Impact Evaluation of the Finnish Higher Education System Reforms

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***Abstract*—Two distinct higher education sectors of Finland are introduced and profiled based on their educational objectives and their ways to impact the society and country's economic growth. Both sectors experienced major legislative and steering policy reforms within the last decade in parallel with the continuing recession after the financial crisis. Recent OECD 2017 country report offers a critical view of the science policy implementation and its discontinuity. On the contrary, recent research from the UNIFI, the representative body of the Finnish Universities reports a high regional impact of indirect gross value added of the university sector. Equally recently ARENE, the representative body of the Finnish applied science universities responded to the 2017 funding model reform that the model is missing a relevant funding instrument for the Applied Science Universities. The paper briefly introduces the modes of knowledge production as the fundamental rationale of the two sectors. The critique of the potential discontinuity of the Finnish science policy discussed based on the OECD report. However, the report on the impact to Finnish economy contains university sector contribution only. The universities of applied science are comparatively evaluated using rough analogies between the sectors, showing at least the impact of 2/3 of the university sector in terms of gross value added.**

***Index Terms*—Applied research, basic research, funding model, GVA, impact, OECD, steering, science policy.**

I. Introduction

Finnish higher education system has experienced major reforms within the last decade. The education systems consist of two parallel tertiary education paths with distinctly different profiles. This is usually referred as binary or dual system [1]. Universities follow theresearch-oriented tradition and run Bachelor, Master and Ph.D programs based on their research orientation. Universities of Applied Sciences form another pillar of the higher education system with roughly equal size in terms of the number of students but are mainly oriented towards applied research and engagement with the local industry needs. Most of the degrees are Bachelor's and a smaller portion of Master's with high working life orientation. Legislatively the paths are kept separate by a requirement of three-year work experience before joining the UAS Master's programs. Therefore, these degrees are mostly designed in a way that the students can continue their careers while studying.

The university reform 2010 disconnected the science universities from government budget and allowed them a status of a separate legal entity with autonomy and responsibility to manage their own strategy and finance. The universities of applied sciences were allowed the same in 2008 and the autonomy was forced on them in 2014. Disconnecting the budget and establishing a general, competitive funding model was motivated by the need to cut down the government direct funding of the higher education system, specifically to increase the efficiency of their operation by introducing competition.

Recent OECD country evaluation expresses a critical view on the country's science and education policy, especially on the balance shift of the policy towards the basic research, although applied research and innovation might be the direction that the country's very slowly reviving economy might have needed [2]. After the financial crisis of 2008, the economic revival of Finland has proved to be very slow for nearly a decade.

Another look at the regional impact of the Finnish university system is just published, indicating the indirect gross value added to the country's economy [3]. The research was commissioned to an outside international consultancy by the UNIFI, the representative body for Finland's universities.

The paper discusses the dual nature and differing modes of knowledge production to establish the differing roles and rationale of the dual system. The two potentially differing views are discussed, keeping in mind that the impact evaluation focuses on the university sector only [3]. The equal size UAS sector is, however, noted also in the OECD report. The dialogue between the two reports is relevant because the funding model of the UAS system was modified 2017 towards applied research, development, and innovation. However, ARENE, the representative body of the Finnish applied science universities criticized that the policy implementation did not include any funding instrument to pursue towards this objective [4]. As a result, the UAS sector is likely to compete with universities on research type of funding. Therefore, the paper takes a fresh look at an emerging gap in the higher education steering model.

II. Material and Methods

The Finnish dual system of universities is briefly introduced within a framework of knowledge production modes. The reforms of the higher education system, especially related to balance shifts towards increased funding for basic research and their possible rationale is discussed based on the OECD report. The overall impact on the Finnish economy is summarized based on the UNIFI report. The funding shift towards basic research and missing instrument affect the UAS sector most severely. The previously omitted

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impact of this sector is evaluated using sector size basic data in relation to the university sector. Ministry of Finance statistics is used to adjust the evaluations.

