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Research in Business Disciplines in Finland

EVALUATION REPORT

ACADEMY OF FINLAND

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EVALUATION REPORT

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Abstract	The report evaluates the Finnish research in business disciplines with a wide scope. It first tracks the developments of the Finnish research system in general and business research in particular. It then goes on to describe the field of research as a system under stress in which a number of problems can be found. The ascendance to the very cutting edge of business research is hampered by structural obstacles relating to eg. fragmented researcher training and small, isolated units. Finally the report recommends greater concentration into larger units focusing on top-level research, teaching or knowledge diffusing activities.	
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On behalf of the evaluation panel, I am honoured to present this evaluation of the research performance of business studies in Finland. We have prepared this report with the full appreciations of the importance of the task, and have approached this responsibility seriously, with an objective, critical but constructive, spirit.

We would like to thank all those who prepared self-evaluations and background material for our work, as well as all those who gave us their time and shared their experience and insights during our site visits.

Special thanks go to the local coordinators of our work Ms Anu Nuutinen, Mr. Matti Kajaste and Mr. Paavo Löppönen, who prepared our visits, provided background material and worked very closely with the panel to help us process a large volume of information, while scrupulously avoiding any value judgments, thus safeguarding the objectivity of the review.

Yves Doz
December 10, 2004

Executive summary

The expert panel found the research in business disciplines in Finland to perform a useful function for the development of business management competencies and to be of comparable quality to research performance of business education systems in other small European countries.

However, the Finnish business education system is in transition and under stress. For the past twenty years the academic system, built on German-inspired tradition, has served the growth of the student body, responded to regional development policies, and given priority to teaching quality and productivity, over research-driven academic excellence.

Funding and incentives are based on teaching volumes, registering large numbers of students, particularly in PhD programmes, even though many of these students are inactive and employment opportunities are scarce. The lack of a multi-stage career track system for faculty, and the growth of "non core" funding of a temporary nature have increased the workload of faculty and been detrimental to research. The lack of career management, differential rewards, and other incentives for research for senior faculty further reinforces the teaching orientation.

The incentives to increase student enrolment, in particular in PhD programmes, have not been matched by a parallel increase in academic opportunities, creating the paradox of a glut of students but of relatively few well-trained PhD graduates to perform research.

Finland's internationalisation and the growing integration of the European higher education system call for changes to this system, and build pressure for an evolution toward the U.S. system of academic excellence and research emphasis. While this might be feasible on a pan-European basis, the key features of the U.S. system cannot be sealed down effectively from a country counting 2,000 business schools to one counting 20.

The fragmentation of research efforts among many small departments makes it difficult to develop or diffuse a research culture, and to attract research visitors to Finland. The lack of a structured career path for recently graduated PhDs also limits the willingness of young Finnish researchers to move abroad temporarily. Further, the lack of a career track system makes an academic career less attractive than it should be, and may be particularly harmful in the early stage of a career, when researchers need to establish and deepen their research orientation so they can move toward outstanding publications.

A few Finnish schools have put in place measurement and reward systems that are research-based and publication-oriented, but most are still hostage to the system that drove – and in many cases built – them over the past twenty years. Among these schools, some have managed to exploit a Finnish *locational* advantage – or an

early advance – to achieve a high level of useful empirical research, some top-level journal publication, and to build the basis of sustained global excellence.

Many other schools, or departments, and research centres, have taken more a network bridging and knowledge brokering role, conducting multidisciplinary research of relevance and often of direct usefulness to the business community in Finland.

Some departments, often in smaller units in regional universities, pursued essentially a teaching mission, i.e. did not really ambition to carry out leading edge research of international repute but saw themselves essentially invested with an educational mission: to train students as well as possible. While less glamorous than research excellence, and less rewarding than brokering and bridging roles, the importance of the teaching mission cannot be ignored. A clear priority given to teaching is more important and more useful for these units, than the performance of second-rate research.

The expert panel's observations and analysis lead to recommendations in eight major areas:

1. Funding: Increase core funding and change funding formulates to include research as part of the basic mission and to provide more stability to funding programmes.
2. Incentives: Create incentive systems to foster research and publications and make academic careers more attractive.
3. Careers: Create a career track system and a tenure process.
4. Organization: Recognize the diversity among units, and their different missions, and encourage initiatives to create initial mass in academic areas.
5. Doctoral programmes: Distinguish more clearly between PhD programmes for the training of future academics and executive PhDs, and consider the creation of executive MBA programmes. Internationalise actively the academic PhD programmes.
6. Internationalisation: Promote and facilitate the international mobility of students and junior faculty.
7. Impact: Create more interactions with other disciplines, such as engineering, in Master's training.
8. Orientation: Encourage theory building, rather than more empirical testing, and the development of practice theories and of research areas where Finland can enjoy a *locational* advantage.

In sum, we observed an educational system which responded well, and successfully, to the demands placed on it over the past decades, but which now needs to keep evolving in very significant ways if Finnish research in business disciplines is to play a leading role in the international research community and to be of sustained value to the further development of business management competence in Finland.

1 Context

1.1 Mandate and Terms of Reference

The Research Council of Culture and Society of the Academy of Finland appointed on the 15th of September 2003 a Steering Group chaired by Professor Paavo Okko to plan and support the evaluation of research in business disciplines in Finland. The evaluation should be carried out by an international panel of six independent high-level experts. For that purpose the Steering Group invited Professor Yves Doz (INSEAD, France) to chair the panel. The other members were Professor Bo A.V. Carlsson (Case Western Reserve University, USA), Professor Marie-Laure Djelic (ESSEC, France), Professor Kjell Grønhaug (NHH, Norway), Professor Anthony G. Hopwood (Oxford University, UK), and Professor Juhani Kuusi (Finland). When Professor Hopwood reported that he was unable to continue for health reasons Professor Sten Jönsson (Göteborg University, Sweden) replaced him in the summer of 2004.

The purpose of the evaluation has been threefold; first, to evaluate the scientific quality of research in Finland in international comparison; second, to evaluate the impact of research on Finnish business know-how; and third, to evaluate the Finnish organization of research in business disciplines.

The background to the evaluation is that, even if Finland has been very successful in upholding a strong competitiveness in international comparison (cf. Finland's ranking as no 1 in the Global Competitiveness Report 2004-2005 of World Economic Forum.), the government stresses in its strategy for 2003-2006 competitiveness via business know-how: "In research and innovation public funding will be directed – in addition to R&D – to the business know how, which supports creation, competitiveness and growth of firms."

All major research funding organizations (Academy of Finland, Tekes, Sitra) have programmes to strengthen their investments in research to develop business know-how. Probably the most important project to this end, "Finland in the Global Economy", managed from the Prime Minister's Office, strongly emphasises knowledge intensive development. The role of universities, with greater financial autonomy, and able to compete on international educational markets is underscored. In the further development of its reasoning the report indicates that priority for expansion and broad coverage of the whole country should be replaced by a concern for academic excqellence. The development of business know-how is prominent on the agenda of the Ministry of Education as well as that of the Ministry of Trade and Industry. Against this background the more specific objectives of the evaluation have been specified as:

- To find out what has been the scientific quality and impact of research in the business disciplines.
- To assess whether the organization of research ("the Finnish concept") is appropriate, and which policy measures (incl. funding) would be adequate in achieving scientific excellence and effectiveness in the future.

The results of the evaluation – its conclusions and recommendations – are intended to be used by public funding organizations (especially the Academy of Finland) to develop their policies on how to promote research in business disciplines and its applications in Finland. The feedback from the panel is also expected to be of use for universities, research institutes, and departments in their planning. The evaluation was conducted on the department level and not on the level of research groups or individuals.

The questions posed to the panel thus were:

- What is the general state and structure of research in Finland in international comparison?
- What is the scientific quality and impact of business disciplines research in Finland?
- Are available human and financial resources appropriate?
- Is the impact on the development of Finnish business know-how adequate and effective?

The answers to these questions provide a basis for judging:

- How promising and challenging are the views from different actors on the future direction of research?
- Which policy measures (on the level of ministries, funding organizations, and institutes) would be appropriate to strengthen the business disciplines in Finland in their search for international and academic excellence? How should the priorities be set?
- Which policy measures would be advisable to strengthen the impact of research on business know-how in Finland?

In trying to establish a secure basis for a discussion of these issues the Panel has:

- Conducted **desk research** in terms of studying relevant documentation provided by the Steering Group such as descriptions of the Finnish innovation system, public documents, previous evaluations, self-evaluations by institutes in the research fields in response to the questions posed to them, and lists of publications and CVs provided by individual researchers.
- Interviewed and listened to presentations by **officials** and other experts who are responsible for planning and implementation of funding.
- Interviewed and listened to presentations by **representatives of Chambers of Commerce and industry** throughout the country on their views on the use of research on business know-how.
- Interviewed a large number of heads of departments, researchers and doctoral students in the **research and educational units** in the field.

Our efforts have been successful in the sense that we have been provided with an overwhelming volume of information, and we have been met with courtesy and understanding by a very large number of persons who sincerely assisted us in our quest for a stable ground for answering the above mentioned questions.

1.2 Background to the evaluation

1.2.1 Heritage

Finland, like the other Nordic countries, has a history of successful welfare state construction with a basis in rational social engineering. People have, by and large, accepted a sizeable public sector, with its comparatively heavy tax burden, and reallocation of resources from the rich and strong to the less fortunate via a trusted cadre of civil servants. Finland has ranked as a country with the least corruption ever since this has been measured. Part of the explanation for this is the Finnish-Swedish tradition of government agencies that are formally independent of the parliamentary majority, but carry out, loyally and rationally, governmental decisions. In order to be able to translate governmental intentions into action, these agencies have to have access to the deliberations and judgement of the polity. This is secured by an open decision-making process and free access to all public documents for all citizens. In this way trust is gained, but at the same time responsibility is delegated to many. Social capital is an asset of considerable value in Finland.

Industrial traditions stem from forestry and heavy machinery with a strong sense of regional and national responsibility. Finnish industry has, until today, been an exporting industry. Also the currently leading company, Nokia, has succeeded in maintaining a large part of its production in the home country at a time when "out-sourcing" seems to be a solution to many problems. Industrial leaders have to be able to keep their composure as the export markets (especially in forestry) generate price fluctuations that would wreck the nerves of anybody with very large investments in process equipment and raw material production. Outsiders admire Finnish stamina, even stubbornness, in the face of adversity, and tend to attribute this specific dimension to experiences of mobilising around strong leaders during the Second World War, and earlier.

A consequence of the sense of national responsibility in a country that gained its independence as late as in 1917, and that has had to cater for its self-sufficiency and neutrality in the shadow of a powerful and not always friendly neighbour, is an emphasis on regional policy. The principle is that the whole country should be inhabited. Part of that regional policy has been to found universities in all regions. We now find 20 universities in a country of five million people together with a number of polytechnics. This policy has been quite successful in terms of economic development and can partly be explained by good co-operation between the university sector and industry, but it has stretched academic personnel resources to the limit.

Demography adds to the problem of further improvement because baby boomers of the post-war period are now approaching retirement. The rapidly ageing population poses a problem with many dimensions, economic, social and political that Finland shares with Japan and other European countries.

Sustainable prosperity is believed to depend today upon the rapid development of a knowledge society. Excellence in scientific research should translate into productive

industrial and social action through an adequate structure of co-operation between academia and the concerned partners in society. Attention must then be paid to how academic excellence can be promoted, but also to the capacity of industry and other sectors of society to absorb new knowledge and translate it into valuable products and practices.

The academic system in Finland was, as is the case also in the other Nordic countries, founded in the German tradition of having departments led by a respected professor (holder of a "Lehrstuhl" for life) with associates and assistants geared to the plans and interests of that scholar. This has worked well in the stable environment where departments could build institutions and long-term relations with industry. Legendary professors could participate actively in the setting of norms for good practice and education could prepare students for meeting a well-known practice.

The role model for most countries nowadays is the American university system. To an extent, this has also been accepted in Finland. It is the famous universities we want to mimic, and the key is for the individual scholar to develop her/his C.V. in departments with a large enough critical mass to provide a stimulating environment. Mobility between universities is required as candidates go to conferences to present their results and take part in recruiting interviews with senior colleagues from other universities. In a vast system like the one in the United States, with over two thousand business schools, the "mainstream" rules and the selection of candidates can have an elite orientation. This is where the difficulties with the American system come in. It might be applicable on a European level, now that the *lingua franca* is English, but few Finnish scholars would be attracted by the American-style academic career system. Since the Finnish university system does not have the volume to benefit from adopting the American way, a combination of the best properties of the two systems might be an attractive option.

1.2.2 Challenges: Divergent demands

The fundamental problem for business disciplines seems to be to organise for more flexibility so that Finland can globalize with confidence and with the innovation system in a supporting role. For that purpose there is a need to discuss not only resource needs at different points but also how the business disciplines may be best organized to meet the challenges ahead. The starting point is that Finland has done well so far.

There are sediments in the structure, partly due to the influence of the development over the last decades of a structure to meet regional demands, partly to the traditional way of organising departments.

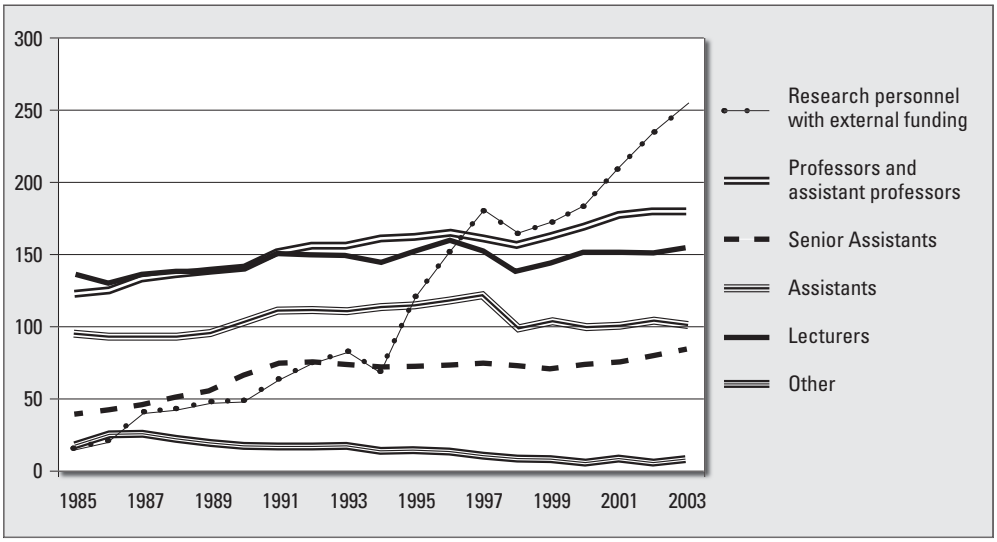
Furthermore, there is a clear local/regional demand for Finnish business research that should be, largely, filled on that level. At the same time there is an equally clear need for greater efforts towards academic excellence in an international perspective, that requires concentration of efforts to units with the necessary critical mass.

