Johanna Julia Vauterin

THE DEMAND FOR GLOBAL STUDENT TALENT: CAPITALIZING ON THE VALUE OF UNIVERSITY-INDUSTRY COLLABORATION

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Abstract

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The university sector in Europe has invested money and effort into the internationalization of higher education. The benefits of internationalizing higher education are fuelled by changing global values, choices and practices. However, arguments that serve the internationalization of higher education tend to stress either local organizational or individual interests; seldom do they emphasize the societal benefits. This dissertation investigates how collaboration between university and industry facilitates a shift in thinking about attracting and retaining global student talent, in terms of co-creating solutions to benefit the development of our knowledge society.

The macro-structures of the higher education sector have the tendency to overemphasize quantitative goals to improve performance verifiability. Recruitment of international student talent is thereby turned into a mere supply issue. A mind shift is needed to rethink the efficacy of the higher education sector with regard to retaining foreign student talent as a means of contributing to society’s stock of knowledge and through that to economic growth. This thesis argues that academic as well as industrial understanding of the value of university-industry collaboration might then move beyond the current narrow expectations and perceptions of the university’s contribution to society’s innovation systems. This mind shift is needed to encourage and generate creative opportunities for university-industry partnerships to develop sustainable solutions for successful recruitment of foreign student talent, and thereby to maximize the wealth-creating potential of global student talent recruitment.

This thesis demonstrates through the use of interpretive and participatory methods, how it is possible to reveal new and important insights into university-industry partnering for enhancing attraction and retention of global student talent. It accomplishes this by expressly pointing out the central role of human collaborative experiencing and learning. The narratives presented take the reader into a Finnish and Dutch university-industry partnering environment to reflect on the relationship between the local universities of technology and their operational surroundings, a relationship that is set in a context of local and global entanglements and challenges.

Keywords: university-industry collaboration, international student recruitment, knowledge transfer

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“Research functions not as a distraction from practice but a development of it”
(Schön, 1983, ix)

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Contents

Abstract

Acknowledgements

Contents

List of publications 9

1 Background to the narrative 11

2 The narrative 13
   2.1 The problem ........................................................................................................... 13
   2.2 The many drivers of the expanding global student talent movement......... 16
   2.3 The university in a globalizing knowledge society ........................................ 18
   2.4 The methodological stances ............................................................................. 20
   2.5 Dissertation aims and purpose ....................................................................... 24

3 A study on the value of the university-industry linkage 25

4 Responsiveness to changing market forces 29
   4.1 The drive towards the market............................................................................. 31
   4.2 Conceiving market orientation in a university environment ..................... 36
   4.3 Market orientation in the university-industry relational space.................. 39

5 On value, reciprocity and value-in-context 40

6 A resource-based analysis 42
   6.1 Collaborative partnerships in the resource-based view ......................... 43
   6.2 Partnership rationale: obtaining and retaining of resources ................. 47
   6.3 Partnership structure: accumulating relationship capital ...................... 48
   6.4 Partnership performance: resource investment and alignment; learning 50
   6.5 Missing perspectives of the resource-based view .................................... 53

7 Through the lens of social capital 55
   7.1 Offering new insights on the value of the university-industry linkage ... 56
   7.2 Linking together the micro, meso and macro levels ............................. 59
   7.3 A view beyond institutions and organizations .......................................... 61

8 The narratives in context 64

9 Discussion 68
   9.1 Some ethical considerations ........................................................................... 68
   9.2 Collaborative knowledge management solutions ....................................... 70
   9.3 Co-creating solutions: a new paradigm .................................................... 72
9.4 Limitations of the study................................................................. 74

References 77

Appendix A 97

Publications
List of publications

This thesis is based on the following papers. The rights to include the papers in the thesis have been granted by the publishers.


V. Vauterin, J.J., Michelsen, K.E. and Linnanen, L., (2012). Attracting and retaining student talent from around the world: the lived experience in university-industry collaboration. This paper has been accepted for publication in *Industry and Higher Education* and is currently being revised for publication in 2013.

Author’s contribution

Johanna Julia Vauterin is the principal author and investigator in papers I – V.
Background to the narrative

Europe’s challenge today is to secure its knowledge-based economy to withstand the pressures of globalization and reinforce economic competitiveness in the world. But Europe’s – including Finland’s – population is declining. Concern is intensifying as the ageing knowledge societies increasingly face a range of current and emerging challenges. Linked with the changing demographics is the widespread concern that more effort needs to be expended on investment in human capital to produce the skills that are so crucial to a dynamic knowledge-based economy. At the same time, the competition in the global marketplace for talent and skills is seemingly increasing. As a result of and response to the socio-economic and socio-demographic shifts, more and more attention is now being devoted to the international developments and associated action and behaviour of the higher education enterprise, with particular interest in global attraction of student talent. In other words, higher education policy and practice now emphasize a focus on attracting, training and retaining the best students and the highly skilled from around the world.

To some extent, economic policy discourse has influenced the investigation revolving around the following questions: Is the phenomenon of the ageing population linked to unavoidable disaster, with a serious impact on the well-being of our societies? Alternatively, is this phenomenon linked to opportunities for development across all levels of human reflection in learning, policy and practice; opportunities now available to us as the result of past achievements of our societies? This dissertation hopes to contribute to the latter viewpoint. In what follows, the spotlight is turned onto the ever-evolving landscape for higher education. Attention is focused on the value and meaning of the university-industry linkage – an under-recognized source of co-creation opportunities and a source of value co-creation for advancing solutions to sustainable attraction and retention of global student talent.
2 The narrative

International student education is a large, growing, and lucrative industry in many developed countries. Students not only help to maintain domestic institutions’ competitiveness, they also represent a valuable pool of skilled immigrants for governments wishing to recruit “tried and tested” individuals into their labor forces. (Hawthorne, 2008, p. 1)

In recent years there has been an increasing focus on the role universities play in the economy and impact they make in promoting innovation and raising international competitiveness. But until recently there has been a prescriptive view of university-business interactions with a narrow focus on technology transfer. Although technology transfer may be important, it is also necessary to focus on the more diverse and varied impacts of business-university knowledge exchange relations. (Abreu et al., 2008)

2.1 The problem

The task of this dissertation is to discover unrecognized contexts and relationships and to bring to the foreground new approaches and insights concerning the value of university-industry collaboration. To this end, it advances solutions for 1) leveraged and sustainably managed processes associated with attracting, training and retaining global student talent; 2) sustainable transfer and use of international knowledge resources and skills; and 3) contextual thinking about the contribution of university-industry collaborative practices to human resourcing and human capital development in a globalized context.

This task was initiated by a perceived and manifest concern which comes under the domain of higher education developments. The concern stems from the existing institutional arrangements in higher education limiting the collaborative response that is necessary to gain advantage in a competitive environment. Concern also arises from our current restricted abilities to understand the importance of and the factors underlying effective university-industry collaborative processes that “leverage” global student talent (cf. Florida, 1999). Paradoxically to (and in spite of) a strong European and national policy consensus on the strategic importance of enhanced mobility, attraction,
training and retention of international student\textsuperscript{2} talent, policy attention – accentuated in ever-exacting higher education accountability measures – seems as yet to be unduly directed to a narrow interpretation of return on investment in higher education. The breadth and depth of knowledge produced in an academic environment is consistently reduced to innovation, research and development, in order to produce visible and measurable value in the marketplace. The justified demand for measurable results (and associated various levels of accountability) is, however, much driven by the short time horizon of government and institutional governance, and by the dynamic uncertainties of higher education policy and the international higher education market domains to which accountability measures are applied (cf. Schuller, 2001). Thus, attempts to assess performance in terms of visible and measurable outcomes may yield a de-contextualized picture of investment in higher education and human capital development. Within such a restricted picture, reflection on the contribution of the higher education stakeholder network to society’s stock of knowledge is left aside (Geuna, 2001).

Much of the investigation into university-industry interaction is an attempt to turn the qualitative into the quantitative. This, presumably, is a response to the need to create appropriate performance measures that would allow for adequate assessment of, primarily, university performance and needs, but also of university-industry partnership performance and needs. But it is also, presumably, a consequence of the fact that the overwhelming majority of all investigation into university-industry interaction is concerned with questions related to the role of the university-industry collaborative partnership in the nation’s innovation system (Lee, 2000; Sparrow et al., 2009). Contribution of the university-industry collaborative partnership to the nation’s innovation system is sought to be explicitly justified in quantifiable terms and statistical measures of knowledge capitalization and resource multiplication for transformation into financial opportunities and economic development. This is done with the obvious objective of establishing the university – whether labelled “entrepreneurial” or not (Etzkowitz, 2003; Slaughter and Leslie, 1997) – as an economic actor in its own right (Etzkowitz, 1998, p. 833).

This dissertation does not claim that there is a need to develop an anti-narrative of quantifying research into the value of university-industry partnerships. However, it does suggest that research attempts to quantify the value of university-industry collaboration have as of yet much overlooked the potential of the university-industry linkage in fostering economic growth through knowledge transfer above and beyond a research-led approach (Abreu et al., 2008; Sparrow et al., 2009). Beyond the well-recognized role of the university as an economic and social institution that provides talent for regional and national economic development, there remains the less-recognized dimension of the

\textsuperscript{2} “Students are classified as international students if they left their country of origin and moved to another country for the purpose of study. Depending on country-specific immigration legislation; mobility arrangements, such as the free mobility of individuals within the EU and the EEA; and data availability, international students may be defined as students who are not permanent or usual residents of their country of study or alternatively as students who obtained their prior education in a different country, including another EU country” (OECD, 2011, p. 330).
2.1 The problem

university-industry linkage; that is, the potential of the university-industry linkage to
develop the collaborative capacity to create, share and use knowledge flow within a
scope of mutual concern over an emerging competition for global student talent. In this
context, and as a counterbalance to the ample research stream on innovation and
technology transfer in university-industry relationships, there is a need to indicate the
value of university-industry collaboration as providing the basis for the inimitable
processes of knowledge transfer through people. This refers to processes fostering
global talent mobilization and supply as well as global knowledge flow through
attraction, training and retention of international student talent. This kind of a focus
opens up a perspective going beyond the traditional academic understanding of
knowledge transfer as the process of valorising technology research and innovation, and
entering into the human element of knowledge transfer; i.e., talent and skills, which is at
the heart of the knowledge economy (Florida and Cohen, 1999).

Before I proceed further, it is necessary to give some consideration to what is meant by
the term “talent”. The meaning of this term is clearly dependent on the environment in
which talent, and the need for talent, is assessed. The following quotes may illuminate
the complexity of metaphorical understanding around the concept of talent. Compare
especially the first three with the last two quotes.

Organizations are increasingly saying that they want to manage talent – and to develop
it. Talent management has become a common phrase in many companies. But what is
“talent”? Most organizations imply that talent management is about the recruitment,
retention and development of an elite band of people. (Barlow, 2006, p. 6)

At a more general level, talent discussions affect all employees within the company.
Every employee can and should be considered a “talent.” We have synthesized these
general talent discussions into a simple talent formula: Competence x Commitment x
Contribution. (Ulrich and Smallwood, 2011, p.6)

The value of thinking-intensive workers is derived from the value of their minds – the
ideas they develop and the decision they make – and from the intangible by-products of
that work, such as the knowledge, reputation and relationships they create. ... The fact
is that even the most self-directed, brilliant people cannot create wealth by working
alone. They need help mobilizing the talents of other thinking-intensive people and
securing crucial capital and labor. They need to be able to convert their thinking into
moneymaking activities. (Bryan and Joyce, 2007, p. 7 and p. 29)

Colleges and universities are talent machines; their most basic functions are to create
talent, to connect people to one another, and to add to their pool of talent. Colleges and
universities not only do this directly, they also do it indirectly. If a college or a
university has a great faculty, then it attracts great graduate students; if it has great
graduate students and faculty, then it also attracts great undergraduates. But more
importantly, if a town has a great college or university, or if it has several of them, it
attracts people and, often, companies. (Florida, 2006, p. 26)
Talent is defined as individuals with high levels of human capital, measured as the percentage of the population with a bachelor’s degree and above. (Florida, 2002)

What constitutes talent is perceived differently in the commercial and academic sectors. In the commercial sector, the concept of talent obviously encompasses the “right” people with the “right” skills and the “right” knowledge. It implies continuous investment in development of the effectiveness of strategic management in the flow of talent throughout an organization, which is a prerequisite for realizing the potential of a given business. In the academic sector, talent is associated with potential knowledge resources and related knowledge transfer. It implies continuous investment in the development of human capital today to produce talent for tomorrow.

In the context of this dissertation, “international student talent” is the expression used to encompass foreign students who, previously to going abroad to the country and institution they have chosen to continue their education, have already pursued at least one higher education degree, typically, but not necessarily, in their country of citizenship.

2.2 The many drivers of the expanding global student talent movement

Over the past three decades, the number of students enrolled outside their country of citizenship has risen dramatically, from 0.8 million worldwide in 1975 to 3.7 million in 2009 (OECD, 2011). These data should be interpreted with caution as there are diverse perspectives on student mobility, yet such growth is impressive and indicative. More than half of the world’s students who studied abroad in 2009 were hosted by six countries – Australia, Canada, France, Germany, the United Kingdom and the United States.

What are the major factors that have contributed to these trends and developments? Bhandari and Laughlin (2009) have identified and examined four interrelated developments in international education that have contributed to the significant shift in the demand and supply equation of global mobility. These developments are related to the increase in recruitment of international students, the growth of higher education capacity in the primarily “sending” countries, the growth in alternative forms of international higher education offerings and the emergence of non-linear mobility patterns.

The first development, recruitment of international students, is supported by national policies and government efforts. Many countries are now seeking pathways to formalizing the link between higher education and the skilled job market (especially in scientific and technical fields). Policies have been implemented allowing international graduates to remain in the country for post-graduation employment, thus encouraging these graduates to enter the workforce of the host country.
2.2 The many drivers of the expanding global student talent movement

The second development, increasing higher education capacity domestically, is closely interrelated with the first one. In the developing countries, higher education supply and demand has grown dramatically as national and regional governments increase their investments in public education. Nevertheless, in China and India, the number of potential student population continues to exceed the domestic higher education capacity of these countries. This causes a demand-supply imbalance that may partly explain the growing numbers of Chinese and Indian students who continue to seek an overseas education. This is confirmed in a recent U.S. research study reporting that the most commonly cited reasons for increased mobility among Chinese students are the growing supply of high school graduates whose families can afford a U.S. education and the unmet demand for high-quality education at home (Choudaha and Chang, 2012).

This dissertation is interested in the developments engendered by an increase in government- and institution-supported recruitment of international students. Its scope does not include Bhandari and Laughlin’s third development, that of technology-supported virtual and distance international higher education offerings. Nor does its scope include the fourth development of non-linear “multi-country” mobility (Bhandari and Laughlin, 2009) of international students circulating from one country to another in pursuit of new individual educational or career opportunities.

Push and pull factors – Macready and Tucker (2011) distinguish between push and pull factors. The authors mention three major push factors in international student mobility. One important factor pushing students to go abroad to study is the aforementioned limited availability of quality higher education programmes or specialization degrees in their home countries. This factor is complemented by the viewpoint that the changes in international student mobility have, in fact, been propelled by a combination of factors (Bhandari and Laughlin, 2009). These include 1) the increasing number of international students; 2) the availability and global spread of alternative modes of educational delivery; and 3) domestic economic, demographic and workforce conditions that might affect students’ decisions regarding an overseas education. By way of example, Bhandari and Laughlin consider it quite possible that “reported declines in international students pursuing science and engineering degrees in the U.S. might have more to do with the growing value of degrees in business and management in key sending countries such as India and China and less to do with the presumed decline in America's appeal as a destination for studying science and engineering” (p. 6). In addition, the wish “to broaden cultural and intellectual horizons and improve job prospects” may push young students to study abroad (Macready and Tucker (2011, p. 42). Moreover, students and young researchers may choose to study abroad to position themselves for the next stage of education or work.

Pull factors are those factors that influence students in choosing one destination country and institution over another. Pull factors are mainly associated with elements such as perceived reputation of the country and institution of destination, quality of study and work opportunities, affordable tuition fees and cost of living, study programme
flexibility, internationally recognized qualifications and helpful residence permit arrangements.

2.3 The university in a globalizing knowledge society

Globalization of the knowledge society is pushing the higher education “industry” towards internationalization. We have now entered the era of pursuing competitive advantage in attracting global knowledge, student talent and skills. The strongest focus is on the supply and demand of scientists and engineers, because the stock of human resources in science and technology is obviously considered crucial to the development of knowledge and technological innovation (Eurostat, 2011). Both the European Union and individual European host countries have put in efforts and launched initiatives to increase recruitment of science and technology student talent from around the world.

One of the major drivers for this orientation is competition with America's well-funded research universities and research institutions that reputedly attract the world's best and brightest science and technology talent (Bhandari and Blumenthal, 2009). To remain competitive and to respond to the new challenges, universities and private sector actors are seeking to develop collaborative practices. Often these collaborative partnerships have emerged as a vital vehicle serving as a stepping-stone for more complex collaboration involving multiple organizations, universities and research centres; playing a considerable mediating role in the national R&D policy; and aiding in the distribution of resources (Elmuti et al., 2005).

Case investigation universities – This is the context in which both of the technical universities – one in Finland and the other in the Netherlands – involved in the case investigation of this dissertation operate. Given the larger context, the national and regional scene in which both universities operate is different in some regards but similar in others. The degree of regional absorptive capacity – the ability of the regional economy to effectively absorb and utilize the scientific and technological capabilities coming out of the university – is different (Cohen and Levinthal, 1990; Florida and

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3 As with many industries, the higher education industry deals with growing internal and external pressures. The institutions comprising the higher education industry are in competition with one another. They compete for students, sometimes as part of their educational mission but often simply as revenue sources, for donations, for governmental research grants and corporate research support. For a recent and comprehensive approach to the issue, see Weisbrod et al., 2008.

4 Teichler (2004) has presented a distinctive viewpoint on the use of the term “internationalization” in the higher education sector: “Internationalisation of higher education became a key issue in Europe during the 1990s; therefore our priority placed on this is likely to come to an end soon. Terms with the ending ‘-sation’ usually signal: there was a problem in the past and an opportunity for improvement, obviously supported by a trend with respect to this issue – in this case internationalisation. Thus, a number of phenomena in higher education are likely to have occurred which deserve be called ‘-sation’ without, however, having led to an end of such a process or the successful complete implementation of related policies” (p. 6). In this dissertation, however, the term “internationalization” refers to the dimension of “physical mobility, academic cooperation and academic knowledge transfer as well as international education” (p.7).
Cohen, 1999); the challenge faced by both universities to find the funds necessary to pay the costs of internationalization is similar. The share of international students\(^5\) at the master’s degree level is almost 20% at the Dutch university and below 10% at the Finnish one, and at the postgraduate level it is respectively approximately 60% and 27%.

“An important social experiment in the nation's innovation system” is how Lee (2000) characterizes the concept of university-industry collaboration. The experiment has lasted: today, universities interact with industry using a large variety of channels.

**History of university-industry partnering** – University–industry collaboration has a lengthy and rich history\(^6\). University involvement with industry – from a base of joint R&D projects and establishments (OECD, 2002) – is thus by no means a new phenomenon. Over time, along with the changing global and local factors, players and economic needs of a developing knowledge society, the nature and structure of the collaborative links between universities and industry have dynamically evolved.

Rather recently, however, since the 1970s, there has been a growing recognition of the fact that national systems of higher education constitute a strategic asset in the modern knowledge-based economy (Mowery and Sampat, 2005). In response to this awareness and to the growing importance of international competition in both the business and academic world, governments throughout the industrialized world have increasingly sought to use universities as instruments for knowledge-based economic development and change. Numerous policy initiatives have been launched to link universities to industrial innovation more closely. However, most of these initiatives have focused on the codification of technology transfer and rarely address the broader matrix of industry-university collaborative links that span a much broader range of activities and outputs (ibid; cf. also Perkmann and Walsh, 2007; Salter et al. 2000). The knowledge management literature has focused on this aspect as well. There is no doubt that universities as producers and transmitters of knowledge do play a crucial role in contributing to society’s innovation system (D’Este and Patel, 2007). Providing human capital is one of the major inputs for industrial innovation processes (Schartinger et al., 2002). It is, however, an input that has not yet been studied in relation to the shifting dimensions of and new opportunities for university-industry collaboration.

**The meaning of industry** – Industries are created; they evolve, change, globalize or disappear over time. Depending on the economic, social or geographic perspective on the phenomenon, the meaning of the term “industry” differs. This may be the reason, arguably, for why the literature on university-industry collaboration does not give a clear and inclusive definition of what is meant by “industry” in the university-industry

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\(^5\) The given percentages are for the academic year 2011-2012.

\(^6\) The roots of university involvement with industrial users of university research trace back to pre-World War times in the United States, where publicly funded but decentralized research universities and the organized pursuit of R&D in industry met each other through applied research in agriculture (Mowery, 1999).
partner relationship. In the context of this investigation, industry broadly includes the wealth-creating businesses contributing to the national economy and interacting with the university in a local or global space. Industry involves hence the different sectors and levels of the economy: the goods producing, services providing, knowledge- and finance intensive industries, but also the decision-influencing and decision-making corresponding levels in science, government, and media and culture. These all play an important role in the complex social network of a knowledge-intensive environment.

Setting of university-industry collaboration – With the growing recognition that universities are increasingly blurring their boundaries by engaging in more diverse forms of collaboration with industry, justification for this orientation has been sought by directing the focus on formal and measurable forms of university-industry interaction. This is occurring in spite of the fact that engagement in less formal collaborative interaction is far more frequent than engagement in patenting and academic entrepreneurship (D’Este and Patel, 2007; Perkmann and Walsh, 2007; D’Este and Perkmann, 2011; Bruneel et al., 2009).

Positive partnership results – This dissertation is an attempt to build a salient link between emerging forms of university-industry goal-directed interaction in collaborative alliances and the new opportunities for value creation in university-industry collaboration induced by the shifting dimensions in the global search for talent. In this connection, hence, another strong rationale for universities and industry to seek alliance advantage should be identified and accentuated; namely, the resulting enhanced visibility, status and reputation for both parties. Empirical evidence from the case narratives supports this viewpoint, indicating that the university and the firm, in finding each other and recognizing the potential value of combining resources, may promote their organizational visibility and signal their enhanced status and reputation to would-be student talent and employees (Eisenhardt and Schoonhoven, 1996).

2.4 The methodological stances
The objective of this subsection is to outline the methodological stances underlying the overall dissertation work. Though there is a growing use of non-positivistic paradigms in research into university-industry linkages, mainstream research still seems to be highly fixated on objective socio-economic science and the positivist “technological” paradigm. This paradigm encompasses technology/market combinations for economic development (Etzkowitz and Leydesdorff, 1999; Perkmann and Walsh, 2007). If one were to use the classical outline of social and organizational theoretical paradigms by Burrell and Morgan (1979), research into university-industry partnerships would fall into a rather conventional area within knowledge management and organizational investigation. Interpretive research into university-industry collaboration would be regarded as alternative research to mainstream research. However, the ontological and epistemological assumptions of interpretive research suggest different perspectives,
conflicting theories and contradictory findings in research into university-industry collaboration. But, the question is, does it really need to be viewed as contradictory?

**Paradigms and contradictions** – Burrell and Morgan (1979) developed their scheme of analysis with the objective of providing a tool for exploring multi-paradigmism. They delineate theoretical and empirical investigations into a two-dimensional typology, based on a “commonality of perspective” (p. 23). The first dimension situates the four debates of social and organizational science. This dimension is commensurate by the subjective–objective polarization. It involves assumptions about ontology (nominalism vs. realism); about epistemology (positivism vs. antipositivism); about methodology (nomothetic vs. ideographic); and about human nature (determinism vs. voluntarism). The other dimension of assumptions characterizes the nature of society either as subject to regulation or as subject to conflict and radical change. On a 2x2 matrix, the two sets of assumptions constitute four quadrants of paradigms labelled according to their dualities: the functionalist paradigm (objective-regulation), the interpretive paradigm (subjective-regulation), the radical humanist paradigm (subjective-radical change) and the radical structuralist paradigm (objective-radical change) (Burrell and Morgan, 1979).

The attractiveness of the four paradigms lies in that the dimensions of the framework nicely confirm the existence of “the world as viewed from the mainstream tradition, thus reaffirming that tradition and providing a ‘safe’ understanding of the developing alternatives” (Deetz, 1996, p. 191). The framework, however, argues for paradigm incommensurability and discontinuity. It thereby turns the paradigms into a grid of contradictions, mutually exclusive subjective vs. objective and radical change vs. regulation dichotomies. This is exactly what has been the most subject to criticism (Chua, 1986; Willmott, 1993).

The research literature offers a sound response to these limitations. Schulze and Stabell (2004) have developed an adaptation of Burrell and Morgan’s four paradigms. The authors distinguish between the “consensus” and “dissensus” dimensions of social order. The two epistemological dimensions are captured by the questions “What is knowledge?” and “When is knowledge?”. The “what and when” questions reflect the social constructedness of the world in the respective terms of “dualism” (“either/or”, or object thinking) and “duality” (“and/both”, or process thinking) (p. 553). Based on these dimensions, Schultze and Stabell frame the worldviews by considering them as “discourses” (an approach the authors have adopted from Deetz, 1996) and show that
(tacit) knowledge, and the meaning of managing (tacit) knowledge⁷ vary across the four discourses. This is elucidated by presenting the concept of knowledge in metaphors: knowledge as asset (neo-functionalist discourse); knowledge as mind (constructivist discourse); knowledge as power (critical discourse); and knowledge as discipline (dialogue discourse). The authors compellingly point out that each of the worldviews “is plagued by internal debates, that the edges between the worldviews are not well demarcated, and that debates in one worldview influence debates in the others” (Schulze and Stabell, 2004, p. 555).

On tacit and explicit knowledge – Knowledge embodied in people is tacit. It represents knowledge as mind, implying intelligence, ideas, education, experience, training, competence, skills, etc. In the resource-based view of the organization, knowledge is an inimitable asset and it has the ability to generate sustainable competitive advantage (Nonaka and Takeuchi, 1995; Carayannis et al., 2000). But this asset is unmanageable as long as the knowledge is kept tacit. This is the contradiction inherent in the neo-functionalist discourse and indeed underlying the concept of this dissertation.

The constructivist discourse is concerned with how to exploit tacit knowledge so that others can learn from it. It is thus concerned with practices of knowing and learning and the coordination of action in organizations. “Managing tacit knowledge implies its imitation so as to construct a formative context that supports the communication of explicit knowledge and coordinated, collective action within a system of distributed cognition” (Schultzze and Stabell, 2004, p. 563).

Tacit and explicit knowledge, together with its movement and management, are viewed as a duality and as a process. The duality of knowledge lies in the perspective that knowledge is both the outcome of situated action as well as the input into it (Weick and Roberts, 1993, cited in Schulze and Stabell, 2004, p. 558). Knowledge is a process, an ongoing accomplishment (Kogut and Zander, 1992). Within this process, knowledge is continuously actively and passively shaped by the social practices of individuals in communities. This implies that “the totally systematic and objective pursuit of the truth is a myth” (Gummesson, 2005, p. 38) because “there is no finite fund of knowledge of which scientists and knowledge workers in organizations can take ownership” (Schultzze and Stabell, 2004, p. 558).

On the discourses – Discourse is both language in use and socially situated text. In (any form of) text, meaning is created and eroded in the conversational dynamics of language in use and as part of an ongoing social change. The underlying viewpoint on discourse

⁷ Schulze and Stabell use the “managing-tacit-knowledge” contradiction to develop their framework. The reasoning behind the contradiction is as follows (p.551). Contradiction arises out of knowledge management wisdom and recommendation that, in order to manage tacit knowledge, it must be made explicit (e.g., Nonaka and Takeuchi, 1995). However, once the tacit knowledge is explicit, it can be imitated, implying a potential loss of competitive advantage. Paradoxically, attempting to manage tacit knowledge would seem to destroy an organization’s knowledge advantage (Barney, 1991; Kogut and Zander, 1992).
2.4 The methodological stances

in this dissertation is that different discursive approaches have been employed to make policy, practice and research text more effective for convincing the reader of the text or for influencing decision-making. This dissertation, therefore, encompasses three overarching discourses. These are the discourses around “higher education and international recruitment”, around “university-industry collaboration”, and around “the entrepreneurial university and economic development”. Text elements may be imported and rearticulated not only from the field-internal discourses, but also from other, external discourses. Section 4, for instance, provides explicit examples of how, with the importation of business constructs and terms, traditional higher education is hybridized with market relevance as a process of legitimising change (Lowrie and Willmott, 2006, p. 223).

The Schultze and Stabell discourse framework enables one to assess the state of affairs in knowledge transfer through recruitment of international students “not just in terms of what it is, but also in terms of what it could (and should) be” (Schultze and Stabell, 2004, p. 567). This dissertation moves along the dimension of consensus and across the neo-functionalist and constructivist discourses associated with the phenomenon under investigation. It does so while seeking out opportunities for a richer understanding of the multifaceted nature of knowledge transfer through people, specifically via attraction and retention of international students. It emphasizes discourse as a social construction of social interaction in dialogical process.

Strategies of the dissertation – The work of Gummesson (2001, 2005) has inspired me when reflecting on and selecting the strategies for my investigation work. In his Roadmap for a wilderness of complexity and unpredictability (2005), Gummesson presents an invitation to scientific pluralism and individual “methodologies-in-use” because – in his view – “no one could ever claim that he or she has found the golden key to knowledge and science” (p. 321). In an earlier paper, the author presented his (at that time) current methodology-in-use in a story of his “journey through Methodologyland”, and presented his favourite research methodologies as his “Hall of Fame or Research Methodology in Marketing”. Methodology-in-use is interactive research based on the strong belief that communication and interaction play a crucial role in research. Interactive research is a combination of different research strategies. Case research recognizes complexity and ambiguity; grounded theory lets reality tell its own story in its own terms; ethnography emphasizes the importance of being there; action research makes it happen; and reflecting, narrative research makes reality come alive (Gummesson, 2001, p. 39). In Gummesson’s words (2005, p. 324):

Interactive research represents various interactions, such as between the researcher and the object of study and its actors; between your consciousness and qualities of your inner self; between substantive data and general concepts; between the parts and the whole; between words, numbers, body language and tacit language; between the researcher and audiences; and between data, analysis, interpretation and conclusions. The elements of interactive research all strive to reach a high level of validity.
This dissertation builds on the accumulated experience of many people who have been engaged directly or indirectly with the subject matter of this work and who – through their direct or indirect experience – have been involved directly or indirectly in the investigation. It also builds on the many ideas, concepts, approaches and viewpoints that even the lay but attentive reader may grasp by studying the literature. My “audience” (Gummesson, 2001, p. 39) has been people in the first place; every single encounter, via my own work or via the work of others, has offered significant opportunities for learning. The outcome is a narrative that is firmly governed by a humanist hermeneutic perspective, and has relied on qualitative case study research, action research, interpretive phenomenological research and ethnographic research.

2.5 Dissertation aims and purpose

This dissertation serves to create a metanarrative of the meaning and value of the university-industry partnership in a shifting landscape for higher education. It introduces and contributes a series of case narratives and studies to the larger narrative. These case narratives are situated in a fast-changing European environment, where the information-based, knowledge driven and service-intensive societies feel challenged by the threat of a coming skills and talent shortage whilst their universities see themselves increasingly pushed to compete for student talent in a globalizing market for higher education.

The aim of this thesis is to demonstrate that a mind shift is needed to rethink the efficacy of the higher education sector with regard to retaining foreign student talent as a means of contributing to society’s stock of knowledge and through that to economic growth. It argues that academic as well as industrial understanding of the value of university-industry collaboration might then move beyond the current narrow expectations and perceptions of the university’s contribution to society’s innovation systems. This mind shift is needed to encourage and generate creative opportunities for university-industry partnerships to develop sustainable solutions for successful recruitment of foreign student talent, and thereby to maximize the wealth-creating potential of global student talent recruitment.

The case narratives and studies have been constructed around the leitmotiv of the overall thesis work. That is, the thesis strives to bring about a coherent understanding of the discursive relationships between increased investments in the international expansion of higher education, increased international student talent recruitment and the benefits of these for the knowledge society. It signalizes the efforts that must be made to better exploit the potential of global knowledge flow. To this end, it analyzes the value of university-industry collaboration for leveraged opportunities for attraction and retention of global student talent. The thesis contributes to the development of a university-industry research stream in providing a humanist, phenomenological and hermeneutic perspective to collaboration, interaction and engagement in the university-industry linkage.
Section 2 has portrayed and delineated the landscape of investigation. Given the landscape, the objective of this introductory writing is to outline a multifaceted approach to inquiring into the value of the university-industry collaboration for leveraging opportunities in the supply of global student talent.

3 A study on the value of the university-industry linkage

This dissertation proposes a value approach to investigating the potential of the university-industry partnership in creating opportunities for co-development of practices for attracting and retaining global student talent. It does so by taking both a resource-based and a social capital perspective on the issue. Both perspectives are firmly embedded in the relationship between relationship capital\(^8\) and human capital\(^9\), and the interaction between these to generate value. What interlinks both perspectives is the notion of reciprocity. Reciprocity is the act of giving benefits to another in return for benefits received (Molm and Cook 1995; Molm et al., 2007). Reciprocity may carry and convey value; hence, it contains the potential to contribute to the creation and distribution of value through relational interaction (Molm et al., 2007). An act of reciprocity is carried out by means of, on the one hand, instrumental (exchange of actual benefits) values of reciprocity and, on the other hand, communicative (or symbolic) values of reciprocity. Trust\(^10\) and commitment are the two key relational constructs that arise from relationship and social network engagement, and they underlie the instrumental and communicative values of reciprocity.

The resource-based view offers an inside perspective that emphasizes the resource dependency of both partners of the university-industry collaboration (Selsky and Parker, 2005). It is therefore appropriate for use in analysing the university-industry relationship, its structure patterns and its processes. I apply the resource-based view in the analysis of my inquiry into the meaning and value of the university-industry collaborative partnership in bridging the gap between the potential and realized practice of attracting and retaining international student talent. The gap itself is composed of the market-based contingencies and boundary conditions for dialogue and information

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\(^8\) The concept of relationship capital is based on the three key components of trust, commitment and information exchange, which are crucial to relationship-based practices (Sarkar et al., 2001), and determined by variations in the act of reciprocity in exchange (Molm, 2007).

\(^9\) Human capital is defined by the OECD (2001, p. 16) as “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being”.

\(^10\) Trust is a difficult notion. It is, however, a crucial element throughout this dissertation and therefore calls for an attempt to elucidate the notion with a description that makes sense in the context of this dissertation. Trust is both an outcome of and a prerequisite for a relationship. Trust is, succinctly, “the belief that the exchange partner can be relied upon to help, rather than to exploit, the actor” (Molm et al., 2007, p. 205). Nooteboom distinguished, illuminatively, between competence trust and intentional trust, “since their breakdown calls for different action. If competence fails, one may give support to improve it. If intentions fail, one may improve incentives or give threats” (Nooteboom, 2000, p. 82).
flow\textsuperscript{11}. My analysis draws on a series of narrative instalments to represent the rationale, formation, structure and performance components in the university-industry practice of attracting, training and retaining student talent from around the world. These are indeed the four essential components of a resource-based theory of strategic alliances (Das and Teng, 2000), and are integral to partnership advantage and value creation in the university-industry linkage.

The concept of social capital offers a contextual view and a long-term perspective beyond institutions and organizations. It contains the heuristic potential and explanatory power to analyse the interrelatedness of value-creating practices, practices that are integral to the accumulation of other forms of capital, such as human capital. A growing number of sociologists, political scientists and economists have invoked the concept of social capital in the search for answers to a broadening range of questions, the complexity of which cannot be dealt with through narrow policy concepts and limited measuring instruments (Adler and Kwon, 2002; Schuller, 2000). I suggest that social capital may provide an appropriate heuristic device for challenging the limits of existing assumptions – those assumptions that also support higher education policy accountability systems – underlying higher education networking practices of attracting and retaining international student talent. I further suggest that social capital might open up novel dimensions for further exploration in the domain as introduced in this study (Schuller, 2000), and in the sense as summarized by Portes (1998, p. 2):

The novelty and heuristic power of social capital come from two sources. First, the concept focuses attention on the positive consequences of sociability while putting aside its less attractive features. Second, it places those positive consequences in the framework of a broader discussion of capital and calls attention to how such nonmonetary forms can be important sources of power and influence ...

This dissertation introduction has thus far been organized to support the outline and discussion of the two perspectives as introduced above. The rest of the introduction to the dissertation is structured as follows.

First, there is a “roadmap” to provide the reader with an overview of the main approaches and concepts employed in the dissertation. Next, there is a summary of the five papers of the dissertation. Section 4 then provides some conceptualizing reflections on the relationship between market responsiveness and global competitiveness in a university environment. It thereby serves as a review of the context-related higher education scholarly literature. Section 5 also draws from the literature and provides some consideration towards the understanding of the notions of value, trust and reciprocity, which are used throughout the dissertation. Section 6 draws from the case narratives and introduces the findings according to a resource-based view on the value of the university-industry partnership as a source of talent and capital for

\textsuperscript{11} Compare with the extended concept of potential and realized absorptive capacity developed by Zahra and George (2002).
2.5 Dissertation aims and purpose

development. Section 7 uses the concept of social capital to complement and challenge the viewpoints presented in the second section, and to open up new dimensions for further reflection and investigation. Section 8 explains that in order for one to understand the narratives, a larger context of meaning is required. Section 9 concludes with a discussion of the issues for consideration arising from the dissertation.

Roadmap – To maximize the benefits of reading this dissertation, a roadmap is provided to the reader immediately following. It places the five papers of this dissertation in the context of a growing higher education and knowledge economy discourse on the global supply of science and engineering talent (Figure 1).

Figure 1: Roadmap of the dissertation: the five papers framed respectively in resource-based and social capital perspectives and set in their respective partnership, marketplace or knowledge society context

- **Co-creating and capturing value**
  - Leveraged university–industry collaborative processes for enhanced mobilization and retention of international knowledge and skills
  - Attraction and retention of global student talent as a source of advantage and economic growth (Dissertation)

- **University-industry linkage**
  - Collaborative relationship, interaction processes, marketing boundary
  - Relationship value (Papers No. I and II)

- **Market as boundary**
  - Higher educational and market orientation, boundary spanning
  - Co-creating and capturing value at the relational level (Paper No. III)

- **Knowledge society and social capital**
  - Networks, learning by partnering, absorptive capacity
  - Capturing co-created value at regional and societal levels (Papers No. IV and V)


Paper I: “Issues of delivering quality customer service in a higher education environment”. The paper focuses on a comprehensive mapping of gaps, generally in the international higher education service, and specifically in the contexts of degree programme development, recruiting of international students and associated service interactions with industry. It highlights some of the issues pertaining to service quality, customer orientation and sustainability in international higher education and associated service delivery.

Paper II: “Customer orientation in higher education: the missing link in international student recruitment? A relationship marketing approach”. The paper investigates the university–industry linkage by deconstructing the relationship, with a focus on
university–industry service interactions in international higher education service delivery and use; and by analysing the relationship elements and dynamics that affect the market for international student recruitment, placements and employability.

Paper III: “Value creation in international higher education: the role of boundary spanning in university-industry collaboration”. This paper argues that to recognize, identify and exploit opportunities for university-industry collaboration in international talent supply, it is critically important to understand what boundaries stand between university-industry partnering initiatives in international higher education, and what interaction processes span these boundaries. The paper develops a model of the boundary-spanning functions and processes underpinning value marketing for strategic university-industry partnering.

Paper IV: “A university-industry collaborative response to the growing global demand for student talent: using interpretive phenomenology to discover life-world knowledge”. This paper is an in-depth study of the philosophical and methodological viewpoints and arguments underlying a case study into university-industry partnering in the international/global context for higher education. The paper does not look for answers to the question of how partnering is experienced, but instead reflects on how answers to the question can be obtained. An interpretive phenomenological approach is proposed to tap into the nature, meaning and value of university-industry partnering to attract and retain the best student talent from around the world.

Paper V: “Attracting and retaining student talent from around the world: the lived experience in university-industry collaboration”. This paper taps into the nature and value of university-industry partnering to attract and retain global student talent. It argues that global student talent recruitment is at the heart of “knowledge transfer through people”. To that end, the paper provides an inclusive picture of the university-industry partnering phenomenon. It looks into the role of human collaborative experiencing and learning. It finds that even the university-industry collaborative practice dealing with global issues remains local in terms of engagement. It also demonstrates that by using interpretive and participatory methods, it is possible to reveal new insights into the university-industry practice of partnering to promote attraction and retention of global student talent.

In these papers, the theoretical and empirical knowledge claims presented in this dissertation are grounded, supported and validated. The roadmap (see Figure 1) may allow the reader to trace the logic of and grasp the contribution of the case narratives to the metanarrative of this dissertation. This would be the development of understanding of the university-industry collaborative practices and processes that leverage opportunities for value creation through attraction, training and retention of international student talent in response to the demand for enhanced mobilization and retention of international knowledge and skills. The narrative of the dissertation thus provides a macro-structure, which creates coherence of discourse on the macro level and contributes to local coherence on the micro level (van Dijk, 1977).
This introductory writing brings in two lines of approach to the narrative of the dissertation. The first line of approach analyses the university-industry interaction processes in their marketplace and environment from a resource-based view (see Section 6). This approach is structured to create coherence on the micro and meso levels. The other line of approach is social capital in nature (see Section 7). It places the narrative instalments into a wider societal context, and as such serves to create coherence on the macro-level.

Introduction to Sections 4 and 5 – Some introductory considerations are presented in the following two sections. In these, the understanding of market orientation in a university environment and the concepts of value and reciprocity are discussed. These considerations serve to expose the reader to a complex field of deeper questions inquiring into the relevance and meaning of market-responsiveness and value co-creation, and into how these connect to and advance the university’s mission to contribute to socio-economic development.

4 Responsiveness to changing market forces

What has been paraphrased as “the rise of market forces” in the last decades of the previous century has manifested itself in higher education in the form of resource diversification and increasing reliance on tuition fees in public institutions, expanding share of private institutions in national higher education systems and diffusion of practices from the world of business to the governance and administration of institutions of higher education, both public and private. (Gürüz, 2008, p. 77)

The socioeconomic dynamics and increasing demand for higher education have reshaped the governance, institutional structure and financing of higher education over time (Gürüz, 2008). Gürüz has argued that the way universities are governed in a given country bears directly on the position of that country in international student mobility and in the global higher education market (p. 34). To think ahead of the competition in the global higher education market, universities should anticipate the changing market requirements and respond to them. This requires, first and foremost, an understanding of and attentiveness to the market environment. It also requires institutional flexibility and responsiveness to market changes and opportunities, and the ability to pursue opportunities speedily.

Market orientation as a capability – A growing body of marketing research across the business and public domains has produced a number of compelling themes relating to market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990). These issues all relate to the nature and development of market orientation, as well as to the relationship market orientation has with performance (Foley and Fahy, 2009). In the resource-based view of the organization, however, market orientation, together with entrepreneurship, innovativeness and organizational learning, has been identified as a crucial capability contributing to the creation of positional advantages and to success (Hult and Ketchen, 2001). More recently, Foley and Fahy (2009) have also suggested that when market
orientation is integrated into a capabilities perspective of the resource-based theory, the emphasis will be on identifying the key capabilities which the organization must develop in order to be market-sensitive and market-oriented.

