

STRATEGIC NETWORKS OF HIGHER EDUCATION INSTITUTIONS: EVIDENCE FROM EUROPE

Juha Kettunen, Turku University of Applied Sciences

ABSTRACT

The purpose of this study is to present the establishment, activities and the results of the Consortium on Applied Research and Professional Education, which is the strategic network of higher education institutions. The study analyses the role of trust in strategic partnerships and the benefits of networking. The concept of trust has been used to plan the structure of the strategic network and create a cohesive network with common interests. The strategic network promoted student and staff exchange, research and development projects and the sharing of knowledge and good practices. The consortium is the first strategic network of its kind established by five European universities of applied sciences. The findings of this study are useful to the administrators of educational institutions as they improve internationalization and institutional performance.

JEL: M1, R1

KEYWORDS: Strategic Management, Trust, Networking, Higher Education

INTRODUCTION

The European development in the funding of research and development has increased the sophistication of communication and collaboration, so that the role of autonomous higher education institutions without trustworthy partners and social networks is no longer reasonable. The core idea of network theories is that networks of experts create benefits and value, which are hidden in social relations characterized by trust and reciprocity. The networks raise the ability of members and community to participate and interact when resolving common problems (Cross and Barker, 2014).

Trustworthy strategic networks enhance the willingness of people to act in a way that is beneficial to the network and institutions. For the purpose of the study, we define *international strategic partnerships* as, relatively enduring collaborative arrangements that utilize human and financial resources and governance structures from autonomous institutions located in several countries for the joint accomplishment of individual and organizational goals. Strategic partners are those mentioned in the strategic plans or otherwise deemed important for the future success based on agreements, stipulations or practices. The purpose of this study is to analyze trust and the extent of networking in the strategic network of higher education institutions. The study presents the establishment and activities of the Consortium on Applied Research and Professional Education (CARPE) of five European universities of applied sciences. CARPE is the first network of its kind, providing opportunities for research and development projects, student and staff exchange and sharing knowledge and good practices.

The collective trust of a network is separate from the interpersonal relationships within an organization. Therefore, trust must be assessed at the organizational and network levels. It is essential to create trust in a system of expertise, which is not specific to an individual. *Institutional-based trust* is a belief that the necessary impersonal structures are used to enable trust formation (McKnight, Cummings and Chervany, 1998). In institutional and network trust, formal mechanisms such as agreements and contracts are used to determine the extent of trust (Zucker, 1986). The European strategic network is important from the

viewpoint of the European Union, because among other things it promotes economic and social progress by strengthening economic and social cohesion. The network of higher education institutions implements the policy in a very reasonable way, because education and research and development create capabilities that are needed for European progress and cohesion. Europe is an important market area of the enterprises, which the CARPE partners will support by producing a skilled labor force and carrying out research and development projects. The remainder of this paper is set up as follows. The next section includes the literature review which shows that trust brings the confidence to demand collaboration especially in the projects of research and development. Trust is balanced with the activity and the supply of opportunities provided by the network to create an equilibrium of trustworthy partners. The third section includes data and methodology, which describes the European strategic network, criteria for membership and the governance. The fourth section presents the results and discussion. The concluding comments are presented in the final section.

LITERATURE REVIEW

Earlier studies attribute trust to relationships (Bell, 2001; Kramer, 1999), but Anderson, Steinerte and Russell (2010) have extended it to interpersonal, institutional and contextual trust. When we say that someone is trustworthy, we mean that he or she will perform an action that is beneficial or at least not detrimental to us (Gambetta, 1988). As a relational matter, trust depends on the quality of the interaction. Personal contacts, communication, availability of information and transparency help partners build trust. They contribute to the reciprocity of trust, which is as an expectation that others will return trusting behavior in kind (Kramer, 1996; Tyler and Kramer, 1996).