Furthermore, there is a need for industry to be able to benefit more quickly from scientific results, for a distinct improvement of the capacity of industry in many sectors has taken place to absorb such new knowledge. This would require not only a further improvement (albeit from a high level) of the co-operation between industry and academia, but also an increased flow of qualified scientists who take up positions in industry to conduct the dialogue with the scientific community.

Finally, reflection is needed on how the context of a more knowledge intensive development should be designed to enhance a desired move towards improved welfare. After all, it is reasonable to describe the Finnish innovation system facing a new phase of globalisation as a system under stress.

As an illustration we refer to the table below, which shows a rapid increase in the number of research personnel employed on external funding, while the number of permanent positions (professors and lecturers) has only increased marginally. At the same time the output of PhDs has increased considerably (even if the number of Licentiate degrees has declined at the same time), and the involvement of professors and lecturers in an expanding production of Master degrees is clearly noticeable. These increased demands for the most qualified researchers, the professors, seems to keep them from devoting more time to their own research. The comparatively "flat" salary structures do not help in providing incentives for more qualified research.

Figure 1. *Teaching and Research Personnel in Business Disciplines in Finland, 1985-2003*



1.2.3 International comparisons

Centres of Excellence

There seems to be a general trend in the debates on science policy in many countries to focus on public funding to support the establishment of Centres of Excellence. Most OECD countries have processes in place for this. A Swedish review of the common

characteristics of these Centres of Excellence efforts in 13 countries (Ministry of Education, Ds 2004:21) concludes:

- The common drive is toward scientific excellence and international position.
- That funding is based on "peer review" evaluations with international participation.
- The size of "Centres of Excellence" varies between 20 and 100 persons.
- There is a basic funding of 1 MEuro+ per year over about 10 years with additional project-based grants.
- The funding of these centres is also seen as an investment in high-quality doctoral education.

Denmark has allocated 25% of Research Council funds for this purpose

Norway (SFF) has selected 13 centres.

Germany, which is said to have the longest tradition of supporting Centres of Excellence ("Sonderforschungsbereiche" since the 1960s), allocates about 30% of the DFG (Deutsche Forschungsgemeinschaft) resources for this, focusing on (1) the classical geographically concentrated centre (one university, or a consortium) for basic research, (2) centres adapted to research traditions in humanities, and trans-regional centres (networks), and finally (3) "Transfer Centres" dedicated to research cooperation between universities and industry including the innovation process. More recently, the German Chancellor has announced his plan to boost ten German universities and turn them into elite and "first class establishments and research centres" that can "compete with international top league schools like Harvard or Stanford".

In the **USA**, the National Science Foundation allocates about 15% of its budget to these centres. Key words for these are critical mass, longevity, risk taking, interdisciplinarity, and, more so than in Europe, an emphasis on integration with education.

Australia has launched several programmes for Centres since 1990, all with a profile toward strategic areas and co-operation with industry.

South Korea has about 50 centres with similar profiles as in Australia.

Britain gives a more fragmented impression with its seven research councils. An interesting aspect is that the British system of evaluation and classification of universities (Research Assessment Exercise, RAE) seems to have got such a high profile that it has a major influence on the priorities of universities.

1.2.4 Educational reform

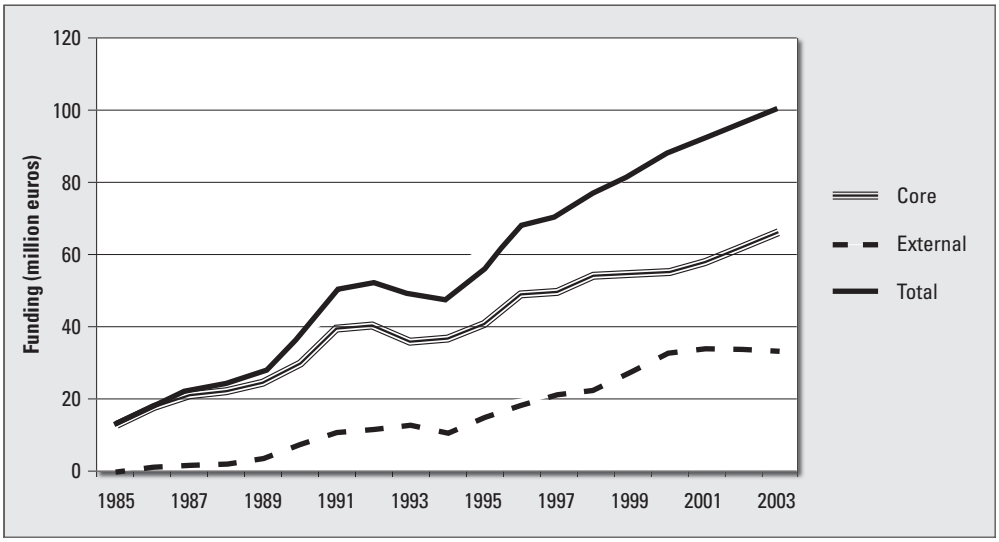
Several developments in the educational field demand the attention of research staff. The ever-increasing flow of exchange students has required a transformation of many programmes. EQUIS and other certifications are considered strategic (until everybody has them). The Bologna process is under way. As mentioned, these duties

exert extra demands on research personnel at the same time as external funds for research have increased rapidly. Small or fragmented units simply cannot cope with all of this at the same time as excellence in research is pursued, and keep personnel that are satisfied with their work.

2 Objectives and Funding – a System Under Stress

Over the past two decades, the funding of the business education system in Finland – and of the university system as a whole – has changed dramatically. The overall level of funding of business education has increased from 14 million euros in 1985 to 100 million in 2003 (See Figure 2). The business disciplines represented 8.3% of total funding of Finnish universities in 2003. The funding increase has been associated with a rapid expansion of the system by building several new units outside the traditional universities. A large share of the additional funding has gone to the new units.

Figure 2. *Core and External Funding of Business Disciplines in Finland 1985–2003*



While the overall funding has increased, the sources of funding have shifted. As shown in Figure 3, core funding from the Ministry of Education has been reduced as a share of overall funding from nearly 94% in 1985 to about 66% in 2003. Thus, an increasing share of the total funding has come from 'external sources'. State funding from sources other than the Ministry of Education – the Academy of Finland and Tekes – represented about 18% of total external funding in 2003. Finnish companies and other Finnish sources contributed nearly 60%. The remaining 22% came from the EU and other foreign sources. See Table 1.

The core funding is based on a formula reflecting the need to maintain a balance between four functions: extent of activities, teaching, research, and societal services. The *extent factor* consists of the "basic component" (determined in relation to operational expenditures), a component based on the target number of new students determined in the performance agreement between each university and the Ministry of Education, and a facilities expenditure component. For the university system as a

Figure 3. *Core and External Funding as % of Total Funding. 1985–2003*

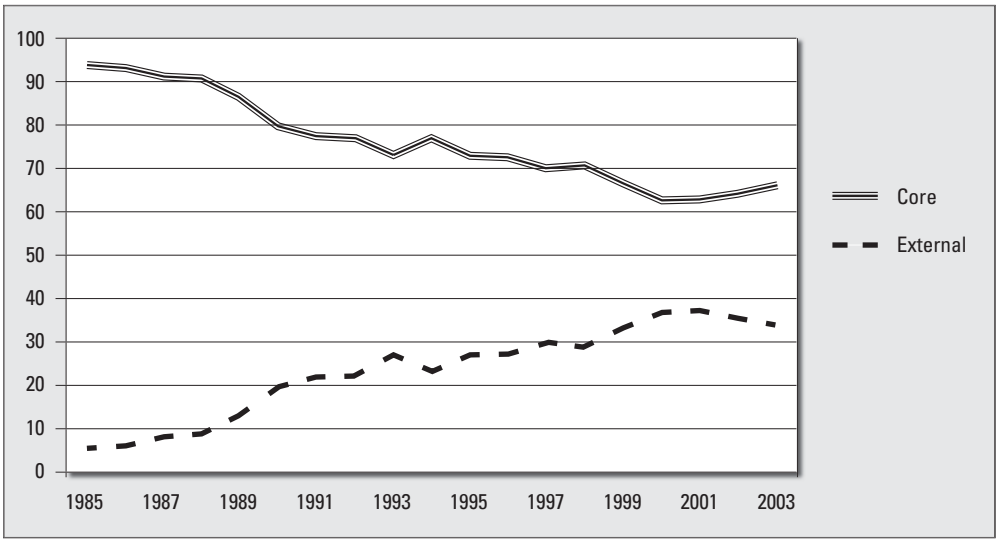


Table 1. *Sources of External Funding of Business Discipline Research in Finland, 1994-2003*

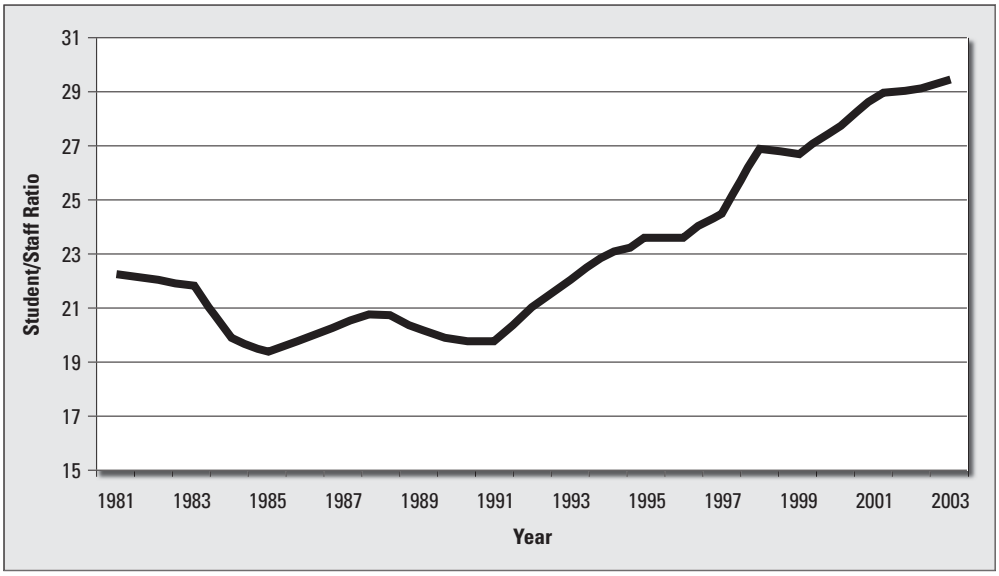
	Total external	Academy	Tekes	Finnish companies	Other Finnish	EU	Foreign companies	Other foreign
1994	100,0	6,1			90,0			3,9
1995	100,0	6,3			90,7			3,0
1996	100,0	8,8			72,2			19,0
1997	100,0	6,7			76,9			16,4
1998	100,0	8,8			68,3			22,9
1999	100,0	8,4	9,7	16,2	53,2	7,4	1,8	3,3
2000	100,0	7,6	10,0	20,0	53,5	4,0	0,9	3,9
2001	100,0	7,1	8,9	20,4	49,7	11,0	0,3	2,5
2002	100,0	9,7	6,7	19,3	44,0	16,6	0,7	3,0
2003	100,0	10,0	8,1	15,9	43,9	18,3	0,3	3,5

whole, this factor represents 19% of the core funding. The *teaching* factor (44% of the total) covers educational expenses for Master's degree students. The *research* factor (30%) refers to graduate schools and doctoral education, and the *societal services* factor (7%) covers the Open University and other societal services. In the education and research categories, 2/3 of the funding is allocated according to the expected output set by the department, 1/3 according to whether or not the goal is achieved.

One of the consequences of these funding principles is to encourage large enrolments while putting less emphasis on throughput. Thus, it often takes many years to complete a degree, particularly at the PhD level. The funding principles also reflect the idea that education should be free and open to all, and that a higher degree is always better than a lower one.

The core funding of research has played a diminishing role in the overall academic research; external funding agencies have become increasingly important. This is a result of a deliberate decision to make academic research more competitive and the results more relevant. This is highly desirable. But a less fortunate side effect is that research funding has become increasingly short-term and project-based (as distinct from long-term and programme-based). While the system has recently been shifting away from the traditional German system (a single professor in a discipline, surrounded by a few PhD students who do most of the research) towards a system with more professors and acting professors (non-tenured, on renewable 5-year contracts), the transition is far from complete. The number of teaching personnel in business disciplines increased from about 425 in 1981 to about 600 in 2003 but did not keep pace with the increase in the number of students. The teaching loads are heavy, especially for senior professors. The number of business degrees conferred more than doubled over the same period, from about 800 in 1981 to nearly 1900 in 2003. Similarly, the non-academic personnel has also been stretched thin, reflected in a nearly 50% increase in the number of students per staff member since the early 1980s. See Figure 4.

