



OECD REVIEW OF INNOVATION POLICY: FINLAND

STRENGTHENING THE CONTRIBUTION OF HIGHER EDUCATION INSTITUTIONS AND RESEARCH INSTITUTES

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Recent developments in the HEI sector

- Efforts underway to strengthen profiling, strategic and interdisciplinary research, leadership (through performance-based funding and special programmes at the Academy of Finland).
- Significant improvement in international co-publications.
- Signs of more strategic thinking.
- Some mergers and consolidation.



Higher education institutions in the Nordic countries

	Number of universities and university colleges	Student enrolment (Full time) 2014	Student enrolment (full and part time) 2014	Population 2015	universities per m inhabitants	universities per 10 000 full-time students	universities per 10 000 students
Denmark	16	269493	301399	5,1	3,14	0,59	0,53
Finland	38	174037	306080	5,5	6,91	2,18	1,24
Norway	19	166322	264207	5,7	3,33	1,14	0,72
Sweden	33	230549	429444	9,9	3,33	1,43	0,77



University reforms – a slow transformation?

- Governance – e.g. financial and administrative autonomy has been reinforced, but opportunities have not been fully exploited.
- University boards have gained greater influence in universities' strategic decisions, the rector's position has been strengthened.
- Performance-based funding model:
 - strong emphasis on academic research excellence and strategic development
 - low priority on impact or utilization of research, societal relevance and cooperation or interaction with surrounding society
- University reforms coincided with a number of other changes, all of which affect universities, such as funding cuts, university mergers, the drastic reduction of Nokia's R&D activities and the economic crisis.



Common challenges in Finland, Sweden and Norway

- Autonomy, stronger external representation and funding increases (or decreases) have so far proven insufficient to drive necessary changes (mergers, consolidation, specialisation, recruitment, mobility, interaction, education reform, quality of research, lifelong learning).
- The performance of the higher education sector is constrained by governance shortcomings, which call for continued reform. The national performance-based research funding system cannot compensate for this institutional deficiency.



Unintended undermining of societal interaction?

- Concurrence of increasing focus on research excellence combined with drastic cuts for funding of long-term industry-academia cooperation and research institute funding does not appear to be part of a grand design or conscious strategy.
- This results in unintended potentially quite damaging consequences for the societal impact, utilization and relevance of the Finnish HEI system, and the long-term competitiveness of Finnish companies.



Challenges with the current model/system

- Finnish universities reacting at a rather slow pace to the need for consolidation and specialisation and for changes in course content.
- High proportion of institutional funding based on performance minimises universities' room for autonomous manoeuvre and can make research more short term, avoiding high-risk or transformative research, discouraging inter-disciplinarity, reducing career prospects for women and impeding inter-sectoral mobility.
- HEIs' contribution to innovation and societal development (both through research and education) under-incentivized at all levels?
- Quality of the supply of human capital but frictions in the education system.