Trust has been defined in behavioral terms: a trusting individual makes a low personal investment in monitoring and enforcing the compliance of the individual with whom he or she has made a contract which he or she sees as beneficial (Levi, 1996). Trust is an essential tool in reducing transaction costs (Jack and Anderson, 2002). Trust can be conceptualized in institutional terms, where institutions set formal or informal norms to achieve benefits with low transaction costs. Transactions require personnel to search for partners, to negotiate with them and monitor agreements. If partners can trust each other, the transaction costs can be significantly reduced and quality improved.

Institutional trust accompanies the relational trust. Many studies have reported on the importance of laws, regulations and formal contracts for trust (Volery and Mensik, 1998). The formal law may create trust by creating confidence in the legal system. Regulations and contracts may create trust since effective law creates confidence and makes it easier to trust in other relations. Agreements between higher education institutions are typically voluntary. Even though they are not financially binding, they still provide a guarantee of compliance. There are many models of trust but not all of them do address the multi-partner property of trust or reputation in networks. Anderson, Steinerte and Russell (2010) mention contextual trust, where coordinators of research and development projects do not trust people *per se*, but particular circumstances. There are constitutive expectations in trust relationships. Therefore this study analyzes the networks of research and the development projects of higher education institutions when they apply for funding from the European Union or from elsewhere.

Trust is clearly limited to a number of partners, because it is impossible to trust everybody and the number of contacts is limited by time constraints. If the number of partners in the network increases, so do the transaction costs but the benefits of the project decrease. We can conclude that trust decreases with the number of partners in the network. At the same time, if the activity of the network increases, so does the number of partners and so do the benefits. The networking activity provides opportunities, but not all these opportunities are found to be beneficial because trust decreases. Clearly there is an equilibrium determined by trust for the collaboration and activity of collaboration in the network.

Figure 1 depicts the changing equilibriums in the network. Part A of the figure describes a situation where trust has a positive shift in the research and development market, which may be due to the better stipulations and funding regulations. As a consequence, the benefits of the project increase due to lower transaction costs and the number of partners can be increased. Part B of the figure describes the increasing opportunities in the network based on the positive activity shift of the partners, which may be due to the budget cuts of the central government in the basic funding of institutions which motivates to look for external funding opportunities. As a consequence, the number of partners increases, but the benefits of the project diminish because the transaction costs of communication and collaboration tend to increase. It can be concluded that trust is equal to the demand for collaboration and it must be balanced with the activity in networking to reach the equilibrium, which determines the number of partners and benefits in the network.