III. Science and Innovation Policy

A. Modes of Knowledge Production

One of the most influential distinctions to describe different ways of knowledge production is a traditional application of scientific method, building on acquired knowledge (mode 1) in contrast with an application-oriented and socially-induced approach (mode 2) [5], [6]. The mode 1 knowledge production can be characterized by a strict application of processes related to obtaining scientific knowledge, executed by professionals of the same discipline. Mode 2, in contrast, is characterized by organizational diversity and inter-disciplinary problems, therefore using mixed methods. Both modes are still organizationally implemented. The organizational manifestation of the first two modes of knowledge production can be seen in the existence of traditional science university systems in parallel with the systems of applied science universities. Such dual systems can be found in many of the OECD countries.

The governmental steering and funding mechanisms are fundamentally oriented towards controlling institutional actors. Recently, discussion about increasing amounts of available data, analysis tools, and computing facilities have suggested the emergence of a third mode (mode 3) of knowledge production [7]. Mode 3 can be characterized to be self-organized in a sense that individuals could determine their objectives of interest and join through social media to link their interest. They could also do experiments and analysis on their own (therefore having n=1) but being able to join their interest, research data, and results in a meaningful way. This can be seen as a weak signal of an emergence of a non-institutionalized way of knowledge production and innovation. Because the mode 3 is organizationally distributed, it is not reachable by any formal science policy implementation.

B. University Reform in Finland

OECD 2017 country report acknowledges that the strength of Finland's economic revival from the recession of 1990's was a systematic, long-term science, technology and innovation policy [2]. The overall impact of this policy was the country's rapid development from the 1980's and still continuing over the recession of 1990's until the year 2008. The report points out a potential lack of trust in the power of this approach in the 2010's. This was shown as a number of seemingly incoherent or discontinued science policy actions.

A closer look at the timing of the higher education system reforms shows 2010 as the milestone for the birth of the autonomous science universities. The funding model was changed from direct institutional funding to partially output-oriented funding. Additionally, the research funding was changed to be more open, but also more competitive by increasing the funds channeled through Academy of Finland based on scientific merits of applications [8]. In principle, this is reasonable and promotes quality of research. Therefore the university reform can be seen as the one turning point, not for a worse as such, but combined with later events, leading to a sequence of incoherent steps.

C. Industry Structure and Renewal

The shift in innovation policy can be understood within the framework of industrial history. The key to the sustained economic growth and survival of the economy was largely related to the rise of the telecommunication and mobile phone industry, eventually led worldwide by Nokia. It is reasonable to conclude that the very long-term science policy eventually resulted in major outcomes in the industrial sector. The research funding also peaked in 2010 and a significant part was eventually channeled to Nokia-related cluster of companies and their projects including university partners. Due to shift in consumer market Nokia mobile phones was losing the market and entered the alliance with Microsoft, thereby shutting down research and development units in Finland, with massive layoffs peaked at years 2011-2012. The aftermath of this can be identified as a second strategic turning point to evaluate if this was a failure of the long-term science policy and what were the remaining options forward. The position is shown in Fig. 1 as the export market drop.

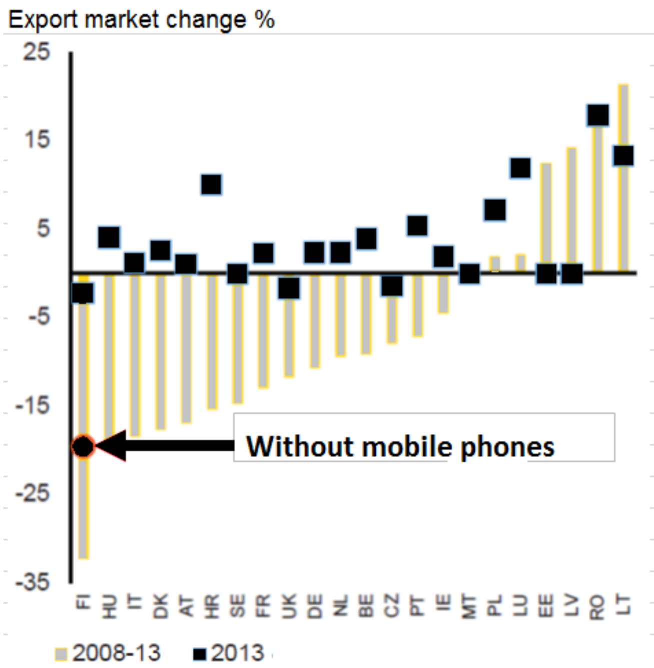

Fig. 1. Export market change in European countries [10].