There have been other serious attempts to identify connections between marketing theory and resource-based capabilities theory. For instance, Srivastava et al. (2001), in seeking answers to the underlying question “What gives rise to competitive advantage and how can it be sustained?” (p. 777), illustrate how a market-based resource view facilitates new perspectives on the evolutionary interplay of market-based assets and capabilities, market-facing processes, and customer and stakeholder value.

Given this knowledge, this section addresses the market orientation discourse pertinent to enhancing understanding of the crucial relevance of market orientation as a capability underlying university responsiveness to the market, its performance and its global competitiveness. Innovativeness and organizational learning have, unquestionably, always been the driving capabilities of a successful university. How then are entrepreneurship and market orientation capabilities understood as contributing to university performance?

**Current understanding of market orientation in higher education** – Market orientation does matter in higher education and within the university environment. This is evidenced in a growing body of literature on the subject (for example, Caruana et al., 1998; Lindsay and Rogers, 1998; Plewa and Quester, 2006; Häyrintnen-Alestalo and Peltola, 2006; Hemsley-Brown and Oplatka, 2010). Comparative higher education research, however, only offers a disintegrated view of the market for the higher education sector. “Markets” are obviously brought into the realm of higher education policy and practice, and “orientation” towards markets is in large part shaped by assumptions about socio-cultural and socioeconomic change.

This begs the question of how market orientation should be understood, for instance, in terms of opportunities for strategy and practice development. Numerous studies and reports deal with the debate over, concern with and empirical interest in change, development and impact associated with the marketization and corporatization12 of higher education. The field is analytical and critical, wide and diverse, but scattered. It does not offer a contextual understanding of how specific market forces affect higher education development thought in policy and practice. Markets are conceptualized separately from the state as being shaped by an “invisible” hand or by the rational choices of individuals in the “marketplace” (Marginson and Rhoades, 2002, p. 297; cf. also Teichler, 2003, p. 182). Such a narrow conceptualization, arguably, does not contribute to a contextual understanding of how market orientation is, in fact, a crucial element in the managerial context of a market-responsive, stakeholder-oriented, entrepreneurial and globally networked university.

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12 Marketization and corporatization of higher education can be considered products of neoliberalism and corporate culture and consequences of the market forces that have changed “the language we use in both representing and evaluating human behaviour and action” (Giroux, 2002, p. 426).
4.1 The drive towards the market

Market orientation in business and higher education literature – This section seeks to build an understanding of the concepts prevailing in the business and higher education literature. To do this, it draws heavily from the business and higher education literature of the market orientation discourse. It should thereby elucidate for the reader the multidimensionality of the issue of a market-oriented university operating in an increasingly globalizing higher education landscape. The objective of this section is to frame the plurality of this multidimensionality in terms of layered, yet overlapping, not mutually exclusive orientations and knowledge claims.

Market orientation may be contextualized in time, place and manner. It takes place in an era of globalization pushing the university towards accelerated internationalization (Altbach and Knight, 2007). It is simultaneously situated globally, nationally and regionally (Marginson and Rhoades, 2002). Finally, it is in a social sphere where the task of the university is to provide internationally competitive and value co-creating education and research services within a complex network of multiple stakeholders (Pavičić et al., 2009).

The articles cited below embrace a wide range of relevant socio-philosophical, socio-economic, policy and management theory-based approaches, arguments, viewpoints, empirical evidence and critique. They serve to supplement each other and to help one form a broader perspective as to how the complex meaning of market orientation in a university environment can be understood. They therefore serve the main objective of this section as mentioned above.

Subsection 4.1 explains how university market responsiveness may be viewed through the lens of three different approaches towards market orientation. These include a business construct approach, an entrepreneurship approach and a social learning approach.

4.1 The drive towards the market

A business construct approach towards market orientation – The marketing concept is essentially considered a business philosophy. The successful implementation of an organization’s business philosophy is reflected in the overall market orientation of the organization, in that all internal and external activities and behaviours of that organization are highly market-oriented. Market orientation facilitates identifying and meeting the needs of the market; i.e., the stakeholders (Kohli and Jaworski, 1990; Narver and Slater, 1990; Rueckert, 1992; Day, 1994).

Yet recently, a related stream of research has focused on the concept of market orientation within the public sector context, including the higher education sector (Lindsay and Rodgers, 1998). Because empirical research evidence from the business sector has repeatedly indicated a positive impact of market orientation on business performance, the marketing and market orientation constructs have started to appeal to researchers and managers in higher education. Many researchers have attempted to
unpack the forces that drive higher education towards the market (Buchbinder, 1993; see also the review by Bugandwa Mungu Akonkwa, 2009). Along with the latest developments in higher education, the role of the university system in society has changed. Greater autonomy for universities has engendered new pressures on European universities to increase market responsiveness, improve efficiency and enhance competitiveness both nationally and internationally (Mora, 2001). These pressures tend to reinforce universities in their belief that the logic behind market forces is becoming an integral part of the academic environment (Häyrinen-Alestalo and Peltola, 2006), and that an increase of institutional responsiveness to social demands will require an increased market orientation on the part of universities (Mora, 2001).

Business research contends that market orientation contains elements of market intelligence generation, dissemination and response (Kohli and Jaworski, 1990); and elements of stakeholder and competitor orientation and inter-functional coordination (Narver and Slater, 1990). This, Foley and Fahy (2009) argue, effectively represents the nature of a market sensing capability. Hemsley-Brown and Oplatka’s (2010, p. 206) definition of market orientation in universities alludes to a market-sensing capability: “a set of beliefs that puts customers’ interests first, but at the same time raises the higher education institutions’ awareness of the need to obtain information about competitors and establish cross-departmental activities to satisfy customers’ needs, in order to gain a competitive edge in the turbulent, competitive environment”. This definition, however, emphasizes that seeking and using market information is obviously a reactive response on the part of the university to meet expressed student-customer needs, and to improve student-customer satisfaction through enhanced student-customer services. In the higher education discourse, the university is positioned in a reactive mode of adapting and responding, not explicitly to the market or the economy, but rather vaguely to ideas and challenges (Mautner, 2005, p. 107). The market orientation literature in general, and specifically with relation to the measures of business market orientation, tends to take a reactive approach to the collection of, dissemination of and response to market information (Atuahene-Gima and Ko, 2001).

An overly narrow interpretation of market orientation – focusing merely on responding to and adapting offerings to a changing market – is believed to lead to an incomplete understanding of the relationship between an organization’s market orientation and innovativeness. Therefore, the construct of market orientation has recently been refined to include two complementary approaches to it. These are a market-driven (or responsive) approach to market orientation and a driving markets (or proactive) approach to market orientation (Jaworski et al., 2000; Narver et al., 2004). Whereas a responsive market orientation focuses on satisfying the expressed needs of current stakeholders, a proactive market orientation seeks to create value for current and potential stakeholders through learning about their latent needs. Research evidence indicates that there is a strong relationship between a proactive market orientation and innovation (Narver et al., 2004). The notion of a proactive market orientation would then link the concept of market orientation in higher education to the concept of innovation and entrepreneurship orientation in higher education.
4.1 The drive towards the market

An entrepreneurship approach towards market orientation – It is believed that proactiveness is one of the three underlying dimensions of organizational predisposition to entrepreneurship orientation (the other two are constructive risk taking and innovativeness) (Bhuian et al., 2005). Organizational proactiveness promotes a proactive approach to organizational market intelligence-related behaviour. Market intelligence generation, dissemination and organization-wide responsiveness to market intelligence are, in turn, fundamental elements of market orientation (Kohli and Jaworski, 1990). Organizational proactiveness also encourages responsiveness to new market opportunity-seeking activities and promotes acting on those opportunities ahead of the competition (Matsuno et al., 2002). Within the context of entrepreneurship, proactiveness refers to a forward-looking perspective (Matsuno et al., 2002), and to an explicit readiness to take initiative “by anticipating and pursuing new opportunities and by participating in emerging markets” (Lumpkin and Dess, 1996, p. 146). Organizational performance will be optimized when market-oriented and entrepreneurial behaviours are aligned (Atuahene-Gima and Ko, 2001).

In higher education research, the link between entrepreneurship and the market orientation–performance relationship is unexplored, undefined or integrated into the dimensions of a larger dynamic network system. Mautner (2005, p. 96) argues that “entrepreneurship, both as activity and discourse, is one of those ‘imported’ practices [...] deployed by academic leaders and administrators as a carrier of key values that they want their external stakeholders to associate with the organization, and their internal stakeholders both to believe in and implement”. This carrier of key values would then refer to the aforementioned values of efficiency, dynamism and innovation (ibid, p. 103). In their analysis on organizational antecedents of market orientation in the (Spanish) public university system, Flavián and Lozano (2006) do not include values or measures associated with entrepreneurship. Etzkowitz et al. (2000) view the role of university entrepreneurship within the Triple Helix of university-industry-government relations as a developmental pathway for continuous transformation, not towards the end state in the transition to market, but rather towards a mixed system of market forces and government incentives.

However, there are other viewpoints. The use of entrepreneurship-related keywords such as “entrepreneur”, “entrepreneurial”, “enterprise” and “enterprising” is found as “ambiguous in denotation and rich in connotation” (Mautner, 2005, p. 95). Clark, however, formulates his viewpoint on the meaning of entrepreneurship and innovativeness in the higher education context as follows: “Throughout much of [...] the research, the two terms ‘entrepreneurial’ and ‘innovative’ were used as loosely synonymous. The concept of ‘innovative university’ has much appeal. Gentler in overtone, it also casts a wider net. It avoids the negative connotations that many academics attach to individual entrepreneurs as aggressive business-oriented people seeking to maximize profit. [...] I have chosen ‘entrepreneurial’ over ‘innovative’ as the organizing conception for this book because it points more powerfully to deliberate local effort, to actions that lead to change in organizational posture” (Clark, 1998, p. 4).
But what is academic entrepreneurship? Mautner (2005) contends that the various meanings of the concept of academic entrepreneurship may be roughly grouped into three layers. For the university, these would include engagement in for-profit activity; restructuring of management to facilitate market-driven behaviour; and promotion of organizational culture supporting values such as efficiency, dynamism and innovation. Etzkowitz et al. (2000) suggest that the entrepreneurial paradigm in higher education must not be exclusive to innovation-driven or research-intensive universities, but rather should be applicable to research as well as teaching universities, for instance through innovations in undergraduate education and continuing education. Nevertheless, research on the relationship between university entrepreneurship and university market responsiveness has mainly focused on entrepreneurial activities in and adaptation to external markets (Marginson and Rhoades, 2002). Davies (2001) distinguishes between adaptive and entrepreneurial responsiveness. Whereas the former is simply about the organization being “competent at recognising external opportunities and threats, and devising policies and activities to meet these”, the latter is about the ability “to generate surpluses which might be used to invest in further development” (ibid, p. 28-29). Here, the relationship between the entrepreneurial university and the entrepreneurial process of social enterprise and entrepreneurship is emphasized. Chell (2007, p. 18) holistically interprets and defines entrepreneurship as a process “that includes the assumption of both public and private worlds and judgements that are based on knowledge and understanding of both social and economic processes. These judgements enable the entrepreneur to pursue opportunities with a view to creating both economic and social value; and afford the entrepreneur the ability to make fine judgements in business and the marketplace, envision opportunities that others cannot and create incredible wealth as a consequence”. In other words, the university is entrepreneurial in its endeavours to create social and economic value. The university does this by consciously garnering alienable resources through networking and other processes and by using human capital to achieve its “espoused mission of wealth and social value creation” (ibid, p. 18).

The above cited reflections illustrate, firstly, how fragmented understanding is of the relationship between university entrepreneurship and university market orientation. Secondly, however, and in accordance with Etzkowitz et al. (2000), the considerations as singled out above (with specific reference to proactive university engagement in market-driven for-profit activities and generation of surpluses for wealth creation) suggest that Schumpeter's model of the entrepreneur has been creatively extended beyond the sphere of business into higher education and the university environment (p. 325). This brings in another viewpoint, which is that of the university taking the role of the other (Leydesdorff, 2000, 2005). The boundaries between university and industry (and between public and private) are shifting, so what was traditionally assumed to be the province of the other does not necessarily hold true anymore today (ibid).

**A social learning approach towards market orientation** – Market orientation is fundamentally a learning orientation; it is a culture and a commitment to value creation (Slater and Narver, 1995; Narver et al., 1998). Market orientation as a paradigm of
4.1 The drive towards the market

The drive towards the market, learning and commitment to value creation may thus be considered a philosophical orientation that does not contradict the values of higher education.

It is then possible to draw the connection between the business approach to market orientation (Shapiro, 1988, Narver and Slater, 1990; Jaworski and Kohli, 1990; Rueckert, 1992; Deshpandé et al., 1993; Day, 1994\(^{13}\)), and the “new” entrepreneurial university in its mission of social and economic value creation. This link is placed here within the wider systemic context of neoliberal “governmentality”\(^{14}\) where “markets have become a technique of government’s ‘positive’ power, acting deliberately through the vehicle of the state to engineer the conditions for efficient economic production” (Olsson and Peters, 2005, p. 317-318), and where “systems of government are merging with economic life” (Marginson, 1997, p. 64).

In a university environment, information exchange is understood and interpreted in terms of commercialization of knowledge. Knowledge commercialization is often perceived in the literature as the economic driver for academic capitalist knowledge exchange\(^{15}\) (cf. Slaughter and Rhoades, 2004).

Market learning processes are embedded in innovation-focused, university-industry collaborative practices. In these, universities seek to accumulate fundraising expertise and success through increased entrepreneurial thinking and behaviour (Levidow, 2002). The transformation of higher education systems from elite access to mass and global access (cf. Trow, 2005) is accompanied by an increased pressure to perform in the highly competitive market of higher education. This has resulted in the mounting need to compete internationally, increase volume and make distinctive efforts to be attractive to international student talent and to the highly skilled.

Simultaneously with an increase in global environment challenges, national higher education funding has declined. This has driven European universities into entrepreneurial competition to seek new fundraising opportunities (Levidow, 2002). Universities are pressured to establish new mechanisms and processes of partnering and networking with funders, to adopt a more stakeholder-centric orientation in all activities and thus to maximize stakeholder value. As a result, a new relationship has emerged.

On the one hand, universities need to enhance market-attentiveness supporting mechanisms and processes to develop and secure a competitive advantage. On the other hand, universities need to meet the challenge of implementing explicit performance-

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\(^{13}\) For an extensive review of the contributions to the implementation of market orientation, see Lafferty and Hult (2001); van Raaij and Stoelhorst (2008)

\(^{14}\) In his study of power relations in higher education, Marginson (1997, p. 64) has interpreted Foucault’s (1991) concept of “governmentality” into his study of power relations in higher education as a extended definition of ‘government’ to include “a complex of networks and apparatuses, linking the machinery of state with civil and market society, and individual behaviour”.

\(^{15}\) The term “academic capitalism” was introduced by Slaughter and Leslie (1997) to denote the growing involvement of academic institutions in market activities to attract external revenue (as cited in Ylijoki, 2003).
focused thinking (in terms of input-output improvement and accountability measures) into new business-like, service-driven and stakeholder-oriented managerial systems, (Olssen and Peters, 2005). New public management has entered higher education. This is accompanied by attempts to restructure higher education management and operations to respond to the needs of market-like domains or quasi-markets (Olssen and Peters, 2005; Ylijoki, 2003, 2005). This development has been presented as “the marriage of administrative reform with business type managerialism and represents private sector management imported into the public sector” (Hood, 1991, as cited in Adcroft et al., 2010, p. 548), and has since been a focus of higher education discourse.

Although the literature presents a rather mixed picture concerning the meaning of market orientation in the public versus corporate sector, there seems to be overall consensus that market intelligence is crucial to generating stakeholder value (cf. Hult et al., 2005). Awareness of competition and competitive intensity engenders a knowledge advantage over competitors and, consequently, increases the ability to respond to the competitive market, which in turn promotes stakeholder-oriented product and services development activities (Narver and Slater, 1990). Stakeholder value is created in successful internal (interfunctional) and external (relationship) service marketing.

There remains, however, a fundamental question: Who are the stakeholders of higher education? Pavičić et al. (2009) approach the issue of (inadequate) market orientation in (Croatian) higher education from a stakeholder perspective. The authors argue that the use of the term “market orientation” in relation to the function of market orientation in higher education is ambiguous. As a function, market orientation encompasses “responsibility and focus of the whole organization and its management of relations with consumers/users and other relevant stakeholders, including forces shaping their behaviour” (ibid, p. 192). It might therefore be appropriate to consider whether market orientation in the higher education context can be understood as a dimension of social orientation. Such a dimension would then entail a much broader “[defining and serving] of the needs, wishes and interests of [the institution’s] consumers/users, as well as protect[ing] and enhanc[ing] the welfare and long-term goals of society as a whole” (Pavičić et al., p. 193).

Clearly, the above subsection amply describes an environment of continuous change in organization and culture, but it also addresses resistance to change. Change, however, is about learning. Learning is therefore the key to developing the university’s market-related capabilities (compare with Narver et al., 1998).

4.2 Conceiving market orientation in a university environment

The university can be seen as an institution which emerges from the public sector. It is more and more pressured to operate according to the terms of the private sector. In fact, the two sector model is ‘incomplete, inaccurate and misleading.’ The public sector is involved in supporting the private sector process of accumulation. Nevertheless, the popular mythology is otherwise. (Buchbinder, 1993, p. 338)
4.2 Conceiving market orientation in a university environment

Conceptual structure of the meaning of marketing orientation – Through intensive engagement with the literature, I have identified and mapped the elements which I believe essentially constitute the meaning of market orientation. I have combined these elements into a conceptual structure of the meaning of market orientation in higher education (see Table 1). This system is comprised of four adjacent layers, indicating how market orientation is conceived in a context where the key focus is perceived to be on 1) knowledge production for academic excellence, 2) student markets for student recruitment competitiveness, 3) university-industry stakeholder relationships for dyadic interaction, and 4) entrepreneurship for wealth creation. Below each of these layers is a description of the domain-differentiated conceptions of market-oriented action, associated practices and consequences on the performance of the university. The cross-layers are constructed based on my interpretation of what knowledge claims underlie the approach, perception and assessment of market-oriented action in the university environment. The cross-layers consist of the cross-functional orientation, which delineates the alignment of departmental activities and performance objectives by focusing on markets (Jaworski and Kohli, 1993). The cross-functional subheadings include horizontally 1) product orientation, 2) customer-student orientation, 3) dyadic stakeholder orientation and 4) societal/network multiple stakeholder orientation and include vertically 1) claims of relationship between market-oriented practices and performance; 2) drivers of competitiveness in terms of output-oriented functions and performance; and 3) a synthesis in terms of reactive, responsive and proactive market orientedness.

Table 1: Conceptual structure of the meaning of market orientation in higher education

<table>
<thead>
<tr>
<th>Layer</th>
<th>Knowledge production for academic excellence</th>
<th>Student markets for student recruitment competitiveness</th>
<th>University-industry relationships for dyadic interaction</th>
<th>Entrepreneurship for wealth creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-functional orientation</td>
<td>Product orientation</td>
<td>Customer/student orientation</td>
<td>Dyadic stakeholder orientation</td>
<td>Network/societal, multiple stakeholder orientation</td>
</tr>
<tr>
<td>Knowledge claims</td>
<td>Research-driven educational programmes; Academic excellence and professionalism; Publication output; Academic independence</td>
<td>Academic capitalism; Commercialization; Market competition; Market-driven service-oriented professional programmes; Quasi-market behaviour and new public management</td>
<td>University-industry linkages; Industry-driven interaction-intensive contract research and consulting; Talent transfer</td>
<td>University-industry-government linkages; Commercialization of knowledge production; Innovation and technology transfer; Spin-off activities</td>
</tr>
<tr>
<td>Drivers of competitiveness</td>
<td>Research-driven academic output</td>
<td>Service-driven programme development</td>
<td>Value-driven relational collaboration</td>
<td>Innovation-driven network collaboration</td>
</tr>
</tbody>
</table>
In the appendix, some of the key themes from the key authors are referenced to support the proposed framework (see Appendix A).

Given that the system as conceptualized here is positioned within a diversity of explicit and implicit formulation of higher education-related public and social policy and managerial problems and processes, and given that the university is a multi-faculty organization, it is clear that the system’s layers are by no means mutually exclusive; instead, they overlap and thus maintain continuity. They, however, differ in their visibility and interpretability and allow for the analysis of interrelations among these layers (cf. Homburg and Pflesser, 2000). This, in turn, may contribute to a more holistic, interdiscursive understanding of those drivers that arguably push academia towards a more explicit market orientation but also underlie differences in market-oriented strategy and behaviour in academia.

The differentiating focuses are articulated in the four overlapping sub-systems as they are constructed through the research lens of sensemaking and sensegiving in relation to how the evolving market for higher education has changed and developed the market orientation of academia.

The conceptual structure as delineated in Table 1 provides a method for understanding the meaning and meaningfulness of market orientation in a university environment. It shows how market orientation can be understood in terms (and degrees) of a reactive, responsive and proactive market approach, as well as in terms of impact of and on the market. It is mapped in a series of layers placed on a continuum defined by two polar approaches to the market. On one end lies the reactive/responsive approach from within the academic environment. The reactive market approach is to be understood here as merely acting upon “provoked” market influences, whereas a responsive approach implies a notion of market awareness and the taking of responsible action. On the other end lies the proactive approach from within a collaborative (relational or network) environment (cf. Jaworski et al., 2000).

It is thus proposed that the meaning and meaningfulness of market orientation in a university environment is related to a set of perceptions16 associated with 1) the cross-functional relationships between and interconnectedness of market-oriented activities within the complex collaborative environment of the university, 2) the knowledge claims in regard to being market-oriented and 3) the drivers of competition and

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16 The word “perception” is used here to imply the notion that people tend to perceive what they expect to perceive (Chisholm, 1957). There is an abundance of literature providing an argument for the correlation between (selective) perception and resistance to (organizational) change.
4.3 Market orientation in the university-industry relational space

Global forces towards a stronger market orientation for higher education institutions have stimulated research on the competitive aspects of the university-industry linkage. There is indeed a considerable amount of research on the dynamics in university-industry relationships with regard to the organizational, relational or network mechanisms supporting competitive R&D, innovation, knowledge production and technology transfer. However, the impact of the university-industry collaborative practices on the “production” of human capital and on global student talent transfer in a globalizing market has been relatively ignored, which is surprising, given the growing bulk of literature on the relationship between university market orientation and competitiveness in the rapidly internationalizing student market. Consequently, there is evidence for an obvious dearth of attention with regard to the relationship between market orientation for human capital development and the value of university-industry collaboration. Whilst the journal papers cited in this investigation explore many aspects of market orientation in higher education and university management, the main focus remains on the national and international student market and associated issues of service development and student-customer satisfaction. In this sense, the research offers a fragmented and relatively narrow picture of the meaning of market orientation in higher education and higher education institutions.

Whilst much of the existing literature on the entrepreneurial university is rich on what universities need to do internally to prepare themselves for entrepreneurial endeavours, it is much more modest on the issue of creating successful partnerships with external agencies from a behavioural point of view. Yet it is clear that a university can only be entrepreneurial if it has good client relationships, and what factors lie behind effective partnerships is a topic worthy of considerable further study. (Davies, 2001)

Rather than viewing the university’s operational surroundings as a faceless environment, one might instead consider them as a potential network of inter-organizational relationships. The university’s market-oriented strategy and activities are then to be translated into a relational level (Helfert et al., 2002). The term “relational space” is used by Bradbury-Huang et al. (2010) and refers to “a rich context for aspirational trust and reflective learning across organizational boundaries” (ibid, p. 109). The concept of relational space is thus proposed for developing an understanding (beyond a student-customer focus) of the meaningfulness of three market-orientation elements. These are the market-oriented strategy and behaviour in the university-industry relational space; the impact of market orientation on building a sustainable competitive advantage in the global higher education marketplace; and, in particular, the impact of market orientation on the validity of the emerging commercialized and rationalized concept of attracting and recruiting international students.
5 On value, reciprocity and value-in-context

Value – What constitutes value and how is value created? Value creation as a concept entails ontological and epistemological dimensions: it carries the assumption that value has content presumed valuable, and it includes considerations of the process of how and where value is created. However, much of the business and marketing studies literature contributing to the concept of value creation for economic growth starts from the assumption that there exist valuable resources and capabilities on the base of which the process of value creation can be assessed, analysed and optimized (Bowman and Ambrosini, 2002). Hence, perhaps “value is one of those taken for granted concepts but is important to business because it self-evidently lies at the heart of every economic and psychological transaction” (van Rensburg, 2012, p.13). This is “value” as defined through a practitioner’s lens17.

Simmel (1900, p. 595) stated that, in a purely economic sense, a thing is worth something when it is worth something to someone and that someone is ready to give something for it. Further, he concluded that “we may examine the one object ever so closely with reference to its self-sufficient properties, we shall never find the economic value; since this consists exclusively in the reciprocal relationship, which comes into being between several objects on the basis of these properties, each determining the other, and each giving to the other the significance which each in turn receives from the other (ibid, p. 602-603)”.

This brings the relational perspective to the process of value creation. It is a perspective which has later been conceptualized 1) into a relational marketing theory which espouses that value is co-created over time in a long-term win–win relationship with stakeholders and customers (Gummesson, 1999; Ravald and Grönroos, 1996); and 2) into a philosophy of relationship marketing, where ethical considerations on notions of trust, honesty, benevolence, reliability, commitment and diligence are salient (Gummesson, 1997).

Reciprocity – I again refer to Simmel (1900, p. 579), who noticed that people “distinguish, for instance, interests and relationships as the ethical, the egoistic, the economic, the domestic, etc. The reciprocal weaving together of these constitutes actual life”. Life – society and practice – is thus based on social equilibrium and cohesion that could not exist without “the reciprocity of service and return service” (Simmel, 1950, p. 387, cited in Molm et al., 2007, p. 199). The value of reciprocity – the act of giving benefits to another, directly or indirectly through another actor, in return for benefits received in the process of exchange – lies in its feature that makes the act of reciprocity itself a carrier of value, and variations in that act important determinants of trust and bonds of affect and solidarity (Molm et al., 2007, p. 200).

17 van Rensburg (2012) recently wrote a commentary on the concept of value based on his own experience in general management and marketing roles with The Coca-Cola Company and Unilever. (See the special issue of Industrial Marketing Management on “Value in business and industrial marketing”).
4.3 Market orientation in the university-industry relational space

Given that value is created in a process of exchange, there needs to be consensus about where and how value is created through exchange and about the role of exchange in the value-creation process itself (Chandler and Vargo, 2011). On this point, Bowman and Ambrosini (2000) argue that the term “value” refers to different phenomena, and they distinguish between subjective value, which is the “use value”18 pertaining to the receiver’s perceptions of the value, and the monetary value, or “exchange value”.

Relational value is the value conceived through the relationship itself and refers to the value which is co-created through relational interaction (Möller, 2006).

Value in context – Vargo and Lusch have developed the concept of value-in-use from a service dominant view (Vargo and Lusch, 2004, 2008), and subsequently developed the concept of value-in-context, meaning that the purpose of exchange is “to access resources that have potential value – that is, that provide benefit – to actors from within their own particular contexts” (Chandler and Vargo, 2011, p. 35).

Edvardsson et al. (2010) introduced the term “value-in-social-context” in an attempt to grasp the notion of the complexity of social forces and perceptions that shape the meaning and influence the degree of consensus of what the value of products and services is. In this connection – and from the viewpoint that resources are bundles of potential service – Chandler and Vargo and Edvardsson et al. have put forth insightful perspectives on the interrelatedness of context, markets, social systems and value co-creation. They suggest that, as a result of this interrelatedness, an actor’s ability to create value through reciprocal exchange processes is a function of the unique context, where multiple micro and macro networks are embedded in a dynamic service ecosystem (Chandler and Vargo, 2011).

It is important to recognize that value creation and value capture are two distinctive processes. They should not be confused with each other, because the party creating the value may or may not be able to capture or retain (all) the value in the long run (Lepak et al., 2007). Lepak et al. (2007, p. 187) have illuminated a value-capture scenario in a broader and much more complex context as follows:

Once an organization is fairly successful in creating large amounts of value for its customers, and in return realizes exchange value from this success, questions arise among stakeholders and broader society about the appropriate levels of value that should be returned to the firm, as opposed to other stakeholders, particularly employees who often invest significant amounts of expertise, effort, commitment, and time under an exchange relationship initiated at a prevalue realization state. Similarly, other stakeholders, such as suppliers and society in general, may typically raise concerns

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18 The term “use value” stems from Marx’s labour theory of value. In Marx’s work, use value means that it is use that determines the value of a thing, and that use is determined by fashion. In other words, there is no production without consumption. Use value and exchange value are then inseparable dialectical aspects of the social unity of the commodity (Marx, 1844, “Economic and philosophic manuscripts of 1844”, cited in Keen, 1993).
about the fairness of value distribution and try to gain a greater share of the returned value.

Hence, value created at the micro level (by an individual) may be captured at the meso level (by a community or organization) or macro level (by society). Conversely, value created, for instance, by a higher education policy initiative initiated at the societal level may be captured solely or partly (by an individual) at the micro level (cf. Lepak et al., 2007). It must, however, be stressed that this line of thinking objectifies the understanding of value to a great extent. The objectification of value stands in contrast to various subjective and inter-subjective understandings of value as a unique determination of a beneficiary (Vargo and Lusch 2004, 2008).

6 A resource-based analysis

By way of introduction to this section, I wish to capture the reader’s attention regarding a phenomenon that is widespread, even in the domain of scientific thinking and writing: the phenomenon of borrowing conceptual tools, models and theories among disciplines tantamount to a use of metaphors. Klein (1990, p. 93) explains:

Inevitably borrowing invites speculation about the metaphorical nature of interdisciplinarity. Metaphors may be didactic or illustrative devices, models, paradigms, or root images that generate new models. Some metaphors are heuristic, whereas others constitute new meaning...Borrowing is metaphoric in several ways. Theories and models from other disciplines may sensitize scholars to questions not usually asked in their own fields, or they may help interpret and explain, whether that means a framework for integrating diverse elements or hypothetical answers that cannot be obtained from existing disciplinary resources. When a research area is incomplete, borrowing may facilitate an inductive open-endedness. It may function as a probe, facilitating understanding and enlightenment. Or, it may provide insight into another system of observational categories and meanings, juxtaposing the familiar with the unfamiliar while exposing similarities and differences between the literal use of the borrowing and a new area.

Recently, Andriessen has intensively studied the subject, and he has written several publications on the use of metaphors in knowledge management (Andriessen, 2006, 2007, 2008). He argues that, for instance, Grant’s knowledge-based view of the firm (which is an extension of the resource-based view (Grant, 1996)) focuses upon knowledge as the most strategically important of the firm’s resources (Andriessen, 2006). He argues further that presenting knowledge as a resource offers an “instrumental approach to knowledge management, that only treats knowledge as a tool, contributes to the further dehumanisation of organisations that is taking place in modern society” (Andriessen, 2008, p. 9). Using metaphors in knowledge management may determine the way we think about knowledge management because it highlights certain attributes of knowledge while hiding others. When we share, develop, store, transfer or
exploit knowledge, we treat knowledge as a resource or, in other words, as “stuff”. And we do that all the time, consciously or unconsciously (ibid).

This dissertation itself is guilty of metaphorical use; however, this is done in a modest attempt to re-establish the often displaced human dimension of knowledge transfer. Knowledge transfer through people is the expression I have deliberately chosen to emphasize the human element embedded in knowledge transfer (through mobilization, attraction and retention of student talent from around the world). My intention is to accentuate a subtle distinction between “knowledge transfer through technology” and “knowledge transfer through people” (see Paper V) in university-industry collaboration. Keeping this in mind...

6.1 Collaborative partnerships in the resource-based view

In the marketing literature, alliances come in many shapes and sizes. Commonly used terms include “joint ventures”, “formal and informal collaborations”, “partnerships”, and “partnering”. In the literature on university-industry partnerships, the importance of university-industry alliance formation is emphasized with relation to a broad range of knowledge transfer in the R&D domain (D’Este and Patel, 2007) and, to a lesser degree, with relation to how these relationships affect fundamental research (Poyago-Theotoky et al., 2002).

The resource-based view suggests that the rationale for alliance formation is the value creation potential of organization-specific resources and relationships that are pooled together (Das and Teng, 2000). Alliances are established – and collaborative practices developed – when organizations are in need of resources that partnerships can bring, or when organizations in strong social positions have the assets they seek to share and capitalize on creating alliance opportunities (Eisenhardt and Schoonhoven, 1996). Doz and Hamel (1998) have emphasized one more fundamental imperative for organizations to form alliances, which is the need to learn through alliances, both to overcome skills deficits and to acquire new competences. Hence, the resource-based view of alliances brings into focus strategic and social factors, organization-specific characteristics, learning capacity, resource needs and value creation from social opportunities (Eisenhardt and Schoonhoven, 1996; Doz and Hamel, 1998).

History and development of the resource-based view – In the late nineteen-fifties, Penrose (1959) first introduced his theory of the resource-based growth of the firm. This was taken up more than two decades later by Wernerfelt (1984), who coined the term “resource-based view” and established the field for research. Almost ten years later, Barney (1991) significantly developed the view.

Nowadays, the resource-based view is fundamentally a firm-level and efficiency-oriented analytical tool that integrates a management perspective with an economics perspective (Peteraf and Barney, 2003). It argues that only through optimal bundling, allocation and exploitation of the organizational resources and capabilities sustained
The resource-based view also argues that an organization has a competitive advantage when it implements a value-creating strategy not simultaneously being implemented by any current or potential competitors. In the context of the university-industry collaborative partnership, resources include the organizational tangible and intangible assets, knowledge, skills, capabilities, processes, attributes, information, etc. controlled by their owner – the university or company – and applied to the collaboration. With these, it will be possible for the practice to conceive of and implement strategies that improve its efficiency and effectiveness (cf. Barney, 1991).

The resource-based perspective has increasingly been applied in the study of the underlying motives for alliance formation (Eisenhardt and Schoonhoven, 1998), partner choice in inter-organizational collaborations (Mowery et al., 1998), resource alignments (Das and Teng, 2000) and even network resources (Davie, 2006).

Resource alignments – As mentioned above, Das and Teng (2000) developed a typology of inter-partner resource alignments and explored the effects of these on alliance performance. They outlined four essential components of a resource-based theory of strategic alliances: rationale, formation, structure and performance (ibid). These are the very components that have underlain my own investigation into university-industry partnering practices. It is thus an investigation into a collaborative partnership in which the following four components are present. 1) The rationale for collaboration is to aggregate, share and exchange valuable resources, to grasp value-maximizing opportunities and gain competitive advantage in the search for international student talent and skilled employees. 2) Collaboration is the effective exploitation and application of the resources provided by the partnership’s structure. 3) Collaboration is relationship-capital mediated. 4) Collaboration is developed as a key practice for value co-creation and value capture in the processes associated with attraction and retention of international student talent, and with turning international student talent into human capital.

The logic of the narrative instalments stems from two major assumptions. Firstly, it is assumed that in the higher education environment of today (increasingly competitive over international students), the motives and influencing factors underlying international student university choice are becoming increasingly connected to the labour marketplace in terms of employment and career prospects and associated return-on-investment decisions, and less connected to subject interest and love for scholarship (cf. Maringe, 2006). This is supported by increasing evidence that individuals now focus on their capital worth and employability (Garavan et al., 2001). Hence, universities – in their efforts to build brand value and competitive advantage to be attractive to the best international student talent – need to recognize the importance of their relationships with business within a stakeholder network context. Secondly, it is assumed that with the rapid growth of European international higher education capacity, a likely tendency is for higher education productivity to be affected by the absorptive
capacity – the efforts and ability to support and adopt human capital development (Vinding, 2004) – of the regional, national and European infrastructure systems.

Value creation will thus demand a competitive advantage; therefore, universities should seek opportunities to create value through creating partnership advantage (Doz and Hamel, 1998). It follows that value creation and sustainable competitive advantage are the assumed desired outcomes of all cooperative efforts within the university-industry collaborative environment (Fahy, 2000). It is then also assumed that sustained competitive advantage is indeed achievable. The resource-based view, in turn, assumes that parameters of both partners’ competitive strategy are critically influenced by their accumulated resources, and that, therefore, the competitive position of the partnership is defined by a bundle of unique resources and relationships, rather than by the competitive environment (Das and Teng, 2000).

A resource-based-view analysis of collaboration – The rest of this section is an analysis of the four components of the resource-based view of the university-industry partnership practice – rationale, formation, structure and performance. This analysis is based on the marketing logic and case evidence presented in the narrative instalments of this dissertation. The theory and evidence of the case narratives rest on relationship marketing, which is marketing based on interaction within networks of relationships (Gummesson, 2004) and directed towards establishing, developing and maintaining successful relational exchanges (Hunt and Morgan, 1994). Here, the stance is taken that the importance of relationships in building and sustaining competitive advantage is evidenced in the emergence of relationship marketing; the importance to strategically exploit and apply organizational resources is evidenced in the resource-based view. Hunt (1997) has argued that in relationship marketing the view of resources is expanded to include all identities that have an enabling capacity, including such intangible identities as relationships with stakeholders, employees and competitors. Hunt has further argued that for grounding relationship marketing, firm resources need not be owned by the firm, only available to it. In the resource view, such relationships that contribute to the superior performance of the organization constitute relational resources (Hunt, 1997). Marketing as a boundary-spanning activity becomes then the key to understanding the relationship between the market (and market orientation as the organizational response to stakeholder needs) and the organization’s resources and capabilities. Furthermore, and according to Srivastava et al. (2001), the common emphasis of both theories – the resource view and relationship marketing – upon the leveraging of resources to create and sustain value for the organization’s stakeholders proffers the opportunity for theoretical synthesis. However, this viewpoint has received surprisingly little attention19 (ibid).

19 There are a few notable exceptions to this as mentioned by Srivastava et al. (2001) and others cited in Srivastava et al. (2001) and recently in Achrol and Kotler (2012), who mentioned the contributions by Hunt (2002) and Vargo and Lusch (2004).
To make explicit the link between the resource-based view of the university-industry partnership and the relationship-marketing theoretical approach of the case narratives, the crucial elements and common issues are presented in table form (Table 2). The presentation is adapted from Srivastava et al. (2001, p. 780-781) and transformed to serve the resource-based view of the university-industry partnership under investigation. The table establishes the link to the correlating relationship marketing issues and constructs of the case narratives of this dissertation (see Papers I, II, and III). It supplies an overview of how the partnership-specific resources are leveraged via interaction-based, market-facing processes to deliver value and competitive advantage. Value and competitive advantage may then result in enhanced organizational performance and be reinvested in superior relational resources that can nurture market-based assets and capabilities in the future (Srivastava et al., 2001).

Table 2: An overview of the resource-based issues and constructs of the university-industry collaborative partnership and their correlative links to the interaction-based approach introduced for investigation in Papers I, II and III.

<table>
<thead>
<tr>
<th>Resource-based issue</th>
<th>Resource-based view</th>
<th>Relationship marketing process view</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Inside-out” view or the university-industry relationship per se</td>
<td>University/corporate stakeholder interaction</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td><strong>Obtaining and retaining resources for value maximization:</strong> accessing new student talent pools and retaining knowledge, talent and skills; <strong>Strategic calculus and social advantages:</strong> capitalizing on combining social networks and resource dependencies resulting in enhanced visibility, reputation and competitiveness in the international student talent marketplace.</td>
<td><strong>Co-creating value for stakeholder satisfaction:</strong> reducing uncertainty in the international marketplace for student talent and skills; optimizing stakeholder value and value-in-context through value capture from global student talent mobility and recruitment programmes.</td>
</tr>
<tr>
<td><strong>Formation</strong></td>
<td><strong>Strategic needs for resources and social opportunities to create resources:</strong> perceived competition and perceived need for global student talent, skills and human resources; need to respond; <strong>Need for critical resources with specific attributes (valuable, rare, inimitable, non-substitutable):</strong> university/company-specific social network knowledge and competences, learning by interaction, building absorptive capacity for enhanced value capture from global student talent recruitment; co-created value-added attraction and retention solutions through pooling of valuable resources and exploitation of these in collaboration.</td>
<td><strong>Need for reciprocal and efficient value-added exchange processes:</strong> service interaction in the international activities of higher education, knowledge sharing and capital transfer routines; <strong>Boundary-spanning competences:</strong> service encounters, value is co-created through optimization of service processes.</td>
</tr>
</tbody>
</table>
6.2 Partnership rationale: obtaining and retaining of resources

The resource-based rationale emphasizes value maximization of the university-industry partnership through the pooling and utilization of valuable resources and competence (Child and Faulkner, 1998; Das and Teng, 2000). Both the university and business seek competitive advantage in an increasingly cutthroat environment. Gaining access to and maintaining partnering opportunities require efforts that are not without costs. Universities and business, however, form collaborative partnerships because the payoff for collaboration exceeds that of proceeding alone (Eisenhardt and Schoonhoven, 1998). Behind this argument are strategic and social explaining factors. The former are related to the need to acquire international talent and skills, mutual knowledge and financial resources; the latter to opportunities for creating awareness, reputation, mutual knowledge, trust and commitment (ibid).

Set in the context of this investigation, the antecedents to university-industry partnership formation are mainly the pressures of globalization, costs of internationalization, increased perceived competition in the international marketplace for student talent and skills, and perceived environmental uncertainty. The driver of university-industry partnership formation is primarily the wish to respond to the new demands brought on by an increased perceived need for human talent and skills (cf. Eisenhardt and Schoonhoven, 1998; Das and Teng, 2000). University-industry
partnering may contribute to the enhanced visibility and positive reputation of the university (Eisenhardt and Schoonhoven, 1998), as well as to increased absorptive capacity of the social and physical surroundings of the collaborative partnership in terms of greater rates of human capital retention. Das and Teng (2000) distinguish between partnering to obtain resources and partnering to retain resources. Whereas the former refers to universities and business being concerned with creating competitive advantage in the immediate present, the latter refers to a focus on gaining and sustaining competitive advantage in future.

The valuable resources owned by the partnership actors are inputs to the university-industry partnership. They are imperfectly mobile, imperfectly imitable and imperfectly substitutable20, and thus not only are essential for sustained resource heterogeneity21, but also are instrumental in the formation of collaborative practices (Das and Teng, 2000).

Grant (1996) distinguishes between easily transferable, or codifiable, explicit knowledge and not easily transferable, or non-codifiable, tacit knowledge. The issue of the transferability of knowledge – which is the most strategically important of all the resources – extends the resource-based view of the partnership into a more specific, knowledge-based view of the partnership (cf. ibid). Knowledge that is not codifiable is a tacit resource of the university-industry partnership. This is the knowledge embedded in people, and the knowledge accessed and retained through attraction and retention of international student talent. It may also be tacit knowledge associated, for instance, with social and professional network interaction such as (international) etiquette, politeness and other behaviour-related social norms.

However, “resources are not, they become; they are not static but expand and contract in response to human actions” (Zimmerman, 1951; cited in Chandler and Vargo, 2011, p. 37). The university-industry collaborative partnership should then be understood as a unique bundle of resources that, when strategically combined, may be converted into capabilities. It is, hence, in the collaborative practice that resources are transformed into something that is valuable for the stakeholders. This value is maximized through the optimal deployment of available resources and capabilities (cf. Grant, 1996; Möller, 2006).