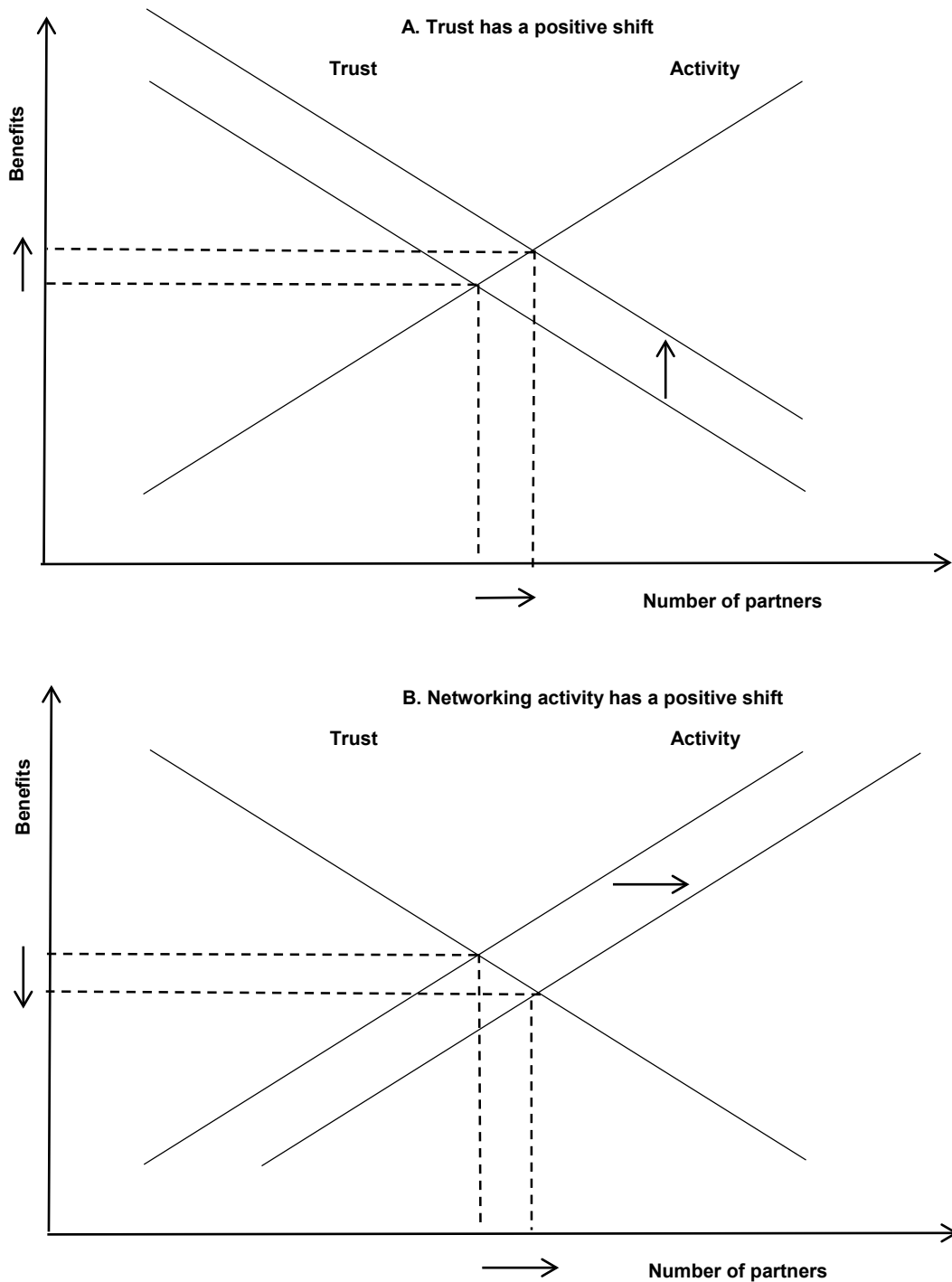
DATA AND METHODOLOGY

The Vice-Rector of HU University of Applied Sciences and the Rector of the Turku University of Applied Sciences planned the first ideas of the network in 2008. After three years of preparations and negotiations four European higher education institutions signed the agreement about the strategic network to form CARPE in November 2011. CARPE is an association under Dutch legislation. Manchester Metropolitan University was accepted for the full membership in 2012. The Consortium on Applied Research and Professional Education (CARPE) network includes the following institutions 1.) HU University of Applied Sciences Utrecht (Hogeschool Utrecht), 2.) Turku University of Applied Sciences (Turun ammattikorkeakoulu), 3.) Polytechnic University of Valencia (Universitat Politècnica de València), 4.) Hamburg University of Applied Sciences (Hochschule für Angewandte Wissenschaften Hamburg), and 5.) Manchester Metropolitan University. The CARPE network supports the economic and social cohesion in the European common market and create benefits for the universities of applied sciences in various countries. Trust and the number of members in the network were discussed in the first meetings.

Trust was considered an important element of CARPE when the formal network was established and the agreement was signed. The leaflet of the first conference in Utrecht crystallized the idea: “Trust is important in joint research and development. If you have good partners, you have better results.” This statement reflects the idea that the number of institutions in the network must be relatively small to ensure trustworthy activities and high-quality results. The motivation for the strategic collaboration was that the most important target market of the enterprises is in Europe. For example, about 55% of Finland’s exports go to Europe. Exports are important for the Finland’s small open economy.