Figure 4. *Students per Staff Member in Business Disciplines, 1981–2003*



Source: KOTA database of the Ministry of Education

The bulk of external funding has gone to support short-term projects carried out either by post-doctoral fellows (acting professors or senior researchers) or by PhD students. This has resulted in a sharp increase in the number of PhDs produced. During the expansion of the business education system (primarily via the establishment of new units), these new PhDs were absorbed there, and initially many of them obtained permanent positions. More recently, especially since the new units have also produced new PhDs, there have been too few permanent positions available to absorb them. This overproduction has resulted in a large number of people in temporary jobs with short-term and highly uncertain research

funding. Many of these temporary positions are in research centres at universities. As indicated in Figure 1 above, the amount of externally funded research personnel has grown tremendously over the last two decades. It is now the largest teaching and research personnel category; other categories have increased much more modestly. The growth has been particularly rapid since 1995. From 1985 to 1994, the number of newly produced PhDs in business disciplines totalled 129, whereas the number of academic positions increased by 91. But between 1995 and 2003, 434 new PhDs were graduated while the number of academic positions increased by only 53.

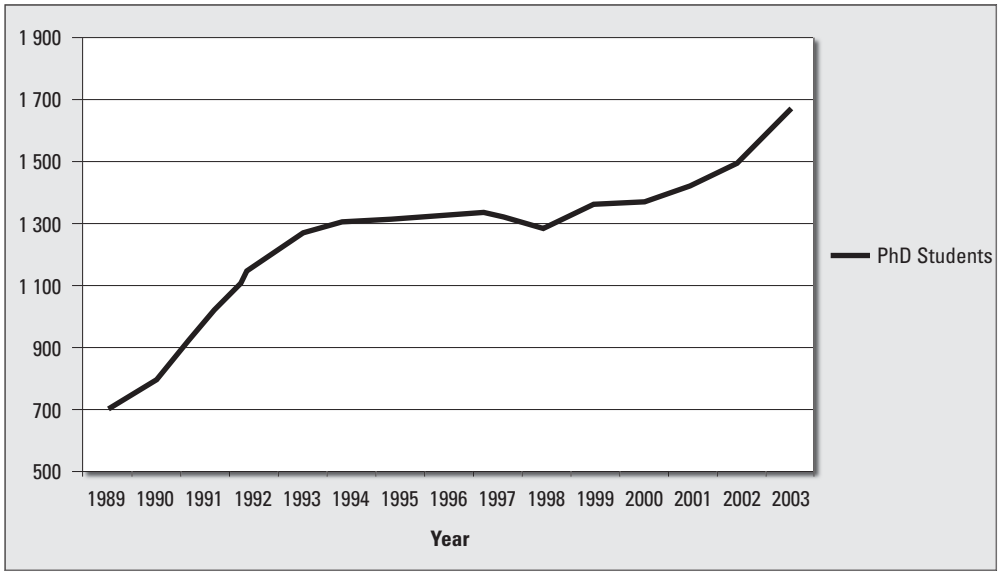
Thus, what we find is a system under tremendous stress. The business education system in Finland has expanded rapidly over the last two decades to support a growing economy and regional development. The financial resources are now stretched thin. The system relies increasingly on short-term external funding. Most of the research is done by relatively young PhDs in temporary positions, while the teaching staff, especially senior professors, have increasing teaching burdens and quite limited time for research. The number of new PhDs vastly exceeds the number of available academic positions in the system, while the ability of the business sector to absorb PhDs appears to be extremely limited.

3 Researcher Training – a Fragmented Landscape

3.1 PhD dichotomy

In the current system, the key priority has been to enrol (and to a much lesser extent graduate) large numbers of PhD candidates. On the whole, this has been a supply-driven system, characterized by the double principle that more is necessarily better and that highest-level degrees should be accessible to all. A consequence has been a very rapid increase in the aggregate numbers of registered PhD students in business disciplines, as Figure 5 shows:

Figure 5. *PhD Students in Business Disciplines in Finland*

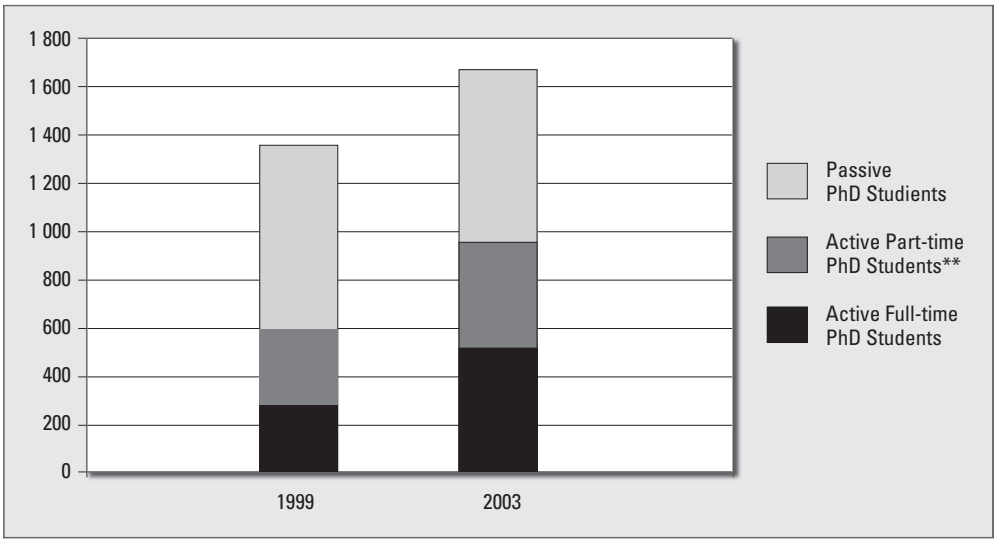


Source: KOTA database of the Ministry of Education

Overall, though, one wonders whether this means that quantity has primed over quality. The combination of free access to all in principle and of a funding system highly dependent upon the number of PhD students enrolled has resulted in a situation where many of the students enrolled have in fact been inactive or altogether absent. We call that the "dead souls" syndrome and we have identified it nearly everywhere. Figure 6 gives a sense of the extent of that problem.

This "dead souls" syndrome appears to be particularly acute within the population of students who already have a position in the labour force – whether in the private sector or in public administration. People who register as graduate students gain status from it in both their personal and professional lives. The mere fact of being officially a graduate student may be associated with a more or less informal ranking in the professional context as "high potential" or equivalent. On the whole, though, they probably have underestimated the amount of work, time and involvement that

Figure 6. *Active and Passive PhD Students in Business Disciplines**



* The source of the total number of PhD students is the KOTA database. The number of active students was supplied by the departments' answers to the evaluation questionnaire. The number of passive students was calculated by subtracting the latter from the former.

** The active part-time category also includes students who annually do as little as a month of doctoral studies.

graduate studies require and have found themselves unable to complete the process. They remain enrolled, nevertheless, and may even participate from time to time but they will not move – or else ever so slightly – towards completion of their thesis and degree.

Departments and schools of business studies across Finland accept this because they need those high levels of enrolment in order to acquire the funding and the budgets for their regular functioning. So the situation is basically that of a negative reinforcing loop where, at one level, nobody has the short-term incentives to question and disrupt the system and, at another level, the system is leading to an absurd situation – high numbers of enrolment, low levels of graduates and, in the meantime, a clear waste of resources.

Free access to doctoral studies for all in Finland also means that there are in fact two very different kinds of sub-groups within the active doctoral population. On the one hand, there are what could be called "academic doctoral students" – people who have entered the doctoral route with the intention of entering an academic career. These students have an academic ambition. On the whole, this sub-population tends to be younger than the other one. They will also more often tend to be full-time students and quite involved and active in the departments as teaching fellows or lecturers, research assistants and participants in various workshops and seminars. On the other hand, there is a group that could be called "executive doctoral students". These students have experience in the private sector or in public administration; they will often be working in a company or an administration and could be students on a part-time basis. Their interest will go more towards experienced-based and highly

applied theses. They tend to be much less involved and active in the departments than the other sub-population, whether as teaching fellows, research fellows or seminar participants.

This dichotomy in the Finnish PhD system implies a number of things. The first direct consequence is that there is a blurring, in the Finnish context, of the concept of doctorate or PhD. In many parts of the world, the PhD is essentially a "driver's licence", opening the road to an academic career. This implies a highly demanding academic training and capacity, on the part of the candidate, to show that he or she can become an expert (or "the" expert) on a very specific academic question or issue – often a deep but narrow one. This understanding of the PhD or Doctorate is blurred today in Finland since the same title refers both to the academic "driver's licence" and to the experience-based executive doctoral degree. A second consequence of this situation is the high level of pressure that is being put on professorial resources everywhere. On the whole, professors are supervising a great number of students and this necessarily has an impact on the quality of each individual supervision and hence on the quality of the resulting doctorates. Altogether, this leads to a paradoxical situation. On the one hand, there are too many PhDs in the system – it is more accurate to talk of over-enrolment than of over-production. On the other hand, there may not be enough good, academically-oriented PhDs, due in part to the dispersion of resources on too large a doctoral population.

Some departments and schools have recently started to feel the limits of that system and are now focusing all their energies on active PhD candidates, full-time and academically oriented – in other words, on those students applying to get a "driver's licence" for an academic career.

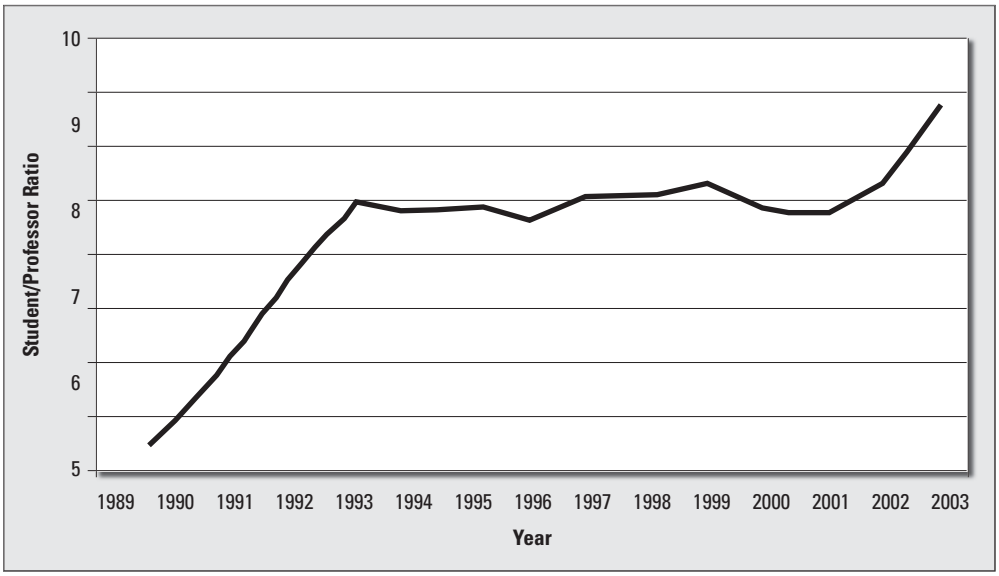
3.2 Fragmentation of PhD education

Open access to PhD education, combined with the funding system of universities and with a preoccupation for regional development (that has implied the multiplication of universities and departments) have spread resources thin when it comes to the training of PhDs. Every single school or department of business studies in the country has PhD candidates, and sometimes quite a few of them, even when there is only a very small number of professors around. This spreads supervisory resources thin, or else puts an unbearable burden on professors who, as a consequence, may have less time to engage in research. The high number of PhD students per professor in business disciplines is shown, in an aggregated manner in Figure 7 below.

At the same time, with all the good will in the world, this situation has made it difficult to have real PhD programmes locally, with sufficient numbers of quality courses, for example. There are, in many cases, simply not enough professors around to ensure PhD training locally and/or not enough PhD students to make this financially viable.

In the 1990s, KATAJA was developed as a mechanism to deal with some of those issues. KATAJA is part of the centrally organized and structured disciplinary graduate schools system. It is the graduate school most closely associated with the

Figure 7. *Active and Passive PhD Students in Business Disciplines*



Source: KOTA database of the Ministry of Education

core of business studies although KAVA, the graduate school in economics, also plays a role in the training landscape for business education. Like all other graduate schools, KATAJA offers essentially two things. First, it provides funding to a number of students. The system works on the basis of a core of associated departments that sit on the board of KATAJA, and each have reserved access to one or several such fellowships. Those fellowships are then competitively allocated within the pool of students from each department. Second, KATAJA organizes courses and seminars that are open at the national level not only to those students who are funded but also to all PhD students in a particular field or subfield. Originally, the pool of intellectual resources to draw from locally in business studies was quite limited. Hence the idea was both to pool those rare local resources at the national level and to complement them with foreign expertise. Many of the KATAJA courses, particularly in the beginning, were being offered by foreign academics, leaders in their fields. The idea behind having international researchers as visiting PhD trainers was to give a quick ride to the research frontier on a particular research topic.

Although KATAJA undeniably has played a significant role when it was created, it may be in the process of reaching its limits. A number of issues are emerging: First, courses and seminars are not being offered very regularly. At the same time, the possibility to go and attend a KATAJA course appears to be, in many places, more *ad hoc* than systematic. It depends very much in particular on the characteristics of each department and on their respective resources, but also on the personal feelings and pedagogical approaches of each supervisor. In the end this has the problematic consequence that PhDs in the same field or subfield may not have followed the same courses and may not even have a solid common base. This translates into heterogeneity in profiles and a blurring, once again, of the understanding of what a PhD degree is in any particular field or subfield. The fact that, in a number of

situations, the persons who will be supervising graduate students are not involved in the teaching of core or specialty courses to those students, is also an issue. To create a research-oriented culture, it is important that students realize that their supervisors are mastering the frontiers of the intellectual debates in the field; the teaching of a core course or specialty seminar can create such an opportunity. Finally, KATAJA is probably not the best mechanism to stimulate internationalization. While there are foreign faculty members involved, the internationalization of PhD studies should probably go much further today.

3.3 Fragmentation of research

On the whole, the fragmentation of PhD education that is a mark of the system is closely associated with the fragmentation of research units and centres and departments. In many places, there is simply not enough critical mass for it to be possible to make a mark in a given field of research. A number of research entities or departments depend, with respect to research productivity, on one or a handful of researchers. This means that, even in those cases where productivity is good, the situation is often fragile.