Thirdly, the radical change in the leading industry sector revealed the narrow and shrinking industrial base of the country, which is exceptionally largely dependent on export. Therefore, this event occurring in the middle of the prolonged financial crisis and slow economic growth was indeed to trigger a question if the university reform and the research funding reform would raise the quality of research and to put the country back on growth track. This selected path clearly sets the target on long-term effects. The OECD report gives a critical account of this choice, especially in the context of low economic growth [2]. Public discussion was still waiting for a second, repeated miracle of Nokia. With this context in mind, the imminent size of the industrial crisis and the timescale of the corrective actions could be seen as disproportionate.

Industrial growth of this scale takes a decade or more. Next, it is time to take a closer look at the unused option.

As noted above, the university reform and the competitive nature of the research funding created an instrument to channel research funding. Practically all funding was channeled to the university sector or consortiums with strong university basic research (mode 1) presence.

D. Declining Innovation Funding

Another funding instrument, oriented to innovation with commercialization objective in Finland is Tekes, the funding agency for innovation [9]. This has been the other science policy funding instrument, but clearly with a business orientation to promote linking and clustering companies and research organizations under somewhat focused themes with a mid-range target. Mid-range here means that the research results are open to the project participants with a time horizon within few years ahead of commercialization. Therefore this is in a gray area between basic research and commercial application. This could also be characterized as semi-open applied research. Participation on such project is in the interest of higher education institutions because of the relevance of research topics, extended exposure to real-world problems, and possibility to still maintain their role in basic research. Participation is in the interest of start-up companies who will get access to the frontline of thematic research with shared cost and potential of sharing their knowledge for open access or maintaining some related knowledge in their own further use. The differentiation of this weak line is that if reported working time and associated outcomes are funded by the project, the information is open. Quite obviously, on a very short lead time to a commercial application, the company interests are closer to product development, and their interest in sharing these results become lower.

However, the funding instrument has proved its usability, including attracting both large companies and startups. The interest of the large corporation is to renew and innovate out-of-the-box in new areas in a flexible way. In fact, also in Tekes-channeled funding, the Nokia-related cluster of companies was well represented in the thematic research programs. The shift between the funding instruments (millions of euro) from Tekes to Academy of Finland is shown in Fig. 2.

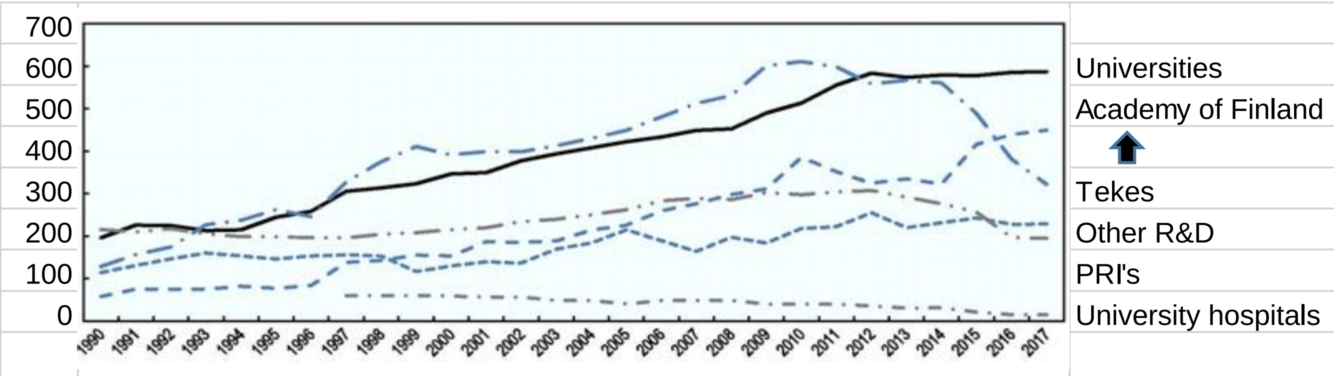

Fig. 2. Funding instrument shift from innovation funding (Tekes) to basic research funding (Academy of Finland) [2].