The share of exports is nearly 40% of the gross domestic product. Another motivation is the external funding from the European Union, which makes student and staff exchange possible in addition to international research and development projects. The key objectives of the network are 1.) Exchange and collaboration in European research programs, 2.) Development of joint study programs, 3.) Exchange of students and staff, and 4.) Establishment of a strong European reputation. The student and staff exchanges financed by Erasmus funding from the European Union creates possibilities to plan research and development bids and to develop joint study programs. The research and development projects are planned to serve the enterprises and other organizations in the regions of the institutions. The criteria of calling members to the network were analyzed and discussed in many meetings. The higher education institutions were selected based on similarities in the curricula and offerings, which facilitate student and staff exchange. The differences in the strengths of institutions enable the collaboration and distribution of work in applied research and development. All the members in the network are universities of applied sciences, which have applied research and development and professional education to promote regional development. The Manchester Metropolitan University and the Polytechnic University of Valencia have doctoral programs, but the other institutions in the network have education only to the master’s level. The member institutions have strong roots in their regions and a substantial role in the economic, social and cultural life of their community.

Figure 1: Increasing Trust and Activity in Networks



Part A indicates that the positive shift in trust increases the number of partners in the network and the number of benefits obtained from the research and development project. Part B indicates that the positive shift in the activity increases the number of partners and decreases the benefits of the project due to the increasing transition costs.

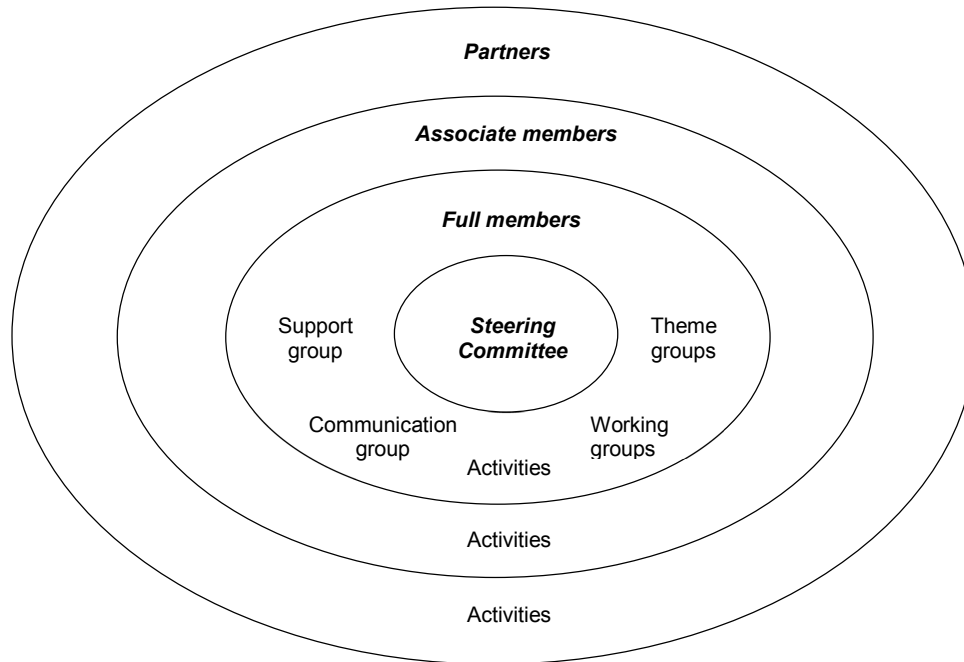
The institutions promote collaboration to disseminate, implement and commercialize knowledge and skills in their regions particularly focusing on small and medium-sized enterprises, but also with large enterprises and public sector. Informal working groups, project groups and meeting are used to plan education, research and development and other activities. The institutions also promote innovations, in the form of new or improved products, services or processes to meet market needs (Tidd Bessant and Pavitt, 2001; Bessant, Lamming, Noke and Phillips, 2005). The Turku University of Applied Sciences developed innovation pedagogy for the universities of applied sciences to create efficiency and improve external impact on the region (Kettunen, 2011; Kantola and Kettunen, 2012; Kettunen, Kairisto-Mertanen and Penttilä, 2013). The institutions respond to the development needs of the enterprises and other organizations in the region. Research and development projects are typically interdisciplinary and integrated into education. The projects provide opportunities for students to create skills for development work. International activities promote innovations, which encourage for entrepreneurship. Lecturing is supplemented by the collaborative learning in groups and networks. Students learn to think creatively and work collaboratively in groups and networks to solve design problems (Pun, 2014).

