

Master Thesis

An institutionalised perspective on local economic development in a less-developed country.

The university's commitment to create a creative class,
a case study of the Kathmandu University, Nepal.

By

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Abstract

KEYWORDS:

Local economic development;
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Kathmandu University, Nepal;
Less-developed country.

This research takes an institutionalised perspective on local economic development, whereby it uses the Triple Helix Model to study the function of a university and its interaction with civic society institutions. There is no scientific consensus about the existence of a fourth helix, as an addition to the traditional model. In economic development, “innovation” is a fundamental element. Hence, this research focuses on the theoretical background of innovation stimulation concepts, like: (social)entrepreneurship, which might lead to the determination of a fourth helix. We found an increasing importance of the civic society, since the main institutions for (social)entrepreneurship are described as: the public sector, business sector and civic society. Generally, the Triple Helix Model has been applied in developed societies. These additional insights leads to the main research question: how can the interaction between a university and the local society contribute to local economic development in a less-developed country?

A case study analysis is conducted in order to: research the suggested expansion of the Triple Helix Model, focus on the functions of the university and study the interaction with local civic society institutions. Moreover, the case study of the Kathmandu University, Nepal, was the first time the Triple Helix Model has been applied in a less-developed country in Asia. Hence, we found support for our propositions. First, one can conclude that the university has many activities and policies in favour of local civic society institution. Since the connection between local civic society institutions and the Kathmandu University is described as a very important relationship regarding local economic development, we found support for our suggestion that the local civic society institutions should be part of the Triple Helix Model, whereby it represents a quadrilateral network between the state, industry, university and local civic society. Second, the university can stimulate local economic development through the interaction with local civic society institutions.

What we can conclude from the theoretical and case functions of the university, is that the new model has four institutional actors, with relating functions. We point out the importance of an equal distribution of the university’s focus on the multiple institutions and the corresponding functions, based on a non-isolated institution perspective. We have seen that the Kathmandu University has a strong focus on local civic society institutions and might overlook the importance of the business sector. It would be interesting to research the generalisability of this effect in other LDC cases. Also, the balance or unbalance of interactions in developed countries would be interesting. The KU case learns us the importance of a balance and integration of all institutional elements to be a successful university in LED.

A university should criticise its own institutional policy in order to develop its LED operations. If a university wants to reinforce its interaction with local civic society institutions, the creative class concept appears to be significant. In this scenario we conclude that the duty of a university is to create an environment where a new generation of genius people live and want to live. The optimal environment is case specific, since formal institutions, informal institutions and cultural differences might differ per country, per area and per university. Nevertheless, universities can learn from each other and can be challenged by each other, in order to stimulate the institution to find an optimal balance for LED for their specific case.

Acknowledgements

Namasté! I am honoured to present the capstone of my double degree Master in Advanced International Business Management & Marketing, at the University Groningen and the Newcastle University Business School. I would like to introduce my master thesis about local economic development in less-developed countries.

This report discusses multiple functions of a university in a less-developed environment, whereby the study focuses on the Kathmandu University case. I would like to point out the importance of all commitment and the support I have received from all universities involved. Their openness, flexibility, intellectual support and financial support was fundamental in the development of the thesis. In relation to the Kathmandu University, special thanks go to:

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नमस्ते Namasté!

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Abbreviations

KU:	Kathmandu University
LDC:	Less-developed country
LDCs:	Less-developed countries
LED:	Local economic development
LCSi:	Local civic society institutions
NCGE:	National Council for Graduate Entrepreneurship
NGOs:	Non-governmental organisations
QNM:	Quadrilateral network model
RBV:	Resource Based View
SOA:	School of Arts, Kathmandu University.
THM:	Triple Helix model
TH I:	Oldest Triple Helix model, called: Statist Triple Helix model
TH II:	Evolutionary Triple Helix model, called: Laissez-Triple Helix model
TH III:	Latest Triple Helix model, called: Hybrid organisations and action model

1. Introduction

Whether it is from an economic perspective, philanthropic ideas or the search for legitimacy, an increasing number of organisations are exploring their roles in the local, regional, national or global environment. This research focuses on a specific type of organisation, namely: an institution of education having authority to award higher degrees, determined as a university.