E. Public Research Institution Reform

The third balance shift in Fig. 2 is less obviously seen in funding level change. The funding and objective of the Public Research Institutions (PRI's) have stayed relatively stable over the history until 2013. A comprehensive reform of state-owned research institutes and research funding was initiated. The number of PRI's changed from 19 (2009) to 12 (2016) and their total funding declined. Most of them were sectoral organized to support the needs of various ministerial needs. However, their functions were diversified from statistics collection, monitoring, coordinating, applied research and some cases basic research in their specific fields. Transferring the basic research of the PRI's to the science universities as part of building stronger and specialized units can be justified as a reasonable step in promoting research orientation. The organizational reforms therefore also indirectly enforced the change towards mode 1 research orientation.

Reviewing the reform against the previously discussed timelines of the university reform 2010 and the major industrial R&D collapse 2011-2012, this reform could be seen as the second stage of a constructive destruction: a major re-organization of the research and education infrastructure. Placing the decision into more administrative and economic context, Finland has been facing a trend of aging population and consequently, a growing concern on its capacity to maintain a Nordic welfare state model. The country survived the recession of the 1990's by successfully playing the Nokia card, which was lost at the time. During the prolonged financial crisis, the pressure was increasing.

Having research and knowledge production activities within the sectorial organization is likely to be uncoordinated and potentially overlapping. One of the key discussions during the university reform was the creation of stronger and more profiled units of education and research. In this context, it is logical that basic research and some related functions could be integrated into university research units. Considering administration and modes of knowledge production, the reform seems consistent. Indirectly, similar to the new model of funding, the portion of direct funding is reduced and more funding is based on the research competition, yet again strengthening the role of the Academy of Finland.

In addition of reducing the basic research from sectorial PRI's a change in the objective and focus of them was also shifted from supporting sectorial decision making and administration to create more value by addressing the economic and social challenges. The second objective was to strengthen knowledge- and evidence-based policymaking. Addressing societal challenges implies multi-disciplinary approaches with networked models of knowledge production and sharing. The change from a sectoral role, especially when basic research has been dislocated, closer to applied research orientation with wider societal scope is not a quick transformation. As a result, the remaining functions of the new PRI's remain to be the control and support of the ministerial decision making. More networked role related to acting on the societal challenges raises an interesting question of their multidisciplinary knowledge production: how does it relate the applied science university system and its already proven practice-oriented and evidence-based models of working?

Fourth element contributing to the balance shift was pointed out by Federation of Finnish Industries [10] in their concern in 2015 that half of outside funding from industry to universities is also linked to Tekes funding. Consequently, reduction in Tekes funding will also indirectly reduce university funding. The budget cuts were especially targeted to Tekes-organized strategic centers of science, technology, and innovation (SHOKs). The OECD report states the overall result does not "appear to be based on any clear rationale" [2]. The SHOKs were organized as limited liability companies with wide engagement through stakeholder ownership to allow flexible organization of new initiatives and to apply collectively funding from instruments provided by Tekes. Therefore they acted as a practical tool for channeling the interest around specific innovation themes.

The industry view expresses strong support in a shift back to innovation through Tekes, more radical profiling of the higher education system, and more selective and focused research themes [10]. Interestingly, also the tighter coupling of higher education institutions and the PRI's is encouraged.