New members are accepted by invitation by the Steering Committee. One important criterion for membership of the CARPE network is the geographical spread in Europe. At the first phase, the network is located mainly in Western Europe. There have been plans to extend the coverage and activities to Eastern Europe. The Steering Committee assessed the joint activities of potential associate members and accepted the University of Debrecen in Hungary for an associate member in November 2014. The university can be considered as full member in the future. Figure 2 depicts the governance of the CARPE network. The Steering Committee, in the center of the figure, comprises the heads of member institutions and support group, consisting of the international relations officers from each member institution. The Steering Committee is the highest decision-making body, and meets twice a year to assess progress, plan improvements and make decisions. Regular communication is essential in building rapport and understanding, which is the basis for a long-term relationship among the institutions. Face-to-face discussions establish collaborative interpersonal relationships.

The Steering Committee has specially designated groups to perform development tasks and make decisions. The support group prepares the agenda for the meetings of the Steering Committee. The communication group prepares the webpages, leaflets and other communication. Working groups and theme groups perform other pre-determined development tasks. Each institution nominates its own members of the groups. CARPE is an open network, because all the higher education institutions and partners can join the projects and other activities if the project groups of CARPE deem it necessary to achieving the objectives of a project. Active participation in joint projects and other activities opens up possibilities for associate memberships and finally for full memberships. Active collaboration generates trust, improves collaboration and keeps the full members of CARPE in projects and other joint undertakings.

There are no membership fees of the CARPE network, because each institution pays its own administrative, traveling, accommodation and other costs. The research and development projects are financed by the European Union. The student and staff exchange is financed by the Erasmus. The governance structure is deliberately simple in order to avoid unnecessary bureaucracy and to preserve the autonomy of each institution. According to the Statutes of CARPE, the parties will promote cooperation among student associations at their institutions. The active members of the student associations attend CARPE Conferences and met students from other member institutions. The participation of students is important, because the activities of support services, student exchange and the participation in international research and development projects create networks which are valuable after graduation

Figure 2: The Governance of the CARPE Network



The role of the Steering Committee and groups supporting the activities of the CARPE network. The activities of partners open up opportunities for associate and finally for full memberships.

RESULTS AND DISCUSSION

Collaboration in the Consortium on Applied Research and Professional Education (CARPE) has remarkably increased the external funding of the institutions. The network considers other CARPE members as the preferred partners in the new research and development projects. The collaboration has increased the external funding for the research and development of the Turku University of Applied Sciences to 7.6 million Euro in 2013. Nearly 60% of the external funding has been obtained from the European Union. The Turku University of Applied Sciences was Finland's most active higher education institution in the Erasmus Lifelong Programme, participating in nearly in every third project during the 2007-2013 program period. Another important result is that student and staff exchange has increased among the CARPE members. The Turku University of Applied Sciences integrates research and development projects into education and invites students to participate. The international research and development projects offer international student exchanges and practical training supervised by the teachers and other personnel. Distance education, technology-based practices and collaborative learning are changing the traditional face-to-face teaching modes (DiRienzo and Lilly, 2014; Wali, Chowdhury, Alam, Wali and Islam, 2014). CARPE holds biennale conferences to share knowledge and promote collaboration. The conferences bring together personnel from the CARPE institutions to share expertise in research, support services and teaching. The first conference was arranged in Utrecht in 2011. The second conference was in Manchester in 2013. These are not traditional academic conferences where researchers present papers and posters; member institutions meet to share ideas and prepare collaborative projects for European funding bids. The network shares knowledge about higher education management. For example, the first CARPE Conference organized in Utrecht in 2011 demonstrated the importance of many research groups at the HU University of Applied Sciences Utrecht. The good experience with the research groups encouraged the Turku University of Applied Sciences to create its own research groups in 2013 and after the organizational

change scheduled for early 2015 the research and development activities of the institution are based entirely on the activities of the research groups.

