helsinki University, Department of Economics
Toivanen Otto	Hecer, Helsinki Center of Economic Research
Vilmunen Jouko	Bank of Finland

Thursday 31.5.2007, meeting with “clients” of VATT

Helin Jyrki	SAK, Central Organisation of Finnish Trade Unions
Hetemäki Martti	VM, Ministry of Finance
Mustonen Jussi	EK, Confederation of Finnish Industries
Suvanto Antti	SP, Bank of Finland
Tiihonen Paula	Eduskunta, Committee for the Future in Parliament of Finland
Vihriälä Vesa	VNK, Prime Minister's Office

Annex 5: Brief description of research areas (Source: Research programme 2006 – 2008)

Research area I: Labour market, taxation and social security

Our research on this area is based on responding to current policy problems mainly by utilising extensive individual-, household- and enterprise-level data sets and economic methods. Central thematic research entities are the functioning of the labour market, the effectiveness of labour market policy and studies evaluating the impacts of taxation and income transfer systems.

Labour market and labour market policy

During this programme period, the functioning of the labour market is an essential policy issue. Do the supply and demand match in the labour market or do there simultaneously exist wide-ranging unemployment, labour shortage and recruitment problems? Has structural unemployment actually decreased? Which kind of mobility exists within the labour market? These topics are reviewed by studying the changes of the labour market. The demand and supply of labour will be reviewed simultaneously during this research period. We will go deeper into the research of recruiting issues by analysing recruitment problems. Selection of topics, viewpoints and methods in evaluation research will be specified at the same time as determined work is done to develop the best research data. Thus, we will be able to respond to problems arising within the labour market flexibly and based on extensive data content. Central labour market policy issues are connected with the evaluation of the impacts of optimal circumstances related to the active programmes and their functioning. In the field of labour market research, we are prepared to study issues arising during Finland's EU presidency.

Taxation, income transfers and income distribution

The economic impacts of policy changes in taxation and income transfers are evaluated from the viewpoint of the state finances and as an impact on different population groups. From the viewpoint of work, major topics related to social policy systems are unemployment benefits, family benefits and pensions. The aspects of indirect taxation are added to consumption research and the topics are reviewed in connection with policy issues resulting from the ageing of the population. The basic problem of studying income distribution is to review the occurrence and prevention of economic disadvantage which is also one of the core tasks of the government. The review aspects related to this are being developed.

For a long time now, the micro simulation model TUJA has been utilised in the research of personal taxation and income transfers. It is used in co-operation with the Ministry of Finance and its maintenance and future usage are evaluated in co-

operation with the Ministry. The co-operation with the European-wide EUROMOD project will continue. We also aim at utilising the TUJA model for research purposes together with other users of research data.

During this programme period, we will be prepared to make analyses related to low-productivity work in connection with its subsidy systems, the impacts of the tax deduction for using domestic help and other tax experiments.

Research area II: Tax policy and economic growth

Our central research task in this area is studying tax policy which is hardly carried out elsewhere in Finland. Another research entity addresses entrepreneurship, industrial policy and the growth prerequisites of the private sector. Furthermore, the tasks of the research area include analyses on growth and competitiveness, on the sustainability of public economy and on the international economy. We will continue to renew the publication *Finnish Economy – structural indicators*. At the beginning of this research programme period, we will start publishing a new international economic journal, *Nordic Journal of Public Policy*, on the Internet.

Tax policy

Increasing international tax competition creates new challenges to domestic tax research. Sustaining an extensive tax base in company, personal and indirect taxation is a prerequisite for economic growth in Finland. In this area, the impacts of tax reforms are studied *ex ante* and *ex post*. The objective is to examine the effects of tax reforms from theory to practice and consider the effects of the whole tax system. Furthermore, the impacts of enterprise/dividend tax on employment and investments are reviewed. In the area of tax research, the YRTTI database based on the tax form data of enterprises is utilised. International tax competition and the necessities for change in taxation are monitored and forecast. As to indirect taxation, the economic effects of changes in the value-added tax are evaluated.