6.3 Partnership structure: accumulating relationship capital

Collaborative learning supports the creation and accumulation of relationship capital; i.e., the capital resting on the trust and reciprocity of knowledge exchange. Relationship

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20 The valuable resources are related to the complex resource systems of academic and industrial inter-organizational networks as well as to the partnership-specific knowledge, knowledge processes and core competences.

capital has an important mediating role in the relationship between the resource characteristics of the partnership and the performance of the partnership (Sarkar et al., 2001); that is, between the resources available in the collaborative practice and the co-creation of value out of knowledge transfer through attraction and retention of international student talent.

In all alliances, partners bring to the table not only valuable resources but also different objectives and different modes of absorbing relational benefits (Das and Teng, 2001; Carayannis et al., 2000). Although the primary objective of both actors in the university-industry collaboration is the same – acquiring valuable, unique and inimitable resource synergy to create competitive advantages that can be sustained for a period of time (Harrison et al., 2001) – the very nature of the final objectives of the two organizations is dissimilar (Elmuti et al., 2005). Effective governance mechanisms are hence needed to overcome the differences between the partners and to be able to preserve the balance between the costs of partnering and the perceived collaboration-specific benefits, rents\textsuperscript{22} and value gained from the partnership. Such mechanisms should support the continuous knowledge exchange, learning and process restructuring in the collaboration (ibid).

There are property-based resources (such as financial capital, physical and human resources) and knowledge-based resources (all intangible and imitable resources, explicit and tacit, know-how and skills (Das and Teng, 2000). Srivastava et al. (2001) have devoted considerable effort to emphasizing the relational aspect of alliance resources. The authors distinguished between relational market-based assets (which are intangible, not owned, and based on trust and reputation) and intellectual market-based assets (which are all types of organization-owned knowledge).

Knowledge as a resource, however, has the distinctive characteristic that once it is exchanged between the actors of a collaborative practice, it will become a partnership-specific shared resource. This is unlike financial capital resources, which can only be transferred and not shared (Carayannis et al., 2000). It follows that on the one hand, repeated sharing of knowledge at the university-industry interface increases the interdependence between the partners, but, on the other hand, it contributes to the social connectedness between the partners (Santoro and Bierly, 2006).

The university-industry partnership practice serves then as a vehicle for accelerated organizational learning (Carayannis et al., 2000). Organizational learning contributes to the development of trust. Trust, in turn, is a presumed element in the sharing of explicit and tacit knowledge within the partnership, but trust is more important in facilitating learning from tacit knowledge (Santoro and Bierly, 2006).

\textsuperscript{22} Dyer and Singh (1998) define a relational rent as a supernormal profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partners.
The resource-based view recognizes that “the value of the firm's resources and capabilities is determined by the market context within which the firm is operating” (Barney, 2001, p. 645). Even so, the internal character of the resource-based view tends to overlook the relational perspective of collaboration. It therefore does not sufficiently offer the structural framework needed to address the importance of stakeholder relationships and the impact of relationship-specific, market-based assets and processes in the transformation of resources and capabilities into stakeholder value (Srivastava et al., 2001; Möller, 2006). Nor does it adequately recognize the interconnectedness between the (dis)advantages of the individual organization and the (dis)advantages of the network of relationships in which the organization is embedded (Dyer and Singh, 1998).

As in university-industry collaboration, the factors and functions impacting value creation have become more complex and intertwined. The collaborative practice should, therefore, rather be viewed as a continuous process of learning together over time through participation, interaction and dialogue built on trust (Ballantyne, 2004; Ballantyne and Varey, 2006). Through learning, the actors participating in the collaboration will be able to develop new collaborative and communicative competences (Möller, 2006).

### 6.4 Partnership performance: resource investment and alignment; learning

Partner resource alignment is, broadly defined, the pattern whereby the resources of partnering organizations are matched and integrated in collaborative practice (cf. Das and Teng, 2000, p. 48). Collaboration is successful when the partnering organizations are capable of generating common rents and value through effective exploitation, aggregation and application of resources and capabilities and through knowledge-sharing and learning (Dyer and Singh, 1998).

With reference to Grant’s (1996, p. 110) delineation of the resource-based view of the firm, one might however argue that this view of the university-industry partnership is, in fact, less a theory of partnership structure and behaviour and more a useful pathway to identifying valuable resources post hoc through empirical work (Srivastava et al., 2001). That means that, based on empirical evidence, it might be possible to predict why some collaborative partnerships between universities and business are able to establish positions of competitive advantage and gain collaboration-specific rents. Such relational rents are a function of the partners’ absorptive capacity, which is “an iterative process of exchange”, a systematic identification of valuable know-how and subsequent transfer of this know-how across organizational boundaries (Dyer and Singh, 1998, p. 666). However, it must also be noted that advantage is a relative concept and only meaningful when compared to another entity or set of entities, when placed in the marketplace and when specified in terms of differentiation or lowered cost, or both (Fahy, 2000, p. 96).
What then can a resource-based view of the university-industry collaborative partnership offer? To find an answer to this question sufficiently able to grasp the diversity of the domain where universities and business collaborate, one should refer back to early resource-based work by Wernerfelt (1984, p. 172): “Looking at firms in terms of their resources leads to different immediate insights than the traditional product perspective. In particular, diversified firms are seen in a new light”. It is therefore suggested here that by looking at the university-industry collaborative partnerships in terms of their resources and by “bringing the focus onto the resources themselves as the fundamental units of value generation” (Mathews, 2003, p. 120), we may gain different insights and new opportunities for differentiation and value creation around the practice of global student talent attraction and retention.

The resource-based view is a perspective concerned with partnership investment in resources and with all the processes of learning associated with this, rather than with the questions of partnership productivity and accountability which are prevalent in so many of the contributions to the domain of university-industry relationships. We may view the university-industry collaborative partnership as a vehicle through which university and business may “sell an image” – that is, an image built upon collective strengths and capabilities and social networks. The partnership can also be seen as a way in which universities and business may compete in the crowded marketplace for international student talent, offering (otherwise difficult to market) unique and inimitable resources, such as providing opportunities for investment in education and career (cf. Wernerfelt, 1984, p. 175). Furthermore, we may view the university-industry collaborative partnership as a vehicle for accelerated learning through partnering, as the partnership has the capacity to mobilize and aggregate resources and the capacity to adapt resources as market circumstances change (cf. Mathews, 2003).

There remain, however, two important questions to be answered. Firstly, in the above discussion, what the key dimensions of university-industry partnership value might be has not yet been explicitly considered. Whereas this question was asked by Srivastava et al. (2001) from a customer perspective and in an attempt to integrate the resource-based view and marketing, the partnership per se approach is adopted here. This means that the unit for evaluation is the collaborative practice itself (Das and Teng, 2000), and the value of partnering is viewed as the degree to which the practice of partnering has provided opportunities for value creation and value capturing such that university-industry combined resources may “lead to high returns over long periods of time” (Wernerfelt, 1984, p. 172). Secondly, having discussed what the resource-based view of the university-industry collaborative partnership can offer us, I find there is a need to contemplate what the resource-based view of the university-industry collaborative partnership has not offered us. I shall come back to the latter issue at the end of this section in a brief discussion about some missing perspectives of the resource-based view. The discussion should also serve to make an introduction to the seventh section of this introduction to the dissertation.
It is clear that within university-industry collaboration, partnerships may provide both actors with two kinds of benefits. The literature has introduced these as common or shared benefits, and private benefits (Khanna et al., 1998; Sarkar et al., 2001; Das and Teng, 2001). The former accrue when shared value is created as an outcome of collaborative interaction. Shared benefits may be used to reinvest into collaborative resources to enhance the strategic performance of the partnership (Sarkar et al., 2001). The latter (private benefits) accrue when, through collaborative interaction, value is created that falls outside the partnership domain but within the operational domain of one of the partner organizations. Private benefits also accrue when skills or knowledge gained from the partner are applied to the university or business operations that are not directly related to the university-industry collaborative practice; these resource-sharing benefits arise from combining resource dependency and network perspectives.

Srivastava et al. (2001) have introduced four core dimensions of value – attributes, experiential benefits, attitudes and value networks. These attributes are derived from marketing research but they support the theoretical and empirical integration of the resource-based view and marketing well. These core dimensions of value may be easily adopted to the context of the university-industry collaboration.

A short description of the topic is given below, followed by an introduction to and brief discussion of a fifth dimension of value, that of value-in-context. Attributes refer to those technical (product/programme outcomes) and functional (service quality and value-adding processes) attributes\(^{23}\) on which rest the accumulation of capabilities and resources in the higher education system.

**Experiential benefits** include intangible factors such as perceived engagement, commitment and trust, which are the underlying values of reciprocity and perceived reciprocity of exchange (Srivastava et al., 2001; Molm et al., 2007). The notion also encompasses benefits accruing from learning, and more specifically from practice learning through participation, engagement and investment in learning, emphasizing thus the relational aspects of learning within and beyond the practice of collaboration (Wenger, 1998; Handley et al., 2006). The dynamic university-industry operational environment is highly dependent on development and accumulation of human knowledge resources, and extremely dependent on the ability to attract and mobilize individual talent and develop human resources into human capital and value for stakeholders. In such an environment, knowledge resources have no intrinsic value per se, but they are a potential source of value creation and competitive advantage (Löwendahl et al., 2001). Value creation involves a set of processes. The first of these is the structuring and bundling of resources to build capabilities. The second is the mobilizing of resources to leverage talent, resources and capabilities; to provide value to the stakeholders of the university-industry collaboration; to gain human capital and competitive advantage; and to create human capital and economic wealth (Sirmon et al.,

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\(^{23}\) I refer to Grönroos (2001) where he distinguishes between the technical or outcome quality of the process and the functional or process quality dimension.
Over time, and based in part upon their assessment of attributes and benefits, actors in the university-industry collaboration as well as stakeholders outside of the collaboration develop attitudes toward and holistic perceptions of the collaborative partnership and its offerings. This may bring the university-industry partnership symbolic benefits such as brand image and perceived exclusiveness of expertise (Srivastava et al., 2001).

As Srivastava et al. have stated (p. 784), “the ‘best’ products do not necessarily win. The best-networked ones usually do”. Although this view strongly rests upon marketing thought, it brings out the implications of organizations and institutions being placed in positions of mutual dependence in a global economy (Mathews, 2003; Srivastava et al., 2001). In this kind of mutual dependence, each actor retains the legacy of its origins but is socialized into a network with common values, norms and vocabulary (Carayannis et al., 2000). This again emphasizes the increased need for organizations, during capacity building, to engage in resource-sharing and resource-extending behaviour through network dynamics. As a result, they will be better able to deal with changes and to build competitive capacities (ibid).

Value in context – To build an important link between the internal, resource-based value dimensions – which are valuable per se – and the external, network-based value dimensions generated in and by the social networks in which the partnership operates, it is useful to add a fifth dimension of the value of university-industry collaboration in the creation of human capital; this is the dimension of value-in-context.

Value-in-context refers to social construction theories in accordance with which all human activities, including value co-creation, take place within social systems. As such, value co-creation and value itself extend beyond the individual and subjective setting and can, indeed, only be understood as part of and as shaped by the collective social context (Edvardsson et al., 2010). In this connection, the value of the actions associated with mobilizing, attracting, training and retaining international student talent must also be understood and contemplated within a collective social context. In such a context, the meaning, norms, ethics and values constructed around the activity of mobilizing, attracting, training and retaining international student talent are embedded in a wider social and market-mediated system. Within this system, the university-industry collaborative partnership, as a provider of critical resources, takes its own network position; and has its own role, impact and value.

6.5 Missing perspectives of the resource-based view

Since the introduction of the resource-based view two decades ago, several arguments have been raised against the many weaknesses and different constraints inherent in the theory. Recently, Kraaijenbrink et al. (2010) have provided us with an insightful review...
of the critiques of the theory. The authors assess the critiques thus far offered in the literature and argue that these fall into eight categories. Of these, many are contributions to the academic debate of whether or not the resource-based view has proven or can prove to stand as a viable theory of competitive advantage. Some of the critiques, however, concern the very nature and explanation of the fundamental concepts of the resource-based view — resource, value and sustained competitive advantage (Kraaijenbrink et al., 2010).

It is not my intention here to point out every weak link in the resource-based view with regard to the potential of the university-industry partnership for creating and capturing value and building competitive advantage that may then result in human capital development. The above discussion has already integrated some considerations on perspectives missing in the resource-based view and in the complementary view offered from marketing quarters (Srivastava, 2001). These considerations, however, stand alone in the context, necessitating a brief assessment of what the resource-based view does not address with relation to the potential value of the university-industry linkage.

There are six major considerations and limitations put forward in the literature and relevant to this study. The resource-based view has been criticized 1) for being based on circular reasoning; 2) for lacking a theory of capability deployment and therefore for being difficult to implement (Priem and Butler, 2001b; Kraaijenbrink et al., 2010); 3) for a general vagueness in its delineation of competitive advantage (Priem and Butler, 2001a,b; Srivastava et al., 2001; Kraaijenbrink et al., 2010); 4) for placing primary emphasis on economic as opposed to social or political exchanges and for therefore ignoring the issue of connections and interaction between the resources (of the organization or alliance) and the environment (Fahy, 2000; Priem and Butler, 2001b); 5) for not addressing the issue of how resources can develop and change over time (Kraaijenbrink et al., 2010); and 6) for neglecting the dynamic role played by individuals and social interaction (within organizations or practice communities) (Kraaijenbrink et al., 2010).

Based on these criticisms, three basic lines of thought can be presented concerning the perspectives the resource-based view of the university-industry collaborative partnership does not address. Firstly, the resource-based view does not address the wider rationale for the importance of studying the phenomenon of fostering collaborative processes for leveraged international knowledge transfer through international recruitment and global student talent supply. This rationale is left aside in the resource-based view, as it takes us beyond organizations and institutions into social relationships, networks and the partnering work itself.

Secondly, the resource-based view does not address the relationships that act as a link between the micro, meso and macro levels of the analysis; nor does it address those

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24 The resource-based view statement "if a resource is valuable and rare, then it can be a source of competitive advantage" is necessarily true by logic and thus tautological, if "valuable" and "competitive advantage" are defined in the same terms (Priem and Butler, 2001b, p. 58).
relationships impacting the realization of the potential of human capital and conditioning the structures and channels of distribution (Schuller, 2001; Wassmer and Dussauge, 2011). Although the resource-based view recognizes that value is determined externally, the resource-based view itself does not provide the tools to determine such value (Priem and Butler, 2001a; 2001b). Discovery and creation of value would indeed involve different levels and modes of internal and external social influence and power, distribution channels and mechanisms (Coff, 1999, cited in Kraaijenbrink, 2010). The value of the partnership’s resources is, hence, to be understood as being distinct from the value created in multiple points of interaction in the collaborative practice, however determined by the market and socially recognized in the market (Kraaijenbrink et al., 2010).

Finally, this view does not address the long-term perspective of value creation for international higher education and human capital development. Human capital accumulation is essentially a linear process; investment in resources and capabilities is followed by return on investment. Human capital, however, remains limited in how it can be valorised if the process – awareness of opportunity, achievement while in education and subsequent valorization of qualifications – is assessed in isolation from its social context; that is, in isolation from the networks to which people belong (Schuller, 2007, p. 18). Human capital valorization is a process that needs to be viewed over time, in flux and in interaction with other elements of analysis or policy (ibid, p. 13).

7 Through the lens of social capital

Whatever concepts are employed, it is difficult to reach definitive conclusions about the value of the university-industry linkage within the international higher education context as discussed in this dissertation. The reason for that is obvious: market dynamics and policy responses make the phenomenon subject to rapid and continuous change over time. It is clear that these rapid changes also involve institutional and organizational structures, inter-organizational and international competitiveness (here the ability to access global student talent pools and attract student talent); they involve the very nature of university-industry collaborative interaction for building competitive capacity in attracting and retaining international student talent. In such a complex evolving system, there is indeed a need to understand and explain the means and processes that underlie and form the ties between actors, roles and reality in a higher education context. This refers to ties between university, society and its stakeholders of higher education; the university-industry collaborative partnership bonds; and the dynamic roles of all players in the reality of a fluctuating environment.
7.1 **Offering new insights on the value of the university-industry linkage**

The actors’ ability to detect opportunities for mutually beneficial collective action and to act accordingly lies in the structure of the actors’ social relations. Coleman (1988, p. S101) explains that social structure is the source of social capital and that “the function identified by the concept of ‘social capital’ is the value of these aspects of social structure to actors as resources that they can use to achieve their interests”. Social capital is hence the resource available to actors as a function of their location in the structure of their social relations (Adler and Kwon, 2002, p. 18). Based on this idea, we would indeed need to understand that if we neglect social capital in the spatial and temporal processes of human decision-making or in the interaction of international higher education development and practice, we then neglect the impact of social structure on relationships contributing to value co-creation in international higher education.

The rest of this section draws from the literature on social capital. It briefly addresses some serious criticism that has questioned the value of the concept of social capital. Finally, it puts forward some considerations of whether, how and when issues of social capital need to be incorporated in development thought and practice specifically relating to building collaborative capacity to attract and retain global student talent.

**Social capital** – Social network theory considers that society is constituted of networks, in which dyads and single relationships are the building blocks of a network and are therefore conditioned by that network. Social capital, a concept within social network theory, is found to explain group behaviour (Coleman, 1988), the social texture of civil society (Putnam, 1993a, 1993b, 2000), and the different forms of ties that facilitate obtaining resources (Lin, 2001). Most studies of social capital distinguish between bonding (closely knit groups of people), bridging (different groups of people) and linking (individuals and groups of people in different social positions) forms of social capital (cf. Putnam, 2000). Understanding of the different forms of social capital rests on Mark Granovetter’s (1973) distinction between weak and strong social ties. Whereas the latter refer to closely knit groups of friends, the former refer to loosely knit people from different social backgrounds and environments and play a role in linking together members of different social groups to integrate them into a larger social setting.

What exactly is social capital? Social capital is one form of human-made capital\(^{25}\). It concerns the importance of social relationships and the values of these for achieving

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\(^{25}\) Ostrom (2000) distinguishes between physical, human and social capital, but characterizes all as forms of human-made capital. “Physical capital” denotes the material resources needed and used to develop infrastructure for economic growth. “Human capital” is defined by the OECD (2001, p. 16) as “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being”. In addition to these, the notion of “cultural capital” is identified with Pierre Bourdieu (1986), and refers to the credentials and cultural assets embodied in individuals and their families (Schuller, 2001).
mutual goals (Schuller et al., 2000, p. 1). Beyond this basic consensus, however, there exists considerable disagreement and confusion (and accordingly various context-dependent dimensions and definitions, conceptualizations and operationalizations) concerning the specific aspects of social relations that create social capital (Adler and Kwon, 2002). Social capital may be best described broadly as the information, trust, and norms of reciprocity inherent in one's social networks (Woolcock, 1998, p, 153). Or in other words, at the heart of social capital is the ability of people to form groups cooperating on joint projects (Paldam, 2000, p. 632).

Within the context of this dissertation, social capital is proposed to be understood in two ways. First, it comprises the network and the resources inherent in that network (cf. Nahapiet and Ghoshal, 1998) which facilitate (or hinder) knowledge flow. Second, it represents individual as well as collective behaviour and action for leveraged university-industry interaction processes in mobilizing and capturing the flow of global knowledge, trained skills and human resources (through attraction, training and retention of international student talent).

Popularity of the theory – Social capital theory has recently gained considerable popularity and scholarly importance. The notion of social capital was first enthusiastically adopted alongside the publication of Robert Putnam’s work *Making Democracy Work* in 1993. Since then, it has been popularized and promoted by academic disciplines, organizations, international agencies such as the World Bank and OECD, and by government policies alike as the “missing link” between responsible governance and economic growth for wealth creation for societies, communities and individuals. The popularity of the notion may be explained by the fluidity of the term, which renders social capital its “wonderfully elastic” meaning (Lappe and Du Bois, 1997, cited in Adler and Kwon, 2002, p. 18), and makes the concept applicable in so many different ways and contexts (Schuller, 2000).

The mixed bag of social capital – Social capital is a concept that is developing well beyond the academic domain; it has been increasingly used in policy debate and journalism (Paldam, 2000) and therefore runs the risk that it could be abused politically and analytically (Schuller et al., 2000). As a term or metaphor with powerful political and economic connotations, it may evoke “a handy resonance with trends in political thought”, therefore justifying endeavours “to reconcile openness in economic structures with social values” (Schuller, 2000, p. 29). It may thus be the policy response needed to soften the “hard old capitais reflecting material values” with new “soft post material values” (Paldam, 2000, p. 634). As a policy concept, therefore, social capital may or already has created confusion. As Paldam (2000, p. 634) noticed, “It appears that many use social capital as a loosely defined plus-word. Whatever it is, it is certainly benign!”

Criticism of social capital theory – The term “social capital” has been criticized for “merely put[ting] old conceptual and theoretical wine in a new terminological bottle” (p. 160). Some critics argue that the term is drawn from the predominant economic model to overcome the deficits of this model but thereby fails to reduce the distance
between the economic and other perspectives as it only dissolves the latter into the former (Smith and Kulyntych, 2002). Social capital has also been criticized for its logical circularity (Schuller et al., 2000) because it implies circular reasoning in that social networking and social capital breed one another in a virtuous circle, thereby enhancing opportunities for repeated future collaboration, which in turn increases the available stock of social capital. Social capital has also been charged with posing problems for rigorous measurement of the multiple dimensions of social capital (involving the sources, facilitating mechanisms and outcomes of social capital; distinctions proposed by Ruuskanen (2001), see Figure 2), and with opening up channels for authoritarian forms of normative control (Schuller et al., 2000).

**Merits of social capital** – Like all human-made capital, social capital involves creating new opportunities as well as exercising restraints. It involves a risk that the investment might fail, and the possibility to use capital to produce harms rather than benefits (Ostrom, 2000, p. 174). It is not the purpose of this section to contribute to current understanding of social capital by studying the specific forms and the use of social capital or by inquiring into the benefits of social capital (whereby social capital would then be viewed as a resource to be optimized or maximized for university-industry capacity building purposes). Rather, to serve the task of this dissertation, this section uses the concept of social capital in its presumably simplest but most powerful feature; i.e., as a heuristic instrument to highlight and point out neglected relationships in the internationalising but heavily national and context-dependent dimensions of higher education development thought and action. As such, social capital can offer us insights that complement and go beyond higher education policy goals, practice and measurement, and beyond the conventional understanding of accountability; i.e., that what is important also has a visible and thus measurable economic performance. This conventional understanding may prevent us from seeing, asking and questioning the hidden, and from seeing the long-term value of emerging phenomena, such as university-industry collaborative action for enhanced global student supply opportunities. Social capital could provide a counterbalance to the threat of de-contextualization in policy concepts and governing instruments underlying action and collaboration for enhanced value capture from international higher education developments (cf. Schuller, 2000). More specifically, the concept of social capital is introduced here primarily as a heuristic device to support reflection on the question “Where are the efforts to encourage ‘social capital formation’?” (Putnam, 1993b; cited in Woolcock, 1998, p. 154). In that capacity, social capital facilitates constructive dialogue (Woolcock, 2010) about strategies, measures and conditions under which this social capital would help effective, responsible and context-driven university-industry collaboration for enhanced potential and realized absorptive capacity at the different

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26 Higher education policy and instruments are still predominantly shaped at a national level and tend to reinforce the linear model way of thinking e.g., investment is followed by return, whereby the risk arises that dynamics and effects at the micro- and meso-level are neglected (Enders, 2004; Schuller, 2001).

27 Absorptive capacity is a learning capability (Lane et al., 2006). It is the ability to identify and exploit the external knowledge necessary for competitive advantage gained from people, institutions and firms (Cohen and Levinthal, 1990; Nooteboom, 2000). As this dissertation is concerned with potential and
societal levels. Nevertheless, it has also been argued, that as umbrella concepts, the terms “social resources” or “social capacity” would have as much heuristic value as the term social capital “without having broad ideological implications, obscuring key analytic distinctions, and extending illusory promises of theoretical parsimony with the trinity of financial/human/social capital” (Smith and Kulynych, 2002, p. 152). I refer in this connection to the above reflection in Section 6 on the use of metaphors not only as a way of making understanding explicit but also as a way of directing understanding of and reflection on an issue.

7.2 Linking together the micro, meso and macro levels

Many studies on university-industry collaboration have focused on examining the role of “the others” in opportunity and commitment development. Unlike these, this section is an endeavour to build an argument for the importance of examining the role and impact of relationships between the different actors, in the larger context of university-industry collaboration for capacity building and enhanced value capture from international higher education developments. To accomplish this, an attempt is first needed to capture the conceptual and context-specific elements of social capital into a framework that should help us to identify the complex relationships underlying opportunities for social capital formation.

Based on a transparent conceptualization of social capital as proposed by Ruuskanen (2001), Figure 2 presents a framework structured around the understanding that the study of social capital involves three dimensions: the sources of social capital, the facilitating mechanisms of social capital and the outcomes of social capital28. The framework demonstrates that social capital crosses several levels of analysis.

The sources of social capital are outlined in three highly interdependent levels: the micro level, or individual ties within the practice/community; the meso level, or the ties between practices/communities; and the macro level, or societal level.

The mechanisms of social capital – trust and the underlying dynamics of communicative and learning capacity – facilitate the flow of information, implying values of reciprocity and engendering learning through interaction for consensus building and absorptive

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28 Compare for instance with Uphoff (2000, p. 217); “Social capital needs to be addressed in terms of (a) what its constituent elements are, (b) what the connections are that exist among these, and (c) what consequences can be attributed to these elements and their interaction.”
capacity building (Nooteboom, 2000). As Adler and Kwon have pointed out (2002, p. 26), the link between trust and social capital has puzzled researchers. This is because trust has been defined in multiple ways: as being synonymous with social capital (Fukuyama, 1995, 1997), as a source of social capital (Putnam, 1993a), as a form of social capital (Coleman, 1988) or as a collective asset resulting from social capital (Lin, 1999a, 1999b). In the framework outlined here, it is suggested that trust as a mechanism in social capital formation may be best understood as the manifestation of the relational dimension of social interaction (Tsai and Ghoshal, 1998). It may appear that the intrinsic and instrumental values of trust are overlapping and therefore are difficult to distinguish, but that precisely would be one of the key characteristics of social capital (Schuller, 2000).

Ruuskanen (2001) distinguishes between two types of social capital outcomes in the form of benefits. What he calls the “consumption” benefits produce instant gratification based on trust and communication; “capital” benefits can be used as resources to further develop the available stock of social capital.

The framework indicates that whereas both the sources and the outcomes of social capital are highly determined by context, it is believed that the mechanisms by which social capital is generated and maintained – those mechanisms that help produce instant benefits, reinforce collective action and network collaboration, and, in the end, create opportunities for societal well-being – work in a similar way across contexts (Ruuskanen, 2001).

Figure 2: A framework for considering the vertical and horizontal interrelationships between the sources, facilitating mechanisms and outcomes of social capital on the micro, meso and macro levels (adapted from Ruuskanen, 2001)

<table>
<thead>
<tr>
<th>Sources of social capital</th>
<th>Mechanisms of social capital</th>
<th>Outcomes of social capital</th>
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<tbody>
<tr>
<td><strong>Macro level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between state-society and macro-level institutions</td>
<td>Trust in others, institutions and government</td>
<td>&quot;Consumption&quot; benefits Information and control benefits Access to knowledge and global talent pools</td>
</tr>
<tr>
<td>State, society and governance relationships</td>
<td>Communicative and learning capacity: Exchange of information Values of reciprocity</td>
<td>&quot;Capital&quot; benefits International flow of human capital Opportunities for economic growth</td>
</tr>
<tr>
<td><strong>Meso level</strong></td>
<td></td>
<td></td>
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<tr>
<td>Between communities and practices</td>
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<tr>
<td>Academic and business national/international relationships</td>
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<td><strong>Micro level</strong></td>
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<td>Within local community and practice</td>
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<td>Individual and group national/international relationships</td>
<td>Strong and weak boundary-spanning ties</td>
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</table>

Ruuskanen (2001) distinguishes between two types of social capital outcomes in the form of benefits. What he calls the “consumption” benefits produce instant gratification based on trust and communication; “capital” benefits can be used as resources to further develop the available stock of social capital.

The framework indicates that whereas both the sources and the outcomes of social capital are highly determined by context, it is believed that the mechanisms by which social capital is generated and maintained – those mechanisms that help produce instant benefits, reinforce collective action and network collaboration, and, in the end, create opportunities for societal well-being – work in a similar way across contexts (Ruuskanen, 2001).

Figure 2: A framework for considering the vertical and horizontal interrelationships between the sources, facilitating mechanisms and outcomes of social capital on the micro, meso and macro levels (adapted from Ruuskanen, 2001)
7.3 A view beyond institutions and organizations

Social capital and learning processes – Paldam (2000) has noted that social capital, in fact, comprises two learning processes. One process is about individuals learning to adjust their own level of social capital to the common level. The other process is the adjustment process of the level over time. Learning includes an appreciation of the ways in which action may be coordinated (individual adjustment), and it includes the specific meanings and understandings negotiated in the course of social interaction (adjustment over time) (Nahapet and Ghoshal, 1998, p. 248).

In all learning processes, human experience thus has a central role because learning is embedded in shared experience (Kolb, 1984, p. 26-27). Human experience is additionally embodied in people and embedded in a given socio-economic context in which people learn to interact (for mutual benefit) by using their social relations. Collaboration for collective action is hence a life-world in which people create meaning of that world through a continuous dialectical process of learning (see Papers IV and V). Learning by social interaction can thus be an important source of human capital acquisition (Nooteboom, 2000). As Uphoff (2000, p. 217) has contended, we need to take much better account of the human dimensions of development; therefore, we need to focus on components, relationships and results that can be evaluated in real-world development experience. One way to understand social capital would then be to view social capital formation over time as the development of social relationships that are shaped through the human experience of participation in collective action.

It is, hence, important to recognize that the benefits and long-term economic outcomes of social capital are not the only components of the development equation of social capital (Woolcock, 1998). Long-term benefits and economic growth (if and when they occur) are the results of the combination of different but complementary types of social relations. Therefore, it is primarily the sources of social capital that must be evaluated from a timescale perspective because the relative importance of each part of their combinations will shift over time (ibid).

When concentrating in this way on the sources of social capital, it is useful to distinguish two major areas for consideration (as discussed at length below), which should generate reflection about the efforts needed to support the processes that will generate (and not destroy) social capital. Such efforts involve the development and implementation of networking behaviour, patterns of interactions and exchanges, and network locations of various actors and their resources (Lin, 1999a, p. 46).

The first area for consideration concerns the relationship between social capital, the various levels of communicative and learning capacity and the critical role of these in creating trust and reciprocity to achieve the benefits of collective action. Behind the statement “Without a capacity to ‘give’ in a responsive and accountable manner while simultaneously cultivating with ‘receivers’ a more just, participatory, and equitable social environment, development initiatives will struggle to achieve their goals”
Through the lens of social capital

(Woolcock, 1998, p. 186), there is reasoning implying that reciprocity in action is important. If, for instance, in the given network of horizontal and vertical social relations (as outlined in Figure 2), actor A perceives that actor B cannot be trusted, not only will there not be successful interaction between actor A and B, but also this might hamper the optimization of the entire social network structure towards efficiency and effectiveness. If in the given network there exists a relationship between actor A and actor B, then only if actors A and B reciprocate in interaction may both actors join efforts to achieve goals that could not be easily attained if they were to act alone. But if both actors A and B were bonded by community membership in a valuable group of actors engaged in collective action (in the context of this dissertation, to respond to the need to gain competitive advantage in the international student talent and skills marketplace), the conditions that are relevant for social capital to aggregate (active commitment to networking, participation, and community social support) could be more easily met.

Paldam (2000) has specified that there are three reasons for individuals, groups or communities to cooperate when successful cooperation is an advantage. Group members cooperate for individual reasons, they cooperate due to pressure within the group, or a third party outside the group enforces the cooperation precisely to help build social capital.

As Ostrom (2000, p. 182) has suggested, macro-scale governmental institutions may strongly affect the level and type of social capital available to individuals for pursuing long-term development efforts. They may do so by facilitating (or indeed hampering) the creation of social capital by individuals or communities seeking to collaborate for collective action. Ostrom further argues that the creation of social capital is facilitated when considerable space for self-organization is authorized outside of the realm of required governmental action. This argument supports the viewpoint that greater support needs to be provided to innovative efforts to develop capacity for collective action. Such efforts would be a response to underlying weaknesses in higher education development thought and practice, particularly in the international arena. In the narratives of this dissertation, these weaknesses have been identified as a lacking stakeholder orientation and interaction as a basis for co-creation, dialogue, participation, engagement and connectivity in university-industry collaborative practices. Enforcement efforts of government and governmental institutions could thus support networking and collaboration in creating bonding opportunities across the different levels of collective action. New, innovative forms of collective action across the different levels of social capital are needed to foster the co-creation of opportunities and solutions that would enhance knowledge flow through successful attraction and retention of global student talent.

29 Compare with the notion of structural holes and their impact on the efficiency and effectiveness of a social network (Burt, 2004). A structural hole is a relationship of nonredundancy between two contacts. Burt’s argument is that opinion and behaviour are more homogeneous within than between groups. Being connected across groups opens new horizons of thinking and behaving which provides people with a larger variety of sources for learning, more options for selection and otherwise unseen opportunities.
In practice, the process of collective action may be fostered and managed with the cooperation of the actors involved in the social network through effective strategies for value co-creation. Social network optimization efforts would recognize that opportunities for co-creation in social relations could be enhanced through the actors’ identification with the collaborative community. In other words, initiatives and programmes are needed to foster the bridging and bonding of relationships.

As alluded to above, governmental institutions may support or interfere actively or passively (Paldam, 2000). Active enforcement is the active interference by the government and its institutions to help network actors to build trusting relationships among the participating parties. Active interference, however, presumes that the enforcing party has extensive and true knowledge about all the actors and mechanisms of the social network. Passive enforcement is the passive support provided by the government and its institutions to help create a social capital-friendly environment in which actors find it easy to collaborate (ibid). However, carefulness is required when enforcement strategies and initiatives are designed, because enforceable governance mechanisms tend to reduce flexibility in the configuration of activities and the variety of sources of learning; this, in turn, reduces incentives to seeing and utilizing opportunities (Nootenboom, 2000).

The second area for consideration concerns the costs of transactions. If, in the international market, knowledge and skills were freely available, if decision-making were completely rational, if there were always alternative customers and suppliers, and if there were no carry-over effects of a specific transaction to another, it would be a perfect market without transactions costs (Johanson and Mattsson, 1991, p. 261). However, trade in higher education services may be considered as international transactions in services, which are not without transaction costs. Hence, in reality, transactions costs are incurred, and this also concerns the higher education industry.

Transactions costs arise because the many benefits gained by embeddedness in a given regional, national and international network of academic, industrial and societal actors and stakeholders come accompanied by the corresponding costs of transaction; these are the costs of possessing, maintaining and developing certain forms of social capital, and of devoting effort to organizing, carrying out and controlling the transactions between the actors of the network (Johanson and Mattsson, 1991; Woolcock, 1998). In this case, these are the costs devoted to internationalization activities, including accessing and retrieving international knowledge, marketing, partnering, accessing international talent.

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30 It must be noted here that established theoretical implications and empirical findings on the relationship between trust and economic development would be subject to further clarification. Recently, Roth (2009) examined the relationship between trust and economic growth (based on the per capita income between 1980 and 2004 in 41 countries) and found evidence that economic growth is negatively related to an increase in trust. This negative finding would thus be in contrast to existing belief based on previous empirical findings. The negative relationship seems to be mainly driven by developed countries from the OECD, and the EU-15 (here particularly the United Kingdom and Finland), and very strongly by the highly-developed countries (p. 123).
pools, and attracting, training and retaining international student talent. Moreover, the expending of considerable effort towards one activity in higher education development includes the opportunity cost of not expending that effort towards some other activity.

This means that careful consideration needs to be given to costs versus benefits assessment beyond the context of specific individual and institutional relationships. Indeed, the breadth of cost-benefit analysis should include the context of the entire networks of relationships (Koka and Prescott, 2002). Particular attention also needs to be paid to the specific combinations of bonding, bridging and linking of social networks at and across the different levels. It is important to understand that the combination of social networks will determine whether the costs versus benefits calculation is favourable and ensures effective activity, and at what level it accomplishes this. But it is also important to understand that the higher education industry and the market for it develop and change over time, and that this change affects the prevailing, perceived-as-optimal combinations of social capital, thereby causing changes in the calculus of costs and benefits (Woolcock, 1998, p. 186).

One may argue that social capital theorizing might be considered as another cosy attempt on the university side to diminish the pressure of accountability and evaluation. But is that really so? Schuller (2000, p. 33) contends:

*Shifting the focus directly onto these relationships opens up a set of dynamics which cannot be captured by even the most sophisticated of statistical analyses; there are no ‘results’ in the standard sense of defined outcomes with some factors held constant, because they cannot be so held, and because relationships are processes which cannot be isolated in this way. The ‘outcomes’ of research and reflection are then much more obviously provisional and dependent on the social and temporal context in which they are sited. They may be less appealing to policy-makers looking for simple and immediate directions. They certainly do not give ‘results’ of the precise quantitative kind that many human capital analyses purport to provide. But they may be no less valid and valuable for all that. They may open up questions about how fruitful, effective and ethical relationships can be developed or sustained, in ways which would not be available through other approaches. This quality, as a heuristic device which challenges researchers and policy-makers to confront the complexity and fluidity of circumstances may yet prove to be the most potent contribution of the concept of social capital.*

8 **The narratives in context**

I have investigated several strands in order to draw out different perspectives and approaches relevant to the focus of this thesis: the value of the university-industry linkage in co-creating and capturing value for successful attraction and retention strategies in the international expansion of national higher education. This includes case investigations into 1) how the actors involved in university-industry collaboration communicate, interact and work together with a common purpose; 2) how social space
and time require a focus on university-industry collaboration development going beyond mere sharing of innovation and technology to achieve knowledge transfer through global student talent attraction and retention, and how such a focus may be crucial for gaining competitiveness in the global marketplace for student talent and skills; 3) how practices of attracting and retaining international student talent link to market-oriented values and boundary-spanning roles and functions, motivations and beliefs; and 4) how in a socio-economic context the relationship between a social network and its absorptive capacity shapes human interaction in university-industry collaborative practice, and is shaped by the learning of the partners in the practice.

The case investigations provide evidence that serious efforts need to be made to identify and locate resources and opportunities that are still undiscovered or underexploited when it comes to responding adequately to the new challenges and opportunities arising from the growing global competition for student talent and skills. There seems to be a gap in our understanding of the relationship between increased international student recruitment and productive university-industry collaboration for economic wealth creation. There also appears to be a gap between policy expectations and practice perceptions. Finland is slowly responding to the changing demands on the higher education system.

In a higher education ecosystem, all components - roles, norms, rules, processes and values – are interrelated and interdependent with respect to each other and their environment. The new global value drivers, trends and priorities for the enterprise and networked university will have an impact on the entire value network associated with the international expansion of higher education. The global economic development trends, the associated waves in global student mobility, and the socio-economic interactions and dynamics of the immediate environment surrounding and influencing the university-industry relationship will change the relations between the components and partners of the value network (compare with Zineldin, 1998).

The dissertation is a response to the need for a comprehensive understanding of the value networks and knowledge infrastructure underlying sustainable attraction and retention of international student talent. It is important to understand that, within the higher education value network, all university-transmitted response to change – such as changes in priority for international student recruitment targets, or the increase or decrease in rates of internationals student recruitment – will force the dyadic relationship between the university and the surrounding economy to respond. After all, in an ecosystem, the regional economic environment must be able to absorb all signals and responses (Florida et al., 2010). This also means that the grand design of the strategies, value propositions and value chains of international higher education (cf. Pathak and Pathak, 2010) must fit together within a socio-economic logic of sustainability so that they serve and function well as a larger ecosystem.

Recommendations for policy makers – I recommend that higher education policymakers and administrators adopt two goals. The first goal would be to subject the knowledge
flow fostered by the international activities of higher education to a careful design of context-specific knowledge management systems. Every new global wave of student talent potentially brings with it university-to-research and university-to-industry knowledge transfer. To put it in Teece’s words (1998/2003, p. 47), “One must inquire about the present cacophony on knowledge management”. The second goal would be to encourage mindset development towards the creation of a social environment that fosters industrial and academic co-creation of new, innovative solutions for effective global student talent attraction and retention.

If policymakers and administrators were to adopt these goals, the next step would then be to design appropriate policies and programmes for attaining these goals. Serious efforts need to be exerted to identify and locate resources and opportunities that are, as yet, underexploited when it comes to responding adequately to the opportunities arising from the global competition for student talent and skills. Adjustment policies, programmes and other arrangements, and enforcement strategies must be developed in open, participatory and transparent processes by which decisions are then made (emphasized by Stiglitz, 2002, p. 177). These policies, programmes and strategies must be in place to enhance university-industry collaborative capacity to create and realize value from knowledge brought about by mobilized global student talent flows. Participative governance and efficient management strategies need to powerfully activate involvement and collaboration. This would promote productivity and engagement, as well as university-industry collaborative approaches and initiatives, all of which are needed to support collaborative capacity development. This in turn would create value from the knowledge processes associated with attracting and retaining global student talent.

Recommendations for managers – While this dissertation might provide strong support for the view that a carefully designed managerial approach is needed to advance the knowledge processes associated with attracting and retaining global student talent, it is important to understand what the dissertation does not specifically demonstrate. It does not delineate the conditions under which a balance may be achieved between the need for trust between the partners of the university-industry collaboration and the need for university-industry collaboration enforcement efforts. I therefore contend that drawing blanket recommendations for managerial action would be an inherently difficult assignment31, which bears further explanation. Given the dynamics in global student mobility and the fluctuating economic, political, and environmental conditions affecting the relationship between university and industry, the process of international knowledge transfer through international recruitment and global student talent supply is beset with many unknowns. Under such conditions, university-industry collaboration for leveraging opportunities in the supply of global student talent involves high levels of

31 The literature on university-industry collaboration provides sound recommendations for improvements to the university-industry collaboration process (compare for instance with Siegel et al., 2003). Many of these are valid; however, they are not specific with reference to the university-industry knowledge-transfer processes associated with global student talent recruitment.
7.3 A view beyond institutions and organizations

uncertainty. There is, however, ample research evidence that partners who are able to trust each other demonstrate a better capacity to cope with uncertainty and related risks. Trust has therefore been defined as a threshold condition for collaboration (Blomqvist et al., 2005). In this respect, there are aspects of an analogy between university-industry knowledge transfer in an R&D context and university-industry knowledge transfer for human capital development. Compare this, for instance, with the findings of Plewa et al. (2005) and Bruneel et al. (2010) indicating that trust is a key factor for success in research-oriented university-industry collaborative partnerships, wherein uncertainty and risk are inherent. Indeed, trust is one of the strongest mechanisms for lowering the barriers to interaction between universities and industry. Bruneel et al. (2010) further suggest that what they call the “traditional system of informal reciprocity and exchange” should remain an important part of attempts to support and build university-industry collaborations.