The second CARPE Conference was organized in Manchester into a series of themes reflecting the major areas of collaboration of CARPE. There were 90 papers and 22 poster presentations on the following themes: Art and Design Networks (Applied Arts), Continuing Professional Development, Creative Engineering, Entrepreneurship, Quality Assurance in Higher Education, Sustainability, Social Innovation, Future of Healthcare, Spaces of Interdisciplinarity and Re-Inventing the Humanities. These themes reflect the common focal areas of CARPE members. Table 1 depicts the joint activities of the CARPE network obtained from the CARPE website (www.carpenetwork.org) in November 2014. Research and educational projects include planned and accepted projects financed by the European Union. The section of conferences and workshops includes two CARPE Conferences and five workshops to support research and development activities. The student and staff exchange consists of visits to member institutions. Other activities include publications, newsletters, videos and other useful information about the network. Newsletters describe the activities of the institutions. Enterprises and many other organizations have found the strategic network useful. They have participated in the research and development projects and obtained the latest knowledge from experts at higher education institutions. These organizations have created a skilled labor force, because they have hired young students for practical training, where students have also written their thesis. According to the recruitment statistics, the practical training of students is the most important way that education can create contacts and ensure employment for them.

Table 1: Joint Activities of the CARPE Network

Joint Activities	Number of Joint Activities
Research and educational projects	22
Conferences and workshops	7
Student and staff exchange	38

There have been 22 research and education projects. The projects have been planned during the conferences, workshops and exchanges. Two CARPE Conferences and five workshops have been arranged. Several people were included in many of the staff exchanges

CONCLUDING COMMENTS

This study presented the establishment and activities of the Consortium on Applied Research and Professional Education (CARPE), which is a European strategic network of universities of applied sciences. This is the first strategic network of its kind and serves as a model for other higher education institutions hoping to improve their international activities and institutional performance. Trust among the institutions is important and leads to a relatively small number of institutions in the network, but at the same time, the network encourages active collaboration in research and educational projects, conferences and workshops and student and staff exchange. There are five universities of applied sciences at the core of the strategic network. The purpose of the network is to create trust and shared knowledge so that the experts at each institution could contact experts at the other member institutions. The small size of the network is conducive to the establishment of trust, the sharing of common interests and the formation of coherence. CARPE is not a closed network, because any other partner can initiate a student and staff exchange and join the projects planned within the CARPE network. Conversely, other partners can invite the CARPE members to join their activities. In the course of its operation, the CARPE network has identified a range of elements that contribute to developing and sustaining its strategic membership among the

European universities of applied sciences. An important issue that has emerged is that institutions seeking to develop partnerships need to operate in a manner that is compatible with the common fields of education and research and development to promote student and staff exchange, but the strengths of institutions form a basis for research and development projects. The membership implies the need for institutions to be responsive to enquiries and readily available for collaboration to prepare joint funding bids to start projects

that will deepen the collaboration in the CARPE network. Further development of CARPE encompasses double degree programs, graduate schools, continued lobbying for funding and joint pedagogical development. The double degrees could extend the student and staff exchange, which would improve knowledge sharing and planning of research and development. Graduate schools' affiliations with research and development projects could improve the level of knowledge at the network. The universities of applied sciences also need better funding contacts and joint pedagogical outlines to develop networked learning.