Entrepreneurship, industrial policy and growth prerequisites of private sector

The priorities in the research of entrepreneurship and industrial policy are related to the competitiveness and entrepreneurship objectives emphasised by the government and the EU. The focus of research is in analysing dependencies between the public authority and enterprises. The research on industrial policy and technology policy will be increased. A central issue in the research is how the public authority can create prerequisites for the growth of production and employment in the private sector. The research evaluates the importance of background fac-

tors of innovative growth entrepreneurship, such as the industrial and technology policies, the functioning of markets, Finnish competitiveness and the incentives of entrepreneurship. In addition, we will co-operate with the Ministry of Trade and Industry in the SÄVY project.

Demography and sustainability of public economy

Our objective is to continue the follow-up and forecast of the long-term sustainability of public economy. At the same time, it is possible to update earlier development assessments based on realised development and make sensitivity analyses from the viewpoint of different factors affecting public economy. Such are e.g. the pressures for change created by tax competition and the impacts of ageing both on public expenditure and supply of labour force.

Research area III: Environment and infrastructures

The central tasks of this research area are studies on the environmental policy and infrastructure policy and developing and maintaining economic models. This research area is responsible for evaluating the effects and impacts of economic policy. We also participate in forecasting in co-operation with the Ministries and forecasting networks.

Environment and energy economy

The central issues of environmental and energy economy cover the challenges of environmental policy related to sustainable development. Important application areas are the evaluation of realisation alternatives of the environmental policy instruments from the viewpoint of economic efficiency and other impacts. During this programme period, central research subjects are the impact evaluation of the EU emissions trade system, integration of the emissions trade system and other policy instruments, and creating a methodical and data basis for evaluating international agreement proposals after the Kyoto Agreement period. The study of sustainable consumption aims at producing new data on actions related to welfare and consumption.

The study of energy economy is made in the field primarily as a part of evaluating climate policy but also more extensively in the research of connections between consumer habits, forms of housing and energy consumption. A new theme will be the functioning of the energy market.

Infrastructures

The objective of studying infrastructures is to examine the connections between transport infrastructures and the economy. Important research subjects are the

ownership and administration of infrastructures and the connections between the infrastructure, institutions and economic growth which are studied in the research programme ‘Impacts of transport infrastructure and logistics system’ and several independent projects. A central objective from the viewpoint of technology policy and forecasting is to develop new methods and indicators to support the evaluation of technology policy.

Evaluation and modelling

The objective of economic modelling is to develop macroeconomic models and databases related to them and their maintenance, and to expand the applications of the models both in the direction of regional issues and new policy instruments. In developing impact evaluation, we aim at utilising new data and applying statistical evaluation methods.

Research area IV: Welfare services and regional development

In this research area, we produce data for supporting decision-making, the focus being the organisation and productivity of public services. Additionally, regional development and sustainability of municipal economy are studied. The research on the housing market will be expanded.

Welfare services

The ageing of population and tax competition increased by globalisation have brought the costs of welfare services into the focus. With our research, we aim at producing data on the characteristics of a sustainable service system and the strengthening of the current production system. This far, we have mostly focused on studying the productivity and efficiency of health centres. During this research programme period, our aim is to deepen and diversify our analysis to education and social services and to proceed in the methods of measuring productivity and analysing the factors behind productivity development. The quality assessment of public services is a great challenge. Our objective is to organise a know-how concentration within the VATT to analyse public service systems. Its task will be to produce and coordinate the productivity research of public services.

Municipal and regional economy

The research of municipal and regional economy supports the productivity projects of welfare services. The objective is to produce data on, *inter alia*, municipal structure and the changes of the state subsidy system. Regional development is studied from the viewpoints of the regional labour market, the regional struc-

ture of production, regional economic growth and regional service demand. In addition, the impact evaluation of regional policy measures is continued.

Housing market

At present, the volume of economic housing market research is small in Finland. An important theme is the dependencies between the housing and labour markets. Further research issues are the behaviour of households on the housing market and the price formation of housing in different levels of the market, i.e. land, building and property markets.