The role of a university within its environment, local responsiveness and the development of local and regional economy seem to be hot topics for educational institutions. For example the University of Groningen (The Netherlands) had focused their research within the areas of: healthy ageing, energy and sustainable society. Drs. L. Verveld (Secretary general, Office of the University Groningen) acknowledges the importance of function determination, by stating: "this is indeed an issue that is of importance to the university. As one of the largest organisations in the north our activities have a large economic impact. Not only because our 6,000 staff members and our nearly 30,000 students consume and live in the north, but also because a lot of research from the university is connected to the world of business and industry in the north". An issue, which leads to in-depth discussions and a strong influence on research. A phenomenon which is also recognizable at the Newcastle University (United Kingdom), expressed in: business games focusing on local economic development (LED), a business development unit that focuses on commercialization strategies and environmental influences, the close cooperation with city council and non-profit groups, education focused on ethical and environmental issues and lastly guidelines and requirement for research. Newcastle University underpins the wide ranging of relationships between the university, the North East and the City Council. Newcastle University is known as Civic university in a science city. One can assume that local responsiveness and the development of local economy are important issues in a university's operations.

Herewith, we have determined a problem from a practical perspective, the next paragraph will focus on a theoretical perspective.

Problem indication, a theoretical perspective

Organisations are embedded in institutional environments (DiMaggio and Powell, 1983; Tolbert, 1985; Greenwood and Hinings, 1996; Teo, 2003) and they seek to match regulatory demands and normative, as well as ethical or philanthropic expectations, in order to acquire and maintain legitimacy. Along the way to gain legitimacy as a means to survive, a university is subjected to different pressures. To analyse the different pressures and interactions within the university's

institutional environment, one can focus on the Triple Helix model (THM), in order to combine three institutionalised entities: university, industry and government. The THM represents a trilateral network between the three institutions, which stimulates collaboration and an innovative environment (Brundin, Wigren, Isaacs, 2008). Hereby, the stimulant of innovation capacities has played a fundamental role in the growth dynamics of booming developing countries (OECD, 2012). Innovation can be seen as anything that offers a new perceived benefits, whereby we assume it is a fundamental element for economic development initiatives.

The THM has been developed over the years, since the institutional environment and the role of the players changes constantly. Figure 1 shows the development of the model, whereby the first expansion includes the capitalization of knowledge by the university and the change from teaching and researching towards a new mode of knowledge production (Gibbons, 1994). The industry and university became more independent institutions, whereby the government moves towards a stimulating instead of controlling function. The third model represents the generation of a new overlay of institutional structures, focusing on the interaction between the developed country's institutions to fill in gaps in the innovation systems.

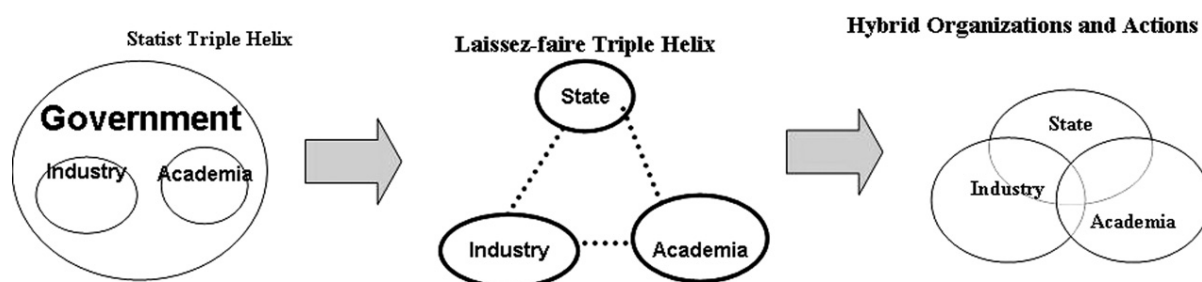


Figure 1: The evolution of the THM (Source: Razat & Saad, 2007)

It is likely that the initiated development of the THM will continue, especially because there is no scientific consensus about the existence of a fourth helix, or fourth institution which needs to be included in the model. Innovation has played an essential role in the development of economies (OECD, 2012). We assume, innovation is a fundamental element for economic development, whereby it is an essential concept in the determination of a fourth helix. This research will focus on the theoretical background of innovation stimulation concepts, like: (social)entrepreneurship. Literature about (social)entrepreneurship is extensive and comprehensive. Basically, entrepreneurship can be determined as a “dynamic process of vision, change and creation. It requires an application of energy and passion toward the creation and implementation of new ideas and creative solutions. Essential ingredients include: the willingness to take risks, the creative skill to

marshal needed resources, the fundamental skill of building a solid business plan, and finally the vision to recognize opportunity where others see chaos, contradiction and confusion” (Kuratko and Hodgetts, 2004, p.30). According to Johannisson (2005), (social)entrepreneurship can be found within multiple facets of the society. Within parts of the public sector, business sector and the citizen sector (social)entrepreneurs operate (figure 2). It is possible to find (social)entrepreneurs within all these sectors and it is improper to determine (social)entrepreneurship as an isolated institution. Bjerke (2010) argues, that it is most likely to find (social)entrepreneurs at markets in the business sector, institutions in the public sector and in private or public places in the citizen sector. Also Bjerke & Karlsson (2013) stress out the increasing importance of (social)entrepreneurial activities within the citizen sector. One distinguishes social entrepreneurship when these activities in the society are not limited to private profits (Bjerke et al, 2013).