At this point, it seems evident that the science, technology and innovation policy has made a sequence of implementation steps, which clearly shifted the funding towards mode 1 knowledge production. Moreover, the mode 2 seems to be absent from the discussion. Institutionally, this means that the universities of applied sciences are too large extent missing from the science policy discussion. Next, following them along lines of the university sector impact evaluations is possible to re-establish the position, impact, and value of them.

IV. Regional Impact of Universities

Altogether there are 14 universities and 23 applied sciences universities in Finland. The two sectors are roughly same size, university sector having 148,000 students and 32,000 staff (2016) [3]. The total budget of the university sector is €2.7 billion, including all funding. In theory of public economics education is considered as a publicly produced commodity with high external positive impact. The external impact means that investment in higher education creates more value-added jobs and more jobs in related service sectors. In a long run investments in higher education, science and innovation multiply and resulting economic growth.

Gross Value Added (GVA) is a measure of the value that an organization adds to the economy through its operation. In case of universities, this was estimated by subtracting non-staff expenditure from the total income of the university sector. The non-staff expenditure is relatively small, mainly related to bought goods and services. One of the key findings is that these indirect external impacts of the university systems are in order of magnitude of 14.2 billion GVA and 136,000 jobs in Finland [3]. Placing this in context of Fig. 1 on industrial export this represents 6 % of the national economic output and more than 5 % of jobs [3]. Therefore direct expenditure of 1 € generates nearly 8 € VGA. The breakdown of impact into its incidental and purposeful constituents is shown in Table I.

TABLE I: Impact Estimation Summary by Sector (€ million gva)

Impact to economy	Universities	UAS sector	Total HEI
Incidental benefits	6,142	2,848	8,990
Core contributions	4,034	1,871	5,905
Student contributions	2,030	941	2,971
Tourism	78	36	114
Purposeful benefits	8,013	6,443	14,456
Graduation premium	3,902	2,876	6,778
Business and innovation	3,431	3,431	6,862
Health benefits	633	127	760
Other benefits	47	9	56
TOTAL	14,155	9,291	23,446

The incidental benefits are generated are a result of any institution employing people and running their services, by Table I these represent €6.14 billion (43 %) of the economic contribution. This is further divided to the core- and student contributions and tourism. The core contributions of €4.0 billion euro GVA is a result of the direct expenditure of the universities and is estimated to support 60,000 jobs indirectly. Student contributions of €2.0 billion GVA are similarly a result of student expenditure and employment and are estimated to support 35,000 jobs. A small contribution of €78 million GVA related to tourism and travel, supporting 2,000 jobs was also included [3].

The purposeful benefits €8.06 billion (57 %) are associated with indirect, added value generated by the function and purpose of the universities. The graduate premium of €4.0 billion GVA represents a long-term effect of graduate increased earnings over a lifetime compared to non-graduates. Business and innovation support is a result of new businesses, research support to business, student placements and related activities and was estimated to contribute to €3.4 billion GVA and to supports around 39,000 jobs. The UNIFIN report notes that this estimate is, however inaccurate due to the very close interaction between the Finnish higher education system and the industry, and suggest that the €3.4 billion is a minimum, whereas the higher estimate can be as high as €21.7 billion, which is six times the minimum [3]. Thirdly, health benefits stem from the accumulated health benefits over a long time and further results and growth of the healthcare sector. These were estimated to €633 million GVA. Finally, a small contribution of other wider benefits of €47 million GVA was included.

In summary, the university sector has a strong impact on the country's economy, and through the indirect multiplier effect in the economy, the report concludes that cuts in the university funding are likely to produce disproportionately negative effects. Using the higher estimate of the benefits related to innovation, the overall impact of the university sector could be more than double from the first prudent estimate, therefore up to €32 billion [3].

V. Impact of Applied Science Universities

The university impact estimation was commissioned by UNIFI, the representative body of the universities in Finland. No similar evaluation of the other half of the Finnish higher education system exists. The applied science university (UAS) sector consists of 23 institutions (2017). In Ministry of Finance (MoF) 2017 budget, the number of university students is 138,250 and the number of UAS students 139,900 [11]. The incidental benefits through core- and students contributions are similar as they relate to expenditure on staff salary and other direct operations. Therefore, a reasonable estimate can be obtained by comparing the sectorial budgets. The results are summarized in the second column in Table I.