REFERENCES

- Anderson, A.R., E. Steinerte and E.O. Russell (2010) "Nature of Trust in Virtual Entrepreneurial Networks," *International Journal of E-Entrepreneurship and Innovation*, vol. 1(1, January/March), p. 1-21.
- Bell, C. (2001) "Elements of Trust," *Executive Excellence*, vol. 18(4), p. 10.
- Bessant, J., R. Lamming, H. Noke and W. Phillips (2005) "Managing Innovation beyond the Steady State," *Technovation*, vol. 25(12, December), p. 1366-1376.
- Cross, R. and A. Parker (2004) *The Hidden Power of Social Networks. Understanding how Work Really Gets Done in Organizations*. Boston, MA, Harvard Business School Press.
- DiRienzo, C. and G. Lilly (2014) "Online versus Face-to-Face: Does Delivery Method Matter for Undergraduate Business School Learning?" *Business Education & Accreditation*, vol. 6(1), p. 1-11.
- Gambetta, D. (1988) Can We Trust Trust? In D. Gambetta (Ed.). *Trust: Making and Braking Cooperative Relations*. Oxford, Basil Blackwell, p. 213-237.
- Jack, S. and A.R. Anderson (2002) "The Effects of Embeddedness upon the Entrepreneurial Process," *Journal of Business Venturing*, vol. 17(5, September), p. 467-487.
- Kantola, M. and J. Kettunen (2012) "Integration of Education with Research and Development and the Export of Higher Education," *On the Horizon*, vol. 20(1), p. 7-16.
- Kettunen, J. (2011) "Innovation Pedagogy for Universities of Applied Sciences," *Creative Education*, vol. 2(1, March), p. 56-62.
- Kettunen J., L. Kairisto-Mertanen and T. Penttilä (2013) "Innovation Pedagogy and Desired Learning Outcomes in Higher Education," *On the Horizon*, vol. 21(4), p. 333-342.
- Kramer, R.M. (1996) Divergent Realities and Convergent Disappointments in the Hierarchical Relation: Trust and the Intuitive Auditor at Work. In R.M. Kramer and T.R. Tyler (Eds.). *Trust in Organizations: Frontiers of Theory and Research*. Thousand Oaks, CA, SAGE, p. 216-245.
- Kramer, R.M. (1999) "Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions," *Annual Review of Psychology*, vol. 50(February), p. 569-598.
- Levi, M. (1996) "Social and Unsocial Capital: A Review Essay of Robert Putnam's Making Democracy Work," *Politics & Society*, vol. 24(1, March), p. 45-55.
- McKnight, D.H., L.L. Cummings and N.L. Chervany (1998) "Initial Trust Formation in New Organizational Relationships," *Academy of Management Review*, vol. 23(3, July), p. 473-490.

Pun, S.K. (2014) "Pedagogy for Creative Collaboration," *Business Education & Accreditation*, vol. 6(2), p. 89-98.

Tidd, J., J. Bessant and K. Pavitt (2001) *Managing Innovation: Integrating Technological Market and Organizational Change*. Chichester, Wiley.

Tyler, T.R. and R.M. Kramer (1996) Whither Trust. In R.M. Kramer and T.R. Tyler, T.R. (Eds.). *Trust in Organizations: Frontiers of Theory and Research*. Thousand Oaks, CA, SAGE, p. 1-15.

Volery, T. and S. Mensik (1998) "The Role of Trust in Creating Effective Alliances: A managerial Perspective," *Journal of Business Ethics*, vol. 17(9/10, July), p. 987-994.

Wali, M.F.I., A.H. Chowdhury, K.M.S. Alam and M. Islam (2014) "Collaborative Education: New Frontier for Future Education and Yunus Social Business," *Business Education & Accreditation*, vol. 6(1), p. 101-110.

Zucker, L.G. (1986) Production of Trust: Institutional Sources of Economic Structure, 1840-1920. In B.M. Staw and L.L. Cummings (Eds.). *Research in Organizational Behavior*, vol. 8, Greenwich, CT, JAI Press, p. 53-111.

ACKNOWLEDGEMENT

The author acknowledge the helpful comments of two anonymous reviewers and the editor.

BIOGRAPHY

Dr. Juha Kettunen is the Chancellor of the Turku University of Applied Sciences, having previously served 14 years as University Rector. He is also an Adjunct Professor at the University of Jyväskylä in Finland. He holds a PhD (Econometrics) from the University of Bristol in the UK, a DSc (Economics and Business Administration) from the University of Jyväskylä in Finland and a DSc (Technology) from the University of Oulu in Finland. He can be reached at the Turku University of Applied Sciences, Lemminkäisenkatu 30, FI-20520 Turku, Finland, at Juha.Kettunen@turkuamk.fi.