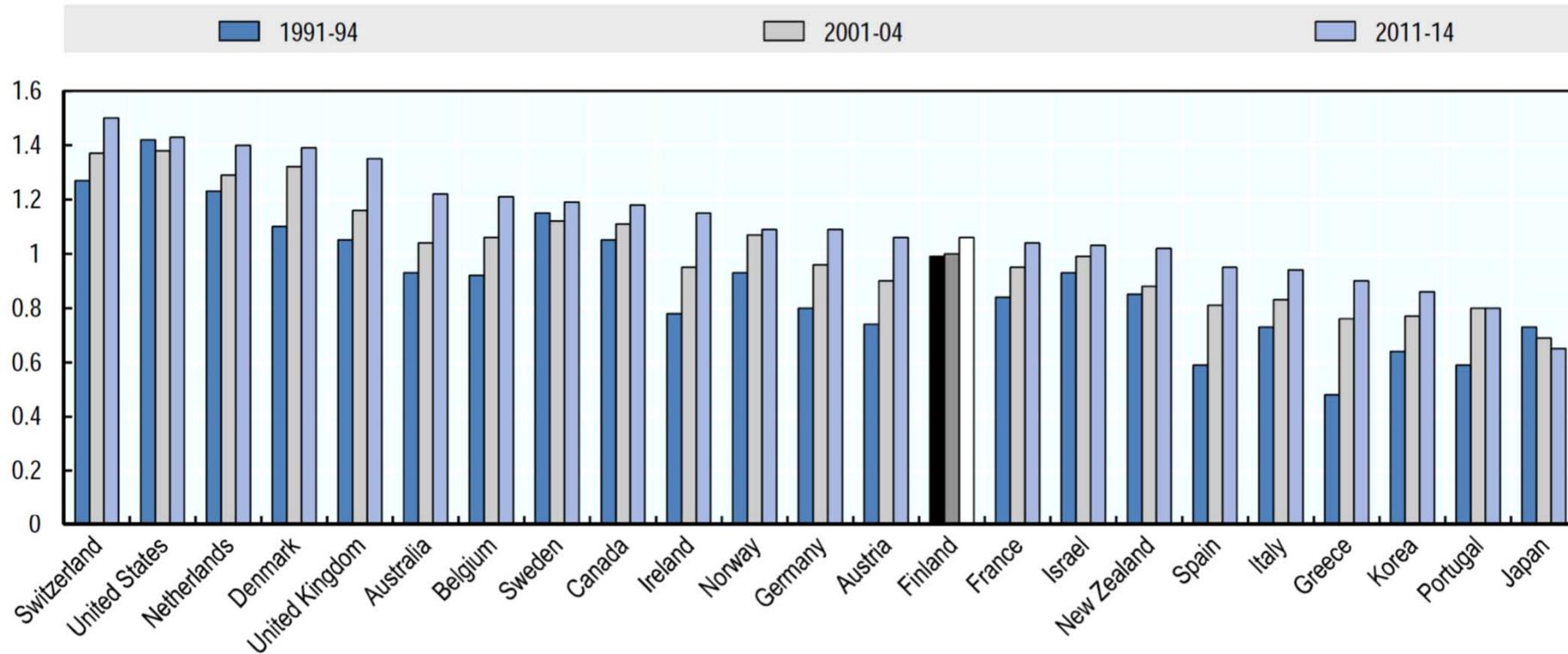


Challenges continued

- Weak internationalisation (particularly in education)
- Quality of science lower than some peers – and flattening since 2000s
- Highly fragmented university research system
 - the discipline units of Finnish universities are typically small. More than 1/3 of the university disciplines employ three professors or fewer, calculated in terms of FTE
- University reforms partially accomplished
 - not clear consolidation of diploma/schools/ departments
 - financial and administrative autonomy has been reinforced, but opportunities have not been fully exploited



Top 10 citation index for selected OECD countries



Source: Academy of Finland (2016), *The State of Scientific Research in Finland 2016*, www.aka.fi/en/research-and-science-policy/state-of-scientific-research.



Challenges to universities in Finland (and elsewhere)

- Early specialisation in education and structural bias against inter- and multidisciplinary research.
 - Slow pace of change.
 - Strong focus on degree programmes.
 - National orientation (funding, recruitment).
- 
- A rapidly changing world...
 - ...with increasingly urgent challenges that require interdisciplinary and international approaches...
 - ...and continuous education (lifelong learning)
 - Increasing international competition.



Possible approaches to strengthening HEIs and their contribution to renewal

- Revisit education needs for a changing world (skills, programmes, transferability between programmes and universities).
- Continue to encourage profiling, strategy, defragmentation, excellence (in education, research and interaction) and internationalisation.
- Further encourage specialization and diversification (universities and UAS; research, education and interaction) to make HEIs more competitive in a global landscape.
- Continue to foster strengthened leadership (rectors and boards, but also collegiate responsibility!).
- Maintain performance-based funding but consider reducing the share, strengthen in the long-term perspective and incentivizing interaction.
- Strengthen interaction across disciplines (in research, education and interaction); don't forget humanities!



“To prosper, colleges need to become more like cathedrals. They need to build beautiful places, real and virtual, that learners return to throughout their lives. They need to create authentic human communities and form relationships with people based on the never-ending project of learning... The idea of ‘applying to’ or ‘graduating from’ colleges won’t make as much sense in the future. People will join the colleges and other learning organizations for as long or as little time as they need”. (Carey 2015, The End of College, p.254)

Finland – home of innovative initiatives in HEI sector (Demola, Aalto, Big Wheel): time for institutional system renewal?



Public Research Institutes



Public research institutes (PRIs)

- Historically an important part of the research system.
- Research institute sector larger than in Sweden but smaller than in Norway:
 - PRIs made up six of the top twenty publishing institutions between 2011 and 2015 (seven in Norway, none in Sweden)
- Traditionally high basic funding (with large variation among PRIs).
- A very diverse population in terms of tasks and industry orientation.
- Significant changes since 2013 (funding, governance, organisation).



Public research institutes (PRIs) and the reform of strategic research funding

- Two goals:
 - reallocate funds towards higher value-added areas
 - evidence-based policymaking (came later)
- Driven by desire to make institutes more dynamic, as well as more responsive to societal and industry needs and more effective in their ability to meet these needs.
- More multidisciplinary research, cutting across ministerial or sectoral boundaries.
- Strengthen PRIs' ability to support decision-making, building their role as intermediaries between firms and universities and strengthen cooperation between institutes and universities.
- *“The idea of the transfer of resources to high value-added areas did not happen”; “we didn’t get the idea of strategic research right”*



Reform of PRIs

- Cutting of basic funding across the board (“cheese slicer”), from EUR 319 m in 2009 to m EUR 197 m in 2016, and from 15.8% of government total funding of R&D in 2008 to 10.7% in 2016.
- Number of researchers or equivalent (FTEs) fell by 24.2% between 2011 and 2015 and overall R&D funding fell by 23.6%.
- Funding transferred to SRC and PM Office.
- Mergers of institutes.
- Greater emphasis on evaluation.



Possible approach to strengthen PRIs

- Further enhance PRIs' ability to address strategic research and innovation needs (oriented towards industry, strategic renewal and societal needs).
- Enhance PRIs' ability to work on cross-sectoral and multidisciplinary issues and in a global context (focused on societal challenges).
- Requires further work on governance, interaction and collaboration, recruitment, funding, etc.



Internationalisation

- Make Finland more attractive for global talent (to do research and study) -> look more at undergraduate education?!
- Enhance HEIs' and PRIs' global embeddedness and competitiveness.
- Link development aid with research and innovation initiatives to tackle global societal challenges and with business opportunities for Finnish firms.
- Strengthen capabilities in key areas of research and innovation (specialisation and excellence) and market the best local skills and technology assets in global markets (Finland as global innovation lab?).
- Reduce the fragmentation of the higher education and research sector and further improve governance.



Internationalisation

Internationalisering kan [därför] aldrig bli en separat verksamhet vid sidan om den reguljära, som ett litet särintresse.... Det gränslösa kunskapsutbytet måste nå in i själva blodomloppet.

Institutioner som bara låter internationalisering förvandlas till strategidokument med klickbar länk på hemsidan hamnar i slagskugga av internationellt starka universitet som integrerar en ständigt omvärderad global analys i sin forskning och utbildning. (Gunnel Cederlöf <http://debatt.rj.se/?p=297>)

Internationalisation is not an end in itself but a means to strengthen quality (in research, education and interaction) linkages with strategic markets and innovation hubs



THANK YOU