In those departments that are very small, furthermore, the pressure on professors for teaching and mentoring activities can be quite high (Master's theses, PhD supervision, undergraduate and Master-level courses). Faculty members may have to teach many different courses, within their discipline or even, in some cases, across several disciplines simply because there are not enough professors around. This naturally further takes time away from research and contributes to spreading resources thin.

Fragmentation is one more factor that has to be added to the particular situation with respect to incentive systems and budgetary rules to account for the overall weakness of the 'research culture' in a number of departments. Fragmentation, furthermore, is not conducive to visibility – whether in Finland or outside. This, in turn makes it difficult to promote and foster foreign exchanges – whether to attract foreigners to spend time in a particular department or to send Finnish researchers abroad for medium to long stays. This can in part explain the fact that those exchanges remain extremely limited today. The Academy of Finland, for example, receives annually only a handful of applications for researcher exchange to Finland in the field of business disciplines.

4 Career Tracks and their Limits

There are two issues here that will be taken up in turn – the career track for recently graduated PhDs and the career track for professors ('tenured professors').

4.1 Career track for recently graduated PhDs

While universities were being opened rapidly across Finland, the new departments could absorb a number of the new PhDs. But in the absence of a continued expansion of the educational system, the academic career opportunities of PhDs in business studies are likely to be more limited in the future. Meanwhile, opportunities in the private sector appear to be quite scarce as well. Private firms do not seem to favour recruiting PhDs in business studies – Masters seem to be the preferred population. The difficulties are compounded by structural obstacles that in most cases prevent recently graduated PhDs from considering the opportunity to spend a few years abroad at the beginning of their career.

The consequence – and as we see it a key issue in the system as it is – is what can be called the "career void" that most recently graduated PhDs have to face. There is literally a period of limbo between the moment when somebody has just graduated and the moment when he or she finally acquires a professorship – if that ever happens. There are quite a few recently graduated PhDs who are waiting around in unstable and precarious conditions for a position to open while they are trying to produce enough publications for their resume.

Contracts for post-docs are often short term and associated with low levels of remuneration. They may be short-term research contracts or temporary teaching assistantships. Many recently graduated PhDs spend a lot of their time applying for funds. They also have to do quite a lot of teaching or accept external consulting or brokering contracts just to earn the means to sustain their families. Some post-docs may accept positions as Acting Professors as a lure to better salaries – but this can mean a lot of administrative and other responsibilities with significant time constraints that tend to reduce their ability to do serious research and to mature as researchers.

In other words, there is no academic career track for recently graduated PhDs in Finland (such as an academic and research-oriented route through assistant professorships towards tenured positions). This means that, as a whole, the academic career may not be as attractive as it could or should be. A lot of energy and time is wasted – and this is particularly harmful at a period in the career when researchers need to establish and develop their research orientation so that they can move towards concrete realizations in the form of excellent publications.

We have been struck by another characteristic of the market for recently graduated PhDs and post-docs. Future opportunities, for professorships in particular, appear to depend strongly upon the insertion into social networks. Two main trends were identified:

1. Departments, when they have openings, tend to recruit amongst their own graduated PhDs. A number of institutions across the world have put in place 'anti-inbreeding' rules, whereby PhDs from a particular institution will not be hired directly by that institution as a rule and will have to at least spend a few years elsewhere before they can come back. This is clearly not the case in Finland, quite the contrary.

2. The universities in Helsinki have been producing many PhDs. Some of those PhDs accept, quite early, positions as acting professors or even professors in some small or young departments that have little or no history of PhD production. This creates the risk underscored above of a dispersion of the energy of those individuals away from research and towards other tasks at a period in their career when they should instead be focusing on establishing and developing their research activities.

The dependence on social networks for career opportunities in the academic system has important consequences. It represents in particular a significant obstacle to the internationalization of recently graduated Finnish PhDs. Post-doctoral appointments in the early years of an academic career can offer great opportunities to gain international experience and exposure. This is a time when individuals could go abroad for several months or even years. However, the current situation makes it difficult in fact, and even in a sense dangerous, to do so. The danger is that if a recently graduated PhD cuts himself or herself off from his or her local contacts and networks after graduation by going abroad, he or she runs the risk of not even being considered the day when a position opens locally. Thus in the current system, mobility at that early stage in the career can mean a risk to longer-term career options.

4.2 Career track for professors

We have identified two issues with respect to the career track for professors. The first has to do with the low levels, in general, of salaries of professors. In comparison to international standards, and also compared to the salaries offered to those individuals who will follow a managerial or business career, the salary scale associated with professorships in business studies in Finland does not seem to be competitive. This has a number of consequences:

- An academic career may not be an attractive option and may not attract the 'best people'.
- Many professors find it necessary to secure complementary sources of remuneration – either through extra-teaching, beyond their regular obligation and / or through different forms of consulting or brokerage with companies. This means that there is less time and energy available for research.
- It is difficult to integrate foreign professors into the system – which could be a good way to push both the research culture in Finnish business studies as well as the internationalization of that community.

A second important issue has to do with the flat nature of the salary scale of professors. The salary level for a starting professor is not very different from the salary level for a professor at the end of his or her career. One very important consequence of that is, in particular, that once a Professor, you have very limited material incentives to publish and produce research. Whether you do so or not has little, if any, impact on the progression of your salary base and remuneration package or on the evolution of your career.

5 Incentives for Research – Current Limits and Pioneer Initiatives

This section deals with the system of incentives structuring the work and activities of researchers in business studies disciplines in Finland. Of particular interest to us is the relative impact of the Finnish system of incentives on research activities in those disciplines. Looking at the current situation, we find that the system is heavily skewed towards non-research activities. This is in striking contrast to what is increasingly the rule on the global scene. A number of actors, in Finland, have already felt the need to react, and we identify pioneer initiatives.

5.1 Cultural, political, institutional and organizational limits

The combination of a political preoccupation for regional development and of a cultural principle favouring open access to all at the highest levels of the education pyramid explain in large part the features of the current incentive system in Finnish universities and hence in most business schools and departments of business studies. The priority, for the last fifteen years, has been to stimulate educational throughput and output. As discussed above, the funding system for Finnish universities has mirrored and reinforced the priority granted to the education function.

In parallel, the relatively low and flat salary scales described above in our discussion on careers and career tracks have created further limits. Faculty members have been unexpectedly induced to look for compensatory and complementary remunerations – either through accepting extra loads of teaching or consulting and intervention contracts in the private or public sectors. The pressure towards other activities – in particular teaching to which are also associated heavy administrative tasks – has left in turn little space and time for research activities. Hence, the Finnish incentive system is highly skewed in favour of teaching, administration, and more indirectly and unexpectedly consulting activities. In contrast, there are only marginal traces of institutionalized mechanisms that push forward and aim to stimulate research activities and publication production.

5.2 Factors with an impact on research activities

There are several ways to envision the issue of incentive systems and there are in fact different factors that can combine to create an environment conducive to research and publication activities. We differentiate here between three dimensions that ultimately should function in tight interaction and reinforce each other. The first set of factors are *institutional* and *political* factors. National priorities, as translated at the institutional level – for example through university funding policies – can to a lesser or greater extent identify research as a key academic activity and stimulate and foster its development.

A second set of factors are *normative* and *professional* ones. Academic communities themselves can give lesser or greater importance to research activities and publication

production. The impact, there, can be particularly powerful. The living exemplar of a supervisor and his or her relationship to research is bound to be highly structuring for doctoral students. The training of PhD students and the production of new academic generations can take place in a normative environment where research is emphasized, fostered and experienced as the core of academic identity, as a "way-of-life". Training of PhDs can in contrast take place in a context where research is rather and only seen as a necessary but short-lived ritualistic precondition to the academic life. Academic life in this context emerges as constituted by other activities – teaching, administrative responsibilities, civil society and political involvement for example.

Finally, the third set of factors are *organizational* ones and they have a more direct and visible impact although they probably are less structuring in the long run than normative factors. By organizational factors, we mean reward structures and mechanisms that orient the careers of individuals and collectives towards research activities and publication production. Concretely, this can mean a remuneration system or a career progression structure that reflect and reward at least in part research realizations. In a perfectly centralized and unified system where university policy is set at the national level, organizational factors – and in particular career and remuneration structures – should and will tightly reflect institutional and political priorities. One can envision, however, situations where room is left to a degree of decentralization and greater local differentiation. In this case, organizational factors could go much further towards fostering research in some centres or units than in others.

5.3. Foreign models and rules of the game

A characteristic of international academic trends is the increasing role and place of research – and more particularly of research with international scope and ambition. This is true in most fields of scientific inquiry but we focus here more particularly on developments in business or management studies disciplines. This primary focus on research has a number of different implications.

First of all, the normative and professional referents of academic communities within business studies are increasingly homogeneous across national boundaries. Those referents reflect the priority granted to research – and what is more to the type of research that ends up being published in a short list of international publication outlets of excellence. The hierarchy between publication outlets is often crystallized and institutionalized in rankings and classification schemes that here again tend to converge. The more networked a particular national or local academic group will be to the international community, the more likely it will be to progressively feel the pressure of this type of reference schemes. In other words, the greater the internationalization of the academic profession in business studies disciplines, the more embedded it will be in international rules of the game that foster research and publications in international outlets of excellence – all of which are in English, most of which are US-based.

The normative pressure is being reinforced, at the international level, by institutional pressures. Academics in business studies disciplines are generally associated with

business schools. The latter are increasingly playing a globally competitive game – where a key component of the competitive advantage is the research profile of the institution and hence of its academics. Business schools are ranked, accredited and constantly compared one against the others. Those standard definition and ranking games are important in part because they have an impact on the capacity of an institution to attract corporate partners and resources but also quality students and excellent faculty. An important dimension, once again, in those ranking, classification and accreditation schemes, is the positioning of a particular institution with respect to the global research game as defined above. How many journal articles does a particular institution produce that find themselves in the first tier of journal ranking lists such as that published by the Financial Times? How many citations does a particular institution cumulate, as measured through and by the Social Science Citation Index (SSCI)?

In order to score high on those dimensions, business schools across the world have a tendency to homogenize a number of their organizational features and faculty management practices. Tenure systems are, for example, diffusing widely – where the key to career progression and ultimately tenure is research as translated into publications in excellent international outlets. Differential remuneration systems are also being adopted widely. Excellent realizations in research and publications are being more or less directly rewarded, in particular through individual bonus systems. Those differential remuneration systems can be complemented or replaced by the institutionalization of various forms of personal research funds. Each new publication, in this case, generates a personal research grant that can be used as a resource for developing further research activities.

5.4 An incentive system for research and publication – ideal-typical description of pioneer initiatives

As it stands right now, the incentive system in the Finnish business studies field is still quite far from what is increasingly the rule in many countries. There is in fact no incentive system deployed systematically that would encourage research and in particular research with a view to academic and international excellence. Concretely, it does not make a difference today if a Professor continues to publish once he is Professor whether on his salary, progression or career as a whole.

A small number of Finnish institutions have, nevertheless, understood the challenges and the stakes of evolving global trends. As a consequence, those institutions are progressively putting more and more emphasis on research with a view to participating in the international publication game. We identify below, in the format of an ideal-typical description, strategies with a view to transforming incentive schemes in favour of research and publication activities. A small number of Finnish institutions are starting to deploy this type of strategies.

The internal allocation of resources within a particular institution is partly based upon the output of each department. Salaries remain to a very large extent paid centrally while each department receives additional financial resources based on

performance on a number of dimensions. In particular, 30% of the additional departmental funding depends upon the research output of that particular department. Research output can take different form but the most important one is 'academic articles'. After considerable discussion and some disagreement within the institution, a decision has been made to distinguish between three types of articles, each with different weight:

- Articles 'A': defined as articles published in journals with an SSCI/SCI score of at least 0.6 and a University of Vienna-ranking of A or higher
- Articles 'B': defined as articles in journals published in journals with an SSCI/SCI score of at least 0.2 and a University of Vienna-ranking of B or higher
- Articles 'C': other journals with blind review-process

The overall output of a particular department is calculated using a three-year average. The department, as a collective, receives the financial resources associated with productivity in publication. It is the responsibility of the head of the department, in the context of internal decision-making processes, to determine how the resources will be used. For instance, the department can decide that authors will receive some of that money to help cover research costs.

As interpreted by the actors themselves, the elaboration of the ranking system has had a number of positive consequences. This has for example significantly increased the social pressure to publish and it has stimulated discussions about research outputs, within and across departments. More attention is being paid now to what people publish and to where they publish their work. This system is also progressively giving more status to those scholars who publish, particularly to those who publish in internationally ranked and known journals. Altogether, this has led to an overall increase in the total research output of the institution.

6 Impact – can Business Studies Research Change the World?

Finnish business disciplines education at the highest level and research activities in the field have only relatively recently reached a volume that can be expected to have major impacts within Finnish science, business and society as a whole. A few figures can be mentioned that are indicative of such a trend. During the period 1981-1990, the Finnish business education system produced 60 PhDs and 9500 Master's degrees. During 1991-2000, the corresponding numbers were 332 and 13,000, respectively.

The recent great expansion of the Finnish university system has involved starting business education and research in many new sites. The new units have absorbed most of the PhD output. This has delayed the direct impact on the business sector but has, on the other hand, created education and research capacity to be utilized by the Finnish regionally dispersed university system. However, in the future this self-absorption rate cannot and should not continue. The output of Master-level education has largely been absorbed by the business sector, with a positive impact.

One consequence of these developments is that academic excellence in a global context has been achieved only by in some of the oldest and largest universities that have managed to leverage Finnish *locational* advantage into high-level useful and applicable empirical research. This has resulted in a few "A-Journal" publications that constitute a firm platform for further conceptual development and theory building. The positive impacts of educational and research activities related to the great changes in the Finnish national economy and business development during the last decades should not be underestimated. Steps like creating a stronger unit of "Economicum" by fusion of several capital area units are – when optimally managed – important in further striving for global excellence.

Bridging units between academic research and national and local business communities have generally been an important channel for knowledge sharing and its resulting impact on business and society. This is true especially in the younger universities with a strong regional focus. This is facilitated by generally intensive interaction between the universities and the business sector in Finland. With well-functioning contacts also with industry and foreign institutions, even smaller units have reached encouraging results in education and research.