VATT-MUISTIOITA / WORKING NOTES

35. Lang Markku: Euroopan unionin jäsenyyden vaikutus maatalojen kassavirtoihin vuonna 1995. Helsinki 1998.
36. Hjerppe Reino – Kemppi Heikki: Julkisen infrastruktuurin tuottavuus. Helsinki 1998.
37. Verojärjestelmän kautta annettava tuki. Helsinki 1998.
38. Tax Expenditures in Finland. Helsinki 1998.
39. Romppanen Antti: Suomen työeläkejärjestelmä kestää vertailun. Helsinki 1999.
40. Mäki Tuomo – Romppanen Antti: Nuoret työhön – varttuneet kouluun. Näkökohtia koulutuksen kehittämistä. Helsinki 1999.
41. Niskanen Esko – Voipio Iikko B. (toim.): Seminar on Urban Economic Policy / Kaupunkipolitiikan seminaari 13.8.1998. Helsinki 1999.
42. Mäki Tuomo – Virén Matti: Käytännön kokemuksia finanssipolitiikan indikaattorien laskemisesta. Helsinki 1999.
43. Verojärjestelmän kautta annettava tuki. Helsinki 1999.
44. Tax Expenditures in Finland. Helsinki 1999.
45. Kröger Outi – Kärri Timo – Martikainen Minna – Voipio Iikko B.: Perusteellisuuden pääomahuolto 2000 – 2030. Esitutkimus. Helsinki 1999.
46. Viitamäki Heikki: Asumistuen budjetointia ja määräytymisperusteiden valmistelua koskeva selvitys. Helsinki 1999.
47. Junka Teuvo: Asuntojen hinnat vapaille markkinoilla. Helsinki 2000.
48. Kunta- ja aluetalouden seminaari 14.2.2000. Seminaarin alustukset. Helsinki 2000.
49. Viitamäki Heikki: Työmarkkinoiden verokiila vuosina 1990-2000. Helsinki 2000.
50. Valppu Pirkko: A Brief Overview of Working Conditions in the Care Sector. Helsinki 2000.
51. Hjerppe Reino: VATT-10 vuotta – tutkimustuloksia ja uusia visioita. Helsinki 2000.
52. Aronen Kauko – Järviö Maija-Liisa – Luoma Kalevi – Rätty Tarmo (toim.): Peruspalvelut 2000 seminaari 29.11.2000 Seminaarimuistio. Helsinki 2001.
53. Parkkinen Pekka: Työssä jaksaminen pitkällä aikavälillä. Helsinki 2001.
54. Lyytikäinen Teemu: Työn keskimääräisen efektiivisen veroasteen laskeminen OECD:n menetelmällä. Helsinki 2002.
55. Tukiainen Janne – Loikkanen Heikki A.: Kuudes pohjoismainen paikallisjulkistalouden konferenssi – yhteenveto. Helsinki 2002.
56. Aarnos Kari: Vihreät sertifikaatit, uusi tapa tukea sähköntuotantoa uusiutuvista energialähteistä. Helsinki 2002.
57. Kemppi Heikki: Suomen jätepoliittisten tavoitteiden mukaiset jätetutkimuksen tutkimuskokonaisuudet I. tutkimuskluusterit (Wasteprev-projekti). Liitteenä kirjallisuuskatsaus jätteiden synnyn ehkäisystä. Helsinki 2002.

58. Heikkilä Tuomo – Kilponen Juha – Santavirta Torsten (toim.): Suomen tiede- ja teknologiapolitiikan haasteet ja muuttuva toimintaympäristö. KNOGG-työpajaseminaarin yhteenveto, Innopoli 1.4.2003. Helsinki 2003.
59. Santavirta Torsten: Benchmarking the Competitiveness Strategies of Six Small European Countries: A Small Country Perspective. Helsinki 2003.
60. Antikainen Riikka – Siivonen Erkki: Julkisen sektorin verrokin periaatteet tiehankkeiden osalta. Helsinki 2003.
61. VATT:n palkkauskäsikirja. Helsinki 2003. (Sisäinen)
62. Honkatukia Juha – Kemppi Heikki – Rajala Rami: Energiaverotuksen ja päästökaupan vaikutus kilpailukykyyn. Helsinki 2003.
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