MoF budget includes direct funding of €1.79 billion for universities and €0.83 billion for the UAS system. Estimating equivalent and proportionate 0.83/1.79 incidental benefit from €6.14 billion equals to €2.85 billion. This estimate does not include factors related to level or discipline of the higher education. Because the original estimates are rough, relating the incidental benefits through budget expenditure can be considered a reasonable estimate. The purposeful benefits reflect the differences.

The purposeful benefits of €8.06 billion are noted as hard to estimate [3]. Therefore, the rough first estimates may be acceptable in evaluating their UAS sector regional impact. Graduation premium of €3,902 million consists mainly on cumulative increased earnings over the lifetime of a graduate. The basis of this can be statistics on salary levels of Master's graduates (university sector) compared to Bachelor's graduates (UAS sector). The former is nominally 5 years, the latter 3.5-4 years, therefore leading to profession sooner. The MoF statistics show Master's average graduation age 27.8 and Bachelor's 25.9 years, differing 2.1 years. Assuming the expected career to be from graduation to around 65 years the difference covers two years earnings for Bachelors. From career length from 25.9 to 65 the difference is +5.3 % for them. Estimating very roughly with subjective experience, the salary level between Master's graduates and Bachelor's reflect the length of the education. Therefore a factor of 3.5/5, is prudent, although some programs like, engineering is 4 years. Therefore the difference in earnings is estimated to be -30 % for Bachelors. Based on these adjustments the graduation premium of €3,902 million is adjusted by -30 % to €2,732 million for an equivalent length of the career and adjusted by +5.3 % to extend it, resulting €2,876 million GVA.

In evaluating business and innovation benefits of €3,431 million of the university system a factor of 6 was suggested between the rather definite minimum and possible, vague maximum. The very large gap is reportedly related to the difficulty of describing and evaluating the partly informal and close interaction between the academia and industry. Within the context of modes of knowledge production, and after transferring the PRI's and their basic research closer and more integrated with the universities, this mechanism of value creation could reasonably be described as diffusion of mode 1 knowledge from academia to the industry.

Evaluation of the business and innovation benefits within the universities of applied sciences -sector faces the same challenges in use of methods. The profile of the institutions is to implement co-operation with the industry, especially with a problem-oriented approach, best described as mode 2 knowledge production. Therefore the value created is likely to be more direct, solving practical, often multi-disciplinary problems. The nature of the industry co-operation can be described as short-term problem solving, concepts development, and innovation. Within the context of mode 2, this activity could be evaluated using more direct mechanisms. Most of the Bachelor's thesis works are done for the industry and other institutions, thereby offering a massive number of student working hours available. Additionally, unlike university programs, the UAS Bachelor's degrees contain a one-semester length of work placement. Furthermore, many programs, especially in engineering education use industry-related, problem-based, integrated teaching and learning methods [12].

In the estimation of the university sector business and innovation benefit, the estimation range is €3.4 to €21.7 billion GVA. Both sectors are the practically same size in the number of students. Based on the qualitative differences in integrating much more of the industrial relations inside the Bachelor degree teaching and learning processes it is considered reasonable to estimate the UAS sector to be the same: €3.4 billion GVA.

The remaining health benefits of €633 million are related to health research and growth of the healthcare sector [3]. The other wider benefits of €47 million are unspecified. Therefore they are here prudently estimated instead of the 0.83/1.79 (46.3 %) ratio, using only 20 %. This results in €127 million and €9 million, respectively.

VI. Summary and Conclusions

The rationale of the Finnish higher education sector reforms was introduced. As in many other OECD-countries, there is a pressure to increase the efficiency of the higher education systems. This has been particularly the in the Finnish reforms, extending from both pillars of the dual system up to the re-organization and streamlining the public research organizations. As the recent country evaluation indicates not all was implemented in a coherent way, although individual decision points seemed rational in their narrower scope.