As an example, in some universities a business discipline department works intimately with a research centre that serves a brokering function. Together they form a flexible unit within the presently relatively rigid Finnish university system. The department uses the research centre as a device to get research started, to facilitate multidisciplinary collaboration and to obtain external funding. The group is also active in collaboration with other universities in Finland, and with foreign institutions. The mutual benefits have led to a significant increase in research

funding from the business sector over the years. The number of PhDs produced and articles on applied and empirical research published in high-level international journals have also increased.

While there are several good examples of similar nature, there is also room for improvement, especially in international cooperation. In particular, more could be done to take advantage of Finland´s special location in cooperation with Russian universities and institutes. The same can be said with respect to the European Framework Programmes in many sites.

In the small sites even greater attention should be focused on the balance between academic and brokering activities. A certain minimal level of both of these is necessary for valuable impacts. In some cases the most valuable impact has resulted from teaching activities alone.

7 Three Missions for Business Studies Units in Finland: Role Differentation

This section builds mainly on the field visits and comparative interviews performed by the expert panel members. They have shown considerable diversity among schools, departments and research centres in how they addressed the trade-offs between academic excellence, local relevance and usefulness, and then basic teaching missions. This section outlined the nature of these three missions, the demands they put on specific units, and the way in which these demands were faced by different types of units.

We observed the Finnish research in business studies being pulled in three directions:

7.1 Academic excellence

As the higher education integrates into the international management and business research community, which is mainly US-driven, the pull for academic excellence gets stronger. As the system opens up to the world, individual researchers also become keener to identify with peers in international research networks, to become part of a global academic community, and more sensitive to the need for academic excellence.

We would like to emphasize, though, that academic excellence goes beyond, and is valued more, than more publications in English language international journals, as already achieved by a large proportion of the Finnish business and management researchers. First, and most obviously, there is a tiering process among academic publications, i.e. between status of journals in various fields (such as the "A-B-C" tiering hierarchy used in the US as a function of selectivity and rejection rate). We observed many English language publications from Finnish researchers, but very few "A- Journal" ones.

Although widely accepted in the US, and increasingly in international academic world, such tiering may in fact be doubly misguiding for the Finnish academic excellence. At a first level, empirical publications in "A-journals", although desirable, do not always leave a mark over the long-term, nor have strong implications for anyone. What research leaves a mark, say after twenty or more years, is mostly conceptual development and theory building contributions, not mere empirical work. Hence, we believe that rather than proliferate empirical contributions – even aimed at better and better journals – the Finnish business research community should strive toward conceptual development and theory building.

At a second level, such emphasis on theory building may be consistent with a unique strength of the Finnish academic system: Rather than distancing itself from the business community – and run the risk of "ivory tower" isolation – we suggest the Finnish business studies community could capitalize on it by developing

"practice theories", i.e. theories of managerial action that are both grounded on underlying social sciences disciplines and useful and relevant to the management practitioners.

Developing practice theories, though, will require at least two very careful balancing acts:

- Theoretical progress is achieved mainly by sub-disciplinary specialization, developing deeper and deeper knowledge about a narrower and narrower area. Yet practice theories are going to require the integration of several such deep disciplinary sub-areas to be relevant to managers. Hence, the combination of disciplinary specialization and interdisciplinary integration is going to be at a premium.
- Practice theories are built through a careful balance between inductive and *ad hoc* theorizing from a phenomenon, and logical deduction from an existing theory is used – as a prism or magnifying glass – to study a phenomenon. (It should be noted that by 'theorizing' we do not mean merely the formalization of theory. While mathematical symbols and quantitative models are often necessary tools in the building of theory, they should not be confused with the theory itself, which involves conceptualization of ideas.)

Lastly, an emphasis on building "practice theories" is intrinsically more risky – as a research thrust – than the accumulation of empirical work within the framework of existing theories. Hence a measurement and reward system emulated from some (mainly US) universities which blindly apply an "A-journal" publication counting scheme may be incompatible with research excellence which capitalizes on Finnish strengths and is going to leave a mark twenty or fifty years from now.

7.2 National uniqueness

Indeed, academic excellence may be easier to achieve in fields and areas where, for whatever reason, Finland is a privileged location from which to do such research. At the most basic level this may boil down to a geographical proximity advantage, for instance in achieving close research collaboration on various features of the Russian economy or business system in collaboration with universities and research institutes in St. Petersburg. Similarly, Baltic or Nordic collaborations may capitalize on geographic advantage.

At a somewhat less basic level Finland may be a privileged location for specific issues (e.g., construction and energy efficiency) or industries (e.g., ICT). Climatic or historical circumstances may make it easier and less costly to do research in Finland in these areas. At a more ambitious level, Finland's priority on social innovation and the "third way" may give birth to unique social experiments, where Finland can become a lead location, for instance on e-services or graceful ageing and wellness.

The broader point here is that research in business studies and management can overcome the limitations and weaknesses noted elsewhere in this report by focusing on research areas, and possibly disciplines, where it may enjoy a natural, or socially built, *locational* advantage.

7.3 Social legitimacy

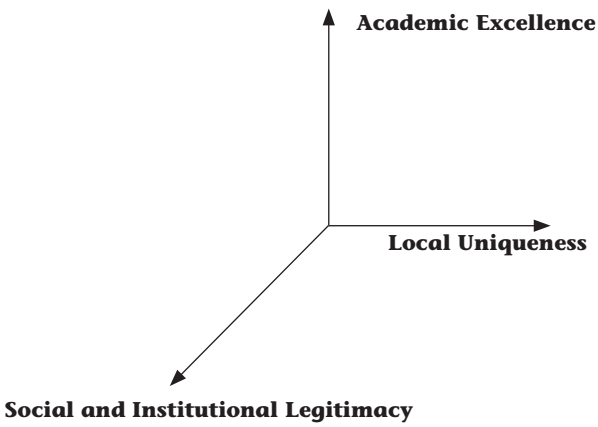
Like any organization – and particularly like any public organization devoted to knowledge creation and higher education – business studies research needs to establish, maintain, and enjoy social and institutional legitimacy.

The strength of Finnish identity, and of regional identities within Finland makes such social and institutional legitimacy particularly important. Business schools and business studies departments have to be seen as responsive to the needs of regional and local social and business communities, particularly in provincial towns and in geographic areas where regional development policies are important drivers of employment, growth, and the maintenance of sufficient population densities and tight enough social fabrics.

Such demands may take many forms, from direct funding of research by local or regional public authorities or business communities to indirect pressures for belonging and identity (for instance where academics belong to the same social networks as the local business and political leaders and see their personal future with the local community).

Direct links with local business communities may not only facilitate funding, and provide a sense of local anchoring for researchers, but may also be a source of practical, relevant, business problems and issues that can be connected to research. Many business researchers, including those at leading schools in the US and Europe, get their research ideas from close contact with local business communities. One can sketch these demands as in Figure 9 below:

Figure 9.



The departments, institutes, and research centres we observed have positioned themselves differently on these dimensions and given priority to one mission or another. While ideally one would want to excel in all three, the realities obviously differ. In broad terms we saw three clusters of department, institute and research centre positions on these dimensions:

7.4 Competitive Global Knowledge Creators

These are mainly thriving to achieve academic excellence in a global context, and to be recognized by research peers around the world as leaders in Europe and legitimate contributors at the leading edge of conceptual development and theory building. Most of these units were, roughly positioned on Figure 9 along the upper right diagonal: thriving for academic excellence, and trying to leverage some Finnish *locational* advantage. To accelerate and support the achievement of this ambition, some of these units draw on the *locational* advantage of Finland and on national or local legitimacy, but they clearly see academic excellence as their number one priority. This tends to be easier in areas where the same work can both be a true and significant academic contribution and be of relevance to Finland and Finnish industry.

7.4.1 Ideal-type description of a medium-sized unit focused on research

This is a medium-sized unit within a larger department. Its research orientation is toward industry-oriented applied research. In its research, the unit takes advantage of cross-disciplinary links with other departments within the university. It is also associated with a laboratory whose task is to evaluate how the research can be used effectively in industrial companies and to select strategies and execute strategy analysis. In addition, the unit uses a research centre within the university as a device to get research started, to facilitate multidisciplinary collaboration, and to obtain external funding. The group is also active in collaboration with other universities in Finland, and with foreign institutions.

In spite of its practically oriented research, the group strives (with a fair amount of success) to publish in leading refereed international academic journals in the field (although not yet in leading general academic journals). Thus, this is an example of a unit that successfully combines local uniqueness with distinctiveness and academic excellence. Its performance is highest in the first two dimensions, but its strategy, self-assessment, sense of identity, and ability to take advantage of linkages with other units make it likely that performance will improve in the academic excellence dimension as well.

7.4.2 Ideal-type description of a larger unit thriving for academic excellence

This unit is large in its field in Finland, comparable in size to corresponding units internationally, and the largest within its department in the university. It does a good job of coordinating its courses and research with other groups within the department. It also seems coherent and thoughtful about its research agenda and where it fits in the school. It is highly productive both research-wise and in producing students (over 30 Master's degrees and a steady flow of 2-3 doctoral degrees per year). The group has become much more restrictive in recent years than previously in accepting new students. They now accept only students who can be expected to complete the programme. As a result, they have a sizable group of 16-20 full-time students (enough to constitute a viable community of scholars, including both faculty and PhD students).

The group has an extensive network of research collaboration in Europe (including but not limited to other Scandinavian countries) and the U.S. with active engagement in several major international research programmes. These programmes are long-term and extend beyond one or two individuals in the group. Thus, this is an example of a large unit that performs well in the academic excellence dimension and that also has enough research momentum and reputation to perform relatively well in the distinctiveness dimension and to some extent also in the local uniqueness dimension.

7.4.3 A system to encourage internationalisation, through faculty exchanges, an ideal-type description

A particular institution has put in place a system to stimulate faculty exchanges and hence internationalization. This system has three main dimensions:

A Senior Distinguished Fellowship Programme
This programme started in 1998 and aims at promoting connections with high-level international experts and at developing networks and long-term relationships. The programme is managed at the level of the institution with support from a foundation. Since 1998, 25 foreign professors have been appointed as Fellows for periods varying from a few months to several years. The objective is to create connections that will last and to make it possible for the foreign professor to gain an in-depth knowledge and understanding of the institution, its faculty and students. Fellows may work together with professors from the institution on different research projects. They will give lectures to students and supervise doctoral students. They are likely to give formal conferences or public lectures for alumni and friends of the institution, and they can engage in consulting work if they so wish. Not only does this programme create the opportunity for the institution to benefit from high-level foreign professors for certain periods of time. By creating stable and enduring networks, it also makes it easier for professors from the institution to reciprocate and take up temporary positions at foreign institutions.

A Guest Lecturer Programme
Through the programme approximately 20 foreign professors are invited annually for a short stay (a couple of days up to a couple of weeks). Some of the invited professors have long-term connections to the institution and its faculty. Some of them are «new acquaintances». Many of the Senior Distinguished Fellowships have developed through the Guest Lecturer Programme.

A Junior Fellowship Programme
The positive experiences of the Senior Distinguished Fellowship Programme led the institution to establish a Junior Fellowship Programme in 2002. The aim of the Junior Fellowship Programme is to appoint promising young PhDs as post-doctoral researchers for a period of one to three years. A prerequisite for an appointment is that the Fellow has an international background and that s/he is not a graduate from the institution. The Fellows work according to their research plan in co-operation with senior faculty from the institution. They give lectures to students and alumni and are involved in the supervision of doctoral students. In 2002-2003, there were three such Junior Fellows in the institution.

7.5 Knowledge sharing and bridging units between academic research and national/local business communities

Although following a somewhat similar logic these units were positioned differently, mostly on the upper left diagonal of Figure 9. Some saw themselves essentially as supporting local business communities, and were in fact operating with close to consulting/professional services logic, bringing faculty expertise to carry out contract research and consulting projects commissioned by specific companies, industry associations or public bodies. The very nature of their positioning made them pluridisciplinary and problem-driven. Centres and departments involved in entrepreneurship and SMEs adopted that position most naturally.

Other units were seeing themselves as developing their own research agenda, exercising intellectual leadership and getting corporate sponsorship, or corporate partnerships for academic research they would wish to perform anyway, irrespective of the origins of funding. Although also perforce multidisciplinary they had a less opportunistic and a more strategic approach to the choice and organization of their work.

A few units, because the substantive nature of their discipline allowed both for theory building and for ready concrete and practical applications could escape the above polarity and integrate academic research achievements and very practical relevance.

7.5.1 Ideal-type description of knowledge brokering department

A business disciplines department works very intimately with a brokering research centre creating together a very flexible unit. In its research, the unit takes advantage of cross-disciplinary links with other departments within the university. A research centre is a device to get research started, to facilitate multidisciplinary collaboration and to obtain external funding. Interaction with business sector is strong. The unit is also active in collaboration with other universities and foreign institutions. In spite of practically oriented research, the unit strives with a fair amount of success to publish in leading refereed international academic journals in the field (although not yet in leading academic journals).

Thus, this is an example of a unit that successfully combines local uniqueness with distinctiveness and academic excellence. Its performance is highest in the first two dimensions, but its strategy, self-assessment, sense of identity, and ability to take advantage of linkages with other units make it likely that the performance will improve in the academic excellence dimension as well.

7.5.2 Ideal-type description on a department developing symbiosis with industry

The department works out a niche strategy that combines industrial "relevance" with a good enough academic standard in dialogue with partners inside and

outside the university. The strategy describes how the department will develop its competence and how this will benefit education and industry over at least 10 years. The strategy also builds on a distinct competence proven by earlier research achievements. (One cannot build a strategy on the fact that the department has no track record in a given area.)

The Academy of Finland (or some other suitable organisation) arranges a review of the strategic plan, and when it is accepted registers the department/institute as focused on the specified problem area (say, IT and logistics). This can be compared to the Norwegian "knutepunkt-funktion."