But, the question then arises of what the precise relationship will be between managerial action and the interactive roles and dynamics of trust and enforcement arrangements in university-industry collaboration for enhanced knowledge processes associated with attracting and retaining global student talent. This is what we still do not know today. Hence, we lack an understanding of how alignment of individual stakeholder and collective interests will develop and transaction costs will decline over time as the social relationship between policymakers and managers eventually becomes more trusting, transparent participatory and collaborative.

To conclude, if a change in mindset is at the centre of development, then it is clear that attention needs to be focused on prompting this change. But, as Stiglitz (2002, p. 169) contends, “To foster the active involvement of the learner, the motivation should ideally be intrinsic to the activity, not a superadded carrot or stick”. Change must thus come from within. It would therefore be helpful if the university-industry collaboration was not conceived as the limited interaction within a small group of university policymakers and administrators and private sector managers involved in the processes of attracting and retaining global student and concerned with the associated knowledge-transfer processes. Such an approach only reinforces the effects of enclave participation that is still characteristic of the prevailing linear and narrow mindset with relation to the expansion of higher education into international dimensions. We need a shift away from enclave participation towards open and transparent participation in the processes underlying successful recruitment of international student talent. This idea is in line with the thinking of Bruneel et al. (2009), whereby they recommend giving more attention to the quality of university-industry interaction. The authors reason that in focusing on the raw numbers of collaborators in policy measures, it is possible for one to underplay the creative character of the interaction between universities and industry. They further suggest that a nation-wide monitoring system is needed. In their view, such a system would enable continuous assessment of the frequency, breadth and depth of

32 Compare with two studies on the relationship between trust and contracting in collaboration; Blomqvist et al. (2005) and Van Slyke (2009).
industrial participation in research projects, and would thereby provide information access and distribution on the vitality of the collaboration for both new and experienced collaborators (p. 19).

Analogously, all university-industry collaborative interaction leveraging opportunities in international knowledge transfer through people needs to be advanced by system-supported monitoring and promotive assessment. Such a system would enable the transfer of knowledge across the value proposition of international higher education investment. It would allow for an assessment of the value of university-industry collaboration for enhanced international knowledge transfer. The system would thereby help to 1) fill the gap between knowledge/awareness and the variety of university-industry interaction, and 2) better address the lacking orientation towards creative approaches to attract and retain global student talent.

9 Discussion

In this section, I conclude by articulating the major issues arising from this dissertation, bringing these to the foreground for reflection and further discussion. The first issue for discussion shortly addresses the social and ethical implications of leveraged strategy for enhanced attraction and retention of international students. The second thought for discussion suggests that transfer of knowledge is fostered by the international activities of higher education and based on the view that attracting and retaining student talent and skills from around the world is tantamount to global knowledge transfer through people. This idea must be subjected to careful thought and design of context-specific knowledge management and knowledge management mechanisms that would enhance absorptive capacity for capturing the value of mobilized knowledge resources (i.e., the value of knowledge transfer via global student talent recruitment). The third issue of this section juxtaposes the almost stereotypical view of a higher education industry and its institutions as being deeply preoccupied with their own survival and as competing to increase their international student intake numbers with the more creative mindset of a networked university collaborating in and contributing to a social networking environment that supports industrial and academic co-awareness, collaboration and co-creation of innovative solutions for global student talent attraction and retention. The final line of thought of this section comments briefly on the limitations of the study. It aims to close the dissertation by reflecting on what might have been contemplated differently, if greater emphasis had been placed on the industry side of the collaborative partnership.

9.1 Some ethical considerations

It would be irresponsible to conclude any investigation into the subject of attracting and retaining international student talent “from elsewhere” (as opposed to “from domestic (one’s own) pools”) without bringing to the reader’s attention that the issue is not without ethical and social implications which may evoke strong emotional responses.
The intensified demand for the best global student talent – in response to changing demographics and economic trends in the highly-developed knowledge societies – is a subject matter that, depending on the interests and stance of the reader, may take on educational, political, economical and/or sociological dimensions.

In addition to relying on reputation, quality and excellence in teaching and research to gain a better competitive position in the international marketplace for student talent and skills, institutions have begun pursuing more active attraction strategies and supporting aggressive marketing programmes. Two factors will become more critical to success in attracting the best students from around the world. The first is the ability of the recruiting university to create expectations and communicate perceptions of attractive industrial or academic career paths (or to reinforce already existing perceptions of career prospects). The second is the ability of the university to offer the attractive environment and service systems needed to support these expectations and perceptions (cf. Wilkins and Huisman, 2011).

The dynamics of human capital flow reflect the phenomena of “brain drain”, or human capital flight or large-scale emigration of skilled resources from the emerging economies; and “brain gain”, or large-scale immigration of skilled resources to the highly-developed economies. Debate in political and higher education arenas revolves around the question of whether or not attraction of educated and talented students away from the poorer to the richer countries is an ethically sustainable action. There are many perspectives surrounding the question, and there is no single approach to the question able to harness all the divergent perspectives towards convergence of one tolerant answer.

However, the movement of skills and talent is far too complex to be restrictively understood as a flow that benefits one country at the expense of another. Saxenian (2002), for instance, views the flow and migration of talent and skills resources between nations as the result of the dynamics of a global economy in which talent and skills are mobilized through social networks of skills and talent, and she calls the movement “brain circulation”, thus emphasizing that there is no one-way direction but instead circularity in the movement of talent and skills. She argues that there is a relationship between the growth of new social networks linking new immigrant entrepreneurs with each other and the increasing availability of shared information, contacts and trust needed by local producers to successfully participate in the increasingly global economy. Research work emphasizing the idea of flow in the movements of talented people and skills (cf. also Carr et al., 2005; Bhandari and Laughlin, 2009; Salmi, 2012) would thus suggest that talent and skills flows are neither unidirectional nor homogenous; they are certainly not permanent.

There should also be space for relativized thought. Let’s assume that Europe’s higher education systems, through strong policy setting, competitive higher education offerings and innovative co-created solutions, strive to maximize the flow and immigration of international student talent and skills. One might then pose the question of whether
success in such endeavours could possibly cause shifts in, or even merely affect, current development trends in global economic growth, trade and migration trajectories. Another pertinent question concerns what the impact of economic crises on the movement of global student talent will be. In this connection, I cite Hawthorne again (2008, p. 24):

_The likely redistribution of international students in the coming period will be influenced by relative currency values, local access to transnational education, perceptions of the value of alternative study sites, and of course in-country capacity development. International-student flows seem likely to diminish as a migration resource for OECD countries for a short time. However, it is simultaneously clear that the OECD demographic trends described at the start of this paper will not disappear. Workforces are aging dramatically. The human resource demands of developed country knowledge economies will not decline. In the context of harsher origin-country economic environments, attraction to OECD study-migration pathways is likely to remain high. OECD governments will have to compete even harder for a smaller pool of students (Hawthorne, 2008)._ 

In light of these remarks, another key ethical question is whether talent migration will be considered to positively affect the relationship development between the rich knowledge societies and poorer developing countries, or whether it will be considered to increase the gap between the rich and poorer countries. There remains the viewpoint that, from a historical perspective, talent migration through student and researcher flow has always existed (Bhandari and Blumenthal, 2009) and has always to some extent affected not only economic development but also degrees of socio-cultural pressure on attitudes and behaviour. Even if at some point in the future the socio-economic potential of international talent flow were to become maximally exploited through collaborative interactions between university and industry, international recruitment programmes offered by the higher education industry would remain only one of the open-door policies to talent and skills migration.

### 9.2 Collaborative knowledge management solutions

No matter what industry or organization is in question, successful knowledge management in an environment affected by the pressures and priorities of economic globalization is an extremely challenging task. The higher education industry, in its endeavours to internationalize, is no exception. Knowledge as flow is a process, and this implies two things. First, knowledge management must focus on the distinctive but interrelated processes of knowledge flow: i.e., creation, assimilation and diffusion of knowledge. Second, knowledge management must involve all the elements and levels of knowledge and knowledge movement within the social network for collective action in the activity of attracting and retaining global student talent (cf. Alavi and Leidner, 2001).

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33 For a detailed discussion on the subject, see Kuptsch and Pang (2006).
9.2 Collaborative knowledge management solutions

One might ask where the efforts are that would encourage developing a knowledge management system in which people are given information, space, time, tools and encouragement to involve, interact and collaborate (cf. Davenport and Prusak, 1998, cited in Alavi and Leidner, 2001, p. 114.). When we recognize that by devoting efforts to managing the various activities and measures to attract global student talent and skills, we, in fact, devote efforts to managing a form of knowledge mobilization. We must then also recognize that all knowledge management efforts will be unsuccessful until we understand that the movement of international student talent and skills is, in fact, mobilized knowledge and resources, the value of which will remain unexploited if knowledge management fails at this stage of the process. When we have recognized this, we may then understand that international student talent recruitment may be represented on a continuum of available knowledge resources. Knowledge flow fills the continuum between access to (potential absorptive capacity) and exploitation of (realized absorptive capacity) knowledge resources. Knowledge flow is the critical source of competitive advantage. It involves the processes of collaboration, learning and co-creation.

A knowledge management system in which people are given information, space, time, tools and encouragement to involve, interact and collaborate would be “a socio-technical system of tacit and explicit business policies and practices” (Carayannis, 1999, p. 219). These would be oriented around building capacity to foster university-industry collaboration as a source of value co-creation in the processes of knowledge transfer of attracting, training and retaining international student talent. To support the development of this viewpoint, a community-of-practice approach to the university-industry collaborative practice may provide value. For Wenger (2000, p. 230), this is the value of enterprise orientation (“learning energy”), mutuality (the “depth of social capital”) and repertoire (a “degree of self-awareness”). For Kerno (2008, p. 77), this is the value of providing a valuable alternative to the more traditional knowledge management approaches, which have tended to focus too much on observable, explicit or codifiable knowledge.

Knowledge movement may be supported or constrained by institutional environment (such as network structure and position) and other contingencies (such as technological conditions and governance instruments) (Nooteboom, 2000). However, knowledge movement through global student talent movement must be understood in a global as well as local context. Through the movement of international student talent and skills, the flow of knowledge among nations is interconnected with global political, economic and cultural relationships and initiated by a set of various push and pull mechanisms (see Subsection 2.2) (McMahon, 1992; Wilkins and Huisman, 2011).

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34 Compare with Hart and Wolff (2006), who have proposed a pragmatic framework for local community – university partnerships, a framework that “is rooted in a sense of place and a commitment to engage with issues of locality” and based on the concept of community of practice.
The transfer of knowledge and knowledge resources through the movement of international student talent and skills is a process that is embedded in the various subnetworks of the entire knowledge network (Argote and Ingram, 2000). These subnetworks consist of people, collaborative practices and technology. Social network structure and location in the network (social capital), capacity of knowledge creation and distribution (absorptive capacity), and practice and experience of co-creation (community of practice) have been identified as the essential elements of the knowledge network (see Paper V). They are crucially interrelated elements that interact with each other, thereby conditioning – in a way that affects strategy and performance beyond institutional boundaries – the underlying processes and outcomes involving the identification, integration and exploitation of the benefits of knowledge transfer (arising from the movement of international student talent). The relationship between social capital, absorptive capacity and practice is affected by local and global meanings but actually shaped by the constraints of contextually localized factors and processes.

The distinctive higher education institutions become established and effective in different regional and societal contexts. In these contexts, practices and mechanisms for collective learning and co-creation are local, cumulative and geographically bounded; and development and change are path dependent (Nooeboom, 2000; Boschma, 2004). Because different contexts yield different opportunities for development, this implies that there is no single best process model of knowledge transfer and no single best way of managing knowledge transfer (Alavi and Leidner, 2001; Nooteboom, 2000; Boschma, 2004). Best practices and related reforms that are imposed on a country or a corporation through conditionality (“carrots and sticks”) may cause short-term modifications in the system but may very well fail to produce lasting change (Stiglitz, 2002, p. 169). It also implies that benchmarking studies are, therefore, unlikely to reveal best models (Boschma, 2004). Institutions and organizations, however, learn not only directly from their own experience, but also from the experience of others (Argote et al., 2000). In this sense, benchmarking may be very useful as a learning tool for higher education development policy-makers and decision makers “when it makes them aware of the dangers of simply copying best practices developed elsewhere” (Boschma, 2004, p. 1011).

9.3 Co-creating solutions: a new paradigm

The final issue to be addressed in this dissertation is that of co-creating solutions. This section also serves to support and reiterate the meaning and purpose of this dissertation. I have written it with two thoughts in mind. One thought is to draw an analogy commensurate with the viewpoint that the “talent war is based on a scarcity state of mind and action” (Beechler and Woodward, 2009) and calls for alternative responses. This viewpoint and my understanding of the context surrounding policy and practice for attraction and retention of international student talent are, in fact, branches of the same concern: there is an urgent need to promote a co-creation mindset. My second thought is to revisit the promised attempt – as proposed in the very first section of this dissertation
9.3 Co-creating solutions: a new paradigm

– to bring to light generally under-recognized opportunities for co-development in the ever-evolving landscape for higher education by focusing attention on the value and meaning of the university-industry linkage.

Beechler and Woodward examine the drivers, responses and implications of a phenomenon that in the literature and in policy is readily called the “global war for talent” phenomenon. They come to the conclusion that it is time for a mind shift (p. 283):

*Businesses, practitioners and academics must move away from the competitive, winner/loser mentality inherent in the language and tactical outlook of the global “war for talent” toward a more cooperative, generative approach of creative ‘talent solutions.’ The language, substance and innovation can provide an evolutionary and suitably inclusive paradigm to attract, develop, motivate and retain talent — globally and locally.*

The narrative evidence in this dissertation has, to an unfortunately broad degree, backed up the rather restrictive view of the university that “goes international” to compensate for decreasing numbers of students –particularly in the science and engineering domains. This understanding is shared by industry people as well as academics. It arises from and is reinforced by the systems of governance and management that overemphasize a linear approach to numbers in terms of international recruitments and degrees. Numbers are indeed important for achieving reportable results. Linear thinking, however, has resulted in a narrow mindset concerning the expansion of higher education into international dimensions. It is a mindset of perceived competition for knowledge resources and student talent and skills; a mindset of maximized efforts to attract international students in order to survive the competition. This mindset has drawn attention and resources away from the seeking of collaborative responses to create generative approaches to attracting and retaining international students and skills. I do recognize that this is a simplistic representation of the current environment. Yet, it may serve to point out that in such an environment, there is space and opportunity for development and change of mindset.

Attracting and retaining international student talent is not just a supply issue (cf. Beechler and Woodward, 2009, p. 282). What matters are the context and the system into which international student talent is attracted. In such a context, listening and learning from the field are key foci of an integrated infrastructure and knowledge management framework to build capacity for greater capture of value accrued from increased investment in the international dimensions of higher education (see Paper V). This implies an alignment of policy and practice, which should create space, time, tools and encouragement for people to involve, interact and collaborate.

One must be very much aware of the fact that, in the globalizing knowledge-based economy, knowledge and innovation is moving away from a single organization. This has given rise to a very complex mix of competition and cooperation (Mowery and
Sampat, 2005). This mix, obviously, also affects the relationship between university and industry, which is starting to look very different from traditional collaborative partnerships, having taken on elements of competition in place of cooperation.

The effects of the emergent competitive relationship between university and industry research make the context very unclear for policy makers and for decision-making with relation to continued public support of the university activities (ibid). It has been argued that effective knowledge management requires departure from the traditional logic of knowledge and knowledge transfer between organizations. Instead of problematizing the transfer of knowledge between the university and industry, knowledge needs to be viewed through the creation of an environment, space and culture in which it can evolve (Davenport and Prusak, 1998; cited in Schultze and Stabell, 2004, p. 552).

In a learning environment, thoughts originate and evolve, and mindsets develop (Wenger, 1998). In space, talent can be pooled. Talent pools can therefore be established to support new solutions for university-industry co-created projects. Learning environment and talent pooling are supported by the co-creation of culture in the collaboration. Compare with Beechler and Woodward (p. 279):

*A new creative paradigm of ‘talent solutions’ is evolving. These are innovative, integrated and strategic responses, rather than tactical war battles, to create more cooperative and generative talent approaches. Creative solutions require a global mindset for people and organizations; evidence-based management; learning agility; broader and deeper approaches to talent management and professional development that encompass not only “top talent” but a wider range of employees, as well as the capacity to leverage diversity. These should be supported by innovative and integrated processes, systems, culture and partnerships.*

By extension, a new approach to the university-industry partnership will evolve beyond the traditional academic understanding of knowledge transfer as the process of valorising technology research and innovation, moving into the human element of knowledge transfer via talent and skills, which is at the heart of the knowledge economy. The university-industry partnership embodies all the elements of the value co-creation framework; it provides a service-providing perspective, a customer/stakeholder perspective and an environment for creative encounters between both partners (cf. Payne et al., 2008; see Papers I, II, and III). It offers the networked environment and space for co-development of new solutions for a sustainable knowledge-transfer practice in the attraction and retention of global student talent.

### 9.4 Limitations of the study

Section 9.3 introduced the idea of co-creating solutions as an essential consideration for the future development of the university-industry collaborative partnership. However, one might argue that already now the various industries, universities and international students attending these universities are necessarily involved in emergent networks at
the various (micro, meso and macro) levels of which there is an obvious need for value-seeking analysis. In this respect, it is necessary to emphasize that this dissertation has not given specific attention to the micro issues on the industry side of the university-industry partnership\(^3\).

Notwithstanding the case investigations, in which narrative data has been communicated and viewpoints have been articulated stressing the dynamics of dyadic interaction within the university-industry collaborative practice, it must be acknowledged that the participatory approach to the investigation has set clear limitations to interpreting and analyzing the industry perspective on the development of reciprocal value seeking (i.e., co-creation of value; Vargo and Lusch 2004, 2008). As I have argued in section 4.3, a university’s operational surroundings could be seen as a potential network of inter-organizational relationships. This represents new network thinking that might provide a response to the changing aims of university-industry collaboration at a micro level. It also, to some degree, fits into the idea of \textit{reciprocal value propositions}. Building on the assumption that each partner in a network is seeking equitable exchange, Ballantyne et al. (2011) have developed the notion of reciprocal value propositions and claim that value propositions should be crafted as they are essential to equitable exchange. The authors suggest that reciprocal value propositions, when crafted by all partners in the network, function as a communicative interaction platform for evaluation of the quality of the interaction experience at the various points of value propositions, resource integration, and value-in-use. When applied to the issue of this dissertation, consideration of the reciprocal value propositions raises the question of what can be done to craft the reciprocal value propositions by \textit{all} parties in the university-industry network of relationships. This work does not sufficiently emphasize that viewpoint; it does not give detailed attention to the importance of developing and crafting industry’s value propositions as reciprocal promises of value (compare with Ballantyne et al., 2011).

Closely linked to the line of thought above is the view, as introduced in section 9.2, that to support the development of university-industry collaboration as a source of value co-creation in the knowledge transfer processes, a community-of-practice approach to the university-industry collaborative practice might be useful. However, as Wenger (2000) has noted, the very notion of community of practice implies the existence of boundaries. I have treated the university-industry collaborative community as a single unit, yet university-industry collaborative communities are rich, complex practices that are beset with many challenges and various success factors, but also by confusion and conflict. I have looked at the boundary crossing processes between the university and industry actors in the network, but I did not give explicit attention to the boundary processes among the different university-industry collaborative communities. In other words, this work does not address how boundaries may create bridges or divisions among and inside the communities. Boundaries are extremely important to understanding the

\(^3\) I wish to thank Associate Professor David Ballantyne for introducing this line of thought into my dissertation.
learning systems within a network, among the communities and inside communities; they connect communities and they offer learning opportunities in their own right (Wenger, 2000). The relationship between the boundaries and the university-industry collaborative processes for leveraged international knowledge transfer through global student talent supply would therefore deserve special attention.
References


References


References


Appendix A

The quotations below illustrate a. the knowledge claims, b. the cross-functional orientation, c. the drivers of competitiveness, and d. the market approach of a university with respect to the four differentiated orientations – 1) product orientation, 2) customer-student orientation, 3) dyadic stakeholder orientation and 4) societal/network multiple stakeholder orientation.

a. 1) Knowledge claims w.r.t. product orientation:

... the management of processes of knowledge production of which human capital was the most valuable asset. The success or failure of individual actors is either determined on the basis of their quantitative performance measured in terms of ‘output’ (performance-related funding) or on the basis of the quality of suggestions (tenders) ... Externally-funded research has become an important element of academic reputation. (Kehm and Lanzendorf, 2007)

The current situation within academia is characterized by the co-existence of two value sets: market-oriented values [and] academic values.... both traditional academic and market-oriented values and practices have long roots in academia, so that the recent change concerns a shift of the balance between them, not the appearance of something totally new. Achieving a balance between market orientation and academic orientation seems to be all the more acute. (Ylijoki, 2003, 2005)

a. 2) Knowledge claims w.r.t. customer-student orientation:

Academic capitalism (term introduced by Slaughter and Leslie, 1997) refers to both direct market activity which seeks for profit such as patents, licenses and spin-off firms, and of market-like behaviour which entails competition of external funding without the intention to make profit. ... new public management characterized by trends towards – among diverse others – attempts to establish quasi-markets, a more competitive and market-like behaviour, the role of the client gains importance and universities start to think about service orientation. (Ylijoki, 2003, 2005)

Marketisation of higher education is based on the belief that allowing market trends to affect the university system will provide an incentive for universities [...] in general, to improve the services the system offers society. (Mora, 2001)

a. 3) Knowledge claims w.r.t. dyadic stakeholder orientation:

European industry has responded to globalisation, but 'the world of education has been slow to respond', the authors lamented. As a remedy, 'partnerships should be formed between schools and local business'. (European Round Table ERT, 1995, cited in Levidow, 2002)
Many of the [conference] contributors discussed and presented examples of increasing demands for closer interaction with industry, and for making research results available and applicable outside of universities; in short, a general drive for commoditization of scientific discoveries. ... It follows also that research is organized and conducted differently; for instance through contract research or even joint research ventures with industry. Thus universities are re-organized to facilitate and promote closer interaction and relationships between the two spheres. This, in turn, also means that research is increasingly being assessed and rewarded according to its ‘market value’ ... There is a parallel development in education, which allegedly has to become better adapted to the short-term needs and demands of the market. This is, for instance, evinced by demands for ‘employability’ of graduates. (Wedlin, 2008)

a. 4) Knowledge claims w.r.t. societal/network multiple stakeholder orientation:

... Universities are expected to become part of the innovation system where innovation stands for product making and the final goal is to contribute to the international competitiveness of the national economy. ... This kind of reorientation tends to create tensions between the traditional scientific aspirations and market-orientation. (Häyrinen-Alestało and Peltola, 2006)

Entrepreneurial or capitalistic universities are not single enterprises, but are conglomerates, with some units devoting more energy to local or national activities and others more pursuing regional and global activities. (Marginson and Rhoades, 2002)

... two major trends can be identified that affect the future role of the entrepreneurial university: ... ever greater dependence of the economy on knowledge production ... There is a shift underway from the economics of the production function to the socio-economic processes of the contemporary innovation system — with universities part of a new knowledge infrastructure. ... the three helices, serving to institutionalize and reproduce interface as well as stimulate organizational creativity and regional cohesiveness. (Etzkowitz et al., 2000)

b. 1) Cross-functional orientation w.r.t. product orientation:

Contradictorily, the notion of market-led curriculum development and initiatives is rejected, perhaps because this kind of action stands in stark contrast to fundamental beliefs about [higher education] as an arena in which the knowledge is produced for its own sake and for the sake of the society as a whole and any involvement of academics in direct marketing activities or in commercialising academic knowledge for external purposes such as the recruitment or retention of students is opposed. (Hemsley-Brown and Oplatka, 2006)

... superficial implementation of new managerial values did not yet bring the intended shift of values; the notion of the learning and adaptive university as an organization that needs to be restructured in order to react flexibly and proactively to a dynamically
changing environment, threats or opportunities in ‘the market’ or industry. (Sporn, 2003)

b. 2) Cross-functional orientation w.r.t. customer-student orientation:

Managerialism is characterized by a greater influence of external agents, more attention to strategic management and other managerial techniques used in business, ... in user contributions to the cost of the services provided, diversification and competition for students, teaching staff and service contracts. ... Experts and international bodies have supported the introduction of market influences as the best way of assigning resources in a mass education university system that is increasingly offering a wide range of services as well as life-long learning (Mora, 2001)

The search for new student markets and attractive programs unleashes a need for more students ... and timely decisions based on constant scanning of the environment – both national and international. Internationalization is ... a search for student markets domestically and abroad rather than positioning the university’s knowledge at the service of others in less advantaged parts of the world. (Stromquist, 2007)

b. 3) Cross-functional orientation w.r.t. dyadic stakeholder orientation:

Yet indicators of the lack of support from industry exist in the adjectival avoidance. The attempt to impress the reader by over stressing the support [by industry] sounds hollow when the term “key” companies is used rather than naming these companies. If these companies exist then why not name them?(Lowrie and Willmott, 2006)

... making knowledge integration and absorptive capacity explicit goals within the development of university facilitation of service innovation capability can enhance capability in university-industry interaction. (Sparrow et al., 2009)

b. 4) Cross-functional orientation w.r.t. societal/network multiple stakeholder orientation:

A dual cognitive mode has emerged in academic science as researchers focus both on achieving fundamental advances in knowledge and inventions that can be patented and marketed. ... emphasizing entrepreneurship, firm-formation and risk-taking. ... the university as entrepreneur also develops capabilities to assist the creation of new organizations. (Etzkowitz et al., 2000)

c. 1) Drivers of competitiveness w.r.t. product orientation:

... globalization, which brings a greater emphasis on market forces to the process of educational decision-making. As knowledge becomes a product, then the market logic dominates. (Stromquist, 2007)
Publication of research and production of graduates are held to be the most appropriate roles for an institution dedicated to the public good. (Etzkowitz et al. 2000)

Research performance is to a large degree measured by the amount of external funds attracted. (Kehm and Lanzendorf, 2007)

c. 2) Drivers of competitiveness w.r.t. customer-student orientation:

Increasing competition for home-based and overseas students higher educational institutions now recognise that they need to market themselves in a climate of international competition. ... the value, effectiveness and potential benefits of using marketing theories and concepts, which have been effective in the business world, are gradually now being applied by many universities: with a view to gaining a competitive edge, and gaining a larger share of the international market. (Hemsley-Brown and Oplatka, 2006)

c. 3) Drivers of competitiveness w.r.t. dyadic stakeholder orientation:

When describing the concept of market orientation, respondents focused primarily on business skills and the supply of technological or knowledge outcomes to industry. A more detailed discussion of perceived benefits and value creation, however, showed a strong focus on other factors, such as retention and human capital, as highly relevant components of value creation for industry ... (Plewa et al., 2006)

c. 4) Drivers of competitiveness w.r.t. societal/network multiple stakeholder orientation:

... The level of market orientation adopted by the university teaching staff is positively affected by the predisposition of the department to take account of the needs of society in terms of research, training and employment. ... We can therefore state that departmental prestige, achieved through the recognition of research and/or teaching activities, constitutes a stimulus for developing behaviours directed towards social needs and, therefore, is market-oriented. (Flavían and Lozano, 2006)

d. 1) Market approach w.r.t. product orientation:

The market is the complexity of influences of the external environment on the university and the meaning of market orientation in this context is incorporated as opposed to the values of academic orientation. (Mora, 2001)

d. 2) Market approach w.r.t. customer-student orientation:

This [relationship marketing] approach emphasises the importance of developing a customer- (i.e. student-) driven organisational culture, and focuses on the quality of the service. ... (Hemsley-Brown and Oplatka, 2006)
d. 3) Market approach w.r.t. dyadic stakeholder orientation:

_We can see, among other things, that the university is cast in a ‘serving’ role, meeting and responding to needs, rather than actively shaping them, and that the relationship with business is conceptualised as a partnership._ (Mautner, 2005)

d. 4) Market approach w.r.t. societal/network multiple stakeholder orientation:

..._an increasing governmental demand for all universities to change their roles from the servants of the welfare state to the builders of a neo-liberal state and to encourage market selection instead of the common good and equalization of opportunity._ (Häyrinen-Alestalo and Peltola, 2006)

..._active university, rather than merely formal innovation agents._ (Etzkowitz et al., 2000)
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Issues of delivering quality customer service in a higher education environment

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Issues of delivering quality customer service in a higher education environment

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Abstract
Purpose – This paper seeks to redress the lack of academic attention being given to the relationship between academia and industry in the competitive environment of international higher education-related service delivery and use. It adopts a relational marketing approach to value creation in service interactions and explore the expectations and perceptions of employers and university academics and practitioners. The research focuses on a comprehensive mapping of gaps in the international higher education service at large, and specifically in the context of degree programme development, recruiting international students and associated service interactions with industry. It highlights some of the issues pertaining to service quality, customer orientation and sustainability in international higher education and associated service delivery.

Design/methodology/approach – This paper is an exploratory case study set in the context of Finnish higher education. It relies on qualitative research methods and applies the GAP model for the analysis of the empirical data.

Findings – Five gaps and a surplus gap are identified in the delivery of high-quality customer service in the context of university-industry interactions in international higher education. To close the gaps between academia and industry, the relationship marketing approach is proposed.

Originality/value – The paper contributes to the research stream on university-industry relationships. The results should help to enhance understanding of customer service delivery in the linkage between academia and industry. The novelty of the paper lies in the integration of the language and logic associated with customer-oriented service delivery into the operational context of higher education service interaction between academia and industry.

Keywords Higher education, Internationalization, Customer services quality, Service marketing, University-industry relationships, Finland

Paper type Case study

Introduction
The Finnish higher education sector is facing new challenges which it has not experienced before. The increased European and global competition, the move of Finnish universities towards a reformed administrative model for stronger university autonomy, and the upcoming new fee regimes are elements added to the challenge of continuing the internationalization in Finnish higher education. One of the spin-offs of the almost explosive growth of international higher education is the dramatic increase of international student mobility and degree partnership programmes. In addition, they are accompanied with the increased marketing of international student mobility and degree programmes by the host universities especially in the science and engineering higher education sector with 30 per cent or more of international students enrolled in sciences, agriculture or engineering (OECD, 2007).
Knight identifies three stakeholder sectors which have different perspectives towards the internationalization of higher education: the government, the education and the private sectors. Each sector includes several stakeholder groups; this diversity shows that the education sector is not the only group which has a vested interest in the international dimension of higher education. International students are in part scholarly research and discipline groups, and are thus also considered customers of international higher education but belong to the higher education stakeholder sector (Knight, 1999). Recently, there has been increasing interest in the relationship dynamics between higher education institutions and the student-consumer market. Yet, little attention has been given to the linkage between academia and industry from a service marketing perspective. In this study, we focus on the intersection between the higher education and private sectors, with particular emphasis on the value-creating processes of interaction between academia and the engineering industry in the context of international higher education. We adopt an analytical approach to value creation based on the logic of service and relational marketing and as represented in the Nordic school view (Grönroos, 2006).

In countries such as the USA, the UK and Australia, relatively much academic and non-academic attention, at a national and international level as well as at a policy and institutional level, has been paid to the issue of international students and their customer relationship to higher education. The issue has been rigorously studied from the perspective of students’ expectations and perceptions of the higher education service, and from the dimensions of quality and culture-related aspects of the academic education experience, and of socio-economic development embodied in the migration of international students (for discussion on the issue, see Chellaraj et al., 2008; Kingston and Forland, 2008; Arambewela and Hall, 2009). In the Finnish context, the issue of international graduates from Finnish higher education has not yet been put in scientific terms. One of the primary explanations for this is definitely that the dimensions of internationalization of Finnish higher education and the flow of international students to Finnish universities are still relatively small. However, international students compose a substantial and growing proportion of the higher education population also in Finland. With this in mind, we should consider the results of Finnish research showing that two of three international students would prefer to stay and work in Finland after graduation if certain social prerequisites were fulfilled, including their integration into society and the labour market (Niemelä, 2008). The willingness of international students to stay in Finland after graduation if employment could be found is confirmed by Finnish research evidence (Kinnunen, 2003). For comparison, the Finnish findings are similar to those obtained in The Netherlands and published in a Dutch report on the market place for foreign students graduated from Dutch higher education; about 40 per cent of international students in The Netherlands wish to stay and work in the country also after graduation (Berkhout et al., 2006). An analysis by Bohm et al. on the perspectives of international student mobility in the UK clearly revealed that not only the quality of education provision but also future employment prospects associated with the qualification obtained in the host country are the two factors that are of considerable importance and the most attractive in the choice of the host country and university. In the analysis, employment prospects are defined as the factor referring:

[...] to the value of a destination country’s qualifications within the local and global labour markets, and to this extent it includes both the ability to obtain employment as well as the relative return within the labour market over a period of time (Bohm et al., 2004).
Human capital is considered a key element in the economic growth process. In their review on the impact of human capital on economic growth, Wilson and Briscoe claim that investment in education and training on national economic growth is shown to have a clearly positive and significant impact on national economic growth. The authors further argue that, nevertheless, despite the several comparative international studies emphasising the key importance of skills training in raising productivity, employers in many countries still have a rather negative attitude towards investing in skills and training (Wilson and Briscoe, 2004). The university has an influential task in the global race for human capital mobility and economic growth (Ruokanen, 2004; Raunio, 2005). The following questions then arise: set in the context of a globalizing and competitive market for higher education:

- What exactly is the understanding that universities have of what the needs of the industry sector are towards university delivered higher education services?
- How do companies understand their own opportunities for interaction with university provided higher education services?

While constantly seeking higher education programme development with the objective of promoting student mobility, and consequently, skills and talent flow, the university constructively addresses global business trends and human resource challenges in international business (Vauterin and Kässi, 2009).

However, this is not enough, as the university must also communicate the provision of the international higher education service and make explicit the needs and expectations of the industrial customer in exposing him or her to the new service and in creating the right prerequisites for the right services in international higher education. The industrial customer can then perceive this as the expected attractive added value (compare Edvardsson and Olsson, 1996). Research in marketing also emphasises the educational role of marketing, which means that through service marketing the customer demand can be influenced and the customer can be trained and educated by the service producer to demand new services (Edvardsson and Olsson, 1996; Ng and Forbes, 2009).

**Research objectives**
The literature treats the issue of university-industry relationships relatively extensively from an ontological as well as epistemological perspective. Several concepts and frameworks are introduced on what the interaction mechanisms are in university-industry relationships, and on how we understand the value of university-industry interactions. These studies, for the vast majority, focus on experiences in university-industry interactions, or approach the issue from a policy perspective (Valentin and Sánchez, 2002). However, the resulting knowledge on relationships is largely limited to the development, maintenance, interaction and output characteristics at a macro level (network relationships) and micro level (dyadic relationships) with respect to the transfer of technology (Plewa, 2005). The rapidly growing flow of international students as a result of the increasing internationalization and commercialization of higher education brings new opportunities for university-industry relationships. We seek to redress the lack of academic attention being given to the relationship between academia and industry in the competitive environment of international higher education associated service delivery. In the given context, we aim at gaining insights about the quality of services delivered by the university in interaction with the industry sector. In this paper, we explore...
the perceptions of employers and academics while approaching the issue from a value-creating service delivery perspective in international higher education and in the context of international student mobility and related service expectations. Our research focuses on a comprehensive mapping of gaps in the international higher education service at large, and specifically in the context of degree programme development, attracting and retaining international students and associated service interactions with industry. We highlight some of the issues pertaining to service quality, customer orientation and sustainability in international higher education and associated service delivery, and the value of delivering quality customer service in the university-industry relationship. We adopt a relational marketing approach to value creation in service interactions and explore the expectations and perceptions of employers, academia and practitioners. The paper contributes to the research stream on university-industry relationships. The results should help to enhance understanding of customer service delivery in the linkage between academia and industry. The novelty of the paper lies in the integration of the language and logic associated with customer-oriented service delivery into the operational context of higher education service interaction at the interface between academia and industry.

Understanding the four-sided university-student-industry triangle relationship

We use the triangle concept as a tool to help academics, managers and practitioners better understand the linkages between the components of the international higher education service, and to introduce the relationship-related terminology used in this study. The four-sided relationship triangle (Figure 1) illustrates how higher education institutions, industry and international students are interconnected through service interactions, here in the competitive context of international higher education.

The three outer sides of the triangle illustrate the mission- and market-driven relationships between higher education institutions, international students and industry. Setting and creating opportunities are interactions that link the higher education institution (the university) as the service provider with the intended users of international higher education-related services. We identify the international student with his or her expectations of enhancing his or her ability to convert the degree into

Figure 1.
The relationship triangle of interactions in the higher education service
a job and career or advanced education as the consumer of the international higher education service. The industry sector and its expectations of enhanced competitiveness on the international recruitment market we identify as a potential future employer, the customer of the international higher education service. Seeking opportunities is the interaction that cross-links the international student and industry sector, both using international higher education related services to match mutual expectations, which again will return expected value to the stakeholders of international higher education. The inner side of the triangle reflects the service mindset of the international higher education service. This mindset is defined here as the orientation which supports the drive towards enhanced customer-provider interaction, and is shaped by the degree of value co-creating interactions between the service co-producers, i.e. in our case the university, the international student and the industry sector, which are the resources of the service production (Gronroos, 2006). In the relationship triangle, all partners – academia, the international student and the industry sector – work together in interactive relationships, thus co-creating value to international student mobility, degree programme development and international student recruitment.

The service logic in international higher education Service provision set in the landscape of competitive and successful service delivery and use in international higher education needs academic attention. A few studies have attempted to approach the issue of higher education service delivery from a service marketing or relationship marketing perspective. However, these studies focus on the links between the university as a producer of the higher education service and its students as consumers of higher education to examine higher education as a service (Mazzarol et al., 2000), discuss the importance for the university of being market driven as well as mission driven (Ancil, 2008), or seek to understand the meaning of market/customer orientation in higher education (Ng and Forbes, 2009), the marketing mechanisms that underlie student retention (Ackerman and Schibrowsky, 2007/2008), or the impact of the process of university “marketization” on the link between the university and society (Wedlin, 2008). (For a review of articles on university-industry relationships, see Valentín and Sánchez (2002)).

Services are interactive processes, not products (Gronroos, 2001). It follows that customers do not evaluate service quality based solely on the outcome (technical features) of the process, but also evaluate the process (functional features) of the service delivery (Zeithaml et al., 1990; Gronroos, 2001). Higher education services are co-produced in interaction with the university and its stakeholders, i.e. the intended users of HE services. Drawing on the framework presented by Ng and Forbes (2009), who distinguish between the core service, which is the learning process experienced by the student, and the supplementary service, which is the service playing a role in co-facilitating the core service, we integrate the idea of core service and supplementary services into Gronroos’ (1984) perceived service quality model. In our GAP model (Figure 2), this is presented in that the service design and the institution’s internal service-related processes constitute the functional components of the service delivery. These functional components influence the customer perception of how the process of service delivery is experienced. The core service in customer-oriented higher education services builds on academic knowledge. Thus, the education expertise of the university is the technical component of the service delivery process and influences the
customer’s perception of what he or she receives as the outcome of the service delivery (Gronroos, 2001). Clearly, the core service is dependent on the level and type of efforts the international student wishes to commit to the learning process (Ng and Forbes, 2009). Finnish industrial customers may perceive the same international higher education related services in different ways, as they have different values and different grounds for becoming involved with international higher education related services. However, when there is insufficient customer awareness of the service delivered by the university, there will be an insufficient customer perception of the service: what customers do not perceive does not exist (Edvardsson, 1996).

The case study
We attempt to highlight the expectations and perceptions of industry and business in their university-related service experiences. The primary objective is to identify the need for the development of services associated with university provided international activities and, at large, whether there is a need for service mindset development. This paper presents the findings from an exploratory in-depth case study on the service interactions between Lappeenranta University of Technology (LUT), Finland, and the energy technology industry sector in an international higher education setting. We propose a customer-perceived value perspective. This approach enables us to extend service marketing research in the higher education setting beyond the student-oriented service interactions towards customer-oriented service interactions in the university-industry relationship. Because we are seeking individual interpretations and reflections on the issue, we find the use of prior observational evidence combined
with data obtained from in-depth interviews and evidence from other academic research most appropriate. The case study \((n = 1)\) is used here to support us in our attempt to understand in depth and holistically the specific nature of the problem introduced in this paper. We acknowledge that a single case may not provide sufficient evidence to make strong theoretical generalisations, but it may help to outline the argument for the existence of a phenomenon (Kelliher, 2005). Our case has been selected because it was identified as one particularly rich in information (Patton, 1987, pp. 19 and 23, 2002) because of its focus on Russia-expertise and long-term experience in the field (Vauterin and Kassi, 2009; [1]). The paper relies on a qualitative analysis of empirical data that are collected:

- through direct observation surveys\([1]\) over the seven years of active involvement and experience of the authors in the development of relationships with industry in the academic and operational context of international degree programme management;
- from numerous discussions and conversations with academics and practitioners involved in the internationalization of the higher education service of LUT; and
- by in-depth interviewing which served to deepen our pre-understanding of the processes, to gain in-depth insights from both sides of the university-industry dyadic relationship, and to elicit information in order to achieve a more holistic understanding of the interviewees’ viewpoint on the topic of the investigation.

A detailed outline of the data-collection process is given below in the data analysis describing a five action procedure.

In our qualitative case study, we applied narrative and interpretive methods as relevant to hermeneutic phenomenology. Using this approach helps us to understand and structure the phenomena from the viewpoint of their sequential and causally generative interaction and embeddedness in the organisational and social context, and from the perspective of perceptual experience and purpose (Greenhalgh et al., 2005). In addition, it supports us in the iterative process between the pre-understanding and understanding of the parts and the whole of the phenomenon (Eisenhardt, 1989; Gummesson, 2000, p. 70; Finlay, 2009). Using qualitative inquiry methods allows us to explore and capture (Patton, 1987, p. 15; Gummesson, 2000) the meaning of quality service delivery in university-industry relationships in the international higher education context, and with the aim of obtaining a good pre-understanding of the phenomenon (Gummesson, 2000). This pre-understanding will serve as a basis for further reflection and investigation by the authors into university-industry relationships within the setting of international higher education and associated services.

We explore the interdependence between university service delivery and quality customer service in the context of the market for international student mobility and placement in Finland, and based on the LUT case study findings. We base our analysis on the GAP model of service quality (the model was designed by Parasuraman et al., 1985; Zeithaml et al., 1990) and incorporate the framework for the analysis of the university education service introduced by Ng and Forbes (2009). Moreover, we develop a framework for understanding the role of customer-orientated service delivery and for analysing the interdependence between customer orientation, customer relationship quality and international student placement within international higher education-related activities in Finland (Figure 2).
The findings – the gaps in international higher education associated service delivery

The finding of our analysis should enable in-depth insights to be gained from both sides of the university-industry dyadic relationship about the quality of services delivered by the university in interaction with the industry sector. The case study is set within the context of international higher education in the science and engineering branch. Gap analysis is used here as a tool to identify quality gaps in the environment of service provision and use in international higher education. The main objective of the study is to bring to light those constructs of the service which could be identified as being in particular need of improvement and therefore need special attention. We attempt to identify the gaps and discrepancies that exist regarding the expectations towards the higher education service and the tasks that are associated with university customer service delivery relating to skills transfer interactions via the attracting and retaining of international students and placement and recruitment activities. To identify and understand the nature of existing discrepancies, we explore how academia understand and perceive the growing need for international involvement by the university, and related to this, the need for international higher education associated service development. We compare these perceptions with the need of industrial companies to interact with the international higher education service. We explore industrial employer behaviour influencing the decision process to invest in the international higher education service, and to select a university for international higher education-related service interaction.