Within the reforms and based on the policy programs from Prime Minister's Office the UAS sector has not been part of science policy discussion or implementation [13], [14]. The role if the UAS-sector has been more as a target for efficiency improvements and cost cuts. The UAS funding model was modified, being effective in 2017 so that outside funding has a stronger role in earning government funding. As a response to the ARENE's concern about the gap in the funding instrument, this brief evaluation revealed the impact of the UAS sector to be 2/3 of the university sector. A breakdown analysis of the UAS sector was done to complete the impact evaluation. System-level analogies were used in the analysis.

The impact of the university sector represents 6 % of the national economic output and 5 % of jobs. A limited number of variables was used to adjust the analogies between the sectors. The incidental benefits were adjusted proportionally with governmental funding between the sectors. In estimating graduation premium the degree level was adjusted by study time difference over the working career length and average salary level over the career time by the relation of study length in years based on the statistics. No discipline or program level details we used. The result follows closely to 2/3-relationship.

Business and innovation benefits were prudently and possibly underestimated to follow the funding relationship -model, similar to incidental benefits. Estimating it higher would require institution- or program level of details, which is a very extensive task. Other remaining purposeful benefits were prudently estimated as only 20 % of the university sector. The UAS-sector analysis shows that this sector represents 2/3 of the university sector. The observation why this sector is not really a part of science and policy discussion is therefore interesting.

The discussion shows also the complexity of evaluating business and innovation benefits. A significant amount of further work on both pillars of the dual system is necessary to determine these in a comparative and systematic way, not only from the interest and viewpoint of one of them. Possible directions of further study would require an institutional level of information, most specifically breakdown into disciplines.

REFERENCES

[1] B. Lepori and S. Kyvik, "The research mission of universities of applied sciences and the future configuration of higher education systems in Europe," *Higher Education Policy*, vol. 23, pp. 295-316, 2010.

[2] *OECD Reviews of Innovation Policy*, Finland: OECD Publishing, Paris, 2017.

[3] *Economic Contribution of the Finnish Universities*, BiGGAR Economics, Penicuik, Midlothian, 2017.

[4] Innovaatioita, kehittämistoimintaa ja tutkimusta — Kaikki kirjaimet käytössä ammattikorkeakoulujen TKI-toiminnassa. Ammattikorkeakoulujen rehtorineuvosto Arene ry, Finland, 2017.

[5] M. Gibbons, C. Limoges, and H. Nowotny, "The new production of knowledge: The dynamics of science and research in contemporary societies," *Sage*, 1997.

[6] H. Nowotny, P. Scott, and M. Gibbons, "Introduction — Mode 2' revisited: The new production of knowledge, " *Minerva*, vol. 41, no. 3, pp. 179-194, 2003.

[7] E. G. Carayannis, D. F. J. Campbell, and S. S. Rehman, "Mode 3 knowledge production: Systems and systems theory, clusters and networks," *Journal of Innovation and Entrepreneurship*, vol. 5, no. 17, 2016.

[8] Academy of Finland. [Online]. Available: http://www.aka.fi/en/

[9] The Finnish Funding Agency for Innovation. [Online]. Available: https://www.tekes.fi/en/

[10] "Osaamisen rima korkealle — Kunnianhimoa tavoitteisiin," EK:n linjaukset osaamis- ja innovaatiopolitiikasta 2015–2019, Confederation of Finnish Industries, Helsinki, 2015.

[11] Ministry of Finance, Finland, 2017. [Online]. Available: www.vm.fi

[12] K. Björn and M. Soini, "Theme-based integrated curriculum development and project learning experiences," in *Proc. 9th international Symposium on Advances in Technology Education*, 2015.

[13] "Valtioneuvoston tiedonanto Eduskunnalle 22.6.2010 nimitetyn pääministeri Mari Kiviniemen hallituksen ohjelmasta," *Parliament of Finland*, 2010.

[14] "Pääministeri Jyrki Kataisen hallituksen ohjelma," *Prime Minister's Office, Finland, 2011.*

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