When the department is registered as focused on a specific field its applications within this field will be treated favourably, while applications for funds outside this area will have less chance of getting funding. Other departments may improve their chances of getting funds by relating their applications to this strength point. (Health care might get research funds for, e.g., IT and logistics in health care). In this way the focused department can lead the way in forming clusters of specialised research of high standing in spite of the fact that it does not have resources to build a world reputation in many areas.

With the accreditation as a focused department follows the responsibility to promote the diffusion of new knowledge from this area by regular national or international conferences.

7.6 Units thriving for teaching excellence

Some units were positioning themselves essentially as providers of teaching services, with limited research/ambitions and means. The need to provide a complete Master's curriculum, the relatively small size and fragmentation of units, and staffing limitations, as well as in some cases the fact that they are far from the leading edge of relatively mature fields constrained their research contributions. Although perhaps not performing research of a very high calibre, these units obviously serve a very valuable – indeed necessary – function. They may also be adapting global knowledge to the specificity of Finnish business and geographic conditions.

7.6.1 Ideal-type description on a unit thriving for teaching excellence

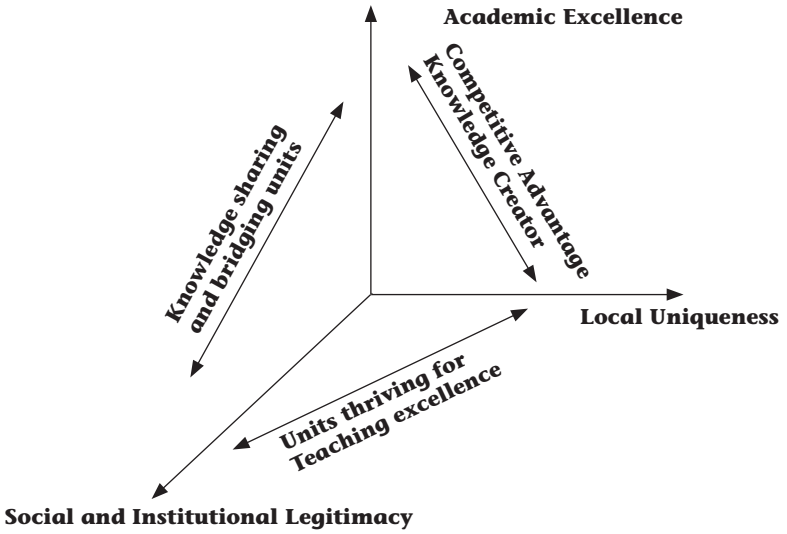
The unit encompasses five professors, three senior researchers as well as three post-doctorial researchers and five full-time doctorial students. Very much of this unit's effort has been directed towards offering various educational programs, primarily aiming at responding to and satisfying local demands. Over the last years the unit has escalated its production of master-degrees. The number of doctoral students has increased as well, but so far the number of completed doctoral degrees has been somewhat modest.

The department also conducts research, and is involved in several research projects. It also – to some extent – co-operates with people/institutions abroad. Even though its research is progressing – both in terms of quantity and quality still, however, the

majority of its research output is published in outlets without referees. So far it seems like the teaching efforts so far have been the dominating one.

The positioning of these three types of units in sketched below on **Figure 10**:

Figure 10. *Responses to various demands*



An effective higher education system in business studies and management requires all three types of units; however, the most challenging task is obviously to foster academic excellence at global standards, since the pull of local communities – and of the third mission of universities in particular – and the desire to fit with or/and exploit the specificity of the Finnish context may trend to blunt the drive for academic excellence.

Local relevance and usefulness will be sustained, from a research standpoint, only if global excellence is also achieved, unless academic units merely take existing knowledge and package it for use in Finland.

8 Recommendations

In our analysis we noted the systemic nature of the challenges faced by the Finnish business studies system, and the various aspects developed in the previous sections of this report are different aspects of the same system.

Our recommendations, therefore, are an integrated whole, each policy recommendation reinforcing the others. In brief, we can summarize our observations as the existence of a "core" system inherited from a Germanic tradition, which has surrounded itself – through multiple partial adjustments, and considerable increases in total, but not core funding – with a set of more fragile and sometimes dysfunctional extensions, such as acting professors, a large number of PhD students, a variety of research institutes of business studies in a comparatively large number of rather small universities, in response to regional development policies. Although this has allowed growth to take place, fulfilled the educational mission of universities, and put in place the channels to have a real impact on business practices, the resulting fragmentation and instability in the education system have not worked in favour of research excellence. In other words, the system has worked so far to reach objectives set in a different context two decades ago, but is reaching its limits. It will not project Finnish business studies into a small global sphere of excellence.

We propose a series of closely interrelated policy measures to foster research excellence by attracting the best minds into business studies furthering the quality of PhD programmes, tempering the existing incentives to go for quantity (of students) rather than quality, providing young scholars with structured and reasonably attractive career prospects, and overcoming the risks of fragmentation – by fostering collaboration between different universities – and the perils of isolation in an increasingly europeanized and even globalized academic community.

We also suggest that Finnish business studies focus on areas where Finland may enjoy a location advantage or one based on social capital (such as closer links between business and academia than in other countries) rather than try to compete across the board for academic excellence with much larger universities and national education systems.

Our specific recommendations are listed below:

Funding

1) Increase core funding and change funding formulae and criteria (to include research as part of the basic mission – and core funding – of educational institutions).

2) Find ways to decouple the budget and funding of departments and schools from the numbers of PhDs enrolled in those departments and schools. One way to do this is to have a time limit (for example, 3-4 years of study) for each PhD student admitted.

3) Provide more long-term, programmatic research funding, ensuring substantial senior faculty participation.

Incentives

4) Increase academic salaries and salary differentiation (to improve incentives, especially for research, and to recruit and retain good people).

5) Create incentive systems to foster research and publication. Those incentive systems can have a direct impact upon salaries and/or they can generate research-associated resources (teaching time off, funds for research trips, research assistantships, documentation and machines, computers, etc.).

Career Tracks

6) Create a "tenure" track system, which implies essentially two things:
Create a career track for recently graduated PhDs, in the form of Assistant and Associate Professorships, for example.

   Underscore the significance of research and international-level academic excellence for tenure. This should establish the 'social norm' of high-quality publication and research as the very definition of the academic track and career and as the essence of what a Professor is. This should also make it possible (and probably even a good bet) for recently graduated PhDs to spend a few years abroad before coming back on the national tenure track.

7) Create a number of funded and stable (for at least one or two years) post-doc positions that can be open to both local and foreign scholars.

Organization

8) Acknowledge the diversity of functions of universities/departments by differentiating among units along the dimensions of academic excellence, local uniqueness, and social and institutional legitimacy. Set up appropriate funding criteria and funding mechanisms for each.

9) Encourage initiatives that move the system towards greater critical mass in certain areas – see the example of "Economicum" in Helsinki that brings together the economics departments of two schools and one university.

Doctoral programmes

10) Doctoral programmes should be offered only in units that have adequate resources. Need to create at least a basis of courses locally. Only those departments or local groupings of departments that can do so would, for example, be 'accredited' to deliver doctorates.

11) One may keep some national-level courses but one could also probably put more emphasis on Nordic collaborations and even more on EIASM courses as viable alternatives that have the great advantage to foster a degree of internationalization.

12) Differentiate between PhD programmes designed for people wishing to pursue academic careers and executive ("practitioner scholar") programmes for people pursuing business careers. Both categories of degrees are justified and useful but they need to be clearly differentiated. There is a need to separate in particular the two processes leading to those two different degrees. Several paths can be explored for the experienced-based doctorate. The development of Executive MBAs could be a way to absorb some of the executive profiles. Another path could be to develop an Executive Doctor Degree. This could be done either by setting up such a programme in Finland, by linking with institutions with similar interests abroad, or by sending students to existing programmes elsewhere.

Internationalization

13) Nationally, and in terms of funding, the emphasis could be put on helping graduate students spend time abroad during their studies and on helping departments arrange that.

14) Create incentives for the participation of graduate students in international conferences, for example (this is already found in a few departments but is not systematic).

15) Create flexible systems, probably at the institution (and not only national) level, to encourage faculty exchanges (see ideal type description of what is being done in a department).

Impact

16) Create more interaction with other disciplines in Master and doctoral education within common (thesis) projects etc. This would facilitate diffusion of business disciplines elements and also future Masters and doctors to multitude of functions with more immediate and wider impact to society.

Orientation of Finnish Business Studies

17) Rather than proliferate empirical contributions – even aimed at better and better journals – the Finnish business research community should strive toward conceptual development and theory building.

18) The Finnish business studies community could capitalize on it by developing "practical theories", i.e. theories of managerial action that are both grounded on underlying social sciences disciplines and useful and relevant to the management practitioners.

19) Research in business studies and management can overcome the limitations and weaknesses noted elsewhere in this report by focusing on research areas, and possibly disciplines, where it may enjoy a natural, or socially built, *locational* advantage.

Implementing these recommendations will require concerted action, and shared ambitions. While each proposition is in itself relatively simple to implement, their real effectiveness comes from their mutually reinforcing coherence, and their combined impact on reforming the business studies system to enable its members to pursue high-quality and high-impact research.

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1 Members of the Evaluation Panel
2 Terms of Reference
3 List of Departments and Units Interviewed
4 List of Documents Submitted to the Evaluation Panel
5 Evaluation Questionnaire
6 Programme of the Evaluation Meeting, 14-15 June 2004
7 Schedule of the Evaluation SiteVisits
8 Schedule of the Panel Meeting in October 2004

Appendix 1:
Members of the Evaluation Panel

Yves Doz is the Timken Chaired Professor of Global Technology and Innovation at INSEAD, where he was Dean of Executive Education (1998-2002) and Associate Dean for Research and Development (1990-1995). He is a graduate of the Ecole des Hautes Etudes Commerciales (Jouy-en-Josas, France) and received his doctoral degree from the Harvard Business School, where he was an assistant professor from 1976 to 1979. His research on the strategy of MNCs, focusing particularly on high-technology industries, led to numerous publications, including four books, in particular *The Multinational Mission: Balancing Local Demands and Global Vision*, co-authored with CK. Prahalad (1987) and the recent *From Global to Metanational: How Companies Win in the Knowledge Economy* co-authored with José Santos and Peter Williamson, two INSEAD colleagues (Harvard Business School Press, 2001) which shows how companies can mobilize dispersed knowledge to learn from the world. His research on strategic alliances has been summarized in *Alliance Advantage,* published in 1998. His research work won numerous awards, most recently (2003) a Distinguished Scholar Award from the Academy of Management. Professor Doz currently carries out research on strategic partnerships and technological cooperation between companies, on global competition in the knowledge economy, and on the competitive revitalization of international companies.

Marie-Laure Djelic (PhD in Sociology, Harvard University) is Professor in Strategy and Organization at ESSEC Business School, Paris, France. She is currently Dean of the Faculty at ESSEC. In 2002-2003, she was holding the Kerstin Hesselgren Professorship at Uppsala University, in Sweden, and has been a visiting professor at Stanford University in 2000. She is the author of *Exporting the American Model* (Oxford University Press 1998), which obtained the 2000 Max Weber Award for the Best Book in Organizational Sociology from the American Sociological Association. She has published extensively in international academic journals and has coordinated edited volumes on issues of globalization, transnational regulation and associated national institutional transformations.

Sten Jönsson is Professor of Business Administration, esp. Scandinavian Management, at Göteborg University, Sweden. Held the chair as Professor of Business Administration esp. Accounting and Finance at the School of Economics and Commercial Law between 1976 and 1996. His research during the 1970s oriented towards development and strategy issues (organisational crises, myths as management tools, budget processes) and about regulation of good accounting practices. During the 1980s, the focus was on the use of economic information in the management of operations and the interaction between local and central units in large organisations. The 1990s were devoted to management style and competitiveness and also to the evaluation of the decentralisation reform in the City of Gothenburg. He was Director of the Gothenburg Research Institute of the School of Economics and Commercial Law at Göteborg University in 1996 – 2004.

Sten Jönsson has written about 10 books and published about 25 articles in leading scientific journals. He was the editor of the Scandinavian Journal of Management

1987-2001, and is member of the editorial board for seven other scientific journals published in Europe, America, Australia, and Japan. He was the initiator and, up to 1997, chairman of the Scandinavian Academy of Management. Doctor honoris causa of the Turku School of Economics and Business Administration, 1995.

Bo Carlsson is Director of PhD Programs and Research and E. Mandel deWindt Professor of Industrial Economics at the Weatherhead School of Management, Case Western Reserve University, Cleveland, Ohio. Born in Sweden, he received his B.A. in Economics from Harvard College (1968) and his Ph.D. in Economics from Stanford University (1972). From 1972 to 1984 he was a Research Associate and for five years Deputy Director of the Industrial Institute for Economic and Social Research (IUI) in Stockholm, Sweden.

Bo Carlsson has published over 20 books and numerous articles in industrial economics, small business and entrepreneurship, technological change, and industrial policy. His current research interests include the digital economy, entrepreneurship, technology transfer, intellectual property management, and the nature and role of technological systems in economic growth. He has served on several government commissions in Sweden and been a consultant to the World Bank, the Economic Commission on Latin America, the Swedish Agency for Economic and Technical Development (NUTEK), the Swedish Agency for Innovation Systems (VINNOVA), the Norwegian Research Council, the Academy of Finland, and private industry. In 1984-86 he was President of the European Association for Research in Industrial Economics. He was chairman of the International J.A. Schumpeter Prize Committee in 1996 and a committee member in 1988 and 2004. He is chairman of the International Scientific Advisory Board of the Danish Research Unit for Industrial Dynamics (DRUID), a member of the Board of International Advisors of Jönköping International Business School, and a Research Associate at the Center for Business and Policy Studies (SNS).