We recognize that the design of the qualitative research is shaped by our prior understanding of the phenomenon. It is, however, not the objective of this study to search for any objective measurement of quality of the service provision in international higher education. Rather, we knowingly move beyond incommensurability and, as Kellie (2005, p. 127) has put it, seek:

[...] to overcome the temptation to convert qualitative data into numbers once it had been collected, in order to preserve the richness of the data and give a holistic view of the research context.

The objective of this case study is to offer an alternative, narrative approach to the issue of quality in service provision in higher education. The narrative approach allows us to reflect upon the communicative power of the interpretive perspective that “challenges, unsettles and reverberates” with our everyday experience and observations (Finlay, 2009, p. 15) related to the challenges of developing and providing quality service in international higher education associated university-industry interaction. The process of accessing cognitive sense making and complex meaning systems of the interaction through narratives is not straightforward (Greenhalgh et al., 2005). Therefore, to open up to the reader the procedure of collecting and analysing data and to validate the insights and knowledge produced by the authors — knowledge that in terms of validation is presented as “practically adequate” rather than the absolute truth (Sayer, 1992) — we give in the following a review and description of the processes of data collection and analysis. The procedure of the data collection and analysis is outlined in five actions. The outline of the data collection and analysis-related processes in the context set for this research is quite consistent with the data-collection template, as outlined by Kellie (2005)[2] for the purposes of research into interpretive case studies:
(1) **Longitudinal participant observation.** The ongoing activity of longitudinal observation through continuous involvement over a seven-year period starting with the launch of the international degree programme activities in electrical engineering at the Faculty of Technology, LUT, in autumn 2004 (for more details about the involvement of the authors, see also footnote [1]). This long-term and labour intensive involvement (Kelliher, 2005) has allowed authors to gain rich insights into and a good level of understanding of the processes and challenges of service delivery in the competitive context of international higher education-related activities.

(2) **Process follow-up.** The activities of the international degree programmes are sequential, which enables the consequent follow-up of the results in the form of reporting and statistical information. One of the measurable results is the degree of profitability in terms of the annual number of placements and recruitments of international students. These results can be considered a barometer of enhanced or decreased service interaction with industry, but also a barometer of changing environmental uncertainty.

(3) **Literature review.** The ongoing process of reviewing the literature for theory, conceptual frameworks and insights giving analysis related to service marketing, service quality and relationship marketing in higher education, and particularly, in university-industry linkages. Reviewing the literature is a continuous and circular process of reflection on and interaction with the case observations.

(4) **In-depth interviews and conversations.** All in-depth interviews were conducted by the first author in an intensive timeline from March to May 2009. The interviews were individual, semi-structured, and conversational (Patton, 1987, p. 113). One focus group consisted of eight university academics, professors and practitioners, all involved in the internationalization of the higher education activities at LUT and representing the viewpoints from within academia. The other focus group consisted of ten key informants from top and middle management (from eight different divisions of two medium-sized and four large Finnish business enterprises operating in the engineering industry), representing the viewpoints from within industry. All interviewees were selected and invited to participate in the research partly due to their knowledge and experience of the LUT provided service in international higher education and partly due to their active involvement in the service interactions between LUT and industry. Altogether, 16 of the 18 interviews were conducted face to face, each lasting approximately between one and one-and-a-half hours, and were recorded. Two interviews were conducted via telephone and could not be tape recorded; here, the interviewer relied on taking notes. The objective of the interviews was to deepen our pre-understanding of the processes, to gain in-depth insights from both sides of the university-industry dyadic relationship, and to elicit information in order to achieve a more holistic understanding of the interviewees' viewpoint on the issue. It is extremely important to note that we sought to record and mediate the meaning of what is understood and communicated, in the given context, by the interviewees rather than to simply transcribe the exact utterances of the interviewees. Also in this point,
we are in agreement with Kelliher (2005, p. 126) and in line with the principles (and "challenge") of narrative research “to capture the phenomena as data and interpret them appropriately” (Greenhalgh et al., 2005, p. 444). The insights obtained from the interviews were strengthened by numerous informal face-to-face conversations and discussions.

(5) Other documentary sources. Separately from but interlinked with the data collection and analysis processes of the present case study, the first author carried out a thorough review of relevant Finnish and international documentation relating to dimensions of service interaction in university-industry relationships, programme development in international higher education, mobility, industrial placement and recruitment of foreign students. The evidence from documentary sources helped to “corroborate and augment evidence from other sources” (Yin, 2003, in Kelliher, 2005, p. 127), to set the multi-faceted context for the competitive environment of international higher education, and to augment the validity and reliability of the present research (Kelliher, 2005).

The university respondents had somewhat divergent views on what the underlying rationale is for the growing process of internationalization in higher education. It is clear that the lack of a common understanding among academics of what the key driving forces are for increasing the internationalization of the higher education service has an impact on the university’s customer-oriented approach on the front-line. This, again, raises the concern that incoherent communication of university delivered international higher education-related services to potential customers leaves the potential customer in a state of unawareness; the international higher education service partly remains “invisible” and thus unexploited by employers (Söderqvist, 2005).

Gap 1 is the difference between what the industrial customer expects and what the university thinks the industrial customer expects. This gap stems from relatively weak customer orientation and insufficient holistic research in the area, which again stems from the fact that the customer services being provided are new and/or considered non-academic, and the understanding of the relevant markets is new and/or immature.

Gap 2 lies between the university’s perceived understanding of the industrial customer’s expectations regarding the international higher education service and the design and development of the service concept and service specifications. This difference arises from uncertain customer-oriented behaviour in the internal relationships of the university, which again arises from a yet unfocused and unstructured aim to be both mission driven and market driven. As Anctil reminds, “being market-smart to remain mission-centered (Zemsky, Wegner and Massy in Anctil, 2008)” means for the university and its management to be not simply driven by the market but to be market-savvy, i.e. to be attentive to the market and allow the market to support the mission (Anctil, 2008).

Gap 3 is the gap that occurs between the design and development of the service concept and service specifications and the actual delivery of the service. This gap arises from insufficient transparency in internal marketing relationships with regard to customer- and market-oriented service delivery, and from the complexity in commitment and interaction relationships between university front-line workers and management.
The communication gap is depicted in gap 4, which is between the delivery of the service and the university’s external marketing communications. In the framework of service delivery in international higher education, a lack of communication-based interaction seems strongly to affect the degree of customer knowledge with regard to the opportunities provided within the international higher education service. This, again, affects the degree of customer involvement in the international higher education service. Gronroos argues that to share and even create knowledge among the relationship parties, a process of dialogue is required. However, dialogue can only be achieved if interactions and interaction-based messages occur (Gronroos, 2004). The role of communication-based marketing in relationship interactions is of increasing importance in relationship building in which two-way communication is “emphasized through better listening to customers and interactivity” (Duncan and Moriarty, 1998).

Gap 5 is the customer gap between the customer perception of the international higher education service experience and customer expectations for the service. Customer expectations have been shaped by external communication (word of mouth), previous experiences and needs and attitudes, which is information that is, primarily, disseminated through and reflected on the market. The information channels that in our model constitute the market are relevant in the placement and recruitment service activities with regard to foreign, and more specifically non-Western students (Storen, 2004), since these channels are shaped by the political and societal infrastructure and by needs and attitudes based on “stories” to a much greater degree than with regard to non-foreign students. Hence, the market is by no means static but very much dynamic, and – what is important – can thus be influenced.

Further building on the work of Ng and Forbes, we argue that the ideological gap, which is the gap identified by Ng and Forbes (2009) in the university experience that is embodied in the learning experience of the student, is reflected into the customer services provided by the university. Ng and Forbes (2009) introduced the ideological gap as the gap which is “the difference between designing the service towards fulfilling students’ expectations and designing the service towards what the institution believes the students should experience”, and which has its roots in the debate that has continued for centuries on “whether universities should focus their curriculum on vocational relevance or academic excellence”. This brings us back to the dilemma faced by the university in deciding whether and how to be more industrially customer-oriented and market-savvy (Anctil, 2008). This also confirms that current development within academia is shaped by tension between two value sets – the market- and the academic-oriented values – and by the search for a new balance in the co-existence of these value sets (Ylijoki, 2003). In our model, the ideological gap is the gap between the academic orientation and the market orientation in the internationalisation-related services of higher education. The ideology gap stems from the complexity of integrating multiple stakeholder perspectives into the management of higher education services, and from an insufficient understanding of the needs and expectations of the different stakeholders. In their case study on performance management in the UK public sector, McAdam et al. (2005) claim that there is a need to develop much more cross-cutting communication to avoid that each stakeholder group would become reduced to isolated silos. This is consistent with our findings that the customer/market versus academic orientation in the international higher education service seems, indeed, to be merely two-fold; a sustainable synthesis has not yet been achieved. We adapt here the interesting and thought-provoking concept
of balanced centricity proposed by Gummesson (2008) – i.e. all stakeholders of HE services should have the right to satisfaction of needs and wants. Furthermore, we argue that the university should aim fully to exploit the potential of interdependency and interaction between the market and academic-oriented processes of the service delivery and thus focus on developing a balanced centricity while recognizing the different stakeholder groups as co-producers of the internationalization related higher education service. This would, in fact, be consistent with the service logic.

According to Zeithaml et al. (1990), the gaps introduced and discussed are the key ingredients in a recipe for gaining a better understanding of the delivered service quality and of what must be done to close the gaps. For the university to be able to produce customer-oriented, value-added services and to achieve customer satisfaction as the outcome, it will be necessary to bridge the gaps existing in the process of producing international higher education-related services.

We further identified 15 major variables affecting the delivery of customer-oriented services in international higher education.

The market demand is influenced by global economy slowdowns and recoveries. The variables successful (and unsuccessful) stories, political infrastructure with respect to immigration and integration, and societal attitudes towards foreign students are to some degree interdependent, but have also separately from each other an impact on the service delivery. These together are the four variables that primarily affect the dynamics of the placement and job market for international students.

The customer’s awareness of needs with respect to higher education services that support internationalization is to some degree dependent on the size of the company. Awareness, however, can and should be raised by effective communication-based marketing.

Trust is an important component in all relationship building. In our model, we identify the variable trust affecting at two different relationship levels:

1. The employer-international student level. Being a non-Finnish student is not considered a barrier to trust. Only three company respondents confirmed that a lack of trust might be a barrier to recruiting international students for R&D project work. However, much depends on the personal attitudes of the employer; the latter finding, in fact, is more in line with the observations and experiences of the authors.

2. The company-university level. The customer’s confidence in the complex system of international higher education-related services may be converted into a relationship of trust towards the non-Finnish student graduating from a Finnish university (for a sociological approach to the concepts of and interdependence between confidence and trust, see Luhmann (2000)).

Two-way boundary spanning commitment (on the company and university side) is the term we use with respect to the role complexity of key persons in the promotion of relationships in international higher education-related service interaction. The role of key persons and their personal commitment to the service process are perceived as very crucial. The innovation literature treats the subject of boundary spanning using different terms (promoters in innovations processes, Folkerts, 2001; relationship promoters in customer relationships, Walter, 1999; champions in university-industry
relationships, Plewa and Quester, 2004; translators facilitating communication and understanding between the parties, Luna and Valesco, 2003).

Service experience, word of mouth as well as the employer’s personal attitudes may affect not only the decision-making process to invest in international higher education-related services, but also the selection of the university for the delivery of international higher education-related services (e.g. being an alumnus or other personal ties may bind the employer to his or her former university). In accordance with Granovetter’s “strength of weak ties” theory, the most valuable reason to maintain a network of strong ties is for its giving access to a network of weak ties (Granovetter, 1973). In this context, it is important for the university to understand how to exploit the strength of the alumni network of its international graduates to access new information, new resources and new networks.

To achieve consistent relationships with the industry sector, the universities should not only adopt a more customer-oriented mindset, but also reflect this in the management of international higher education-related services.

The quality of international higher education-related services as it is perceived by the customer is much defined by the strength of network related ties, in other words by the extent to which the university has been able to successfully develop and exploit a complex network of relationships and to integrate the interactive processes of service delivery into the dyadic university-industry relationship (compare Gummesson, 1999, pp. 43-4).

The university brand, which in our case is often perceived by the customer as service differentiation, is considered important in service delivery. According to Keller's customer-based brand equity model, brand equity is fundamentally shaped by the brand knowledge – the “associative network memory model” consisting of a set of links and associations to the brand – created in customers’ minds by the complexity of marketing programmes and activities. Building a strong brand increases the effectiveness of marketing communication in that brand equity is crucial to the way marketing works (Keller, 1993, 2009). For the university to focus on brand building in international higher education associated service delivery, the following components have to be fully understood and implemented in the right order: the identity of the service provider, the meaning of the service, the response to the customer and the relationship with the customer (Keller, 2009).

When (international) students fail to expend an appropriate amount of effort in the process of learning, they will perceive their university experience as being of lower quality (Ng and Forbes, 2009). It follows that the degree of student efforts and abilities in students’ commitment to the learning process also has an impact on the quality of customer service delivery.

Finally, industrial customers’ perceptions of university service delivery might be negatively affected by insufficient accessibility and responsiveness of the services, or at least by the customers’ perception of insufficient accessibility and responsiveness.

Service marketing in international higher education – bridging the gap between the university and industry

Customer perceptions of a university are much based on how the customer perceives the quality of the university-provided customer-oriented support services. In the context of international higher education associated service delivery, the customer will evaluate
the degree of customer orientation in university services based on his or her perceptions of the quality of international student placement-related services. These findings are in line with the results described by Ellis and Moon (1998), who analysed business and higher education relationships in the UK placement market and found that the university is judged by industrial customers as a whole based on the quality of its placement services.

Clearly, there is a need to identify alternative but effective ways of creating value-added employability enhancing opportunities, such that international students associate with obtaining an international academic qualification (Bohm et al., 2004). Supported by the findings obtained through the interaction processes with the industry sector within the international higher education-related programme activities at LUT (Vauterin and Kässi, 2009), and drawing on the research findings introduced by Stören, it is shown that work experience measured in the number of months of employment before graduating is of significant importance for the international student in terms of increased employment opportunities after graduation. Further analysis shows that only employment associated with the field of study is relevant, and that such employment during studies reduces the probability of unemployment after graduation (Stören, 2004).

We have shown that there are several gaps in the delivery of quality customer services within the context of international higher education associated service delivery. The quality of service delivery in international higher education is probably most affected by the internal and external marketing communication gap. To close the gap, we propose first to have a closer look at an unconventional perspective on the function of marketing. The concept was developed in 1964 by McInnes and presented by Holbrook and Hulbert (2002) in their whimsical (term used by the authors) “Elegy on the death of marketing” to define the nature of marketing. According to McInnes (1964), the “market is the gap which separates producer and consumer […] Marketing is the motion which closes the gap caused by the separation of makers and users in a social economy.” (Holbrook and Hulbert, 2002). The idea is captivating; it serves the aim of this study, which is to suggest that marketing is the missing link in international higher education and related service interactions between the university and the industrial sector.

Conclusions
Given the complex picture of the increasing global competition in the higher education business, increasing internationalization of higher education, increased international student mobility, service quality in international higher education, and international student and industrial customer satisfaction, our analysis of quality customer service delivery in the higher education context is only one approach. However, it is relevant to the issue of how the sustainable competitiveness of international higher education, with a special focus on the growing dimensions in the Finnish context, could be enhanced. We have shown that new ways of adding value to the service concept of international higher education need to be identified. Aiming at closing the gap between the university and the industry sector in the interaction processes related to service delivery in international higher education might be a driver for service innovation, in which the service customer is to be viewed as central to value co-creation in the international higher education service. If international higher education-related services are to be innovated, attention should then be paid to the fact that innovations in university settings
are more likely to be adopted if they affirm with the university’s norms and values and fit with perceptions of needed services, and if they are perceived as profitable for the organization (compare Levine, 1980). To close the gap, we propose the relationship marketing approach to co-creating and developing value-adding relationships between academia and industry in the delivery and use of international higher education-related services.

Notes
1. The first author has been actively involved in the internationalization of the higher education programmes in technology of the Faculty of Technology of Lappeenranta University of Technology (LUT) as Project Manager since 2005, and as Head of International Relations since 2010. In this context, she has focused intensively on the development of piloting university-industry relationship programmes to meet the internationalization needs of industry. A reflective approach to the results of the development work has been incorporated in an action-research-based case study on the management of international degree programmes at LUT (Vauterin and Kässi, 2009). The aforementioned case study is held here by the authors as a theoretically informed and practically grounded reflective analysis outlining the research theme and objectives for the present case study and further research by the authors. The study together with further reflections on and qualitative investigations into the issue, as introduced in this paper, has contributed to a better understanding of value creation and boundary work at the university-industry interface within the internationalizing environment of the higher education service.

2. Kelliher (2005) explored the criticism of interpretive case studies and presented a research design that seeks to address this criticism. Her paper describes the research template developed by her and applies it to a longitudinal case study carried out on a micro firm in the Republic of Ireland.

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Further reading

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Publication II

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Customer orientation in higher education: the missing link in international student recruitment? A relationship marketing approach

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Customer orientation in higher education: the missing link in international student recruitment?

A relationship marketing approach

Johanna Julia Vauterin, Lassi Linnanen and Esa Marttila

Abstract: This paper suggests that the service mindset of academia needs attention to ensure that the potential of university–industry linkages for creating value is used strategically in building advantage in the increasingly competitive market for international higher education. Universities should clearly articulate the value of the higher education–employability interface in the context of growing competition for international students. The paper studies university–industry linkages by deconstructing the relationship with a focus on university–industry service interactions in international higher education service delivery and use and by analysing the relationship elements and dynamics that affect the market for international student recruitment, placements and employability. The relationship marketing paradigm is applied to explain that, by adopting a market-driven, customer-oriented mindset, universities could build strategic relationships with industry, communicate their international higher education services to industry better and more forcefully and develop competitive advantage in attracting and retaining international students.

Keywords: higher education strategy; international student recruitment; university–industry relationships; relationship marketing; value creation; competitive advantage.

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In European higher education (HE) there is a growing awareness of the emerging competition for international students with, for instance, Germany, the Netherlands and Sweden making concerted efforts to increase the numbers of international students they recruit. Among a series of ambitious goals for enhancing the internationalization of HE in Finland, the Ministry of Education (2009, p 29) has declared its requirement for non-Finnish degree student recruitment to increase by 2015. Setting this target has caused some concerns.
Recruitment of international students

Attracting a larger share of the international student market at a time of increasing global competition from existing, English-speaking major HE players has resulted in the question being raised – can this increase in recruitment be made sustainable? While it is generally acknowledged that partnerships with international academic institutions can play a key role in the successful internationalization of HE, and hence the recruitment of international students, increasing numbers of reports and projects addressing the employability of such students suggest that other types of working relationships, such as collaborative partnerships between HE and industry, have remained under-exploited in relation to building competitive advantage in international markets. Countries and HE institutions competing globally have recognized that innovative strategies and strategic partnerships are needed to attract and retain larger numbers of international students and that competitive edge is most likely to be linked to the successful development and exploitation of strategic advantages which will attract them. Students seek a complete ‘international experience’ in which high quality education is offered that can lead to opportunities for placement, employment and, eventually, shorter or longer term immigration (Verbik and Lasanowski-Hobsons, 2007). The important question, therefore, is this: does the HE sector – and in particular do universities – have the mindset that is critical for success?

This paper opens with a short review of the internationalization of HE and related trends in global student mobility. This is followed by an introduction to the international HE business from a service logic perspective in the context of marketing the university–industry relationship. A framework for deconstruction of the university–industry relationship and analysis of the interdependence of the complex constructs of relationship interactivity and environmental–social interfaces is then presented. In the final section we reflect on the implications for the service mindset of academia at large.

Background

‘The fact that education is now one of the 12 service sectors in the General Agreement on Trade in Services is positive proof that importing and exporting of education and training programs and education services is a potentially lucrative trade area’ (Knight, 2004, p 24). The landscape of HE is changing dynamically, as is the world in which HE has a major role (Knight, 2004). As a result of the emergence of international HE markets and the increased commercialization of HE (Williams, 1995; Altbach and Knight, 2007), the global market for HE has expanded significantly over the past 10–20 years. International HE has become a fast growing service sector and is now big business (Altbach, 2004). This rapid development and the ongoing debate about the relationship between HE and the economy put pressure on universities to find new ways of managing the challenges of student numbers, funding and service levels (Yorke, 2009; Fuller and Scott, 2009). Increasing the internationalization of HE is one such way.

Against this background, the development of internationalization of HE – and in particular with regard to the competition to recruit international students and to establish partnership programmes with universities abroad – has resulted in new attention being given to the relationship between the HE sector and its various stakeholders. Questions are now asked about the multi-faceted relationship between recruitment of international students and the exploitation of international talent. Associated concerns are that the linkages between academia, as a major provider of the international HE services, and the employers, as important users of these services, are under-exploited; and that ‘the business community and its networks as parts of the international training practices of higher education institutions could be utilised better than is currently the case’ (Ministry of Education, 2009, p 29).

In an attempt to highlight the HE–employer linkages and analyze the connections between linkages in the increasingly complex environment of international HE services, in relation to the HE stakeholders and in its function of knowledge and skills transfer, we need to establish a reference framework and, for whichever approach that has been adopted, to accept a range of established assumptions. The focus of this investigation is on the evolving relationship between academia and industry in the context of international HE service provision and use. It is assumed that a better balance between supply and demand for international HE services needs to be achieved and that this might be accomplished through adjustment of the service interaction processes. It is suggested that a holistic, process-based, customer-focused systems approach should be used with regard to the internationalization of HE services (see Knight, 2004) under the following conditions:

- processes that are interconnected in input–output relationships through backward and forward feedback;
- inputs which generate outputs which in turn generate new inputs;
- opportunities, core competences and human efforts as inputs;
- relationship marketing as the process of integration;
• satisfaction, value and competitive advantage as output and outcome; and
• feedback loops which provide the mechanisms of control and adjustment in the process from initiation to result.

One major assumption throughout the study is that it may not be possible to maximize the benefits and value to all relevant parties. As Yorke has noted, [while the employer’s interest in recruiting an international student] ‘… implies its self-interest in maximizing the benefit, the returns to the individual and the community are, from the employer’s perspective, second-order’ (Yorke, 2009).

Dimensions of student recruitment and employability

One of the spin-offs of the internationalization of HE is the increasing movement and mobility of students and the increase in the number of international partnership programmes intended to support and foster this mobility. Partnership degree programmes – the majority of which are in the fields of engineering and technology – are being increasingly used to enhance the competitiveness, prestige and strategic alliances of universities. This rapid development in international HE and the creation of an ‘industry’ (Marginson, 2008) brings new concerns and the need for sustainable management of international degree programmes.

Supported by the literature on the socio-economic impact of migration of intellect and talent on innovation and competitiveness – an issue hitherto studied relatively little in Europe, with exception of the UK, but relatively extensively in the USA – and given the increasing global competition at national, institutional and sector level to attract and retain skilled students and researchers (Knight, 2004), we suggest that universities should recognize better and articulate more effectively the value of the employability–HE interface in the context of international degree programmes. The term ‘employability’ is complex and its interpretations are various. For example, Yorke (2006) suggests that ‘… employability implies something about the capacity of the graduate to function in a job, and is not to be confused with the acquisition of a job, whether a ‘graduate job’ or otherwise’, but adds that graduates regarded as more employable are assumed to settle more quickly into graduate jobs (ibid). Research findings show that there is an association between (international) student placement as part of the curriculum and learning experience and enhanced employability (Stören, 2004; Brown and Ahmed, 2009). Enhancing international student employability would thus require closer links with industry and an articulated focus on market orientation, but ‘… many academics are suspicious of closer links to business’, because ‘… while not often articulated in print, there are reservations within the academy that enhanced employability links will infringe academic autonomy, undermine critique and result in ‘training’ rather than ‘education’’ (Harvey, 2000, p 5).

Statistical evidence from research on the employability of international students has not been gathered systematically or regularly and it is therefore difficult to examine the relationship between foreign students having graduated from technical universities in Finland and their employability in terms of work placements, Master’s degrees and actual employment. However, university statistics, research, reviews and reports, produced ad hoc, do provide some evidence to show a mismatch between the level of willingness of international students to stay in Finland after graduation, if employment could be found, and the relatively poor employability of these students in the Finnish industry sector (see reports by Kinnunen, 2003 and Niemelä, 2008). By way of comparison, the findings from Finland are similar to those obtained in the Netherlands and published in reports on the market place for foreign students who graduated from Dutch HE establishments: about 40% of the Netherlands’ international students wanted to stay and work in the country after graduation (Berkhout et al, 2006).

Marginson has expressed his concerns about the development and global position of Australian international HE, where the degree business model, influenced by policy and regulations, has been “brilliantly successful” but might prove less successful in terms of sustainability. He sees two ways forward, to move out of the current framework: the first driven by government and the second by institutions which, he suggests, should concentrate on what he calls ‘product development’. Marginson further suggests that there would need to be an ‘… explicit focus on the employability of international graduates both in Australia and back in the home countries. Work experience and employability are already important to students. They are likely to become a key element of explicit competition in the cross-border market’ (Marginson, 2008).

Referring to the ‘new mobility system’, as introduced by Dayton-Johnson et al, we suggest that to benefit from international student mobility ‘… [the] new mobility system will also require a new set of relationships between public and non-governmental sectors, including the private sector … To get the maximum value from the new mobility system, market forces and civil society must be converted into partners. Working against, rather than with, market forces is an exercise in futility’ (Dayton-Johnson et al, 2007, p 31, emphasis added). This present paper therefore focuses...
on the little-explored relationship between academia and industry in the contexts of international HE service provision and use and recruitment and employability of international students.

Research objectives
We seek to highlight the provider–customer relationship within international HE services with a particular focus on competitive and value-creating university–industry relationships. Given the considerations outlined above, surprisingly little academic attention has been given to the issue of competitiveness in the HE sector in terms of market awareness with regard to internationalization, customer orientation and value creation at the intersection of the sector with industry. Research on the nature of marketing in an HE context is inconsistent and, more specifically with regard to introducing theoretical models, does not reflect well the particular mission of HE and its services (Hemsley-Brown and Oplatka, 2006).

In this paper we aim to redress the lack of knowledge of university–industry relationships in the larger context of international HE development, international student recruitment and employability. By adopting a structural approach to the linkages between academia and industry, and using the relationship marketing paradigm, the paper outlines a deconstruction analysis of the university–industry relationship and presents a framework of constructs and interdependencies affecting development and maintenance of the relationship and value creation at the university–industry interface with regard to international HE service interactions and service experience. We first identify the key components of the university–industry relationship and then explore the interdependence between the relational constructs (Lindgreen, 2001). Much of the research on university–industry relationships has been quantitative, exploring the mechanisms, correlations and impact of interactions from a static perspective (Ambler and Styles, 2000). The literature offers a number of frameworks which provide for generic deconstruction and definition of inter-organizational relationships, based on correlation between the constructs (see, for example, Lindgreen, 2001), and with a specific focus on university–industry relationships (Bonaccorsi and Piccaluga, 1994; Plewa et al, 2005), but these models do not assess the causality between the constructs (cf Ambler and Styles, 2000).

In our framework we seek to adopt a dynamic and causal perspective in recognition of the influence of environmental changes and societal attitudes and integration of the dynamic characteristics that influence the dyadic (dynamic, two-way) relationship in a wider environmental and competitive context (Ambler and Styles, 2000). The model should help to enhance understanding of the dynamics affecting the university–industry relationship in the given context, and will serve as a tool for comparative research in the field and further research to address the issues of measurement of relationship development and the return on the relationship – that is, measuring the value of the relationship (Gummesson, 2004) – and to assess the development of meaning and value, commitment and influences that have characterized the development of strategic university–industry relationships. It should also help to define frameworks within such relationships; for instance, the impact of social and environmental factors critical to building advantage and establishing the context for competitive international HE services.

This paper is based on a qualitative analysis of empirical data collected through direct observations by the authors, over a seven-year period, through active involvement in the development of international HE activities and degree programmes in technology at Lappeenranta University of Technology (LUT), Finland, and from numerous discussions with academics and practitioners involved in the international HE related services of LUT. In-depth interviewing was used which served to strengthen our pre-start understanding of the processes, to enable in-depth insights to be gained from both sides of the university–industry dyadic relationship, and to elicit information in order to achieve a more holistic understanding of the interviewees’ viewpoint.

The interviews were conducted as informal conversations (see Patton, 1987, p 113) with eight university academics and practitioners and with ten industrial sector top- and middle-management representatives (see also the case study by Vauterin et al, 2010). Interpretive methods are applied as relevant to hermeneutics and as described by Gummesson (2000, p 70) to support the iterative process between pre-start and subsequent understanding of both the parts and the whole of the phenomenon.

The paper contributes to the extensive literature on university–industry relationships. It offers a new perspective on the linkage between HE and industry by introducing the value-driven relational marketing approach to the emerging issue of internationalization in the business of HE services, while integrating the language and service logic of relationship marketing philosophy into the strategic and operational context of international HE service interactions in university–industry relationships.

Processing and integrating – relationship marketing in international HE
Perceived relationship value in international HE services
In his seminal paper, ‘Job market signalling’, Spence demonstrates the signalling (indicatory) power (and
value) of education and argues that education signals inherent productivity (in contrast to the human capital theory, according to which education is an investment in enhancing productivity) to prospective employers (Spence, 1973). This implies that students consider a university degree as a signal of individual excellence and accept the costs of investing in education (the signalling costs) as a further signal to prospective employers. In a globalizing market where knowledge, academic curricula and degrees are increasingly standardized and homogenized and convergent (van Damme, 2002) what therefore might serve as a signal of competitive edge? Because employers assume that graduates have the necessary academic skills, evaluation of the university degree is a secondary consideration, and differentiation is sought (and paid for) (Yorke, 2006).

Human capital is considered a key element in the process of economic growth. Research evidence shows a positive relationship between higher educational investments and national economic growth. Despite this, employers in many countries tend to be somewhat negatively disposed towards investing in skills and training (Briscoe and Wilson, 2003). In the global arena of competing interests, the dynamic complexities of economic globalization and shortages of talent due, for instance, to ageing workforces, academia has a crucial role to play not only as a promoter of the mobility of talent and the movement of human capital (Ruokanen, 2004; Raunio, 2005) but also in helping stakeholders of international HE to identify needs and state explicitly their expectations. Marketing research recognizes the educational role of marketing, which means that through service marketing customer demand can be influenced and the customer can be trained and educated, by the service provider, to demand new services; equally, industry is exposed to new services, making it possible to create the appropriate prerequisites and make the appropriate propositions for international HE services (Edvardsson and Olsson, 1996). Figure 1 illustrates the relationship in terms of the perceived value of the relationship between the university, as the provider of the international HE services, and the company (characterized here as the customer) and the international student (the consumer) as the intended users of these services. Figure 1 shows the existence of a knowledge gap that exists regarding interactions in the university–industry relationship in the context of international HE. In agreement with Morgan and Hunt, we argue that, in the international competition in HE, ‘... academics have neglected the search for explanations as how to create sustainable competitive advantages based on relationships’ (Morgan and Hunt, 1999, p 281). As Barringer and Harrison note (2000, p 395),

‘The fact that interorganizational relationships can be justified from such diverse theoretical backgrounds as transaction cost economics (which is grounded in economics), resource dependence (which is grounded in social exchange theory), stakeholder theory (which is grounded in business ethics), and institutional theory (which is grounded in sociology) says a lot about the theoretical soundness of interorganizational relationships.’

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**Figure 1.** International student–university–industry relationships, perceived relationship values and the knowledge gap in university–industry relationship interactions.
Rethinking international HE services: service logic, value-in-use and customer-oriented mindset

Little attention has been given in academia to the impact of international HE from the perspective of service logic. A few studies have attempted to approach the issue of international HE service delivery from a service marketing or relationship marketing perspective, but these focus on the links between academia as the producer of international HE services and its students as consumers, although Valentín and Sánchez (2002) produced an earlier review of articles on university–industry relationships.

In the knowledge economy and the knowledge business, HE institutions have not only a crucial but also a powerful role, because their core activities are associated with knowledge creation and dissemination and with learning; and because knowledge is the principal asset which determines the employability of individuals (Rowley, 2000). Knowledge – information, the creation, application and dissemination of knowledge – is an asset and the fundamental source of value and competitive advantage (Glazer, 1991; Vargo and Lusch, 2004; Tzokas and Saré, 2004; Bean and Robinson, 2002). International HE service quality, as perceived by the customer, is a function of the customer’s perceptions of two dimensions in the service provision: one dimension is influenced by the technical quality; the other is influenced by the functional quality of the service (Grönroos, 1994). This means that how the customer perceives what he receives is determined by the quality of the core service – that is, the university’s core competences of knowledge creation, dissemination and learning. How the customer experiences the service interactions is largely dependent upon the extent to which the university has integrated a customer-oriented, service mindset into all functions related to the production and delivery of the service.

In the competitive environment of international HE services, the customer-oriented application of knowledge and specialized skills is thus the primary focus of service exchange and differentiation. Because academia, as deliverer of international HE services, can only make value propositions, there is no value until the service has been used, experienced and perceived (Edvardsson and Olsson, 1996; Vargo and Lusch, 2004). The value of international HE service interactions and exchange can thus only be perceived and determined by the customer on the basis of value-in-use; that is, the value that results from the successful application of the university’s core competences – its knowledge and skills – for the benefit of the customer (Vargo and Lusch, 2004; Ballantyne and Varey, 2006). This implies that the customer of international HE services is always engaged in service interactions as a co-creator of value for the services. Hence, from a service logic perspective, international HE service seeks to integrate specialized competences into competitive market-oriented services that are developed in customer-focused and relationship-oriented interactions. In all service interactions, international HE service focuses on value creation, and makes propositions based on market demand and for the benefit of the customer; and in relational interaction with the customer (Vargo and Lusch, 2004; Grönroos, 2006).1 It is appropriate to specify here the difference between the terms ‘service interaction’ and ‘service exchange’ as used throughout the discussion. We adopt the relationship marketing approach of Nordic School research in which the focus is on the process of service interactions and facilitating interactions between the service provider and customer, and considers continuous service exchange to be possible only on the basis of successful service interactions (Grönroos, 2006).

A framework of university–industry relationships in international HE service interaction

Building on Lindgreen’s model for breaking down relationship marketing in dyadic relationships (Lindgreen, 2001) we propose an expanded framework, as illustrated in Figure 2, which not only allows for deconstruction of the university–industry relationship into key components – that is, (1) the determining and (2) the defining variables – but also makes allowance for (3) the moderating variables affecting the relationship such that the intended state of the university–industry relationship to form a strategic partnership will most probably differ from the relational state of service interactions and exchange between academia and industry (as customer). The extent of this difference is determined by the influence of relational moderators, such as the dynamic change in socio-environmental signals and messages, the influence of trans-boundary functions and individuals, and the perceived value of international HE services with specific regard to knowledge and skill transfer and enhanced competitiveness. We define such relational moderators as the variables that modify the original correlation between the determinant and defining variables in the relationship. Relationship marketing research into dyadic relationships does not usually distinguish between the two partners and their relationship (Ambler and Styles, 2000). In their exchange relationship, academia, industry and their mutual relationship are interconnected but also independent identities. On the basis of Ambler and Styles’ viewpoint, we argue that as a result of the dynamics of environmental and competitive factors the

1 It may be possible to use the term ‘service exchange’ as an umbrella term, as used within the Nordic School, to subsume the terms ‘service interaction’ and ‘service exchange’.
The university–industry relationship is more than just the university’s attitudes and behaviour towards its industrial partner and vice versa; and, therefore, that the university–industry relationship as such is a prerequisite connection and ‘information conduit’, albeit not sufficient for successful service exchange. This argument underpins the value creation potential of the relationship in its function as a channel or platform for knowledge transfer, communication and dialogue (Duncan and Moriarty, 1998; Ballantyne, 2004a; Ballantyne and Varcey, 2006; Grönroos, 2004; see also Vauterin et al., 2010b).

**Relational determinants**

Inter-organizational relationships are established to reduce uncertainty and/or add value (Håkansson, 1982). Möller and Wilson (1995, p 40) argue that organizations ‘. . .generally develop relationships for multiple reasons that are not based on any singular dimension’. They suggest that relationship development can be motivated by the need for economic gains, the search for stability or predictability, for reciprocity and for efficient and effective operations, to establish legitimacy; or by the need to minimize risk (Berry, 1995); or systematize and make choice routine and thus save time (Sheth and Parvatiyar, 1995). The concept of relational governance – as defined by Heide (1994, p 72) as ‘. . .a multidimensional phenomenon, encompassing the initiation, termination and ongoing relationship maintenance between a set of parties’ – is integrated into our framework. The construct of relational governance has been conceptualized on the basis of Macneil’s (1980) relational exchange theory which defines the role of relational governance as being a key determinant to successful exchange relationships. In the literature on exchange governance, socio-economic exchange interaction has been studied, with a differentiation between transactional governance and relational governance (of which the former can be placed one end of a continuum and the latter on the other end) (Dwyer et al., 1987). The extent of relational governance is defined by the strength of relational norms (Cannon et al., 2000; Ferguson et al., 2005). Relational norms, such as information sharing, flexibility and solidarity, the construct of which was introduced by Heide and John (1992), are prevalent in the relational governance structure (Noordewier et al., 1990). A high degree of relational governance is associated with a high degree of compliance with relational norms (Ferguson et al., 2005). We consider the strength of relational governance in the context of university–industry relationships to be determined by: (1) the extent of relational orientation, which is defined as the propensity to engage in relational behaviour (Gopalakrishna Pillai and Sharma, 2003); (2) the extent to which a market orientation is integrated into the core competences of the organization; and (3) the extent of organizational fit, defined by the degree of organizational awareness, the degree of organizational flexibility and amenability to change, and the extent of the compatibility between organizational culture and structural pattern (Levine, 1980; Cartwright and Cooper, 1993; Plewa et al., 2005). There is case-study evidence that the development in university–industry dyadic
relationships of trust and commitment, the key mediating constructs in successful relationship management and critical dimensions underpinning relationship quality (Morgan and Hunt, 1994), is affected more by the degree of willingness and ability of academia to work with industry (while recognizing the differences in organizational culture) than it is by the degree of the university’s professional expertise (Plewa et al., 2005; Plewa, 2005). A lack of cohesiveness in the internal value system of academia, manifested in academia’s dual orientation towards and asymmetric consideration of the separate market and academic-oriented service processes (Vauterin et al., 2010a), makes managing the complexity of the value system of the university–industry relationship even more difficult (see Geisler and Rubenstein, 1989). The antecedents of relational governance – relational orientation, market orientation and organizational fit – are variables which enable the implementation of relational governance: relational governance, in turn, is positively associated with exchange performance (Ferguson et al., 2005). We thus suggest that the combination of weak relational orientation, market orientation and organizational fit will reduce and downgrade the level of relational governance in university–industry relationships.

Relational constructs

Relationship quality is defined as the ‘metaconstruct composed of several key components reflecting the overall nature of relationships’ between the university and the industrial customer (Hennig-Thurai et al., 2002, p 234). Four constructs affecting the relation quality were identified: relational benefits, communication, confidence and trust and commitment and loyalty. Relationship research has studied the meaning of relationship benefits and the interaction of relational benefits and relationship satisfaction and commitment, from the perspective of the service provider gaining benefits from the relationship, or from the perspective of the customer receiving benefits for being committed and loyal to the relationship (Gwinner et al., 1998; Hennig-Thurai et al., 2002). The research focuses on the identification of relational benefit types (Gwinner et al., 1998), and on the mediating position of the different types in the relationship between relational antecedents and relational outcomes (Hennig-Thurai et al., 2002). There seems to be a broad consensus that a positive relationship exists between relational benefits and commitment and loyalty (Hennig-Thurai et al., 2002; Bowen and Chen, 2001; Bowen and Shoemaker, 2003) and word-of-mouth communication (Hennig-Thurai et al., 2002). While we wish to keep the construct of relational benefits defined broadly as those benefits that exist apart from the core service (Hennig-Thurai et al., 2002) and gained as a result of having invested in the relationship (cf Hennig-Thurai et al., 2002), we take the view that there is an antecedent–consequence relationship between relationship benefits and confidence/trust and commitment/loyalty.

Commitment, loyalty and confidence, trust. Commitment and trust are the most acknowledged and prevalent concepts of relationship marketing (Morgan and Hunt, 1994). In the context of university–industry interaction relationships in international HE services, we identify the construct ‘confidence’ as a driver and the variable ‘trust’ as a consequence of the relationship (cf Ambler and Styles, 2000). ‘Confidence in the exchange partner’s reliability and integrity’ (Morgan and Hunt, 1994, p 23) defines the industrial customer’s confidence in the total quality of the complex HE system in Finland, including its international HE services. This confidence may be migrated into a relationship of trust towards the non-Finnish student graduating from a Finnish university.4

Our findings show that being a non-Finnish student is not considered a barrier to trust. Three company respondents, however, confirmed that lack of trust might be a barrier to recruiting foreign students for R&D projects, although the personal attitudes of the employer would be significant in any such choices. In fact the latter finding confirms better the observations and experiences of university academics and practitioners, including the present authors. Based on the work of Morgan and Hunt, we define the construct commitment for this research as a measure of perceived relationship importance (Morgan and Hunt, 1994; cf Plewa, 2005). Loyalty might be considered as an advanced level of, and strategic choice concerning, commitment (Bowen and Shoemaker, 2003). This is consistent with research findings demonstrating that even if the level of commitment of both parties towards the relationship is high, this does not always lead to renewed investments in relationship collaboration; however increased relationship loyalty is associated with increased expectations of relationship continuity (Plewa, 2005).

Communication. Several gaps could be identified in the delivery of high-quality customer service in the context of international HE. Of these, the gap between internal and external marketing communication has the greatest effect on the perceived value of relationship interactions and the customer-perceived value of international HE service delivery (Vauterin et al, 2010a). Vauterin et al argue that the responsiveness of international HE derives from competitive, customer-oriented, value-creating service interaction activities which build on relationship-focused and communication-enabling interactions (Vauterin et al, 2010b). In relationship

84  INDUSTRY & HIGHER EDUCATION  April 2011
industrial and academic boundaries. The relationships thus help create knowledge (Ballantyne, 2004a; Ballantyne and Varey; 2006) that can be converted into a resource which is perceived as valuable in the market: rare, difficult to reproduce and not susceptible to substitution (Barney, 1991, 1995; Barringer and Harrison, 2000).

**Relational moderators**

**Boundary spanning interfaces.** In relationship interactions, ‘boundary spanners’ are expected to be effective under conditions of uncertainty. Boundary spanners are individuals who operate between a business and the external environment (Aldrich and Herker, 1977; Guss et al, 1998; Johlke et al, 2002), connect the relationship parties through gaining and coordinating access to, and transferring, valuable implicit and explicit information (Aldrich and Herker, 1977), are faced with competing expectations from their own and the partner organization (Perrone et al, 2003) and, deliberately or otherwise, play a critical role in the generation of competitive knowledge by choosing and deciding what information should be selected, transferred or retained (Gander et al, 2007; see also Vauterin et al, 2010b). In operation, and probably as a result of individual efforts and belief, boundary spanners may cross boundaries and break barriers. However, they can also decide to maintain existing boundaries and barriers; and, if so, they ignore rather than perceive as a possible resource, or rejecting as incompatible, what the organization is and does (Cohen and Levinthal, 1990, in Gander et al, 2007). In the context of building university–industry relationships, and specifically with regard to focusing on the relationship between international HE service marketing and the complexity of the socially constructed environment and the ambiguity of the market for international HE services (including work placement for international students), the importance of boundary spanning and the role of boundary spanners as a source of power and control over information has not been sufficiently recognized (Vauterin et al, 2010b).