Juhani Kuusi: Master of Science (Eng.) in 1964, Doctor of Technology in 1970 from Helsinki University of Technology (Department of Tech. Physics), Doctor Tech. h.c. from Tampere Technical University in 1995 and Doctor h.c. from Helsinki University in 2003.
Positions held: 1964-74 Technical Research Centre of Finland (VTT), Researcher, Head of Section, 1974-75 VTT Pro Tem Professor of Research, 1975-79 Oy Finnaton Ab, Research Manager, Components and Sub-Systems for Nuclear Power Plants, 1980-83 VTT, Professor, Director of the Reactor Laboratory, 1983-95 Technology Development Centre (TEKES), Director General, 1995-2002 Nokia Corporation, SVP, Head of Nokia Research Center, Member of Extended Group of Executive Board of Nokia, 2003 SVP, Technology Strategy, Nokia Corporation (retired).

Member of the Science and Technology Policy Council of Finland 1984-86, EUREKA initiative, HLG member 1985-95, President 1991-92, ESA, Head of Finnish Delegation at Council 1994-95, Federation of Finnish Industries, Tech.Pol.Com., Chairman 1995-2003, EURAB(EC), member 2001-2004. Metso Corporation, Member of Board of Directors 1999-, Sitra, Senior Adviser, 2003-.

Kjell Grønhaug is Professor of Business Administration at the Norwegian School of Business Administration. He holds an MBA and a PhD in marketing from the school, an MS in sociology from University of Bergen, and did his postgraduate studies in quantitative methods at University of Washington. He has served as Visiting Professor at universities of Pittsburgh, Illinois at Urbana-Champaign, California, Kiel and Innsbruck, Copenhagen Business School, and Helsinki School of Economics and Business Administration, and consulted with business and governmental institutions both in Norway and abroad.

Over the years he has been involved in several large-scaled projects – addressing such topics as marketing problems, corporate strategy, industry studies and multiple evaluation studies, and been awarded research prices as well. His publications include numerous articles in leading American and European journals. He is the author or co-author of seventeen books, including Research Methods in Business Studies, now being published in its third edition.

Appendix 2:
Terms of Reference

The Evaluation of Research in Business Disciplines in Finland

Background and purpose

1. The scientific quality of Finnish research in business disciplines and its impact on the development of business know-how will be evaluated in 2004 by the Academy of Finland. The evaluation will be done by a panel of international experts. The purpose of the evaluation is three-fold: first, to evaluate the scientific quality of research in international comparison, second, to evaluate the impact of research on Finnish business know-how, and third, to evaluate the Finnish organization of research in business disciplines.

2. Several international comparisons show that the Finnish innovation system has been relatively successful in technology development. It is, however, a common understanding, that business know-how has not been advanced to a corresponding level in Finland. According to the policy of the current government (Sept 25, 2003) "public funding will be directed – besides R & D – to the development of business know-how, which supports birth, competitiveness and growth of new business enterprises" separate government development programs on business know-how and entrepreneurship have been implemented. Building on this premise, the Ministry of Education and the Academy of Finland have agreed to launch the evaluation, the recommendations of which will form a basis for future development and funding measures.

3. The Research Council of Culture and Society of the Academy of Finland appointed on the 15th of September a Steering Group, chaired by Prof. Paavo Okko (Turku Business School and the Academy of Finland), to plan and support the implementation of the evaluation. The Steering Group members represent the Ministry of Education, the Ministry of Trade and Industry, National Technology Agency Tekes, Finnish National Fund for R&D (Sitra), Foundation for Economic Education and the Academy of Finland.

Members of the Evaluation Panel

4. The evaluation will be carried out as an external evaluation by an International Panel of six independent high-level experts. The Steering Group has invited Professor **Yves Doz** (INSEAD, France) to act as the Chair of the Panel. The other members of the Panel are Professor **Bo A.V. Carlsson** (Case Western Reserve University, USA), Professor **Marie-Laure Djelic** (ESSEC, France), Professor **Kjell Grönhaug** (NHH, Norway), Professor **Anthony Hopwood** (Oxford, UK) and Professor **Juhani Kuusi** (Finland). When Professor Hopwood reported that he was unable to continue for health reasons Professor **Sten Jönsson** (Göteborg University, Sweden) replaced him in the summer of 2004.

Objectives and scope of the review

5. The evaluation has two main objectives, of which the first is the main one. The first objective is to find out what has been the scientific quality and impact of research in business disciplines. The second objective is to assess whether the organization of research ('the Finnish concept') is appropriate and which policy measures (incl. funding) would be adequate in achieving scientific excellence and effectiveness in the future.

6. The results of the evaluation – conclusions and recommendations – will be used by public funding organizations (especially the Academy of Finland) to develop their individual and joint policies to promote research in business disciplines and its applications in Finland. The feedback from the Evaluation Panel also helps universities, research institutes and departments to develop their own policies and measures.

7. The evaluation will cover all the research in the business studies, which is done in Finnish business schools, universities, universities of technology and related institutes. The level of the evaluation is department, not e.g. groups or individual researchers per se.

Key issues to be addressed

Scientific quality and impact of research

8. The Evaluation Panel is supposed to answer the following questions:

- What is the general state and structure of research in comparison with international level?

- What is the scientific quality and impact of research?

- Are available human and financial resources appropriate?

- Are the impacts on the development of Finnish business know-how adequate and effective?

Evaluation of future policies

9. The Evaluation Panel is supposed to answer the following questions:

- How promising and challenging are the views of organizations and units of the future direction of research?

- Which policy measures (on the level of Ministries, funding organizations and institutes) would be appropriate to strengthen the business disciplines in Finland? Are there any clear priorities?

- Which policy measures would be advisable to strengthen the impact of research on the business know-how in Finland?

Tasks, responsibilities and working arrangements of the Panel

10. In conducting the expert evaluation the panel members will base their examination on:

- *Desk research* to examine all relevant documentation as provided by the Steering Group such as description of Finnish innovation system, public documents, previous evaluations of universities, institutes or research fields, lists of publications and answers to a questionnaire prepared for the evaluation.

- *Interviews with officials and other similar experts* who are responsible for planning and implementing funding.

- *Interviews with representatives of Finnish business enterprises* who are actual/ potential users of research or business know-how based on research.

- *Interviews with the heads and research personnel of the departments, institutes and other units working in the field.*

11. The Panel will provide the Steering Group with the draft report including conclusions and recommendations by 15 November 2004. The correctness of facts will then be checked by the Steering Group by 30 November 2004. The Chair of the Panel signs the final report by 8 December 2004.

12. The Steering Group provides the Chair and the Panel with all necessary secretarial and other support for preparing and accomplishing meetings and site visits.

13. The Panel Members undertake not to make use of and not to divulge to third parties any non-public facts, information, knowledge, documents or other matters communicated to him/her or brought to his/her attention in the performance of the evaluation.

Provisional timetable

14. The evaluation will proceed according to the following timetable:

- January 2004: The Chair and the Coordinator meet the Panel Chair and discuss the composition of the Panel and the Terms of Reference.

- March 2004: The Steering Group confirms the Terms of Reference including the membership of the Panel.

- March 2004: A discussion of the representatives of the departments, institutes, units to be evaluated and the Steering Group will take place in the Academy of Finland.

- March-May 2004: The Steering Group and its Secretariat collect, combine and prepare the background material (incl. answers to the questionnaire) for the Panel.

- June 2004: The Panel meets for the first time, gets its background documents and discusses with the representatives of the funding organisations and policy makers.

- June-August 2004: The Panel studies the material and plans the site visits.

- September 2004: The Panel makes the site visits and has its second meeting.

- October-November 2004: The Panel prepares its conclusions and recommendations and submits its report to the Steering Group by 15 November 2004.

- December 2004: After checking the correctness of the facts (by 30 November) the Chair of the Panel signs the final report, which will then be printed.

- January 2005: The report will be delivered to the Academy of Finland and presented to a public seminar by the Chair of the Panel.

Appendix 3:
List of Departments and Units Interviewed

This is the list of departments/fields of study/institutes/research centres which have answered a background survey. Universities are presented in the order of the site visit schedule in September. The departments/fields of study are listed in an alphabetical order followed by the research centres.

Tampere University of Technology

Department of Industrial Engineering and Management
- Institute of Business Information Management
- Institute of Industrial Management
- Institute of Occupational Safety Engineering
- Institute of Transportation Engineering

University of Tampere

School of Business Administration
- Accounting and Finance
- Business Law
- Insurance Science
- Management and Organisations
- Marketing
- Business Research Center / TLTK
- eBusiness Research Center (eBRC)

Åbo Akademi University

Faculty of Economics and Social Sciences
- Department of Business Studies
- Department of Information Systems/Institute for Advanced Management Systems Research (IAMSR)

Turku School of Economics and Business Administration

- Department of Accounting and Finance
- Department of Economics
- Department of Management
- Department of Marketing
- Business Research and Development Centre

University of Oulu

Faculty of Economics and Business Administration
- Department of Accounting and Finance
- Department of Economics
- Department of Management and Entrepreneurship
- Department of Marketing

Faculty of Technology

- Department of Industrial Engineering and Management

Lappeenranta University of Technology

- Department of Business Administration
- Department of Industrial Engineering and Management (IEM)

University of Vaasa

Faculty of Business Studies
- Department of Accounting and Finance
- Department of Business Law
- Department of Economics
- Department of Management
- Department of Marketing

Faculty of Technology

- Department of Electrical Engineering and Industrial Management

University of Jyväskylä

School of Business and Economics
- Corporate Environmental Management
- Accounting
- Entrepreneurship
- Management and Leadership
- Marketing

Helsinki University of Technology

Department of Industrial Engineering and Management

Swedish School of Economics and Business Administration (Hanken)

- Accounting
- Commercial Law
- Corporate Geography

- Economics
- Entrepreneurship and Management
- Finance
- Information Systems Science
- Management and Organization
- Marketing
- Statistics

Helsinki School of Economics

- Accounting and Finance
- ASP, Economic Geography
- Business Law
- Economics
- Entrepreneurship and SME Management
- Information Systems Science
- International Business
- Languages and Communication
- Logistics
- Management Science
- Marketing
- Organization and Management
- Quantitative Methods
- Technology Management and Policy
- Center for Knowledge and Innovation Research (CKIR)
- Center for Markets in Transition
- LTT Research Ltd
- Small Business Center

Appendix 4: List of Documents Submitted to the Evaluation Panel

1. A summary report on the research in business disciplines in Finland

Bergroth, Arto (2004). A review for the international evaluation panel. Innovation System and Research in Business Disciplines in Finland. (Unpublished.)

2. Public documents

Finnish Universities 2003 (2004). Ministry of Education, Department for Education and Science Policy, Helsinki.

Knowledge, Innovation and Internationalisation (2003). Science and Technology Policy Council of Finland, Helsinki.

Liike – Research Programme on Finnish Companies and the Challenges of Globalization. Programme Memorandum (2000). Academy of Finland, Helsinki.

Lukkari, Jukka & Repo, Harri (2004) Engineers taking over the leadership positions, Tekniikka & Talous, March 4th 2004 (English translation by Matti Kajaste)

Management and Steering of Higher Education in Finland (2004). Publications of the Ministry of Education, Finland 2004: 20.

Oksanen, Timo, Lehvo, Annamaija & Nuutinen, Anu (2003; eds.). Scientific Research in Finland. A Review of Its Quality and Impact in the Early 2000s. Publications of the Academy of Finland 10/03.

- Scientific Research in Finland: Summary of the General Section of the 2003 Review.

Research in Finland (2003). Ministry of Education, Science Policy Division, Helsinki.

3. Answers (65) by departments (or equivalents) to a questionnaire prepared for this evaluation

4. Curricula vitae of the heads of departments and other senior faculty staff of the departments and units

Appendix 5:
Evaluation Questionnaire

EVALUATION OF RESEARCH IN BUSINESS DISCIPLINES IN FINLAND

QUESTIONS TO DEPARTMENTS AND UNITS

GENERAL INFORMATION

University	
Department or equivalent	
Address	
Phone	
Internet home page	
Head of the Department	
Phone	
Email	
Contact person for the Evaluation	
Phone	
Email	

PART A. ORGANISATION AND STRATEGY – UNIVERSITY LEVEL

1. Organisation and strategy of the university

Describe the organisation and strategy of your university (school of economics and business administration when applicable). Foreseeable changes in the organisation and strategy should be included. Inclusion of an organisation chart describing the departmental / unit structure of the university is recommended. One coordinated answer per university, max. length two pages + chart.

PART B. MISSION, ORGANISATION AND RESOURCES – DEPARTMENTAL LEVEL

2. Mission

Describe the mission of your department or equivalent. Max. length 10 lines.

3. Organisation: Fields of study and administration

Describe the fields of study represented at the department. Describe also the administrative structure of the department and how the steering functions have been organised for the department.

4. Funding

Use Table 1 to indicate the amount of funding (both for education and for research) the department has *received* from different sources in 1999, 2001 and 2003.

Table 1. *The funding (in thousand euros) from different sources in 1999, 2001 and 2003.*

Source		**Budget year**		
		1999	**2001**	**2003**
Budget funding	Core budget			
	Graduate schools*			
	Other			
External funding	Academy of Finland			
	Tekes			
	Other domestic public sources			
	Finnish companies			
	Finnish private foundations			
	EU			
	Foreign companies			
	Other foreign sources			
TOTAL				
Percentage share of external funding				

* Graduate school places both in schools coordinated by the university and in schools coordinated by other universities.

Notes (if applicable):

5. Personnel

Use Tables 2a and 2b to indicate the number of personnel and person-years of all personnel at the department in 1999 and 2003, respectively, by personnel category.

Table 2a. *The number of personnel and person-years in 1999.*

Personnel category	Number of personnel	Person-years
Professors and other principal investigators		
Senior researchers		
Lecturers		
Post-doctoral researchers		
Doctoral students (full-time)		
of which working as assistants		
Doctoral students (part-time, active)		
Support personnel		
TOTAL		

Notes (if applicable):

Table 2b. *The number of personnel and person-years in 2003.*

Personnel category	Number of personnel	Person-years
Professors and other principal investigators		
Senior researchers		
Lecturers		
Post-doctoral researchers		
Doctoral students (full-time)		
of which working as assistants		
Doctoral students (part-time, active)		
Support personnel		
TOTAL		

Notes (if applicable):

PART C. EDUCATION AND RESEARCHER TRAINING

6. Education

Use Table 3a to indicate the number of active students enrolled at the department with a business discipline as major subject and Table 3b to indicate the number of degrees completed in 1999, 2001 and 2003, respectively. Break up the numbers by major subject and indicate the subject in brackets.