**Environmental uncertainty.** The construct of environmental uncertainty has been widely reported in the literature on organization management. Milliken (1987) argued that the level of perceived uncertainty is determined by a complex network of interrelated variables and distinguishes between state uncertainty, which refers to the general unpredictability of the environment and its various components; effect uncertainty, which refers to the inability of the organization to predict the influence of future environmental changes; and response uncertainty, which defines the difficulty faced by the organization in predicting the response of the competitive terrain to the organization’s strategic decisions and processes. The multiple sources of environmental uncertainty are assigned values on a scale on which a lack of information about environmental state, effect and response has a high value and hence represents a major impact (Lawrence and Lorsch, 1964). The literature offers various studies, based on operational indicators, that seek to prove the impact of environmental factors on relationship performance and the existence of a stronger relationship between market orientation and performance under conditions of higher environmental uncertainty. However, these studies did not show any significant moderating effects for environmental variables (Subhash and Raju, 2001). In spite of these results, and on the basis of observational evidence obtained from the present case study which is supported by other research, and inspired by evolutionary biology and sociological theories that seek to explain the phenomenon of increased solidarity and cooperation under conditions of adversity, crisis and environmental uncertainty in plant and animal as well as human communities (Andras et al, 2007), we suggest that, in the context of university–industry relationships in international HE service interactions, the construct of environmental uncertainly has a moderating effect on the market orientation and relationship performance. This would imply that the impact of market orientation on the performance of the relationship is dynamically associated with the environmental influence and often reinforced by a range of both negative and positive feedback mechanisms. Clearly, further research is
Recruitment of international students

needed to study empirically how and to what extent variances in environmental uncertainty have an impact on the market orientation and relationship performance in university–industry relationships in international HE service interactions.

Perceived value of the international HE service. Various factors are associated with the perceived value of international HE services, each to some extent determining the value of the services and more specifically of international student placement, as perceived respectively by the customer (industry), academia and the students. A powerful factor affecting the perceived value of international HE is that of the university brand – which, in the service relationship, is often perceived by the customer as service differentiation (Vauterin et al., 2010a). Building a strong brand is a time-dependent process which, if adequately addressed by the university in building identity, service positioning and articulation, customer orientation and building strategic relationships, may result – and be accelerated by customer satisfaction and positive word-of-mouth – in brand equity which, in turn, is a valuable asset and crucial to how marketing works (Keller, 2009).

Clearly, the quality of the service relationship is influenced by the extent of the effort a foreign student is actually willing to make, the student’s abilities and commitment to the process of learning. Insufficient commitment can lead to dissatisfaction with the university experience (Ng and Forbes, 2008) including placement experiences; this, naturally, will have a negative effect on the value of student placements as perceived by the university–industry relationship partners. Spence (1973) further argues that an employer’s decision to recruit, or not, is an investment decision made under conditions of particular uncertainty, since it is not possible for the employer to know in advance the employee’s capabilities. Employers do have certain expectations and beliefs about the relationship between signals and a potential employee’s inherent productivity, but these beliefs are shaped by data from the marketplace. This leads to a ‘signalling game’ in which the two players – in our case the foreign student and potential employer – can use and interpret the signals of the other party to make inferences about hidden information. An information gap will exist in the market (cf Vauterin et al., 2010a) if signalling is perceived as weak or even absent. It will then be necessary to look for other means by which information transfer can take place (Spence, 1973, p 356). This reasoning leaves us with several questions.

First, as far as the marketplace for foreign students is concerned – a marketplace that is constructed out of information sourced dynamically from multiple resources – what is the effect of the ‘signalling game’? As Spence asks in his conclusions, ‘what is the effect of cooperative behaviour on the signalling game’ and, further, ‘what kinds of discriminatory mechanisms are implicit in, or interact with, the informational structure of the market, and what policies are effective or ineffective in dealing with them’ (ibid, p 374)?

Second, and following the proposal by Ambler and Styles that the potential for value creation of a relationship lies in its primary role as a connection or conduit enabling good communication – that is, the flow of implicit and explicit information (Ambler and Styles, 2000) – to what extent does the university–industry relationship have a moderating influence in its conduit role of transferring effective signalling; and does that make the signalling game a game for three?

And, third, because relationships in a given inter-organizational network do not exist independently of each other but, on the contrary, are interconnected through certain patterns of activity and resources (Håkansson and Snehota, 1995; Ritter, 2000), what is the impact of the university–industry relationships in international HE services on the other university–industry relationships, and vice versa?

Satisfaction, value creation and sustainable competitive advantage – output and outcome

Creating value and constructing competitive advantage is a process built on relationships in a series of interconnected processes reflecting strategic behaviour (Rindova and Fombrun, 1999). Using resource-based theory, Morgan and Hunt (1999) postulated that organizations can build comparative advantage by combining their own organizational, relational and information resources – through ongoing collection of information and knowledge – with those gained and shared in marketing relationships. When properly used, these comparative advantages may result in competitive advantage in the market-place.

In Figure 3 we represent the interactions between relationship satisfaction, relationship value and competitive advantage as a progression of the university–industry relationship from output to outcome. Relationship satisfaction is defined as the immediate output of the relationship and its embeddedness as referring to the complex manner in which the output is inserted and used in the institutional as well as the relationship contexts. Hence, when relationship satisfaction persists over a period of time, and is embedded in continuous relationship assessment, satisfaction may turn into long-term impacts – that is,
relationship value. Relationship marketing emphasises the value of relational connectedness, relationship building, maintenance and development on the basis that these are processes of interaction embedded in shared values (Ballantyne, 2004a; Ballantyne and Varey, 2006) and mutual interests aimed at mutual creation of value and securing mutual benefits (Grönroos, 1994; Christopher et al., 2002; Gummesson, 1997). In university–industry international HE relationships, the value-creating variables bringing mutual benefits to the dyadic partners could be identified as retention, strategic partnership and networking and the flow of talent and gains in human capital (cf. Plewa et al., 2005). Whilst relationship effects only have an impact on interactions and processes at the relationship level, the relationship outcome – that is, competitive advantage – is the combination of all effects arising from the relationship with other moderating forces such as market and societal changes over time, and is thus more than the sum of all relationship impacts.

**Missing the feedback loops? – conclusions and implications**

This paper has contributed to the understanding of relationship marketing in the linkage between academia and industry in the context of international HE service delivery and use. We have argued that the service mindset of academia needs to be addressed in order to ensure that the value-creation potential of university–industry relationships will be strategically developed and used effectively as a conduit to facilitate the purposeful communication, dialogue and learning that is critical for building advantage in the competitive market of international HE. The paper acknowledges the need for further research on the dynamic elements in university–industry relationships, with a focus in particular on examination of causality in international HE service interactions (cf. Ambler and Styles, 2000). In the international operations of the HE sector, ambition seems to be largely driven by short-term decision-making and measures. For Finland, a small nation, competing in the field of international HE solely through product development is difficult. In the search for unique value and competitiveness in international HE, universities should understand that product development alone – that is, degree programme development – is not the decisive factor in building sustainable competitive advantage (Grönroos, 2004). Degree programmes can be replicated: what cannot be replicated is the way in which universities are able to build and maintain a unique network of relationships (Hochmann, 2010). In international HE service relationship interactions, and with specific regard to continuous international degree programme development and increasing international student recruitment, it seems still that there are insufficient feedback loops – the deviation-amplifying loops that serve to link the university–industry relationship outputs to the different constructs and levels within the complex relationship marketing system and, above all, to the organizational mindset, and back. Universities are academic organizations and business in the HE service sector is, importantly, different to
Recruitment of international students

business in the private sector, especially with regard to how universities perceive and interpret their role in promoting the internationalization of HE and in articulating international HE services to the marketplace from the perspective of academic relevance, quality and productivity. However, as universities have become global players, competing in a global HE market, they might want to reflect upon the competitive marketing strategies used in the private sector and select and integrate those elements of marketing crucial to the effective communication of value propositions in international HE. Because the competition for international students and academic partnerships is increasing, we suggest that universities seek advantages through partnering and building network relationships with strategic industrial customers. By adopting relationship marketing for partnering with industrial customers, universities will focus on delivering flexible, targeted, customer-oriented international HE services and associated value-added support services. Clear articulation of the value proposition and customer experience will, in turn, differentiate the services delivered from those of competitors. Especially in the UK, increasingly in The Netherlands, and occasionally in Finland, there are examples of governmental and institutional projects that have been launched at policy level and, in response, at institutional level in an attempt to increase awareness of the gaps in international HE and to support HE institutions in their efforts to enhance international student employability.

However, research has produced evidence of negative attitudes among university academics towards marketing-related activities in HE (Hemsley-Brown and Oplatka, 2006; Vauterin et al, 2010a). In light of this and reflecting on the suggestions above, we raise the notion of internal marketing, a prerequisite for developing effective customer awareness and for successfully managing customer service relationships (Christopher et al, 2002). Although internal marketing – in relation to the university–industry linkage, as analysed here in the context of international HE service delivery and use – was not directly in the scope of this paper, the impact of omitting internal marketing needs to be included in any consideration of measures to be taken. Relationship marketing theory has recognized that internal marketing is a complex system of structural and process dimensions (Ballantyne, 2004b) and needs to be effectively embedded into all levels of the organization to ensure that a satisfactory and engaging customer experience will be delivered. It must be understood that the development of internal marketing – in its sense of ‘treating the employees as if they were internal customers and valued participants in the creation, circulation and diffusion of new knowledge’ (Ballantyne, 2004b, p 5) – is a prerequisite for and thus critical to achieving success in creating value in university–industry engagement: company satisfaction as an output of company involvement in international HE service interaction is translated into the context of international HE services through international student placement and recruitment. Given that service and customer-oriented mindsets can be created only through effective internal marketing activity (Grönroos, 2001, p 332), by focusing on the value of action and learning in good internal relationships (Ballantyne, 2004b, p 24) and by designing all internal functional processes such that customer-oriented values will be assessed and implemented, we stress that it is extremely important to study and understand the potential of internal marketing as a fundamental part of relationship marketing and as a strategic tool for creating a sense of customer consciousness (Barness et al, 2004) within a university environment seeking to combine academic excellence with business expertise in the competitive, global HE market.

Notes
1 For a discussion on the difference between customer-led and market-oriented philosophy see Slater and Narver, (1998).
2 Market orientation refers to an organizational culture that emphasizes knowledge generation and dissemination, customer orientation and competitor orientation, responsiveness and inter-functional coordination (Kohli and Jaworski, 1990; Narver and Slater, 1990) and is thus defined as the organizational need and ability to become well informed about the market and to use market information to create competitive advantage and value (van Raaij and Stoelhorst, 2008).
3 For a discussion on the integration of the construct awareness into the boundary spanning processes of university–industry relationships, see Vauterin et al (2010b).
4 For a sociological approach to the concept of and interdependence between confidence and trust, see Luhmann (2000).
5 For comparison see the study by Subhash and Raju (2001) on the impact of environmental uncertainty on relationship performance in the hospital industry.
6 For example, the Finnish VALOA project (http://www.valoa-hanke.fi) aims to improve the employment opportunities of international degree students in Finland and has a focus, among others, on enhancing university–industry networking.

References


Recruitment of international students


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Value creation in international higher education: the role of boundary spanning in university-industry collaboration

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Value creation in international higher education

The role of boundary spanning in university-industry collaboration

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Abstract

Purpose – This paper takes the stance that the continuous growth of international student degree mobility creates new opportunities for academia and business to collaborate to mutual advantage. To recognize, identify and exploit these opportunities, it is critically important to understand what boundaries stand between university-industry partnering initiatives in international higher education (HE) and what interaction processes span these boundaries. The purpose of this paper is to develop a model of the boundary-spanning functions and processes underpinning value marketing for strategic university-industry partnering.

Design/methodology/approach – The paper employs interpretive phenomenological research methods. It takes an investigative case-based approach, studying over time the boundaries, boundary roles and processes involved in university-industry collaborative interaction in the context of Finnish international HE.

Findings – The findings suggest that conceptualization of the university-industry boundary-spanning processes in international HE needs to be extended to incorporate elements concerning the power, impact and management of the boundary roles. A better understanding and adequate managing of the boundary roles may help to decrease the perceived market demand uncertainty surrounding international HE. The findings also suggest that in-depth research is needed for the development of a holistic understanding of how partnering for international HE is experienced.

Originality/value – This paper represents a first attempt to conceptualize university-industry boundary-spanning processes, both in a general manner and from a viewpoint of value creation in working partnerships between academia and business within the context of international HE.

Keywords University-industry collaboration, Boundary spanning, International higher education, Value creation, Marketing, Finland, Higher education

Paper type Case study

A “new reality”

In his study, Harvey (2000) probes the new realities of the relationship between employment and higher education (HE) in a rapidly changing market for HE. His questions reflect a debate rich in perspectives expressed by the different stakeholders
of HE (Bleiklie and Kogan, 2007). They also reflect the call for enhanced responsiveness of the university to socio-economic demands (Neave and van Vught, 1991). This paper contributes to the discourse on the market responsiveness of HE by bringing into focus a new emerging reality of HE. This new reality lies in the emerging relationship between the need for HE to attract more international students and increase international student degree mobility, and the need for international talent in the global recruitment market. We suggest that academia should attempt to enhance market responsiveness in the international context of HE, and that a relationship-marketing approach to market orientation[1] is required to communicate responsiveness. This paper seeks to demonstrate that a holistic understanding of the boundary-spanning functions linking academia with business might help underpin strategic partnering for enhanced responsiveness of international HE to socio-economic demands.

Study design
We first briefly introduce the university as a stakeholder organization. Against this background, we discuss the context in which the university is linked to the socio-economic environment. Here, we adopt a dyadic perspective and focus on the link between the university and the business sector. The paper contends that the continuous growth of international student degree mobility brings forth new opportunities for academia and business to collaborate to mutual advantage. For one to recognize, identify and exploit those opportunities, we offer a comprehensive understanding of boundary spanning: first, what the boundaries standing between university-industry partnering initiatives in international HE are; second, what the practice of boundary spanning is; and third, what the potential of the university-industry partnership is to develop bridging mechanisms that will ensure an attractive environment for degree mobility, recruitment and retention of talented international students. We adopt a value-driven relationship-marketing perspective and consider the university-industry partnering environment from the standpoint that the stakeholders of the university-industry collaboration are the co-creators of the value of the international HE service. Value is thus co-created in partnership interaction, and value is derived and determined in use. We then analyze the processes of interaction and value creation within a university-industry partnering context, and from the viewpoint that partnering provides the practice for boundary spanning through knowledge creation and partnership learning. A model of boundary-spanning functions underpinning value-marketing services for strategic university-industry partnering is developed and discussed.

The context: a stakeholder approach
For the reader to gain a better understanding of the context, we propose a stakeholder approach to service marketing in international HE. We explore the concept of value creation in international HE from the viewpoint that international HE offers a set of services to and creates value propositions[2] for a range of stakeholders – governments, academic institutions, the private sector, as well as faculty and students – each having their own priorities, expectations and perceptions with respect to international HE (Knight and de Wit, 1995).

In their analysis on trends and change processes in HE organizations, Bleiklie and Kogan (2007) take an organizational perspective. They demonstrate that policymakers,
HE decision makers and other interested parties have influenced recent changes and developments in the HE regime, and that this influence not only caused an ideological shift in HE institutions, but indeed also caused a structural and behavioural shift. It is this shift that is pushing academia away from the traditional university ideal and towards the stakeholder organization ideal, where the academic community within HE is only one of the several stakeholder groups (Bleiklie and Kogan, 2007). Knight (1999) identifies three entities which have different perspectives towards the internationalization of HE: the government, HE itself and the private sector. Each entity consists of several stakeholder groups. It is through the lens of stakeholder management that strategy, processes and performance need to be reviewed (Pavicˇic´ et al., 2009). In this paper, we apply the aforementioned argument to the international dimension of HE. However, within the complexity of HE relationships and networks – all of which are challenged in varying ways and by various levels of "socially justified interests of multiple stakeholders" (Pavicˇic´ et al., 2009, p. 192) – we focus on the micro environment of the dyad between the university and the company representing the business sector stakeholder group. The micro approach allows us to eliminate the potential influence of other relationships and broader networks (Plewa, 2005), and to focus on factors influencing boundary spanning for value co-creation.

Research problem and objectives

There are two major streams of research on the impact of (international) HE on society and the economy. One stream deals with the socio-economic impact of increased investments in HE (as an example, Chellaraj et al., 2008). The other stream focuses on the socio-economic benefits of collaborative partnerships between academia and industry as a source of industrial innovation. Here, however, there are still a number of gaps in the understanding of university-industry linkages (D’Este and Patel, 2007). Academia interacts with industry through a wide variety of channels, including forms of knowledge transfer such as joint research projects, consultancy and training; however, these have not been analyzed systematically (D’Este and Patel, 2007, p. 1296). Despite a growing interest among academics and policy makers towards maximizing the benefits of university-industry partnering, research has largely neglected the potential of university-industry collaboration as a source of talent transfer. In this study, we define university-industry partnering as the practice of collaborating in which academia and industry meet and work together in a mutually beneficial way towards the shared goal of being attractive and competitive to the best international student talent.

The study offers an empirical investigation into the practice of boundary spanning in international HE university-industry partnerships. It builds on a previous case study (Vauterin et al., 2011), and draws on the findings that were empirically obtained from longitudinal observation. Based on these, the study has concerned itself with questioning, generally, the environment and perspectives surrounding and underpinning the empirical practice of university-industry partnerships at work in international HE and, specifically, the practice of boundary spanning underpinning successful partnering. The changing geography of international student degree mobility and the increasing scale of the movement might well change the partnering landscape between academia and business and provide new opportunities for interaction. How is this understood by the stakeholders of university-industry collaboration? How is this

Value creation in international HE
embedded in the delivery of the university’s social and economic mission? And how can we as researchers enhance understanding of the changing dimensions of market-responsive partnering between academia and business?

It is suggested that the increase in international student degree mobility provides new, not yet fully understood opportunities to academia and business for mutually advantageous collaborative partnering. We draw on the understanding that a failure to adopt a strategic approach to the practice of boundary spanning can impose barriers to partnership development between academia and industry (Vauterin et al., 2011). The objective of this study is to assess the longitudinal follow-up of and opportunities for boundary spanning between the university and business in an international HE context and to create new insights. It is not the objective of the study to give an account of the enabling factors, challenges and barriers to partnering between academia and business.

Approach and methods

The research questions that have initiated this investigation derive from the aforementioned concern and draw on the understanding gained from our previous case study (Vauterin et al., 2011). What and where are the boundaries and boundary-spanning functions of university-industry partnering in international HE, and how do these influence service interaction, stakeholder/customer satisfaction and value co-creation?

The paper contributes to the stream of research on university-industry linkages. This investigation comprises all five elements of what Gummesson (2005, pp. 322-4) introduces as his “synthesis of research” and “methodology-in-use”. It is case research (systemic and holistic), inductive (building on reality and pre-understanding of knowledge), anthropological (through direct observation), narrative (concerned with the everyday experience) and action research (seeking both to contribute to science and to help solve a practical problem)[3]. The present paper also draws on statistical material (recorded by the first author) and data documented in extensive e-mail correspondence (by the first author) with academic and industrial partners engaged in the case activities over the seven-year period. The study is also interpretive phenomenological. It is informed by personal lived experience, which is the “ego-logical starting point” for our research (van Manen, 1990, p. 54); by experimental material collected from other people’s lived experience and their reflections on their experiences through informal interviews (Vauterin et al., 2011); by close observation relying on the power of action and dialogue (in international practice settings; in professional development occasions; in administrative staff meetings; in informal one-to-one and group “coffee room” discussions; and in industrial representative and cooperation partner meetings). Referring to van Manen (1990, p. 68), perhaps the most valuable source materials for our investigation have been practice-related anecdotes. Behaviour, incidents and phrases, together constituting interesting anecdotes, have been recalled, recollected and recovered for the purposes of this present study – to make sense of what exactly happened – “in hindsight” (van Manen, 1990, p. 69) and “from some known endpoint that may construct the earlier events in the light of a subsequent more complete understanding” (Mulhall, 2003, p. 312).

The paper is organized to present a model of the practice of university-industry boundary spanning in an international HE environment. The model seeks to capture the boundaries and processes of interaction underpinning success in university-industry collaboration, service experience and value creation. The case settings are in Finnish
international HE in the field of engineering sciences. Comparable results from other studies are incorporated with the objective of bringing together the underlying similarities from different contexts. This should help improve the internal validity, generalizability and conceptual level of the model (Eisenhardt, 1989).

Marketing for spanning boundaries

Vauterin et al. (2011) have suggested that the degree of customer knowledge with regard to the specific opportunities for interaction in international HE seems to be affected by the extent to which and how information crosses boundaries, and that a low degree of customer awareness negatively affects the degree of company engagement in partnership interaction. The authors further identify poor communication or lack of communication – the latter is a negative source of communication (Gronroos, 2001) – in the market to be the primary source of insufficient interconnectedness between international HE and its industrial stakeholders. If the market for international HE is a place that separates the provider from its customers (Vauterin et al., 2011), we contend that this market needs to be bridged by transforming it into a place that connects and facilitates interaction (Duncan and Moriarty, 1998; Prahalad and Ramaswamy, 2004). Such a place can be considered a practice, i.e. a meeting point for boundary-spanning competences (Holtinen, 2010; Levina and Vaast, 2005). If a practice is facilitated, the parties will then possess motivation to engage in and learn through dialogue, and find opportunities for partnering.

The literature offers several conceptual perspectives interlinking the processes of communicating, sharing knowledge and generating mutual understanding with relationship development (Andersen, 2001; Hirvonen and Helander, 2001; Gronroos, 2004; Tzokas and Saren, 2004; Ballantyne and Varey, 2006; Ippolito, 2009). However, these frameworks do not capture the characteristics specific to university-industry partnering in international HE. We single out two main elements characterizing the special nature of service interaction in international HE:

(1) a low interconnectedness of academic and market-oriented (market-responsive) practices (Vauterin et al., 2011); and

(2) a high level of social constructedness, complexity and dynamism of the internal and external market environment.

These characteristics also engender negative attitudes, which in turn might influence the capabilities of a company to engage in international HE partnering (Hirvonen and Helander, 2001).

Our model aims to offer an understanding of the boundary-spanning elements and functions underpinning engagement and decision-making in university-industry partnerships (Figure 1). These partnerships should be viewed as a practice of learning by interaction (Prahalad and Ramaswamy, 2004; Holtinen, 2010). This practice binds the process of value creation to a specific socio-cultural, socio-economic and spatial context at a certain time in history and in the lived-in world of the parties involved in the practice (Holtinen, 2010). The model incorporates the notion that knowledge acquisition, dissemination and application form the fundamental basis of competitive service relationships (Vargo and Lusch, 2004; Ballantyne, 2004; Tzokas and Saren, 2004; Gronroos, 2004). The interaction processes are the enablers of the service experience and value creation (Ballantyne and Varey, 2006). Relationship dialogue is
the process of learning together with the objective of developing a shared meaning (Gronroos, 2001, 2004; Ballantyne, 2004). The boundary spanning roles are recognized as sources of power and influence both in service interaction management (Aldrich and Herker, 1977; Russ et al., 1998; Levina and Vaast, 2005) and in overcoming barriers to collaborative communication and partnership advancement (Tushman and Scanlan, 1981; Walter and Gemünden, 2000). In addition, the model captures the evolution of the learning partnership over time, with boundary-spanning competences as input into the learning partnership (Levina and Vaast, 2005), and stakeholder value as output of the partnership.

The enabling role of the university-industry partnership

According to Rindova and Fombrun (1999), organizational competitive advantage is built in a series of interconnected processes of strategic behaviour-reflecting investments, projections and plot development. Strategic projections are “controlled images projected in social interaction through communication to secure favourable evaluations by others” and “explicit communications about the characteristics of the firm” (p. 697). Employing this perspective in the competitive landscape surrounding universities, we suggest that there is a need for universities to project international HE as a service with special characteristics and potential. Failure to communicate the value of the service offering is likely to reduce the expected contribution of strategically well-targeted investments in international HE. This argument holds the implication that creating value and competitive advantage in international HE is a process in which partnership interaction underpins complex co-creating practices (Rindova and Fombrun, 1999). Through interaction, purposeful dialogue with customers and other stakeholders is facilitated, and the organizational mission is incorporated into all operations “to continually remind all stakeholders what the company stands for” (Duncan and Moriarty, 1998, p. 8). It is hence through stakeholder engagement and adequate interaction with the business sector that the university will be able to first develop and incorporate into its organizational mission a proactive market orientation and stakeholder-oriented mindset, and then be able to devise the right propositions to create stakeholder awareness and needs (Edvardsson and Olsson, 1996; Vargo and Lusch, 2004).

Figure 1. The Programme’s output and performance over a six-year time span
International HE focuses on product development, which is manifested in the continuous development of new international degree programmes. This, however, will not render a sustainable advantage, because the outcomes will only increasingly resemble each other (Gronroos, 2004). Only a strategic approach to international HE partnership development will create opportunities for competitive, difficult-to-imitate knowledge creation (Gronroos, 2004; Tzokas and Saren, 2004; Rindova and Fombrun, 1999). We are concerned that the “invitation to customers” to join the value creation process is, in fact, not partnership-focused, but greatly one-sided and dictated by the characteristics of the service-providing university (Tzokas and Saren, 1997, p. 111). An understanding of the results of partnering, of the value-adding collaborative task and of the consequences of nonexistent or inexplicit invitations to stakeholders is as yet incomplete.

**Value co-creation through interaction in the practice context**

Relationship-marketing builds on the understanding that marketing is a systems-oriented, environment-influenced interactive process between several parties who together seek to develop a profitable relationship with the objective of fulfilling their respective needs and goals (Gronroos, 2006). First, however, the parties should be willing to learn from each other in order to be able to generate the knowledge prerequisite to partnering for value-creation (Gronroos, 2004; Ballantyne, 2004; Ballantyne and Varey, 2006; Vargo and Lusch, 2004). In this learning process, marketing assumes a boundary-spanning role. Marketing facilitates a boundary-spanning exchange of knowledge and skills, processes and performances (Vargo and Lusch, 2004; Ballantyne, 2004; Ballantyne and Varey, 2006). Boundaries may be external as well as internal; they stand as barriers against partnership and organizational compatibility, as they represent differences in practices, values and interests (Hatakenaka, 2004, p. 185).

When questioning how, by whom and for whom value is truly produced in international HE, we question the core concept of value creation in international HE. From a service-centred viewpoint, service is the application of specialized competences for the benefit of the parties engaged in the service (Vargo and Lusch, 2004). Consistently with this, we argue that in international HE, service is the application of a university’s competences for the benefit of the stakeholders of international HE. The traditional understanding of the HE service is such that the university is the deliverer and the (student) customer is the user of a service system that is “merely designed to provide a service as an output” (Mele et al., 2012). This understanding would need to be replaced by a social-dominant logic-based understanding of the international HE service, whereby customers and stakeholders exchange, integrate and use resources (knowledge, skills and competencies) to co-create value (Mele et al., 2012), and whereby the co-creation of value is firmly placed in its social context (Edvardsson et al., 2011). Value is co-created in use (Vargo and Lusch, 2004; Ballantyne and Varey, 2006; Vargo et al., 2008) and in context (Edvardsson et al., 2011); it is dynamic, socially constructed and thus contextual; it presupposes and is always tied to a value-creating practice (Holttinen, 2010). The value-creating practice is a process in which value propositions are considered resources (Holttinen, 2010). The process itself and its elements are defined and shaped through interaction in relationships and networks (Vargo and Lusch, 2007; Gummesson, 2008). Customers and stakeholders participate in
The value-creating practice intelligibly (knowledge based), physically (performance based), and emotionally (value and meaning based) (Ippolito, 2009).

In the university-industry dyad, the value-in-context of the international HE service is dependent on the extent to which value is co-created in successful university-industry collaboration. It is thus subjective, influenced by macro-environment changes and changing over time. This argument holds implications for the market (and stakeholder) orientation of international HE, which is a “much overlooked” orientation in the service interactions of international HE (Ballantyne and Varley, 2006, p. 336). This concern is also emphasized by Vargo and Lusch (2004, p. 8); they see “the problem of organizations and their workers not paying attention to their customers”. However, focusing too much on organized microspecializations (i.e. the performance of increasingly narrow-skilled proficiencies) also applies to “many non-goods-producing organizations, especially large bureaucracies” which also provide services through organized microspecializations that are focused on minute and isolated aspects of service provision.

**The case and empirical findings**

In autumn 2004, after some collaborative negotiations with one partner, the degree programme in electrical engineering of the Lappeenranta University of Technology (LUT), Finland launched a HE cooperation programme (hereinafter called Programme) with first one and later on several Russian technical universities. The first intake of Russian master’s degree students occurred in spring 2005. Since then, the Programme has been expanded to cover all international HE activities of LUT’s degree programmes in the field of energy technology. To allow the reader to visualize the context of the present research, the performance and output of the Programme are provided in numbers of Russian students admitted to the degree programmes, in numbers of industrial placements in Finnish companies, in numbers of recruitments by Finnish companies, and as percentages expressing the relation between the number of placements and number of recruitments by the same company (Figure 2). It is clear that the statistical records reflect only the dyadic output of the Programme. They neither

![Figure 2. A model of the boundary-spanning functions in university-industry partnership collaboration for value creation in international HE](image-url)
take into consideration nor explain the impact of external environmental-social influence and fluctuations in the performance of the Programme. They also neglect other performance and output indicators of the Programme such as extended industrial cooperation in the form of doctoral education, research collaboration, and international graduate and researcher exchange within the Programme’s European network of partner universities and companies.

In the seven-year period spanning 2005-2011, 21 Finnish companies have been engaged in interaction relating to the Programme’s activities. Of these, four large companies are long-standing partners of LUT and repeat customers of the Programme’s services. All companies have been previously engaged in some other form of educational or research collaboration with LUT. Six teams were observed over the seven-year time span. These teams consist of university (academics and practitioners) and industrial participants who have been involved in some form of interaction within the annually (during the academic years 2005/2006 ... 2010/2011) recurring Programme’s practices and with the given groups of, respectively, 8, 14, 24, 17, 33 and 33 Russian students (Figure 1). The sequences of activities and processes of boundary-spanning interaction that were conducted with each team did not differ notably. They correspond to the timeline of the Programme over the course of one academic year (including, respectively, placement-practices-related marketing interaction and decision-making; service and value in use experience; mutual evaluation; and recruitment decisions supporting interaction).

The empirical findings are summarized as follows. Opportunities for boundary-spanning interaction are certainly not always recognized. These are often even neglected, and for various reasons. Academics may perceive that there is no time, no competence, no need or no recognition for (other than innovation-related) partnering with a party from the market environment. Industrial representatives may perceive that (other than innovation-related) partnering with the university is too time-consuming, it does not produce direct results, and it is therefore of lower strategic importance. Boundary spanners’ perceptions of the objectives and outputs of international HE; their related personal beliefs, attitudes and behaviour; but also their uncertainty and indifference all clearly influence the nature of the boundary-spanning practice and partnership interaction on both sides of the partnering equation. Interaction may be promoted or slowed down, recurring or accidental. The variety of (potential) interaction ranges from online or face-to-face conversation in a consultation to the creation of additional value-adding services (for instance, integration support solutions). Conversational interaction might range from a couple of words in a 30-second phone conversation to a whole day of being present in direct interaction. The high degree of change in the team-composition on the side of the companies is striking. Team-composition change negatively affects the way in which partnering and boundary spanning work is perceived by the university team. The researchers are also surprised at the differences that emerged in the way academics perceive the meaning of university-industry partnering and in the way they experience marketing and partnering for international HE.

Learning in the practice
Our model joins parties together into a practice of learning for value-creating partnering. The partnership and organizational boundaries are crossed through dialogue, interaction and value co-creation. The model encompasses three phases of
partnership building, which involve the processes underpinning identification, negotiation and commitment. Institutional service delivery is represented by the university, and the market and societal perspectives on the value-in-context of the service is represented by the company. To validate our reasoning, we draw on the research findings of different studies analyzing the processes of value creation in the partnering practice (Hirvonen and Helander, 2001; Andersen, 2001; Ippolito, 2009). This paper presents the university-industry partnering practice within a conversational framework[6] for relationship learning. The learning process encompasses following steps: generation and processing of new knowledge; communicative interaction and dialogue; acquisition and application of shared meaning to partnership development and mutual value co-creation (Ballantyne, 2004; Ballantyne and Varey, 2006).

The case findings provide the basis for suggesting that conceptualization of the university-industry boundary-spanning processes in international HE needs to be extended to incorporate aspects of power, impact and management of the boundary roles. Most relevantly affecting the nature of boundary spanning are:

- the high degree of differences in the perceptions of university boundary spanners as to the importance of their boundary-spanning role in the partnering practices and in the contextual meaning of university-industry partnering; and
- how university boundary spanners experience the value of marketing and partnering for international HE.

Uncertainty and indifference, motivation and commitment towards (understanding the value of) partnering for international HE are reflected in the way influence and control may be used in the selection and distribution of information.

Researchers have shown an increased interest in the boundary roles in the processes of knowledge building and information flow management, relationship development and innovation management (Aldrich and Herker, 1977; Russ et al., 1998; Walter and Gemünden, 2000). Aldrich and Herker (1977) single out two boundary-roll functions: information processing and external representation. “Information from external sources comes into an organization through boundary roles, and boundary roles link organizational structure to environmental elements, whether by buffering, moderating, or influencing the environment” (p. 218). In the context of international HE, and with particular reference to the complexity of the socially constructed environment and the ambiguity of the market with relation to value-in-context of international HE (e.g. work placement for international students), the boundary-spanning processes and the boundary roles need to be analyzed as a source of power and control over information. Boundary spanners have the opportunity to understand and select incoming information, and to control and use the information flow and the transmission of (relevant) knowledge in accordance with their own beliefs (Guss et al., 1998). They have the power to control the advancement of partnership building and to influence the outcome of the interaction process (Walter and Gemünden, 2000).

In our model, the boundary-spanning functions incorporate:

- The university’s response, which seeks to interpret the heterogeneity of environmental influence and the ambiguity of the market for international HE. It also takes measures to adapt processes to environmental influence through structural differentiation (Russ et al., 1998).
• The company’s response, which seeks to interpret incoming information (Russ et al., 1998), but also the absence of information.

Absence of communication is to be understood as a distinct message from the service provider to be interpreted by the customer (Calonius in Grönroos, 2004, p. 105). In the international HE context and within the university-industry dyad, absence of information implies the inexplicitness or even absence of service and value propositions by the institution (the university) to the market and society (the business sector).

A limited body of research on relationship interaction has analyzed the impact of boundary roles on relationship development in university-industry linkages. Here, the existing research is almost exclusively in relation to R&D knowledge transfer and management, and organizational culture (Plewa and Quester, 2004; Plewa, 2005). Boundary spanners – university academics and practitioners or firm employees – have the necessary insights and capabilities to establish strategic links between the university and business. They do so by removing institutional and behavioural barriers (inter-organizational as well as internal) to knowledge transfer and communication. Empirical evidence from our case reveals that the probability of university-industry partnership development and service interaction being successful will increase if all processes of interaction are effectively communicated through boundary roles on both sides of the partnership. Our case findings are in line with findings from other case studies analyzing the influence of boundary spanners on partnership development and outcomes (Walter and Gemünden, 2000).

How the practice context for value co-creation is constructed by learning through interaction

Identifying

Openness to the external environment, absorptive capacity and boundary-spanning competences underpin the ability to receive, interpret and share information (Aldrich and Herker, 1977). This, in turn, is prerequisite to “the creation and application of knowledge resources” (Ballantyne and Varey, 2006, p. 336) and the creation of mutual awareness prior to engaging in partnering. Awareness is socially constructed and shaped by the learning capabilities of the boundary role players and supported in adaptive decision-making by the partners. Perceived environmental influence is translated into increased internal and external stakeholder awareness and new value propositions. Awareness on the industrial side increases when the level of perceived need uncertainty (uncertainty in the interpreting of one’s own needs) has decreased. Increased awareness removes socially-constructed, organizational and market barriers to decision-making (Håkansson et al. in Andersen (2001)).

Negotiating

Perceived needs and service propositions for international HE are the resources of the “interactive process of learning together” (Ballantyne, 2004, p. 117). In the learning process, all sources of incompatibility between service offerings and expectations are eliminated. Mutual understanding and shared meaning are achieved (Ballantyne, 2004; Grönroos, 2004). Enhanced stakeholder/customer knowledge provides new opportunities for improved service interaction (Ballantyne, 2004). Improved service interaction positively affects total quality management of the service, which in turn
promotes the incorporation of a market orientation into the mission of international HE (Gummesson, 1991). To bridge disagreement and diversity, practice-related information is imported into the organization, processed and then distributed by competent boundary spanners on both sides of the partnership (Tushman and Scanlan, 1981; Walter and Gemünden, 2000; Plewa and Quester, 2004). Boundary spanners may thus influence how opportunities for interaction are recognized, interpreted and exploited.

Discussion
Strategic investments in international HE are expected to create value for the stakeholders and partners of HE not only by satisfying existing needs, but also by creating needs (Rindova and Fombrun, 1999). Value creation for competitive advantage, in turn, is an interactive process that builds on strategic relationships (Rindova and Fombrun, 1999). It is therefore critically important to understand the processes of boundary spanning through learning, the interdependence of the processes and the impact of the processes on the development of successful cooperative partnerships between academia and business (Rindova and Fombrun, 1999; Duncan and Moriarty, 1998). We have proposed the viewpoint that the university-industry partnership is a practice of value creation (Prahalad and Ramaswamy, 2004; Holttinen, 2010). We have emphasized that market responsiveness of international HE is essentially about recognizing the need and identifying the opportunities for finding new practices to bridge the distance between service delivery and use in international HE. We have argued that, in the pursuit of value creation in international HE, special attention must be given to the processes of partnership building, particularly to the interplay of the boundary roles in the communication of (market-oriented) knowledge creation, dissemination and application between academia and business. To some degree, partnership collaboration for value creation seems to be driven and shaped by the influence of the boundary roles on the knowledge processes. This is in line with the results from other studies on the influence of individuals on university-industry knowledge transfer (Siegel et al., 2003a, b; Santoro and Saporito, 2006). Hatakenaka (2004) has claimed that the way in which organization boundaries are defined will influence the patterns of partnership interaction in terms of information inflow, scale and scope. Transfer activities pertaining to collaborative knowledge are essentially social processes where individuals, not institutions, are the key participants (Villanueva-Feliz et al., 2010, p. 204). This is, obviously, because the personal (and socially structured) stock of knowledge of these individuals is shaped by
the information they have acquired over time (Villanueva-Folee et al., 2010). Poor communication between the university and the market environment is a source of demand uncertainty (Andersen, 2001). A better understanding and adequate managing of the complex boundary roles affecting university-industry interaction may help to decrease the perceived market demand uncertainty surrounding international HE. Barriers to engaging in international HE service interaction might then be removed. In the context of our case study, there is a positive correlation between strategic recruitment and increased retention of talented international students. When this correlation is recognized and adequately exploited, it might offer universities new pathways to building strategic advantage in the competitive marketplace for international HE. However, prior to this, in-depth research is needed to develop a holistic understanding of how academics perceive the university-industry partnering practice, and how they experience marketing and partnering for international HE.

Notes
1. Market orientation is considered a business approach that focuses on identifying and meeting the needs of the market, and thus includes elements of stakeholder/customer awareness, competitor awareness and inter-functional coordination (Kohli and Jaworski, 1990, Narver and Slater, 1990).
2. The term “value proposition” is used with respect to customer markets (recruitment markets as well as internal markets), but represents more than a one-sided “this is what I can do for you” value exchange (Payne et al., 2005, p. 868).
3. For a full account of the applied research methods (longitudinal participant close observation, process follow-up, literature review, in-depth interviews and conversations, other documentary sources) used for the longitudinal case research, we refer to an earlier case study by the authors (Vauterin et al., 2011).
4. The social-dominant logic is proposed as an expansion of the service-dominant logic (Edvardsson et al., 2011).
5. Edvardsson et al. (2011) take the viewpoint that all service activities including value co-creation takes place within social systems and, as such, must be understood as part of the collective social context. Because value in international HE is collective, inter-subjective and meaning-laden in a given context it should be understood as value-in-social-context. The term value-in-context is used in this study and refers “to a multifaceted phenomenon that is uniquely and socially constructed between particular actors, including how value is perceived” (p. 333).
6. Diana Laurillard (1999) extended the scope of her Conversational Framework for Individual Learning to encompass the learning organization. In this paper, Laurillard’s idea of a learning organization is adapted to a framework for relationship learning between the university and company. The relationship can thus be presented as a system capable of learning, absorbing new ideas and responding to a changing environment; and, importantly, as a community in which all members are stakeholders in the learning process.

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**Further reading**


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A university-industry collaborative response to the growing global demand for student talent: using interpretive phenomenology to discover life-world knowledge

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Abstract – Student talent supply is taking on an increasingly global dimension; this has unquestionably broadened the breadth of university-industry interaction. Set in the global context of a fast-growing international student market, knowledge transfer between academia and business through global student talent supply is an emerging practice. In this paper, the philosophical and methodological viewpoints and arguments underlying a forthcoming study into university-industry partnering in the international/global context for higher education are introduced. The authors are hence not looking for answers to the question but instead reflect on how answers to the question can be obtained. An interpretive phenomenological approach is proposed to tap into the nature, meaning and value of university-industry partnering pursued to attract and retain the best student talent from around the world.

Keywords – Interpretive phenomenology, university-industry collaboration, leveraging global student talent, Gadamer
University-industry partnering in the value network for global supply of talent

The landscape – Fundamental shifts are taking place both in the way business needs and uses skilled people and in the way companies think about the global supply of talent (Brown et al., 2008). Talent availability is more than a human resource issue. It has become one of the biggest business challenges of our time. In today’s complex knowledge-based economy, which is inseparably linked to globalisation, talent has brought the value and role of higher education to the forefront of the new global mobility of student talent and the highly skilled. As the bulk of the global talent pool lies in the emerging knowledge economies, talent availability has given a global meaning to human capital. These shifts have created new interdependencies between academia and business and raise important questions. How do business and academia work together to be attractive in the international marketplace and to be competitive in the search for new talent pools; how do they exploit their ‘bundle of resources’ to attract student talent and skilled people from elsewhere? And most interestingly, what is our understanding of how people involved in university-industry collaboration think and feel about partnering to attract and retain more foreign students? For this is what matters: collaboration is a life-world where people create meaning in a continuous learning process in which human experience has a central role (Kolb, 1984). It is a life-world of dialectical interactions among people and their environment, where people create their environment based on the knowledge they have and the meaning they have created from their experience (Nonaka and Toyama, 2003).