Table 3a. *Students enrolled with a business discipline as major subject.*

Student category	1999	2001	2003
Master's students			
Licentiate's students			
Doctoral students			
TOTAL			

Table 3b. *Degrees completed in business disciplines as major subjects.*

Degree	1999	2001	2003
Master's degrees			
Licentiate's degrees			
Doctoral degrees			
TOTAL			

7. Researcher training

Describe how researcher training is organised at the department. Max. length one page.

8. Participation/coordination in graduate schools

Describe the department's participation (students, supervisors) in graduate schools. Describe also, if applicable, the department's coordination activities in graduate schools. The term 'graduate school' refers both to graduate schools funded by the Ministry of Education and to other graduate schools.

9. Other training

Describe other forms of formal training (e.g. for companies, courses for people in working life etc.) that the department provides in business disciplines.

PART D. RESEARCH: FOCUS AND IMPACT

10. Focus and priorities

Describe the focus, objectives and priorities of research of the department. Max length 1 page.

11. Major research projects in the fields of business disciplines and their applications

Describe 5–10 major research projects and/or their applications in 1999–2003 that highlight the department's research profile and that have significantly contributed

to research in business disciplines locally, nationally and internationally. Each project (max. length 0.5 page) should be described by name and goals of the project, the name(s) of principal researchers, collaborators in Finland and abroad, and major achievements.

12. Scientific impact in terms of publications in 1999–2004

A Use Tables 4a and 4b to indicate the number of domestic and international publications and presentations since 1999, respectively, by year of publication. The question also refers to other publications than the ones produced in the research projects mentioned in question 11.

Table 4a. *The number of* ***domestic*** *publications and presentations since 1999.*

Domestic publications	**1999**	**2001**	**2003**	**2004 or in press**
Articles (with referee practice)				
Other articles, reviews and conference papers				
Monographs, books and edited volumes				
Publications in university publication series				
Invited presentations at scientific forums				
TOTAL				

Table 4b. *The number of* ***international*** *publications and presentations since 1999.*

International publications	**1999**	**2001**	**2003**	**2004 or in press**
Articles (with referee practice)				
Other articles, reviews and conference papers				
Monographs, books and edited volumes				
Invited presentations at scientific forums				
TOTAL				

B. List maximum 15 publications (published in 1999–2004) which profile the department in research.

13. Research collaboration in terms of joint publications in 1994–2004

List maximum 15 publications (published in 1994–2004) which profile the research collaboration of the department. Break up the list into three categories according to the type of collaboration:

a. collaborations within the university
b. collaborations with other institutions in Finland
c. collaborations with foreign institutions.

14. Research collaboration in terms of EU projects in 1994–2003

List separately all the research projects funded by the EU in which the department has acted (a) as a coordinator or (b) as a partner in 1994–2003. Of each project, indicate the name of the project and the name of the respective EU research programme or source of EU funding (e.g. structural funds).

15. Mobility of researchers

Use Table 5 to indicate the present location of doctoral and post-doctoral fellows who have *left* the department in 1999, 2001 or 2003.

Table 5. *The number of doctoral and post-doctoral fellows who have left the department, by present location and by year of departure.*

Present location	**Year of departure**		
	1999	**2001**	**2003**
Other department or equivalent within the same university			
Other university in Finland			
Business in Finland			
Other organisation in Finland			
University or research institute abroad			
Other organisation abroad			
TOTAL			

16. International visits by research and teaching staff

Use Table 6 to indicate the number of visits by researchers and teachers of your department to foreign countries and visits by foreign researchers and teachers to your department in 1999, 2001 and 2003. Numbers refer to visits of *longer than one month* in duration.

Table 6. *Number of international visits by researchers and teachers of your department and of visits by foreign researchers and teachers to your department in 1999, 2001 and 2003, duration of the visit* ***longer than one month****.*

Visits by	**1999**	**2001**	**2003**
Department's researchers and teachers			
Foreign researchers and teachers			
TOTAL			

PART E. IMPACT OF RESEARCH ON BUSINESS KNOW-HOW

17. Socio-economic impact

A. What are in your opinion *the most important dimensions* of socio-economic impact of the department's research and training in business disciplines?

B. Describe the socio-economic impact of the department's research within business disciplines since 1994. E.g. describe the cooperation of your department with companies, public administration bodies and other organisations. Max. length one page.

18. Employment of PhDs in business disciplines

A. Assess the Finnish and foreign labour market from the point of view of the employment of PhDs in business disciplines. Specifically, describe and evaluate the employment situation of the department's PhD graduates in business disciplines. In your opinion, what is the competence level of PhD graduates in business disciplines in the labour market? Max. length 0.5 page.

(You may also answer to these questions from the point of view of business graduates who have completed their Master's degree. Max. length 0.5 page.)

B. List some of the employers in which the department's PhD graduates have found long-term employment?

C. According to your estimate, what proportion of PhD graduates leave Finland in order to work abroad and what are the main reasons for this?

PART F. SWOT ANALYSIS, FUTURE VISIONS AND DEVELOPMENT PLANS

19. Self-evaluation of the department – SWOT analysis

Describe the strengths, weaknesses, opportunities and threats of your department in research. Max. length one page.

20. Future visions of research-related activities by 2010

A. What kind of research will be done at the department by 2010? How do you assess your cooperation contacts (domestic and foreign) by 2010?

B. What will be the major means of achieving the future goals?

21. The future funding of research in business disciplines

Describe your expectations and proposals concerning the research funding for business disciplines in Finland in the future. Max. length one page.

Appendix 6: Programme of the Evaluation Meeting, 14–15 June 2004

14 June 2004

Meeting venue: **Academy of Finland, Main Hall**
Vilhonvuorenkatu 6, Helsinki

Present from the Evaluation Panel:

Professor Yves Doz (Chair of the Panel)
INSEAD, France

Professor Bo Carlsson
Weatherhead School of Management, Case Western Reserve University, US

Professor Marie-Laure Djelic
ESSEC, France

Professor Kjell Grønhaug
Norwegian School of Economics and Business Administration, Norway

Professor Anthony Hopwood
Said Business School, University of Oxford, UK

Professor Juhani Kuusi
Director of Nokia Research Center (retired), former Director General of the National Technology Agency Tekes, Finland

Present from the Steering Committee:

Professor Paavo Okko
Turku School of Economics and Business Administration

Professor Anne Kovalainen
Academy of Finland, Research Council for Culture and Society

Coordination:

Mr Paavo Löppönen, Director
Academy of Finland

Ms Anu Nuutinen, Project Officer
Academy of Finland

Chairman: *Professor Paavo Okko*

9.00–11.00	**OPENING SESSION** **Background and goals of the evaluation** **Business disciplines in the Finnish research system** *Professor Paavo Okko, Chair of the Steering Group* *Director Paavo Löppönen, Coordinator*
11.00–11.15	BREAK

Chairman: *Professor Yves Doz*

Each organisation has 30 minutes for a presentation and 30 minutes for questions and discussion.

11.15–12.15	**MINISTRY OF EDUCATION** *Dr Sakari Karjalainen, Director, Science Policy Division* *Ms Sirkka-Leena Hörkkö, Senior Adviser, International Relations*
12.15–13.15	LUNCH
13.15–14.15	**ACADEMY OF FINLAND** *Dr Liisa Savunen, Director, Culture and Society Research Unit* *Professor Anne Kovalainen, Research Council for Culture and Society* *Professor Paavo Okko, Turku School of Economics and Business Administration*
14.15–14.30	COFFEE
14.30–15.30	**FOUNDATION FOR ECONOMIC EDUCATION** *Dr Kari Asp, Managing Director*
15.30–16.30	**CLOSED SESSION OF THE PANEL**
19.00–22.00	**DINNER at the Restaurant Bellevue** Addr. Rahapajankatu 3 *Panel and Steering Committee members*

15 June 2004

Meeting venue: **Academy of Finland, Main Hall**
Vilhonvuorenkatu 6, Helsinki

Present from the Evaluation Panel:

Professor Yves Doz (Chair of the Panel)
INSEAD, France

Professor Bo Carlsson
Weatherhead School of Management, Case Western Reserve University, US

Professor Marie-Laure Djelic
ESSEC, France

Professor Kjell Grønhaug
Norwegian School of Economics and Business Administration, Norway

Professor Juhani Kuusi
Director of Nokia Research Center (retired), former Director General of the National Technology

Agency Tekes, Finland

Present from the Steering Committee:

Professor Anne Kovalainen
Academy of Finland, Research Council for Culture and Society

Coordination:

Mr Paavo Löppönen, Director
Academy of Finland

Ms Anu Nuutinen, Project Officer
Academy of Finland

Chairman: *Professor Yves Doz*

9.00–10.00	**MINISTRY OF TRADE AND INDUSTRY** *Mr Timo Kekkonen, Director General, Technology Department* *Mr Matti Pietarinen, Deputy Director General, Industries Department*
10.00–11.00	**NATIONAL TECHNOLOGY AGENCY TEKES** *Dr Martti af Heurlin, Deputy Director General* *Mr Asko Vesanto, Senior Technology Adviser*
11.00–11.15	BREAK

11.15–12.15	**SITRA FUND** *Dr Timo Hämäläinen, Director, Innovation and business development* *Mr Risto Kalske, Director, PreSeed* *Mr Jukka Aaltonen, Director, Industry ventures*
12.15–13.15	LUNCH
13.15–14.30	**CLOSED SESSION OF THE PANEL**

Appendix 7:
Schedule of the Evaluation Site-Visits

Date	Monday 6 September	Tuesday 7 September		Wednesday 8 September		Thursday 9 September		Friday 10 September	
Place	Helsinki	Tampere	Turku	Oulu	Lappeenranta	Vaasa	Jyväskylä	Helsinki	Helsinki
Partici-pants	All	*Grønhaug*	*Carlsson*	*Djelic*	*Doz*	*Doz*	*Carlsson*	*Doz*	*Carlsson*
		Jönsson	*Djelic*	*Grønhaug*	*Carlsson*	*Grønhaug*	*Djelic*	*Djelic*	*Jönsson*
		Kuusi	*Doz*	*Jönsson*	*Kuusi*	*Jönsson*	*Kuusi*	*Grønhaug*	*Kuusi*
		Löppönen	*Kajaste*	*Löppönen*	*Kajaste*	*Kajaste*	*Löppönen*	*Löppönen*	*Kajaste*
Morning		7.04–8.52 Train	7.38–9.25 Train	7.25–8.30 Flight	7.25–8.00 Flight	6.30–7.25 Flight	6.30–7.10 Flight		
		9.15–11.15 Tampere University of Technology, Department of Industrial Engineering and Management (4 institutes)	9.45–11.00 Åbo Akademi University, Faculty of Economics and Social Sciences (2 departments)	9.00–11.15 University of Oulu, Faculty of Economics and Business Administration (4 departments)	8.30–11.00 Lappeenranta University of Technology, Department of Business Administration	8.00–10.30 University of Vaasa, Faculty of Business Studies (5 departments)	8.00–10.45 University of Jyväskylä, School of Business and Economics (5 fields of study)	8.00–11.15 Swedish School of Economics and Business Administration, Hanken (6 fields of study)	7.45–11.00 Helsinki School of Economics, HSE (9 fields of study)
						10.45–11.45 Faculty of Technology, Department of Electrical Engineering and Industrial Management			
Noon		11.30–13.15 Lunch with the Tampere Chamber of Commerce & Industry	11.15–13.15 Lunch with the Turku Chamber of Commerce	11.30–13.30 Lunch with the Oulu Chamber of Commerce	11.30–13.30 Lunch with the South Karelia Chamber of Commerce	12.00–13.45 Lunch with the representatives of business in Ostrobothnia	11.00–13.00 Lunch with the representatives of business in Central Finland	11.15–12.00 Closed lunch of the Panel HSE	11.15–12.00 Closed lunch of the Panel at HSE
After-noon		13.30–16.45 University of Tampere, School of Business Administration (5 fields of study, 2 research centres)	13.30–16.15 Turku School of Economics and Business Administration (4 departments, 1 research centre)	13.45–15.00 University of Oulu, Faculty of Technology, Department of Industrial Engineering and Management	13.45–16.00 Lappeenranta University of Technology, Department of Industrial Engineering and Management	14.35–15.30 Flight	14.10–15.00 Flight	12.30–14.30 Hanken (4 fields of study)	11.45–15.00 HSE (5 fields of study, 4 research centres)
							15.30–17.30 Helsinki University of Technology, Department of Industrial Engineering and Management	15.00–16.00 Closed session of the panel at HSE	
		17.07–18.56 Train	17.00–18.57 Train	16.00–17.00 Flight	17.10–17.50 Flight	(16.00–17.30 Panel work at the hotel)		16.00-> Departures to the airport	
Evening	20.00 Dinner Lasipalatsi Restaurant	20.00 Closed dinner (Panel + coordination) at Restaurant La Tour		19.30 Dinner with the Helsinki Chamber of Commerce (Restaurant Torni)		19.00 Dinner with the Ministry of Education at the Restaurant Papa Giovanni			

Appendix 8:
Schedule of the Panel Meeting in October 2004 at ESSEC La Défense, Paris, France

FRIDAY, October 15

9.00 Synthesis of observation, diagnostic and development of main findings and recommendations

12.00 Lunch

13.00 Development of report conception outline and main points

SATURDAY, October 15

9.00 Report writing and integration

12.00 Lunch

13.00 Finalization of report draft

16.30 End of the meeting

The scientific quality of research in Finland in international comparison, the impact of research in Finnish business know-how and the Finnish organization of research in business discipliness have been evaluated by an international panel.

The report of this evaluation tracks the developments of the Finnish research system in general and business research in particular. The academic system has served the growth of the student body, responded to regional development policies and given priority to teaching quality and productivity, over research-driven academic excellence.

In the evaluation conducted by the Academy of Finland the international panel also sets out a number of recommendations for the future.

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