Against this background, this paper introduces the philosophical and methodological viewpoints and arguments (illustrated by interview excerpts) underlying a forthcoming study which intends to tap into the nature, meaning and value of university-industry partnering to attract and retain student talent and skilled people from around the world. In practice, it addresses university-industry collaboration to promote international talent mobility, to support global student talent attraction and retention and, in the end, to leverage knowledge transfer processes in a competitive global environment.

Higher education and internationalization – Over the past two decades, strategy, initiatives, practices and underlying policies have been developed globally but most intensively within the European area to give increasingly greater importance to the internationalization of higher education and academia. There is complex evidence on the benefits of internationalization of higher education. However, there is also a series of assumptions underlying the new trends in higher education as to why it is believed that internationalization is the sine qua non of an attractive and competitive European higher education. Although it is not our objective to explore the rationales and viewpoints for an expansive internationalization of European higher education, we wish to bring to the foreground the following arguments (Altbach and Knight, 2007; Qiang, 2003). Internationalization of higher education is a response to globalization. Internationalization and globalization are not the same but underlie and fuel each other. Global capital investment in higher education is an investment in economic growth of the knowledge society. Recruitment of international students is promoted as providing a contribution not only to institutional income but also to the national economy. These positions and the growing scale of the movements associated with them underlie our question: should we not be more interested in learning how these movements shape the way that university-industry collaboration progresses and changes?

University-industry collaboration – A UK study examining the nature of university-industry links in the UK provides revealing insights on the types and scale of factors constituting barriers to university-industry collaboration (Bruneel et al., 2009). The study itself and the study findings are indicators of what has been of growing concern in operational management and, consequently, in
academic research (Siegel et al., 2003; Bruneel et al., 2010). From the industrial perspective, there is empirical evidence showing a significant rise in the barriers faced by firms working with universities because of the wide scope of diverse modes of interaction (Bruneel et al., 2009). However, from the academic perspective, there seems to be a critical divergence of opinion between academics and industry on barriers to collaboration (Salter et al., 2010). The aforementioned sources of information might be understood as contrasting with each other. However, in light of the findings indicating that the level of uncertainty on the industrial side about “what university does” has also considerably increased (Bruneel et al., 2009, p. 15), concerns have been raised about the impact of the evolving nature of interaction processes on collaboration between academia and industry (Salter et al., 2010).

“Our lack of attention to these other forms of engagement may misdirect policy efforts, and could potentially lead to significant unanticipated negative consequences for university-industry collaboration.” (Bruneel et al., 2009)

Given this, European community and government efforts to promote university-industry collaboration would need to reflect more powerful mechanisms that bring industry together with universities and better support a large variety of interaction. As Bruneel et al. (2009) summarize in a list of implications for policy, our lack of attention to what remains the main benefit for industry of interacting with universities – that is engagement as a source of access to talent – may have ill consequences for future university-industry collaboration (p. 19).

What do we know about university-industry partnering? A growing body of literature indicates that in both the private and public sector, partnering has been recognized as an approach to dealing with new environments, as a mechanism to achieve better results, and as a catalyst and system capacity for knowledge acquisition, learning and change management (Thompson and Sanders, 1998; Inkpen, 1998; Naoum, 2003; Selsky and Parker, 2005). Much of the discussion around university partnering with external partners is framed within two different contexts. One context is within the higher education sector, where growing competition in international markets has forced universities to multiply and develop their international offerings and where in the pursuit of competitiveness universities rush to engage in academic partnering internationally. The most prevalent rationale underlying this rush is both academic and economic: to generate institutional income, ensure academic sustainability and maintain institutional competitiveness (Qiang, 2003). In the other context, universities increasingly seek to partner with external public and private sector stakeholders. Within the latter scenario, there are two main streams of research into university-stakeholder partnerships. The first stream deals with the dynamic interactions between the university, government and industry, that is, the Triple Helix shaping and reshaping innovations systems and contributing to social and economic development (Etzkowitz and Leydesdorff, 2000; Leydesdorff and Meyer, 2006). The other important stream of research examines the nature, structure and impact of and the factors underlying collaborative, R&D-focused knowledge transfer partnerships between academia and industry (Santoro, 2000; D’Este and Patel, 2007; Sandelin, 2010).

What do we not know well about university-industry partnering? We have a limited understanding of how knowledge transfer between academia and business through international talent supply – an emerging practice that must be set into the global context of a rapidly growing student talent movement – has broadened the breadth of already ‘established’ university-industry R&D-focused knowledge transfer collaborative practices. We have little understanding of how academia and business interaction to promote knowledge transfer through foreign talent supply shapes the relationship between the meaning of the practice in its complex socio-economic context and the
reinforced policy/accountability driven endeavours to heavily internationalize higher education – particularly to attract greater numbers of foreign student talent.

Valorisation and transfer of knowledge are increasingly considered part of the core mission of European universities. It is largely accepted that through stakeholder-oriented partnering with companies and institutions, universities may reinforce their value within society. Within the European community, which already today is facing an emerging shortage of talent and skills, university-industry partnering is increasingly understood as creating new opportunities for competitiveness and growth and for development of capacity for knowledge transfer through global talent leveraging collaboration. Therefore, this partnering is also increasingly fostered. Debate and actions in the field are typically associated with policy and practice in attracting, recruiting and retaining of international student talent, and in general with the internationalization of higher education. There are, however, signs of ambivalence indicating that interaction between academia and business in the international context of higher education is experienced differently from interaction between academia and business in well-established practices (such as interaction for technology and knowledge transfer, consultancy and contract research, and joint research programmes).

Experience and the failure to learn from it – How can we learn about what is different and how these differences affect the value dimensions of university-industry collaboration? This study was initiated from a practical concern that theoretical conceptualization in the field falls short in that it fails to view the practice as situated in a socio-economic and cultural context which firmly shapes the way we observe, perceive and understand our life-world. This concern, as such, is not new. For example, almost three decades ago, in her study on humanistic inquiry in marketing research, Hirschman (1986, p. 237-238) claimed that positivist science methods have remained the guiding norms of marketing as a science; this despite an emergent awareness of the importance of situational context, the subjectivity of perception and the constructed nature of human reality. Yet recently, Ardley (2011), for instance, has criticized mainstream marketing theory for the following reasons. It tends to imitate the methods of the natural sciences, it demonstrates restrictive thinking which ‘arguably distils and simplifies complex human action into neat packages of pre-given terms and meanings that fail to reflect the real nature of organisations’ (p. 629), and it consistently fails to provide us with adequate insights into the world of the marketing manager. Positivist thinking also prevails in mainstream research on the value of university-industry collaboration. We take here the critical stance that theorizing and conceptualizing investigation into university-industry interaction largely neglects the human side of partnering, involving creation and action, and ignores the diversity of perceptions and attitudes. Consider the following attempt to understand the context surrounding the practice of attracting foreign student talent:

‘We have also had a PhD programme or a funding programme, which was to encourage students from China to come to do a PhD here. The whole system was designed such that second-class Chinese students would be attracted and educated here. As if second-class Chinese students are still more able and talented than our own students... In my view, this logic is really weird. And that was funding by the national research council, some kind of programme... This just shows how strangely enough these things are managed. ... But these [foreign] people would be gladly accepted by industry because they are considered more cosmopolite. Dutch companies have only problems when it comes to co-funding the PhD research or the education. In their view, that is a government task.’

(Dutch interviewee, professor, interviewed January 2012)
All this results in restrictive thinking, in detachment of the practice from a life-world that is coloured by policy debate and by a palette of assumptions in knowledge of and prejudiced attitudes towards “foreign” talent and the supply of it, in simplification of human practice and in the failure to learn from human experience. The underlying concern that initiated the investigation may be grasped through a quotation from Wagner:

‘Organizations learn haphazardly from experience and rarely capture it in ways that can be transformed into available knowledge embedded into the organizational memory.’ (Wagner, 2003, p. 97)

Interaction between people from higher education and business increasingly extends beyond a regional and national focus on talent supply to the international dimensions of leveraging global talent. Understanding of these dimensions has remained elusive. Our knowledge of the cognitive change of orientation and attitudes that have become explicit with the evolving dimensions in international higher education-related policy and practice is also vague. What, for instance, are the cognitive effects of these changes on the partnering culture between academia and business (compare with Etzkowitz, 1998)?

How do we define ‘experience’? Experience is a conversational process of questioning, receiving disconfirmed false generalizations and expectations, acquiring better knowledge and again questioning. The structure of experience is, hence, essentially negative because ‘it confuses one's opinions’ (Gadamer, 1975, p. 460). Thus, contradictorily, the negativity of experience has a productive meaning.

We need to move beyond a mere positivist understanding of an evolving policy and strategy landscape (evolving in that it seeks to respond to the intensified need for global student supply) towards an understanding of the collaborative practice (which is collective action and learning embedded in socio-economic dynamics and demographic movements (compare with Wenger, 2000)). Interpretive phenomenology sets the task of discovering knowledge ‘in the sense of Verstehen (understanding) that cannot be attained by the strict or empirical-analytic sciences’ (van Manen, 1977, p. 214; Gadamer, 1975). In this process of knowledge discovery, understanding is first a mode of being and then a mode of knowing (McManus Holroyd, 2007).

The study – Within the context of this study, we have defined university-industry partnering as the various ways of collaboration in which academia and industry meet and work together in a mutually beneficial way towards the shared goal of being attractive and competitive to the best international student talent. During such collaboration, academic and business people join together to combine knowledge and resources to achieve common objectives. For these people, what is the experience like of being involved in a collaborative interaction aimed at increased attraction and retention of student talent from around the world?

This paper presents a phenomenological questioning of what the lived practice is in university-industry collaboration aiming at mobilizing and leveraging global student talent. The question opens up a life-world perspective (Sandberg and Dall’Alba, 2009). It thereby offers the possibility for thoughtful thinking on the ontological and phenomenological dimensions of the lived-in world of the collaborative practice, the embodied lived experience, as well as the possibility for reflective grasping of what it is that renders the particular experience its special significance (van Manen, 1984, p. 3). In this paper, we do not seek answers to the question but rather we reflect on how answers to the question can be obtained. To look for answers, we propose an interpretive phenomenology approach to discovering life-world knowledge. Our viewpoints are largely
underpinned by the many perspectives of phenomenology, but particularly by the work of the
German philosopher Hans-Georg Gadamer. In Gadamer’s hermeneutics, different approaches –
Husserl’s descriptive phenomenology, Dilthey’s critique of historical reason, and Heidegger’s

We hope that through this paper, the reader will be able to grasp the value of adopting a
phenomenological orientation to a practice that is emerging in university-industry collaboration: the
practice of partnering to attract and retain global student talent. To the best of our knowledge, a
phenomenological orientation has by and large not been proposed in the literature investigating
university-industry collaborative interaction. Our argument is that by taking an interpretive
phenomenological approach to collaborative practice, we may unveil underlying cognitive
relationships, assumptions, prejudices and learning processes. We may thereby reveal new horizons
of understanding. We may do so by uncovering the human experience that is embodied in people
and embedded in a given socio-economic and cultural context, but that is hidden from view and
therefore excluded from theoretical conceptualization, from policy and strategy attention, and from
profitability measures and management development. We may show that the ability to learn from
experience depends upon a willingness of the partners to enter into a relationship of dialectical
interaction with practice. After all, all practice is shaped by its various tensions in a process of
human interaction, sense-making and focused action-taking.

Phenomenology

The human scientific study of the lived experience

‘If we want to justify art as a way of truth in its own right, then we must fully realize what
truth means here. It is in the human sciences as a whole that an answer to this question must
be found.’ (Gadamer, 1975, p. 85)

‘Phenomenology is the study of the life-world – the world as we immediately experience it
pre-reflectively rather than as we conceptualize, categorize, or reflect on it.’ (Van Manen,
1990, p. 9)

From a philosophical viewpoint, phenomenology is fundamentally concerned with understanding
the meaning of human phenomena (van Manen, 1990; Halldórsdóttir, 2000). It considers the human
world as built of elements that are available to human senses (Gadamer, 1975), and as constructed
of meanings which profoundly affect how people experience and live their lives (van Manen, 1990; Halldórsdóttir, 2000). As a research methodology, phenomenology embraces the circular process of
reflection, interpretation and construction (Halldórsdóttir, 2000; Cope, 2005). This process requires
active questioning and is always initiated by the human desire to grasp meaning, to know.
Questioning, however, implies the assumption that ‘one must want to know, and that means
knowing that one does not know’ (Gadamer, 1975, p. 357). Seeing what is questionable is then at
the heart of all circular movement that composes reflection, interpretation and understanding.

‘To ask a question means to bring into the open. The openness of what is in question consists
in the fact that the answer is not settled. It must still be undetermined, awaiting a decisive
answer. The significance of questioning consists in revealing the questionability of what is
questioned. It has to be brought into this state of indeterminacy, so that there is an equilibrium
between pro and contra. The sense of every question is realized in passing through this state
of indeterminacy, in which it becomes an open question. Every true question requires this
openness.’ (Gadamer, 1975, p. 357)
Phenomenology, originally a twentieth-century philosophical movement based on the introduction of the concept of life-world (Lebenswelt) by the German philosopher Edmund Husserl, has since developed many consequent applications in various disciplines such as in psychology (Giorgi, 1989), nursing (Crotty, 1996) and education (van Manen, 1990), which all led to phenomenology as a research methodology. There are many different approaches to phenomenological and interpretive hermeneutical research, but what they all have in common is that phenomenological inquiry always begins in the life-world. It is the world of what Husserl describes as the natural, pre-reflective and pre-theoretical attitude of everyday existence (van Manen, 1990, p. 7). In an attempt to sketch the philosophical idea of phenomenology compactly and comprehensively, van Manen (1990) introduces phenomenological research as the human scientific study of the lived experience; it is the study of essences which tries to explain phenomena as they present themselves to consciousness. Experience cannot be understood in terms of scientific results: ‘Experience is not science itself, but it is a necessary condition of it’ (Gadamer, 1975, p. 345). Phenomenology is therefore not a science of empirical facts and scientific generalizations. It does not solve problems but asks for the meaning and significance of phenomena so that on the basis of this understanding it might be possible to develop activities in certain situations.

The freedom of conversation and interpretive understanding

‘Whoever speaks a language that no one else understands does not speak. To speak means to speak to someone. The word should be the right word. That, however, does not mean simply that it represents the intended object for me, but rather, that it places it before the eyes of the other person to whom I speak.’ (Gadamer, 1976, p. 65)

Gadamer developed his hermeneutic phenomenology from the belief that people make meaning (the hermeneutic aspect) of lived experiences (the phenomenological aspect) through dialogical interaction from a perspective where cognition is a product of a particular time and place (Sammel, 2003, p. 155). Gadamer’s concept of play is important here. The nature of play is reflected in partnering: ‘all playing is a being-played’ (Gadamer, 1976, p. 106). Partnering is a playful encounter, an interplay of understandings between actions, meanings and actors. Partnering begins in experiences and exists only in experiences; without these, it is just an empty form. The attraction of being-there or being part of such interplay lies in the spirit of challenge, freedom of choice and joy of succeeding. Consider the following narrative of being-there:

‘There must be a personal drive. Sometimes the work is quite nasty because you don’t belong to industry, but you don’t belong to the university, either. But I am a team player and I would enjoy working in a team of 12 persons to achieve results... In terms of content, you are stagnating if you do this kind of work. It’s nice to attract projects and money, but it’s real fun when you succeed in connecting people who didn’t know each other before, and after 10 minutes, you are superfluous. Then you think ‘this is working’, and it’s a pleasure to see that it was successful. When everything goes fantastically, you are no longer involved. When something goes wrong, you are needed again to fix it. That’s also nice. But the ultimate feeling of joy is when you have interacted with people and they get to work together, plan common projects and do more together than you even dared to expect. It is personally fulfilling. When things go well, then I know that also the next time I can contact that professor, thinking that ‘I have a nice company contact’, or the people from industry may call me with a new issue. This is the give-and-take in such a network. Now and then, you stay in the background and avoid being personally ambitious.’

(Dutch interviewee, university agent, interviewed by the first author in January 2012)
This interplay masters the players, and not *vice versa*. It offers the potential to encounter the other and to generate together new meaning. But it also involves a risk that it will not ‘work’, the actors will not ‘succeed’, or ‘succeed again’, despite their hard endeavours to perform the task; because – in Gadamer’s words – whoever ‘tries’ is in fact the one who is tried (p. 106).

‘The way one word follows another, with the conversation taking its own twists and reaching its own conclusion, may well be conducted in some way, but the partners conversing are far less the leaders than the led. No one knows in advance what will ‘come out’ of a conversation. Understanding or its failure is like an event that happens to us.’ (Gadamer, 1997, p. 383)

Actors of the collaborative practice are considered active agents who have the power and capacity to make certain choices in a given situation (Vauterin *et al*., 2012). This brings us to the concept of freedom, which is an important concept in interpretive phenomenology. Freedom of choice is situated freedom, because an individual’s freedom to choose is always affected by contexts that are composed of historical, cultural, social and political powers (Lopez and Willis, 2004). The task of interpretive phenomenology is then to describe the meaning of the actors’ being-there in the practice (of partnering) in relation to context (of historical, cultural, social and political powers), and to analyse and interpret how this meaning influences and structures actors’ experiences, sense-making of their experiences and the choices they make with relation to the practice (*ibid*).

‘In fact history does not belong to us; we belong to it. Long before we understand ourselves through the process of self-examination, we understand ourselves in a self-evident way in the family, society, and state in which we live.’ (Gadamer, 1975, p. 278)

For Gadamer, the principle of freedom lies in the hermeneutic enterprise, in the practice of interpretive understanding. Partners in true dialogue have the freedom to free themselves for new relationships of meaning (Sammel, 2003). This creates significant potential to generate shared meaning, which involves what Gadamer calls a ‘fusing of horizons’. People do not live in a vacuum, nor do science and knowledge exist in a vacuum. All understanding inevitably involves some prejudice (Gadamer, 1975, p. 272). It is, however, important to understand prejudices not as obstacles to truth but as conditions of truth. Being situated within tradition and awareness of one’s own historical understanding, no matter whether it is today’s or tomorrow’s history, is part of our prior understanding which affects our current understanding. Understanding is an infinite productive process. Understanding will hence keep changing in the process of interpretation.

‘This incapacity for completeness has a positive side: it reveals the true infinity of the mind, which constantly surpasses itself in a new mental process and in doing so also finds the freedom for constantly new projects.’ (Gadamer, 1975, p. 425)

In interpretation, the meaning of a text (or any object of investigation) is always defined and mediated through language by an interpreter ‘through the art of using words as a midwife’ (p. 361) to the other person. Truth is therefore a relative concept and has infinite dimensions. Our task is to throw light on what we have questioned and wish to understand (Turner, 2003). In this task, we need the other person. Therefore, we need to ensure Gadamer’s ‘first condition of the art of conversation’, which is ‘ensuring that the other person is with us’ (p. 360).
Interpretive phenomenology and its application to the phenomenon

The partnership rush and partnership ambivalence

“We are in danger of undermining the value of research universities if we regard them simply as sources of technology.’ (Florida, 1999, p. 67)

The environment surrounding the university is increasingly shaped by external – regional, national and global – socio-economic and socio-demographic factors. To develop responsiveness to these changes and to better contribute to the development of local and national economies, universities are encouraged to establish stronger and more diverse collaborative links with the business sector. Florida’s (1999) strongly articulated critique on the much too far driven, shortsighted ‘rush’ of universities for fund-raising, technology transfer-focused partnerships with business has a point. Florida’s viewpoint indeed does reflect a concern that the role of the university-industry partnership as a source of talent leverage is not fully recognized (Salter et al., 2000) and consequently reflects the need to re-evaluate and reassess partnering between the university and industry (Florida, 1999). Responsible partnering also incorporates a widening of roles (Sparrow et al., 2009) and a widening of orientation and collaborative practices. These shifts need to be recognized, captured, implemented and evaluated (compare with Elmuti et al., 2005). Florida did not narrow down his interpretation of ‘talent leverage’ to a regional, national or international scope. In our study, however, we focus our attention on the ‘foreign’ dimension of talent leverage, as this dimension is increasingly becoming a powerful element in university-industry interaction.

There is empirical evidence that beneath the visible partnering process, there are practice-specific signs of partnership ambivalence that limits the capacity of the actors to fully engage in partnering. Already 14 years ago, Etzkowitz (1998) analysed the cognitive effects of ‘the new university-industry linkages on the way scientists view research, interpret the scientific role, and interact with colleagues, companies and universities’ (p. 824). According to Etzkowitz, the new university-industry linkage resulted from the growth of a commercial orientation in academia and the emergence of conflict lines over this development. This development suggested a transmutation of ambivalence and culminated in a normative change in science. Today – given the increase of the foreign dimension of talent supply in higher education and business, and given the increasing scale of international student mobility – we see similar possibilities for cognitive change among the stakeholders of university-industry collaboration towards increased interaction for enhanced attraction and retention of international student talent. So, how is university-industry interaction in the field experienced today?

Partnering anew, boundaries and making relationships work

We firstly wish to mention that, in practice, partnering is a tool of relationship marketing for creating value and advantage through interaction (Christopher et al., 2002). Relationship marketing, in Gummesson’s (2001, p. 32) words, ‘became a household term for a series of phenomena in marketing with relationships, networks and interaction as core variables and loyalty, trust, and individual treatment of customers as some of the sub-core variables’. Partnering is the process of engaging in cooperative or collaborative relationships with stakeholders/customers (Parvatiyar and Sheth, 2000), where value-added practices and appropriate market-based assets underlie benefits that can be derived from social networks and relationships, (Srivastava et al., 1998). In effect, the benefits are competitive access to emerging global student talent pools and competitive advantage through strategic bundling of resources available to the university-industry partnership. Partnering, in general, underlines the need for new organizational insights and approaches, and recognizes the
value to be created through strategic alignment of people and processes across external and internal boundaries (Hatakenaka, 2004). Consequently, when processes, patterns and insights change along with the evolving meaning and dynamics (and sources) of talent supply, the practice (people and processes) needs to be realigned. All change involves learning (to engage in true conversation), and all learning involves coming to an understanding.

With the emerging understanding that employees are also stakeholders of the organization, open, flexible and experiential approaches are needed which would allow the researcher to grasp the meaning of the phenomenon under investigation and to ‘directly experience the world of informants and all of its variations’ (Hill, 1993, cited in Milliken, 2001). Qualitative interpretive research methods, in general, and phenomenological philosophy and methodology, in particular, have been increasingly applied in (marketing) research to develop an understanding of complex issues that are hidden from obvious responses (Goulding, 2005). However, one may notice that some confusion exists as to what exactly interpretive research within qualitative research is (Prasad and Prasad, 2002). Confusion in the field is apparent where interpretive studies merely offer a de-contextualized and describing focus on phenomena, such as a focus on the particularities of organizational subcultures, and do not attempt to build the link between the micro practice and macro structure (ibid; Lopez and Willis, 2004).

Despite some development in the aforementioned approaches, the objectivist perspective still prevails and is manifest in research into university-industry linkages. This means that partnering work is predominantly viewed as existing independently of people’s engagement in the practice. Here, we see that the objectivist perspective holds the assumption that collaborative practice is shaped in a systematic process or set of processes independently of the global/local partnering context (compare with Seymour, 2007). Opportunities for developing new practices and the practice itself are, however, ‘anchored in time, in the social market, and in the recognizing eye of the entrepreneur’ (ibid, p. 141). In pointing to the emerging foreign/global dimension in the university-industry collaborative context for foreign/global student talent supply, we recognize that the collaborative practice (and its fluid boundaries) are shaped by three factors. Firstly, it is shaped by human understanding and behaviour in a social environment; secondly, by historically structured values and relationships (social capital in networks); and thirdly, by the interplay of organizational and individual boundary-spanning roles through which opportunities for collaboration may be recognized and exploited (absorptive capacity, which is a learning capacity (Cohen and Levinthal, 1998)). Attention thus needs to be paid to the context and the evolving nature of the practice and to how engagement by individuals is supported. Moreover, attention needs to be given to both sides of the partnership (Salter et al, 2010).

The lived experience: understanding the practice of partnering

‘Marketing work is entangled in the tension between different narratives in society.’
(Svensson, 2007, p. 284)

And so, we see, is partnering work similarly entangled in the challenge of gaining competitive advantage in the global race for student talent. From a phenomenological perspective, people involved in the collaborative practice are first and foremost emotional beings who are embodied in the specific life-world of the practice (Küpers, 2005; Finlay, 2009). Phenomenologically, all knowing in and of the practice is accomplished through embodied action and experiential processes in the practice (ibid). Therefore, being embodied in the specific life-world of a practice is already a way of knowing tacitly through one’s own lived experience, so this is the very base for narrative knowing (Küpers, 2005, p. 115). Interpretive understanding, however, does not arise as the result of
a framework of learning rules. It is the result of commitment and engagement towards clarifying the conditions for understanding the lived experience of partnering. Therefore, the mode of being embodied – and related embodied knowledge – cannot be unpacked by the principles of instrumentalism (McManus Holroyd, 2007). Any interpretation or understanding from an interpretive perspective always begins with our prior understanding of the phenomenon. This prior understanding, in turn, is a product of our being situated in the world. Consider the following two examples of prior understanding with regard to the practice of attracting and retaining foreign students:

‘We have here the absurd situation, the practically absurd situation that we pay for those young people and they don’t pay tuition fee themselves. Isn’t that a luxury for them? And we don’t have the means to tie them to this country or to a company. Isn’t that a great luxury?’
(Dutch interviewee, professor, interviewed by the first author in January 2012)

‘And in a way, it can be considered one measure of success that also the rest of Finland can see that for this person here, education has been worthwhile. If this person now stays in Finland even for a while, the money expended will be returned. After all, Finnish taxpayers are the payers of the education of those foreign students, at the moment.’
(Finnish interviewee, professor, interviewed by the first author in February 2012)

How then can we come to understand the phenomenon of being involved in university-industry collaboration for foreign talent supply? We return to Gadamer’s ontology of the concept of play. From a phenomenological perspective, as in any play, we are interested in the movement and interplay of contextual factors and processes shaping the collaborative practice. When we thus speak of collaboration in reference to the experience of partnering, we speak of experience that is embodied in the persons engaged in the practice and that is unfolding in the practice of partnering. The practice itself obtains structure and meaning in the process of partnering, which is a back and forth movement of interaction. To investigate the practice of partnering is thus to investigate the true essence of partnering work. This essence lies ‘in the fact that it becomes an experience that changes the person who experiences it’ (Gadamer, 1975, p. 103), and may change that person’s understanding of the partnering work.

‘From a hermeneutic perspective, interpretation is an improvisational process in which the researcher draws from his or her stock of background knowledge and personal experience to derive insights from textual data. However, this intuitive and creative mode of understanding is not the exclusive province of a rarified artistic sensibility. Rather, it is a defining characteristic of a more prosaic phenomenon: expertise.’ (Thompson, 1997)

In other words, to understand the nature of the university-industry collaborative practice, we already need to have some prior understanding of that practice. Prior understanding underlies active questioning and the knowledge that we do not have enough or appropriate knowledge of the practice. Our present understanding of the given context surrounding the university-industry collaborative practice is prior understanding, which we use to investigate and grasp the meaning of the phenomenon. Hence, we need to recognize that our understanding is rooted in prior understanding of the collaborative practice and determined by historical and hermeneutical situatedness (Prasad, 2002). Situatedness or locality is the context for space and place. The narratives of our study are situated in two different localities, one in Finland and the other in the Netherlands. The locality perspective helps us to understand why and how the respective Dutch and the Finnish localities shape meaning and structure differently in interaction involvement. Locality is what drives the university and business, which share the concern that the knowledge society’s need
for talent and skills exceeds the supply, to learn why and how to collaborate to attract foreign student talent – whether that means sourcing talent locally, internationally, globally or from a specific market for a specific market. Consider the following interview example of relationship to locality:

‘I want to establish some relationships with companies in Brazil. I have been to Brazil, I had some contacts in Brazil but I had no knowledge or actual ties to the companies. I feel that if I said that I’m focusing on R&D here in Finland then, I think, I’d be doomed [to failure]. That somehow, in industry, the, let’s say, exciting things are happening somewhere else than in Finland, and I have to be there where the exciting things are happening, to be doing things. ... So, the first thing was to try to get ties to academia there [in Brazil]. And also, the way to establish ties to industry is to be physically there, at conferences and activities. So, that means that you have to travel. And I have done that, I have been there, I have been giving presentations, so that I get noticed.’

(Finnish interviewee, professor, interviewed by the first author in February 2012)

Locality affects human experiences with regard to how people make sense of the practice (cognition) and give sense to the practice (action) (Gioia and Chittipeddi, 1991). The hermeneutic circle entails our continuous interpretive work (pointing to and making explicit) of what we know and do not know about university-industry partnering to attract student talent from around the world; of questioning the practice as it has presented itself in its various forms and over time; and of constructing new knowledge of the practice. Correction or enhancement of prior understanding will take us ever closer toward understanding the phenomenon. The hermeneutic circle is thus a process of learning in which understanding emerges in the fusion of past, present and future horizons of experience.

The narrative of experience

Phenomenology and phenomenological interpretive approaches have been applied diversely in nursing and social sciences as well as in management and organizational sciences (Koch, 1998; Lopez and Willis, 2004; Sandberg, 2005). Interviews and observation are widely used to identify the ways in which the actors involved understand and make sense of their work (Sandberg, 2005). The output of the interview is a verbal description, a narrative account by the participant of his or her knowledge and lived experience related to the topic (Lopez and Willis, 2004; Sandberg, 2005). Narratives are based on embodied knowing; therefore, ‘narratives not only have an inherent capability to capture rich implicit knowledge, they are carriers and transmitters of implicit knowing’ (Küpers, 2005). For us to grasp the processual element of word and text, using narrative patterns and narrative knowing offers a powerful approach for disclosing, ‘storing’ and transferring explicit and implicit knowing across time and space (Snowden, 2002, cited in Küpers, 2005, p. 124). Through the stories we collect from other people’s experience of actions and perceptions involved in the practice, we can access the knowledge that is already accumulated and implicitly available in the lived experience of the persons engaged in the practice (Küpers, 2005). Here again, it is important to recognize that one must be aware of the phenomenological fact that knowledge is created and re-produced within a context of powerful historical and social but also emotional relationships (Küpers, 2005). Consider the following articulation of an emotional relationship:

‘Well, it is so that in China we preferably recruit people who took their PhD in Europe, because we are an international company. It is a good thing when these people have some international experience and understand that our company is actually of Dutch origin.’ (Dutch interviewee, company manager, interviewed by the first author in January 2012)
Implications of interpretive phenomenological inquiry

‘Not just occasionally but always, the meaning of a text goes beyond its author.’ (Gadamer, 1975, p. 296)

Set in the global context of a fast-growing international student market, knowledge transfer between academia and business through global student talent supply is an emerging practice which has unquestionably expanded the university-industry interaction. It is the practice of university-industry collaboration to promote international talent mobility, support global student talent attraction and retention and, in the end, to leverage knowledge transfer processes in a global competitive environment. In this paper, we have introduced the philosophical and methodological viewpoints and arguments underlying a forthcoming study into university-industry partnering in the international/global context for higher education. We have proposed interpretive phenomenology to tap into the nature, meaning and value of university-industry partnering to attract and retain the best student talent from around the world.

Interpretive phenomenology can contribute to our understanding of university-industry partnering in that it offers a perspective for understanding partnering as a practice which, in the life-worldly university-industry collaboration, can be interpreted as an embodied and situated linkage of experience, processes and meaning (Küpers, 2011). The adoption of a life-world perspective in the lived practice in university-industry collaboration holds several implications for interpretive phenomenological inquiry into the subject.

For us to gain a better understanding of the phenomenon in the context as described in this paper, we need to make efforts to come to a better understanding of it. We propose to do this by entering into conversation with other people’s narratives we have collected for the purpose of empirical investigation. Language commits us to the play of movement and dialogue of thought11. Consider the following example of narrative-based dialogue:

‘It seems to be that, at least in my field, industry is not very willing to accept foreign students. There may be a fear that knowledge and know-how will leak, but besides that also the fact that foreign students don’t speak Finnish does affect the situation. In many Finnish corporations, the language of operation is English, but still some command of Finnish seems to be necessary to open pathways to employment. ... But I think that the lack of professionals in my field will gradually increase the acceptability of foreign students.’

(Finnish interviewee, professor, interviewed by the first author in February 2012)

‘Or could it be that the obstacle is more about Finnish people not knowing English [instead of foreign people not knowing Finnish]? I would maybe put it like that... In a big multinational company like this, it’s largely about the language because language is very crucial. At least a command of English is required, or when we go to Germany to solve something, we analyse the situation: ‘Do we have somebody here with language competencies or should we use the local university over there?’.

(Finnish interviewee, company manager, interviewed by the first author in April 2010)

To grasp and uncover the nature of the university-industry collaborative practice, the focus of our investigation must consequently be on the phenomenon – that is, on the practice itself. To bring the narratives of the life-world to life and to interpret them so that they can be used and presented to an audience (Gummesson, 2001), we must be able to recognize and explicate the complexity of the structure of individuals’ stories of their partnering experience with respect to these individuals’ self-
consciousness and prior understanding of their life-world context (Thompson, 1997). It is important to recognize that there will never be a final interpretation nor a complete understanding of what the meaning and ‘truth’ of the practice we have studied is (McManus Holroyd, 2007). Phenomenological research is always situated in a particular context at a particular time; so is any interpretive understanding given of the university-industry collaborative practice. At best, it is a ‘here and now’ account representing one interpretation of life-world experience in a dynamically changing process that tomorrow may already entail different elements (Cope, 2005). Consider the following comments on global development trends and waves of international student mobility:

‘The latest wave is now coming from China. Before my career at the university around the year 1980 there was a wave of Irish students. At that time, a lot of Irish students migrated and came to the university and the company. But that was because of the economy. I did not really follow the situation, but there seemed to be a problem with the Irish economy, so students didn’t have any perspectives. And by the way, the company took focused action. Students were also recruited then.’

(Dutch interviewee, professor and company manager, interviewed by the first author in January 2012)

It is also important to be aware that interpretation derived from our inquiry into the collaborative practice is, from an interpretive perspective, an improvisational process in which we the researchers draw from our stock of background knowledge and personal experience to derive insights from textual data (Thompson, 1997). This means that, in the process of interpretation, we are reminded of the fact that we are guided by own experience that is already pre-formed by a pre-given body of knowing of the context and practice. Any phenomenological description of the collaborative practice presented by us or by other interpreters will thus represent a personal, ‘second-order’ interpretation of other people’s interpretations of the phenomenon under investigation (Cope, 2005).

Gadamer’s concept of play is relevant for the university-industry collaboration in that, ontologically, the collaborative practice is to be viewed as an open-ended practice that attains structure in the interplay of past, present and future world-building factors and through an interpretive process towards understanding together the meaning of the collaborative practice (Vilhauer, 2010). Knowledge, meaning and truth of the practice derive from ‘the true experience’ of the practice. Being engaged in partnering is hence a mode of being imbued with knowledge and truth (Kelly, 2004, p.114). The epistemology of the collaborative play is that getting engaged in the collaborative practice assumes a degree of concern, readiness and capacity to listen, and interest towards coming to an understanding with the partner12. Consider the following narratives expressing concern over a lack of concern and lack of capacity:

‘If I look at what the benefit for a professor is in getting an international student retained in a company, it’s practically zero. For the professor himself. So, he doesn't get any reward, he is not mentioned anywhere, at no point ... So, for him it is much easier to do the work for the same project with a Finnish student.’

(Finnish interviewee, professor)

‘Internationalization strategy is lacking. Very often universities here want foreign students because they get money depending on the number of students. It’s that simple. They do not really bother with where those students will be employed and so on. They simply need that many students; otherwise they cannot survive.’

(Dutch interviewee, company manager)
Hence, as in play, our efforts to come to a better understanding of the university-industry collaborative practice and to present this understanding to an audience must amount to a collaborative activity. We therefore invite our readers to discover what is interesting about the subject which we the authors have addressed ourselves (van Manen, 1977). As van Manen has interpreted Gadamer, ‘one starts with answers and ends with questions, in the sense that the reader is now being questioned by the author or by the text materials’ (van Manen, 1977, p. 218).

‘Like the earth being round, just lacking a natural end, the journey in Methodologyland has no end. You search again and again and again, just as the term says: re-search, re-search, re-search.’ (Gummesson, 2001, p. 29)

References


1 In this context, we deliberately choose the word ‘foreign’ over ‘international’ or ‘global’ to point out that around the emerging practice of university-industry partnering for ‘foreign talent supply’ (where ‘foreign’ means ‘from elsewhere’) different emotions and associations may be evoked with regard to the university-industry practice of ‘talent supply’ (where ‘talent’ has, traditionally, been considered ‘own’). This may predict differences in perceptions, attitudes and behaviours from the side of all parties involved in and part of the process of talent supply from local and foreign sources.

2 Where possible, the terms ‘interpretive’ and ‘hermeneutic’ are used in this paper to maintain their difference in meaning. Whereas the latter emphasizes interpretation as a relational, language-mediated process between text (narratives or other forms of communication) and understanding, the former articulates the role of interpretation in making manifest the inextricable link between context and the phenomenon being studied (compare with Lopez and Willis, 2004).

3 Heidegger postulated that the world ‘is’, and that this ‘being’ is the underlying phenomenon and the basis of all ontological inquiry. For Heidegger, the world is here, now and everywhere around us. We and all what we do are always in the world, and our being is being-in-the-world (Dasein) (Steiner 1978).

4 For a quick overview of on-line published information on European policy relating to investing in systems supporting research and knowledge transfer, see for example http://ec.europa.eu/invest-in-research/policy/ipr_en.htm.
We refer to the Handbook on Responsible Partnering, which is issued by several major European organizations supporting research, development and knowledge transfer in companies, universities, and public research organizations, available at http://ec.europa.eu/invest-in-research/pdf/download_en/responsible_partnering.pdf, retrieved 6.1.2012.

We refer to two studies on university-industry interaction in the context of international higher education (Vauterin et al, 2011, and Vauterin et al, 2012).

Here, ‘locality’ is proposed to refer to the context of place and space. Place is the physical dimension of locality pertaining to perceptions of insideness and outsideness and entailing cultural and social meaning; space is the phenomenological dimension of locality referring to a more experientially-based understanding of place (Relph, 1976; Cox, 1998; Cresswell, 1999).

The ‘hermeneutic circle’ may be understood as a movement of understanding, which refers to the openness of the horizon of inquiry and is a corrective process (Gadamer, 1975, p. 522).

‘Word’ entails a process of thinking through to the end (Gadamer, 1975, p. 412).

With ‘text’, we mean text not only in written form but also in any form of mental objectifications that are open for textual interpretation and understanding and that can be grasped, reconstructed and re-experienced by the human mind (Prasad, 2002).

Gadamer argues for the universality of language. Language is the form in which understanding is achieved. Language has thus the universal ontological function of mediating between that which is to be understood and the structuring of understanding.

Gadamer plays linguistically with the German terms built around the word ‘Verstehen’ (to understand) to make explicit the hermeneutic triangle relationship between the interdependent elements of ‘Verstehen’ (understanding); ‘Verständigung’ (interpretation, the process of coming to understand); and ‘Einverständnis’ (application, the objective of coming to an agreement). Compare also with Gummesson (2001), who refers to the unfolding of knowledge as being a synthesis of three elements (the process of knowing, the knower, and the known), in which the process of knowing is inseparable from the knower (the researcher) and the known (the outcome of the research).
Publication V

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Attracting and retaining student talent from around the world: the lived experience in university-industry collaboration

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Attracting and retaining student talent from around the world: The lived experience in university-industry collaboration

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Abstract – To be prepared for changing student talent pools within emerging geographic markets and to remain attractive for the coming waves of student mobility, European universities must be able to improve their ability to absorb international student talent at a higher rate. This paper taps into the nature and value of university-industry partnering to attract and retain global student talent. We argue that global student talent recruitment is at the heart of “knowledge transfer through people”. To that end, we provide an inclusive picture of the university-industry partnering phenomenon. We look into the role of human collaborative experiencing and learning. We find that even the university-industry collaborative practice dealing with global issues remains local in terms of engagement. This paper demonstrates that by using interpretive and participatory methods, we may reveal new insights into the university-industry practice of partnering to promote attraction and retention of global student talent.

Keywords – University-industry collaborative practices, international student talent, knowledge transfer, interpretive phenomenology
University-industry partnering and the value network for international student talent recruitment

Europe is undergoing rapid demographic changes. The search for emerging talent pools is driving policy and practice towards new agendas and collaborative pathways. At the same time, the academic institutions of Europe are struggling to find a competitive advantage in achieving their educational aspirations. While seeking to increase enrolment numbers, universities are competing for access to global talent pools. One can, however, easily see that the landscape of international student recruitment is unpredictable. There are time window constraints for the present wave of student mobility – students and young scientists coming from emerging economies and for various reasons seeking higher education and research opportunities in the US, the UK, Australia, and right now increasingly also in the non-English speaking European countries. To be prepared for changing student talent pools within emerging geographic markets and to remain attractive for the coming waves of student mobility, European universities must be able to improve their ability to absorb international student talent at a higher rate. Universities, however, are institutionally embedded in a global, national and regional socio-economic environment. They are also witnessing the rise of new ‘production’ and value networks – global and regional – for higher education and a shift to new forms of competition. It is clear that universities cannot develop institutional attractiveness on their own, in isolation from their environment or detached from market needs, development trends and time waves. This is extensively evidenced in the impressive and rapidly growing amount of research attention towards the importance, impact, development and patterns of university-industry collaborative partnerships. However, in this research stream, the phenomenon of international student flows has been under-studied, despite its growing numerical importance.

Given the background, the present study intends to tap into the nature, meaning and value of university-industry partnering to attract and retain international student and professional talent from abroad – in other words, partnering to promote knowledge transfer through people. This study does not problem-solve. Instead, it presents an interpretive phenomenological approach to the essence of the partnering experience. It asks the question of what it is like to be engaged in university-industry partnering endeavours to attract and retain more foreign students. While asking so, the study involves the states of affairs that are composed in space and time around the emerging partnering phenomenon and are relative to human perception. It thereby addresses the fundamental relationship between social capital and absorptive capacity in leveraging knowledge transfer through people, and highlights the significance of practice-based interaction and human learning in absorptive capacity building at the individual, organisational and partnership levels. In bringing to the forefront the value of phenomenological interpretation in elucidating the nature of university-

1 The notion of ‘Knowledge Transfer through People’ is used as a slogan, for example, by CERN to attract student and professional talent “from all over the world to come to CERN to take part in a unique scientific enterprise” (see http://knowledgetransfer.web.cern.ch/knowledge-transfer-through-people; accessed 17 April 2012). In this study, I appropriate the notion to grasp and highlight the human element embedded in knowledge transfer and to articulate a distinction between ‘knowledge transfer through technology’ and ‘knowledge transfer through people’.
industry collaboration to attract and retain students from around the world, this study attempts to grasp new insights – beyond organisations and institutions – into human processes that are influenced by the socio-physical surroundings of the partnering practice, but that are also socially constructed through practice-based human learning and unlearning.

**Study approach, design and data**

This study sheds new light on the value of the university-industry partnering practice while showing that new insights are possible if university-industry partnering is understood ontologically as an emergent practice that is embedded in a specific life-world in which meaning is negotiated and constructed through participation and engagement among the actors involved. The study rests on Gadamerian-based philosophy which, in its very core, seeks out what is obvious but unquestioned and thereby questions it. The structure of experience is therefore essentially negative. Experience is a conversational process of questioning, obtaining disconfirmed false generalisations, prejudices and expectations, acquiring better knowledge, and again questioning, which is, hence, a process of human unlearning and learning. Wenger's (1998) model of a community of practice is used as a tool to show that the ability to learn from experience depends on the willingness of the community’s members to enter a Gadamerian play of dialogical engagement in the practice of partnering (Vauterin et al., 2013), or in other words, on the ability to engage in ongoing dialectical interaction. The study draws directly upon narrative data which were obtained by interview from academic and industrial respondents engaged in university-industry collaborative practices. In the narrative illustrations, the “lived experience” of partnering to promote knowledge transfer through people covers the diverse forms of activities in Master’s, professional doctorate and postgraduate programme collaboration. The narratives are situated in two different localities, one in Finland and the other in the Netherlands.

The interviews were unstructured, but based on a series of questions which were mainly designed to focus the interview on the context during a sequence of upcoming questions. The interviews, depending on the interviewee’s language choice of Dutch, Finnish or English, lasted between one and one and a half hours. All interviews were tape-recorded and transcribed, each producing transcripts approximately 10,000 words long. The first author was involved in the preparation of the study and interpretation of the data, drawing directly from her senior practitioner experience involving the implementation of academic internationalisation strategies and activities in university-industry collaboration. In this study, individuals, organisations and regions are not identified. We recognise that this, to some extent, may influence the reader’s understanding of the relationship.

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2 The philosophical and methodological viewpoints and arguments underlying this study are introduced in a forthcoming preparatory conceptual paper (Vauterin et al, forthcoming in *Industry and Higher Education*).

3 The three Dutch technical universities offer a number of two-year post-Master’s level Professional Doctorate in Engineering (P.D.Eng.) design programmes.
between the life-world context and life-world practice. The context-dependency of the study should, however, not restrict the generalisability of the implications for local, practice-specific management (cf. Flyvbjerg, 2006). The narrative vignettes provide illustrations of the experience of 'being there' in dialogue and interaction (Vauterin and Linnanen, 2012). The individual narrative vignettes are grouped into clusters of meaning guided by van Manen’s (1990) reflections on thematic analysis.

It is important to understand that the university-industry collaboration network is fragmented in many field-specific ‘clusters’. Collaboration between the university and industry in the various fields of technology represents only one cluster, although, in terms of demand and supply in the global market for engineering skills and student talent, a most significant cluster. As such, we recognise that the following illustrations are limited in perspective and representativeness. Nevertheless, the narrative vignettes serve well to recreate something of the phenomenological texture of the lived experience that resulted from engaging and learning in a community of practice where academic and industrial members work together with the common objective of developing the capacity to attract more student talent from around the world. All members of the community of practice are simultaneously members of the university or the firm, or – some of them in the Dutch context – of both the university and the firm. The original accounts were translated from Dutch and Finnish into English by the first author who hereby hopes to have succeeded in her efforts to keep and transmit the nuance and rhythm of the narratives.

In total 17 persons have been interviewed in their personal capacity of professor and/or agent, or business manager to the issue of this study. To preserve the anonymity of all interviewees, the narrative vignettes given below are attributed to invented names. We introduce to the reader 1) the Dutch collaborative practice with Dries, Jef, Kees, Jaap, Aart and Rolf (six professors/agents), and Riet, Koos and Hein (three business managers), and 2) the Finnish collaborative practice with Tuukka, Pekka, Heikki and Arttu (four professors/agents), and Riitta, Antti, Kimmo and Seppo (four business managers).

The rest of the paper is organised as follows. The next section draws upon the knowledge-based literature and presents an ecosystem approach to understanding university-industry collaboration for knowledge transfer through people in relation to the crucial pillars of the system; i.e. social capital, absorptive capacity and community of practice. The local, social and temporal texture of the lived experience is illustrated in the narrative accounts. The third section summarises and presents some reflections on making sense of the lived university-industry collaborative practice.
Social capital, absorptive capacity and community of practice: an ecosystem approach for knowledge transfer through people

The human element – human motivation, culture, and human resource management – is undoubtedly the most powerful part in knowledge management. Nevertheless, it is exactly that part that is largely underrepresented in knowledge management research and development programmes (Argote and Ingram, 2000), most likely because it is the part that is the most difficult to understand and conceptualise, codify and store in databases, and control. There are, however, a number of reasons to believe that the most valuable knowledge is tacit knowledge, “existing within peoples’ heads, augmented or shared via interpersonal interaction and social relationships” (Zack, 2002).

So, more attention needs to be paid to how firms and universities acquire new ideas from other places. International firms, migrants and students often have access to new knowledge from their home countries. Greater effort could be paid to tapping that resource and to persuading both domestic and international students to stay in a city after they graduate from its university. (Mahroum et al., 2008)

This is how the authors of a UK report summarise their major concerns in the concluding comments of their investigation to map and measure the ability of UK nations and regions to draw on and absorb external innovations and knowledge they need for innovation. The UK has remained a globally major and the most visible player in attracting student talent from elsewhere. However, the competition for talent and human capital is intensifying. Therefore, regions everywhere – within the UK as in Europe – are now concerned with developing their ability to access external knowledge sources. Regions seek to increase their capacity to attract and retain the highest possible number of knowledge capital: human capital and business investments. In the new knowledge economy, the role of talent – the ability to mobilise the best people, resources, and capabilities – has indeed been largely recognised as a crucial element in contemporary regional development strategies (Florida, 1995, 2000, 2002). Regions will gain competitive advantage by focusing on improving their capacity to identify, attract and retain new and external knowledge from international, talented people, institutions and firms. This logic, however, has raised the question, as it is addressed by Boschma (2004), of how to understand the notion of competing regions; do regions actually compete like firms do? The author reasons that since regions are identities that neither enter nor exit markets under the influence of market selection forces, they carry with them a long (local) history that may affect the competitiveness of regional actors and organisations either positively or negatively. And further, when actors and organisations are viewed as “embedded in a territorial context that determines largely their behaviour and level of performance, the notion of regional competitiveness gets its most explicit meaning” (p. 1004). Against this background, and knowing that modern economies – at the regional, interregional or international levels – are learning economies in which knowledge is the most important resource and learning is the most important
process (Lundvall and Johnson, 1994), it is important to recognise that the locus of regional knowledge, creativity and innovation resides not only within the boundaries of regional actors, such as universities and private organisations. Knowledge creation is much a localised process, but it is also a cumulative process and the result of an interdependent knowledge sharing and interactive learning process between different actors and organisations (Nooteboom, 2000; Boschma, 2004). Collaborative practices, in which complementary pieces of knowledge owned by a variety of actors are brought together through well-organised, reciprocal and stable arrangements (Boschma, 2004), may therefore be considered vital spaces for accelerated learning through interaction, knowledge creation and knowledge transfer at the regional level (Lundvall and Johnson 1994). In such a sense, it is important to understand knowledge transfer through people as a non-linear, open system consisting of three major components interacting with each other and with the environment: social capital leveraging external knowledge resources that are “embedded in social networks that can be mobilized when an actor wishes to increase the likelihood of success in a purposive action” (Lin, p. 24), absorptive capacity as the ability of the organisation to utilise externally held knowledge through the sequential processes of learning to exploit knowledge (Lane et al., 2006, p. 856), and community of practice as the locus for accelerated learning, a context for new insights to be transformed into knowledge (Wenger, 1998, p. 214). In other words, it is the space where people engaged in the collaborative practice participate to mobilise and share knowledge, learn from previous experiences (Cadiz et al. 2009), and apply new information and emerging understanding to catalyse the transition from potential knowledge into realised knowledge (Lane et al., 2006). To conclude, in order to be able to give meaning to the practice of university-industry partnering to promote knowledge transfer through people, it is necessary to articulate the complex system of value, meaning and context which gives sense to the partnering practice. The following section will endeavour to articulate the system perspective.

The knowledge transfer ecosystem

Ecosystem management applied to an organisational environment takes its analogue from the ecosystems science of biological and ecological biosphere systems. Ecosystems are complex adaptive assemblages of interacting communities consisting of actors and artifacts. Within the ecosystem, all elements interact interspecifically and intraspecifically with each other and with the environment across different spaces and points in time (Levin, 1998; Hartvigsen et al., 1998). System management requires variation and heterogeneity to enable adaptation (Levin, 1998), and a capacity to flexibly respond to environmental feedback (Folke, 2004). This implies that to develop sustainable approaches to system use, managers must understand the properties, mechanisms and processes operating at all levels of the system (Levin, 1998). In this study, we appropriate the notion of an ecosystem to emphasise that by viewing university-industry collaboration for knowledge transfer through people as an activity embedded and linked within a complex adaptive system, we might more easily understand that managing knowledge transfer through people to be competitive requires an ecosystem approach incorporating the entire network structure of social
capital (Granovetter, 1995; Burt, 2000). Moreover, for it to be effective requires policy support and
the breadth, depth and dynamics of partnership work and collaborative practice (Koka and Prescott,
2002; Cadiz et al., 2009), and for it to be sustainable requires absorptive capacity building (Inkpen
and Tsang, 2005; Abreu et al., 2008).

Knowledge is embedded in the three basic elements of organisations – people, tools and tasks – and
the various subnetworks formed by combining or crossing the basic elements. Such networks
include the member network, which is the human element consisting of the organisation’s members
who together are the organisation’s social network, the tool network, which is the combination of
tools and technologies, and the task network reflecting the organisation’s goals, intentions, and
purposes and articulated in a sequence of tasks and routines (Argote and Ingram, 2000, p. 153).
Within and through these networks, moving knowledge through people, technology or practices
may occur through a large variety of mechanisms, but in all these mechanisms the success of the
transfer is dependent on people’s ability to adapt the knowledge (ibid).

Collaboration is in many ways analogous to ecosystems: all collaboration involves a unique web of
people, bodies of knowledge, processes and action tools that all are combined and interconnected in
a distinctive combination, embedded in a specific social context and linked within a complex
knowledge ecosystem (Pennington, 2008). Every practice of collaboration is thus ‘encapsulated’ by
a unique knowledge ecosystem. And so, every practice of collaboration will have different ways of
solving its context-specific problematic situations (Schön, 1987). In this connection, we refer to
Schön (p. 3):

*In the varied topography of professional practice, there is a high, hard ground overlooking a
swamp. On the high ground, manageable problems lend themselves to solution through the
application of research-based theory and technique. In the swampy lowland, messy, confusing
problems defy technical solution. The irony of this situation is that the problems of the high ground
tend to be relatively unimportant to individuals or society at large, however great their technical
interest may be, while in the swamp lie the problems of greatest human concern. The practitioner
must choose. Shall he remain on the high ground where he can solve relatively unimportant
problems according to prevailing standards of rigor, or shall he descend to the swamps of
important problems and non-rigorous inquiry?*

This, generally, seems to hold true when we take on the challenges of university-industry practice
and engagement for knowledge transfer and absorptive capacity building. Recognising the gap
between the swampy zones of practice-led university-industry collaboration and the high ground of
higher education and innovation policy-driven endeavours to direct and manage knowledge transfer
might help us to focus on problem setting for the university-industry collaborative practice. Schön
points out: “Depending on our disciplinary backgrounds, organizational roles, past histories, interests, and political/economic perspectives, we frame problematic situations in different ways. [...] It is not by technical problem solving that we convert problematic situations to well-formed problems; rather it is through naming and framing that technical problem solving becomes possible” (Schön, 1987, pp. 4-5).

Social networks and social capital

Policy makers, regional development theorists, universities, entrepreneurs – many have been intrigued and challenged by the world-famous Silicon Valley success story of regional economic development. There have been continuous endeavours to determine the secret key to success in regional development, and approaches and perspectives have changed dynamically as time has passed; recently, the notion of social capital is “riding the newest wave of regional development theory” (Cohen and Fields, 2000, p. 179). Obviously, this is because the success of new Silicon Valley firms will depend as much or even more on being a part of local, social and technical networks as on their own individual activities (Saxenian et al., 2002).

For, as it is developing, social capital is at its core two things: a potent technology and a critical issue. The technology is network analysis. The issue is performance. (Burt, 2000, p. 346)

Social capital is “a metaphor about advantage” (ibid, p. 346). The advantage lies in the social structure; it is the advantage that some people or communities have over others because of their location in the social structure. Social capital is a conceptual tool that can be used to explain purposive action and economic rationality in the social context and to explain how action is shaped, constrained, and redirected by the social context (Coleman, 1998). It thus puts the creation of human capital\(^4\) into a social context (Coleman, 1988; Burt, 2000).

Because much of social capital in embedded within networks of trust, cooperation, and collective action (Nahapiet and Ghoshal, 1998; Carayannis et al., 2000), the core idea of social capital lies in the unquestionable significance of relationships as valuable resources for social action. Although the concept underlying social capital is not new, only recently has social capital grown to prominence in the various domains of social, economic and management sciences. It has been applied to explain community and group behaviour, the fabric of the civic society, and accessing resources\(^5\). Accordingly, social capital – although in a broad sense similarly understood – has been defined in various ways, depending on whether the perspective is on intra- or inter-specific

\(^4\) Human capital is “created by changes in persons that bring about skills and capabilities that make them able to act in new ways” (Coleman, 1988, p. S100) and is hence the knowledge and skills acquired through education that an individual brings to an activity.

\(^5\) For a comprehensive overview and conceptual framework of the theoretical research undertaken in these various disciplines related to social capital, I refer to the study by Adler and Kwon (2002).
relationships with a focus on substance, sources or impact (Adler and Kwon, 2002). For the purpose of this study, we use a definition of social capital offered by Nahapiet and Ghoshal (1998, p. 243). They have, based on the seminal work of Bourdieu (1986) and Burt (1992), defined their view of social capital as

the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network.

This definition of social capital embraces the complex network of relationships that provide access to knowledge, assets and resources, markets, and technologies or services (Inkpen and Tsang, 2005). Put into the context of this study we may understand that knowledge is human embodied, technology embodied and task embodied, hence embodied in practice (Argote and Ingram, 2000). The university-industry alliance provides access to assets, capabilities and resources that otherwise may be unavailable (Carayannis et al., 2000; Koka and Prescott, 2002; Chakrabarti and Santoro, 2004). Access to markets means access to global markets for higher education and talent pools (Douglass and Edelstein, 2009), and markets for contacts and careers (Granovetter, 1995). Access to technologies and services is to be understood here largely as knowledge sharing or exchange through technology and service linkages (Inkpen and Tsang, 2005). Building social capital and establishing relationships in a university-industry collaborative environment has become imperative. On the industrial side, however, we find a stronger positive relationship between know-why and know-how to network. Compare the below considerations of academic people (Dries and Jef) and business managers (Antti and Kimmo):

Dries:
It [networking] is a ‘must do’. But you must place it in a time context. And I don’t know whether this [feeling] concerns everyone. I think some people might like it more than others. But I think that there is still a feeling of ‘must’. But the situation is time and culture dependent.

Jef:
Ideally, we would have an office or a database where everyone enters their connections. What kinds of connections they have, individuals, what the interesting themes are. But a university is not organised like that... If it were a corporation, you just would tell the division group leader: “You report.” Firm contacts must be stored in a centralised data system. Now, it may happen that I visit a firm and that they have a connection with the university about which I don’t know anything. That’s not convenient.

Antti:
In my job I see it as a positive aspect that I can always contact you when something comes up related to it. And when you aren’t the right person, then you have your own network.
**Kimmo:**

And of course we need to remember that when we have 100 applications for a position, it’s a huge job to go through them all, isn’t it. And then the question could arise, is it worth doing this yourself. Instead of taking the phone and calling [Professor] and saying, we need a good man, or woman, or person, whatever, and he says, here we have such a guy, well we can avoid a lot of in-house procedures... Absolutely a huge amount...

The entire network of relationships is crucial in leveraging knowledge transfer through people, i.e. in leveraging the processes of obtaining access to student talent pools, of attracting and retaining international student talent. Social capital, as defined by Nahapiet and Ghoshal (1998), encompasses the internal ties within the university-industry collectivity and among the individual and collective actors of the university-industry collaboration, as well as the external ties between the actors of the university collaboration and the external network. It also includes the individual and public perspectives of social capital (Inkpen and Tsang, 2005) in individual career development and human capital development, both underlying regional and national economic growth and wealth. Consider the following line of thought which in a deep sense shows concern and uncertainty about the university's identity in the social system:

**Tuukka:**

But, in a way, the only thing I can do is to accept the fact that I can’t change the world in this way, I can’t go to the companies and say, ‘You should start hiring these guys.’ Because I think that they know who to hire, or they should know who to hire. And also, I mean, for African or Indian students, they, okay, it was their choice to come to Europe to study. And then, I mean, if I think of the Finnish students, it is not our responsibility to find a job for them. So, I don’t think it is our responsibility to find a job for international students. But, on the other hand, I kind of feel that it is our job to try to promote international students and try to improve their chances of getting hired, so... I do this kind of active marketing for our international students. So, with my industrial contacts, I do market these students and I do discuss opportunities with them. But at the same time, I realise that despite my marketing work, the success rate isn’t that high. ... Why do people pay huge sums of money to go to Harvard Business School or the University of Southern California or things like that? Because they feel that [over there] companies will get a favourable impression of them and hire them and so forth. So, I think that if we work with industry and then get the word out that ‘okay, there's a good chance you’ll get a job if you graduate from our university’, then this would be an incentive for somebody to fork out 8,000 euros for [a tuition fee].

In addition, the definition by Nahapiet and Ghoshal implies the assumption that social capital is path-dependent because the social network structure emerges from path-dependent histories of
communities, markets, regions, and societies that are products of and contributors to the institutional, socio-economic and cultural environments in which they are historically located (Woolcock, 1998). Compare the following Dutch and Finnish considerations:

**Hein:**
I think that especially in recent years the situation has become serious. Just because the number of students has decreased considerably. Not so long ago it was the university that contacted us and proposed, ‘we have a good student – do you have a project?’ Now, it seems to be the other way around: we have nice projects but the university says, ‘we don’t have students or promovendi available’.

**Heikki:**
In spite of the encouraging support we’ve gotten from industry [to launch the international cooperation programme], it proved, in fact, rather difficult to realise the programme. Finnish industry seems to be rather weakly prepared to exploit foreign skills, such as foreign students.

**Rolf:**
They [at the companies] know [the challenge to attract promovendi] and they also know that foreign students are more willing [to pursue a doctoral degree]. They also know that these [foreign nationals] are in general rather motivated people. This is the situation [company people] accept. It has even been recognised that after some years, well, those who will be retained or employed in the Netherlands will have learned to some extent the Dutch language and will have assimilated into the culture. Thus, for business these people are ideal employees. They complement the Dutch arsenal. They are assimilated professionals, whereas if, instead, it would be necessary to recruit them directly from abroad...

**Absorptive capacity**
In other words, people make their own environment. People do so – while being influenced by their own environment and past experience – in the way they perceive, understand, value and learn from others’ knowledge. Learning orientation determines the way individuals and organisations access, share and exploit knowledge (Kim, 1998). A central network position providing important access to new knowledge is therefore not enough to increase the probability of attaining a positive impact on action and business; performance also depends on the extent to which a unit can absorb such new knowledge (Tsai, 2001). Absorptive capacity is the ability to identify and exploit external knowledge necessary for competitive advantage from people, institutions and firms (Cohen and Levinthal, 1990; Nooteboom, 2000) and is hence a fundamental learning capability (Lane et al., 2006). In their definition of absorptive capacity, Lane et al. (2006, p. 856) emphasise the process perspective:

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Promovendus is the Dutch term for a student preparing an academic doctoral thesis under the guidance of a supervisor.
Absorptive capacity is a firm’s ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning.

Lane, Koka & Pathak (2006) have found that there are a number of specific assumptions in the literature on the concept of absorptive capacity. They argue that “the reification of absorptive capacity and the limited progress of this literature are in part due to five assumptions that have driven much of the research” (p. 851). Of these five limiting assumptions, two can be mentioned as relevant to the context of this study. One major assumption is that absorptive capacity is relevant only to R&D intensive environments. Most empirical research has conceptualised and operationalised absorptive capacity as the base of R&D intensity and innovation. This is a narrow focus which is supported by the ease to measure but which has limited the generalisability of the studies’ insights. Consequently, few studies have focused on the role of absorptive capacity in leveraging and capturing other types of knowledge transfer (p. 852). Another assumption is that absorptive capacity resides in the firm alone. This, again, has led researchers to overlook the role of individuals in knowledge processing, and in developing, deploying and maintaining absorptive capacity (Lane et al., 2006; Zahra and George, 2002).

Minbaeva et al. (2003) have found that the fundamental elements of absorptive capacity – i.e. the prior knowledge base (or the extent of employees’ ability to learn) facilitating the access to and assimilation of new knowledge and the intensity of efforts (or the extent of employees’ motivation) made by the organisation to solve problems (Cohen and Levinthal, 1990; Kim, 2001, cited in Minbaeva et al., 2003) – are related to the concept of potential and realised absorptive capacity (Zahra and George, 2002). Zahra and George introduce four dimensions of absorptive capacity (acquisition, assimilation, transformation and exploitation of knowledge) and analyse these from the viewpoint that the former two together constitute the potential capacity and the latter two the realised capacity. By distinguishing the potential capacity from the realised capacity, two important perspectives are highlighted, emphasising the significant interaction of ability (the ‘can do’ factor or receptiveness to acquiring and assimilating new external knowledge; Minbaeva et al., 2003; Zahra and George, 2002) and motivation (the ‘will do’ factor or capacity to leverage the knowledge that has been absorbed; Minbaeva et al., 2003; Zahra and George, 2002). This, hence, shows that in order to leverage knowledge transfer through people in university-industry collaboration, both aspects of absorptive capacity – the ability and motivation of actors in the collaboration – are

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1 Lane et al. (2006, p. 835) define reification as “the outcome of the process by which we forget the authorship of ideas and theories, objectify them (turn them into things), and then forget that we have done so”.
needed (Minbaeva et al., 2003). Consider the following four lines of though as to whether and where in the university-industry collaboration absorptive capacity needs to be developed:

Dries:

Content driven collaboration is a good thing. Of course you need to motivate people, but both are in it and committed to producing results. Now, it’s different. You are forced to do it [collaborate]. The whole university system is not at all adapted to that. The support system is abominable. It’s a long learning process – too long.

Arttu:

The major problem is that we are talking to the wrong people in the companies. So, one thing is attitude, an atmosphere of over-dependency on industry of the universities in Finland. One thing is to cooperate; another thing is to be over-dependent. The other thing is a lack of, I would say, systematic communication channels to the right people in the companies. They organise those recruitment events at universities for students; companies come over. However, we don’t have such opportunities to present our plans to people in charge in companies, to present what we can, what we plan, and what they need. That is, to match those who need something to those who can. And, you see, I think this could be beneficial for promotion. In other words, to build a platform for communication with companies, and in a systematic way. Not, you know, to throw parties and, you know, to hunt for thesis students in the individual companies, but to develop the system. So, I think this would be absolutely beneficial, and I think some companies would accept it. Some companies would accept it. And, you know, I also feel a lack of support at the university. Because everybody is happy with the result, but this because you need some resources to get those results, which is not realised here, I’m afraid. … So, I would say, staff is not encouraged to be active in this sense. … Everybody is talking about a strategy, but it is dangerous because … there are the right people to do certain things and there are the wrong people to do certain things. It’s killing the initiative; this is how I see it. … It feels like hunting. Absolutely. … And there is no system. You see, we are mainly approaching the same companies, but it would be interesting to see if we are expanding the pool of [available] companies. Yes, the activity is all quite random. But we should somehow help [companies] by making offerings: “We will organise this – are you interested in participating? We will make you an offer, how to organise it, how much it will cost, what benefits you could draw from it”.

From the perspective of potential capacity, the emphasis is on the importance of the availability of relevant sources of international student talent and other forms of knowledge informing the university-industry collaboration. From the viewpoint of realised capacity, the infrastructure for social networks is highlighted; this includes awareness, capacity and motivation to exploit the various types of relationships and channels available to and facilitating the university-industry collaboration to (re)distribute the flow of international student talent and domesticate some of the
international talent it produces (Mahroum et al., 2008). It would seem that to a large extent there is still a gap between potential and realized absorptive capacity:

**Kees:**

*And where do they all go, the Master’s graduates? Well, I don’t know that. I, too, would very much like to know that. But I have not received any statistics about it, which is a sad thing. Do such statistics exist? That is the question. They should exist in the students’ office, the office which also grants scholarships. It would be their duty to do a follow-up. That is also part of valorisation because the knowledge, when they get their training here and graduate, where does it go? Exactly. Do graduates indeed go to the companies that have paid for their training? At the moment, I have my doubts. Unfortunately, I do not have access to such information.*

**Arttu:**

*I have [access to] a student pool in China. But I don’t send [Chinese students] to work in industry. I’m a little bit scared, not about their English, you know, but the work culture of Chinese students is totally different, and I think it [will be] … too much for industry. What does that mean? It means that Chinese students, they need much more careful supervision than, let’s say, Finnish or Russian students. They must be given detailed instructions, step by step. That’s why, in industry, I am afraid they would not like it.*

**Community of practice**

The term ‘communities of practice’ was first introduced by learning theorists Lave and Wenger (1991) who analysed communities of practice as sites of learning. They defined a community of practice as “an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their community. Thus, they are united in both action and in the meaning that action has, both for themselves and for the larger collective” (p. 98).

As such, a community of practice gives rise to mutual engagement, to a negotiated, joint enterprise and a shared repertoire, where human learning is a socially situated activity (Wenger, 1998). Recently, Wenger (2006) has defined a community of practice broadly as a *group of people* “who engage in a process of collective learning in a shared domain of human endeavour […] who share a concern or a passion for something they do and learn how to do it better as they interact regularly”.

It is thus a collective identity where knowledge sharing is supported in a ‘social fabric of learning’ through intensified social interaction and storytelling (Wenger, 1998; Wenger and Snyder, 2000). A community of practice may be designed or emergent; it may be a response to an institutional mandate or arise in the process of giving existence to an institutional design (Wenger, 1998, p. 244). Institutional design and practice interact with and influence each other, which may cause tensions. Structure and practice will therefore need continuous alignment of interests and task identity through negotiation of meaning (ibid). The boundaries of engagement and membership are fluid. The cognitive transition from involvement over engagement to belonging is fuzzy. But engagement has a measurable extent in the practice in terms of institution-oriented cost-bearing or practice-
oriented cost-sharing with regard to the costs of retaining international talent. Consider the following narrative lines which imply a difficult relationship between engagement and membership, a relationship that affects alignment of interests and a number of other factors and influences implicated in effective collaborative working:

**Jef:**
You become frustrated because you don’t belong to the research staff. ... As an agent you are doing things that don’t have any value for the faculty except in terms of euros. And especially when people do not make a distinction between roles then I sometimes think: ‘What am I doing here?’ I wouldn’t recommend the job to anybody under the age of 40 because there are no opportunities for career development in a university the way the university is now organised. The role I have would probably suit an organisation with a turned over matrix and where themes and business have a role. It’s logical for a university that the scientific role is the primary one. Once a week, I go through these emotions... There must be a personal drive. Sometimes the work is quite nasty because you don’t belong to industry, but you don’t belong to the university, either. But I am a team player and I would enjoy working in a team of 12 persons to achieve results... In terms of content, you are stagnating if you do this kind of work. It’s nice to attract projects and money, but it’s real fun when you succeed in connecting people who didn’t know each other before, and after 10 minutes, you are superfluous. Then you think ‘this is working’, and it’s a pleasure to see that it was successful. When everything goes fantastically, you are no longer involved. When something goes wrong, you are needed again to fix it. That’s also nice. But the ultimate feeling of joy is when you have interacted with people and they get to work together, plan common projects and do more together than you even dared to expect. It is personally fulfilling. When things go well, then I know that also the next time I can contact that professor, thinking that ‘I have a nice company contact’, or the people from industry may call me with a new issue. This is the give-and-take in such a network. Now and then, you stay in the background and avoid being personally ambitious.

**Tuukka:**
If I look at what the benefit for a professor is in getting an international student retained in a company, it’s practically zero. For the professor himself. So, he doesn’t get any reward, he is not mentioned anywhere, at no point ... So, for him it is much easier to do the work for the same project with a Finnish student. ... I mean that it is the whole framework of how the success of a professor is viewed. And right at this point, I feel it is very problematic and skewed; this, how professors are evaluated as successful or not. I know that when I talk with the other young professors – although I’m not so young – then I feel they feel the same way. And the whole thing is that the professors’ career, their salary, their staff, it’s not tied to how well the university is doing. I think if this had some influence, like, ‘okay, now I see that some of the money is tied to how many international students I have, how many international staff members I have’, then this
would change. ...Yeah, I think this is the biggest problem: that it is not rewarded immediately by
the corporate side. I mean, this university, as a corporation, this is something that I think would
be very fruitful for the university.

Kees:

Today, that means more and more coupling to European projects, although the financing
resources remain much lower and all costs need to be reduced to an absolute minimum. Which is
dull. ... For small firms, on the other hand, it might be very difficult to indeed cough up the big
money we are asking. ... Please note that the integral costs for training one Post-Master PDEng
Trainee programme student are about 220.000 euro for 2 years, including VAT. This is an
amount of money I can very well ask for but no company will pay. Although I very well know that
the company’s integral costs to train somebody at the same level are much higher. No, there is
really nobody knocking on my door with projects. ... That is the major downside of these training
programmes: that the companies which 25 years ago agreed that ‘we are prepared to financially
support you’, they have forgotten about that a long time ago. Today, the economic situation of
the universities has declined because government resources have been cut drastically.

Aart:

The fact that some companies believe that by spending a dime they will be front row customers
[in demotivating]... They expect that it will be paid by the government anyway and therefore that
they can get it all without spending a dime. And in fact, it does not work like that...

Riet:

Universities – which by the way amount to 50% of the partners in all collaboration – they had in
the past a clear role in generating knowledge. For that role, they were also very much
appreciated. Today, they require money for it in all operations, and that makes it very difficult to
collaborate with them. ... Today, universities also want money for knowledge transfer; they also
want to apply for patents and do business. We have thereby become competitors and that is
troublesome in collaboration. ... We now need to weigh the proposals for collaboration more
critically. We also live by patents and business. That is our role. And when that is taken away,
why then would you do it anymore. ... It is often a question of misunderstanding. Universities
want to play an entrepreneurial role but they don’t know anything about it. And they want to
play it without taking risks but do want the money. That’s our perception of it. ... The old model
where universities had a role in generating knowledge and publishing and where necessary so
that we paid compensation for that task, it wasn’t that bad, after all. But this is not allowed
anymore because universities are forced by the government to valorise knowledge. And
universities seem to understand knowledge valorisation simply as asking for money for
knowledge transfer.

Pekka:

I would say the bad feeling is here inside the university that, again, we need to drum up the
financial support and so on.
In an interorganisational setting, communities of practice may be advanced as a useful tool to enhance knowledge transfer in fluid, rapidly changing industries. Obviously, this is because practice-based interaction allows the exchange of relevant information and technologies among organisations which, individually, might not have the time or resources to access new knowledge bases (Kerno, 2008). When practice interaction occurs repeatedly, it may help organisations to understand and develop processes and effective routines to access information (Eisenhardt and Martin, 2000, cited by Koka and Prescott, 2002). This also holds true for university-industry interaction. Particularly, information flow is enhanced when the partners of the university-industry collaboration share a history and a common language; in other words, when learning about each other occurs through repeated ties in various forms of interaction in education, research, consultation, etc. (Koka and Prescott, 2002; Tsai and Wu, 2011). In the end, however, it comes down to knowledge transfer through people. Read how this is clearly manifested:

**Jef:**

Our research efforts, they are a very important task. And we need to take that seriously. But in the end, the final result is the supply of people. What we supply is engineers, and in this environment there is an enormous need for them. We are a technical university which first and foremost supplies people for industry and to a much lesser degree for the academic world.

As Cohen and Levinthal (1990) have noted, critical knowledge is not only substantive, technical knowledge; critical knowledge also includes awareness “of who knows what, who can help with what problem, or who can exploit new information” (p. 133). From this viewpoint, university-industry practice-led interaction plays a mediating role in the relationship between absorptive capacity and knowledge transfer performance (Tsai and Wu, 2011). If we see university-industry collaboration as a community of practice, we see it is held together by a shared concern for both the outcomes it achieves for the stakeholders of the collaboration and the personal development and learning of its members (Liedtka, 1999). The performance of the university-industry community of practice is enhanced by the ability of its members to communicate and to absorb tacit knowledge (cf. Nooteboom, 2003). This would then mean that interaction between the members of the university-industry community depends on the extent of absorptive capacity (the ability to absorb knowledge), which in turn affects the performance of (and through) knowledge transfer (Nooteboom, 2003; Tsai and Wu, 2011). Dyer and Singh (1998) and Lane and Lubatkin (1998) have found that absorptive capacity between partners in an interorganisational learning system is also dependent on the ability of the learning partner to recognise and value new external knowledge, to assimilate that knowledge, and to exploit it. Absorptive capacity is therefore also a relative construct. Consider the following examples of relational learning to recognise and value external knowledge:
Koos:

One competing company is also clever in using scholarships to attract students. With this, they attract mainly foreign students. They [foreign students] all end up in that company. I don’t know how they manage to do that but we don’t do that. I would like to advise our company division to do the same; we would then have more students ending up here, as well. And I find it sad that all those good foreign students go to work for the competing company...

Heikki:

It seems to be that, at least in my field, industry is not very willing to accept foreign students. There may be a fear that knowledge and know-how will leak, but besides that also the fact that foreign students don’t speak Finnish does affect the situation. In many Finnish corporations, the language of operation is English, but still some command of Finnish seems to be necessary to open pathways to employment. ... But I think that the lack of professionals in my field will gradually increase the acceptability of foreign students.

Riitta:

Or could it be that the obstacle is more about Finnish people not knowing English [instead of foreign people not knowing Finnish]? I would maybe put it like that... In a big multinational company like this, it’s largely about the language because language is very crucial. At least a command of English is required, or when we go to Germany to solve something, we analyse the situation: ‘do we have somebody here with language competencies or should we use the local university over there’.

Seppo:

We do, in fact, have a person who is responsible for university collaboration. But at the university, there doesn’t seem to be a counterparty.

Drawing on the model for the interrelationship between social capital, intellectual capital and organisational advantage by Napahiet and Ghoshal (1998), we might understand the university-industry community of practice as an intellectual and social collectivity where knowledge and knowing capability (i.e. intellectual capital) are created in ongoing interaction, where the meaning of practice is embedded in a social context, and where meaningful communication requires the sharing of context which can be obtained through the existence of a shared language and the sharing of collective narratives. For the purpose of this study, we define the university-industry community of practice as a group of people (intellectual and social collectivity) who engage in a university-industry collective process of learning (through repeated interaction) how to collaborate in a mutually beneficial way to achieve the common objective of developing a competitive advantage to attract the best international student talent (relationship between meaning of practice and social context).
Viewing university-industry collaboration as a community of practice offers a possibility to understand university-industry collaboration for knowledge transfer through people as a collective identity and engagement “that reflects the qualities of a community of practice, based on an ethic of care\(^8\), [and therefore] ought to be able to create and sustain competitive advantage in a changing marketplace more effectively than its competitors who rely on traditional thinking about the nature of business organizations” (Liedtka, 1999, p. 14). There are, however, many dimensions of perceived caring. Consider one following example of caring:

**Kees:**

*We have here the absurd situation, the practically absurd situation that we pay for those young people and they don’t pay tuition fee themselves. Isn’t that a luxury for them? And we don’t have the means to tie them to this country or to a company. Isn’t that a great luxury?*

Viewing university-industry collaboration as a community of practice further offers the possibility to move beyond a best-practices approach to focus on the underlying system of values, meaning and context that is likely to support the community, and to highlight the need for the alignment and realignment of the value system (ibid). Such a system implies also that there is collaborative capacity that does not produce directly measurable effects:

**Antti:**

*When it came to grassroot measures, I contacted you and recruited a person from there. But after that, we have been collaborating in many matters, and communicating and talking and sharing knowledge, which maybe did not result in anything concrete, but that is normal knowledge exchange.*

**Some reflections**

*Locality and social network interaction affecting sensemaking and sensegiving*

Social capital was referred to as the contextual complement to human capital (Burt, 2000). The emergent skills and scarcity of talent has created a highly competitive market that has global dimensions. In this market, accessing, mobilising and retaining people and ideas will be more effective when supported by strong social networks. Social capital is hence a competitive asset that the different actors of the university-industry collaboration (at the individual, community and organisational levels) possess when they are connected better than others to those in dense networks of strong relationships that are based on trust and reciprocal exchange. Social capital is an obvious

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\(^8\) Liedtka (1999) describes the ethic of care as based in feminist moral theory and as “often compared with the stereotypically masculine ethic of justice. The latter focuses on defining the self as separate, and it uses rights to protect boundaries between the self and other; care moves from its view of the connected self to an emphasis on relationships and the responsibilities that they entail” (p. 14).
source of resources residing in the social structure and as such facilitates the sustained effectiveness of the collaborative practice. Absorptive capacity was referred to as being determined by past experience and socio-physical surroundings (Cohen and Levinthal, 1990; Nooteboom, 2000). It is the domain of cognition; the phenomena one can make sense of in a process of interpreting (Nooteboom, 2000, p. 73). Cognition entails the extension of learning (ibid); the way knowledge embedded in phenomena is approached, interpreted and used. The process of interpreting, on the other hand, includes two dimensions (Gioia and Chittipeddi, 1991): whereas sensemaking (cognition) has to do with meaning construction and reconstruction, sensegiving (action) is concerned with attempting to influence the sensemaking and meaning construction of others.

The given narrative illustrations elucidate how the university-industry collaboration – as a source of competitive advantage in attracting and retaining student talent from around the world and in advancing knowledge transfer through people – must be viewed from a perspective of situatedness or locality, which is the context for space and place. Compare again the Dutch and Finnish examples of situatedness:

**Tuukka:**

*I want to establish some relationships with companies in Brazil. I have been to Brazil, I had some contacts in Brazil but I had no knowledge or actual ties to the companies. I feel that if I said that I'm focusing on R&D here in Finland then, I think, I'd be doomed [to failure]. That somehow, in industry, the, let's say, exciting things are happening somewhere else than in Finland, and I have to be there where the exciting things are happening, to be doing things. ... So, the first thing was to try to get ties to academia there [in Brazil]. And also, the way to establish ties to industry is to be physically there, at conferences and activities. So, that means that you have to travel. And I have done that, I have been there, I have been giving presentations, so that I get noticed. ... In a way, I know there is a big culture gap. Also for many of the people with whom I work, these people haven't worked with an African or an Indian in their own office. So, to have one of them [foreign people], it would be a big change for the corporate culture. So, now I've been talking very much about these Africans and Indians where, in my opinion, the big problem lies. I think, at least for Finnish international companies, to have a Russian student is now considered nothing special. ... Estonians and Russians – I think in all of the international companies, Finnish international, big international companies that I work with – employers are happy with them. So, I don't think the feeling is that [Estonians and Russians] are in a way, let's say, different.*

**Cees:**

*There is an open academic debate on the complex concept of locality. Here, locality is proposed to refer to the context of ‘place’ and ‘space’, where place is the physical dimension of locality and refers to perceptions of insideness and outsideness and entails cultural and social meaning; and space is the phenomenological dimension of locality and refers to the a more experientially-based understanding of place (Relph, 1976; Cox, 1998; Cresswell, 1999).*
Practice has shown by now that in times of economic crisis or re-organisation or whatever, there are no jobs available. The student however, any time is then free to make his/her own choices. [You ask], why aren’t there any Dutch students in the programme? The situation on the Dutch market, and by the way also in Germany, is such that almost every Master’s level graduate in the engineering field finds a job, and even more than one. They are offered jobs already during their studies.

Riet:
Our relationships with universities are rather local despite the fact that from a European perspective we are one of the most international actors. Naturally, collaboration is more effective with people you meet regularly. Keeping in touch easily from a distance is rather practical, but for real collaboration, I don’t believe in it.

The locality perspective helps us to understand why and how the different Dutch and Finnish localities differently drive human experiences, the sensemaking of the practice (cognition) and sensegiving to the practice (action), and how, in dialectical interaction, the space and place of the respective Dutch and Finnish university-industry collaborative practices obtain to some extent different meanings and different structures. Obviously, place and space are experienced differently, interpreted differently and evaluated differently, and thereby, they create different dimensions of awareness and different situational preferences (Seamon and Sowers, 2008). Locality is thus to be understood as a localised social structure, but also as an agent (Cox and Mair, 1991) acting upon the actions and actors of or surrounding the university-industry collaboration and determining the structure and meaning of the university-industry collaborative practice. Referring to Wenger (1998, p. 234), the narratives make explicit that no university-industry collaborative practice is itself global. Every practice remains local in terms of engagement – even if it deals directly with global issues such as attracting and retaining student talent from around the world.

Learning takes place through learning in practice and in interaction with the social environment. However, situational preferences may determine affective expectations towards and reinforce assumptions about how to make sense of and give sense to the collaboration when it is involved with attracting and retaining foreign students. As Nootenboom (2000) points out, people can collaborate without agreeing, probably even without understanding, but not if the practice does not make sense to them. Partial or one-sided sense-making may not be enough for the purpose of university-industry interaction in knowledge transfer through people, and then “one needs to stretch one’s domain (absorptive capacity)” (ibid, p. 74) in order to increase the capacity to learn from others, to make sense of the collaborative practice and to make knowledge transfer through people sustainable. Furthermore, the creation and maintenance of some forms of social capital, in particular
the relational and cognitive dimensions\textsuperscript{10} of social capital, is a costly and time-consuming process. Significant investments are thus required in the development of networks of academic and business relationships, both being a crucial source of social capital in support of university-industry collaboration.

While negotiating the joint practice, the actors of the university-industry collaboration may take up the task of boundary spanners-in-practice and may thereby use organisational resources, professional and context-dependent knowledge as well as their personal influence (or aspirations) to adjust the collaborative activities to the local settings and to accommodate the interests of their counterparts (Levina and Vaast, 2005). The boundaries of the collaborative practice remain therefore often unspoken and fluid; they arise and move alongside with the changing dynamics of the collaborative enterprise (Wenger, 2000).

\textit{Identified through interpretive phenomenological inquiry}

Interpretive phenomenology offers us important insights and reflections on the university-industry practice of partnering to promote knowledge transfer through people. The narratives above obviously imply that endeavours to identify, copy or offer Silicon Valley development stories or other best practices will not be helpful for the purpose of enhancing the competitiveness of a specific university-industry collaborative practice, the partners and stakeholders involved and, in the end, the locality involved (Boschma, 2004). What matters, is the context and the system into which international student talent is attracted. This, obviously, implies that enforcement strategies and programmes must be in place to promote university-industry collaboration in knowledge transfer via people. But they must be designed to conform to the local settings. Building absorptive capacity to enhance learning from experience and from others is undoubtedly a prerequisite for competitiveness. However, every collaborative practice is an integral element of a unique ecosystem of knowledge transfer. Copying the practice as a single element to any other system does not make sense.

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\textsuperscript{10} Tsai and Ghoshal (1998) distinguish between the three dimensions of social capital: the structural (social structure and interaction), the relational (the assets that are rooted in strong relationships, such as trust and trustworthiness), and the cognitive dimension (embodied in attributes such as a shared code and a shared meaning facilitating a common understanding).


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