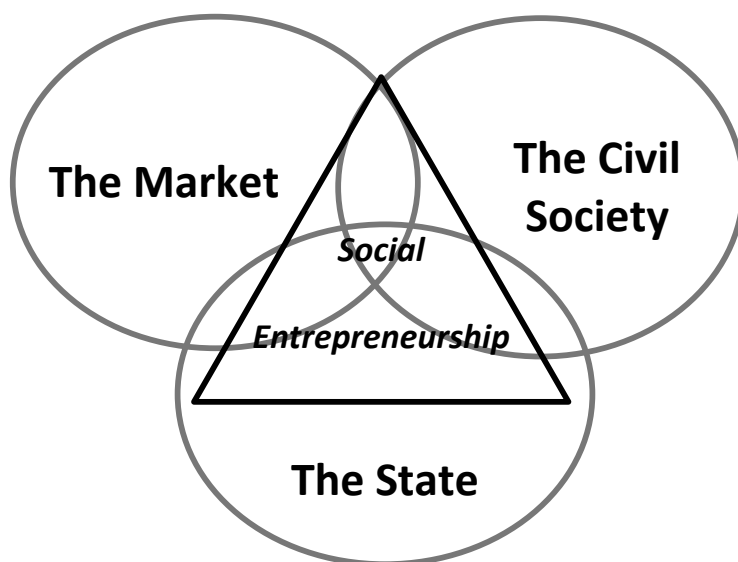


Figure 2: (Social)entrepreneurship within an institutionalised environment (Source: Nicholls, 2006, p.229)

As we have seen, Bjerke & Karlsson (2013) point out the importance of the underlying (social)entrepreneurial theory, which focuses on innovation aspects fundamental for economic development. We found evidence for the increasing importance of the civic society as an institution, whereby we define an institution as a system of established and widespread social rules that structure social interactions (Hodgson, 2006). (Social)entrepreneurship has been seen as an important starting point to study the possible presence of a fourth helix, while Bjerke et al (2013) describes the main institutions for (social)entrepreneurship as: the public sector, business sector and civic society (Toledano, 2012; Lombard, 2012; Perente, 2012). Therefore, one can argue that the civic society is an important institution within the THM. Hereby, the distinction between civic and civil is seen as the intrinsic motivation that comes from the individual (civil society) or any external

source (civic society)(Demarco, 2008). Hence, the research focuses on the university's function and to a less extent on the society's function. Furthermore, Rodriques (2013) suggests, that the university is positioning itself as a leading institution in the promotion of economic development (Nasioulas, 2012; Hosu, 2012; Lombard, 2012), which leads to the following research question: how can the interaction between a university and the civic society contribute to economic development? Cook (1997) concludes that innovation and economic development should be studied intellectually by specifying the institutions and their interactions. However, he stresses out the difficulties of researching this on a national level and suggests that studies should be conducted at a regional or local level, which collectively can give a national perspective. Nowadays, the THM has been applied generally in developed societies. Merely, a similar research has been done in Brazil. Therefore, this research focuses on the local level and contributes to the understanding about the THM in a less-developed country (LDC). These additional insights leads to the main research question:

Main research question: How can the interaction between a university and the local society contribute to local economic development (LED) in a less-developed country (LDC)?

To research the suggested expansion of the THM and enable an in-depth research and deep understanding of the THM in a LDC, a single case study research is recommendable. Hereby, we use the Kathmandu University (KU) as a case study institution, based in Nepal. The KU is one of the leading and most dominant universities in one of the poorest and least developed countries in the world. This research will focus on the KU as an institution, its function in LED and the interaction with other institutions. The relevance of such a study has been confirmed by one of the creators of the THM concept, by stating: "I am intrigued about your case study in Nepal. Much of the academic and public policy in this area if from the developed world and how far it can be transferred is not clear to me" (Goddard, 2014).

The next chapter will further develop a theoretical background, processed into a literature review. Subsequently, chapter three will explicate the research methodology, where after chapter four continues with the case study and theoretical analysis. The research report will be concluded by a discussion of the findings and several practical and theoretical recommendations and conclusions.

2. Literature review

This chapter will establish a theoretical framework for the scientific research on local economic development in a less-developed country. Hence, key definitions and terminology are defined. After an introduction into an institutional perspective on economic development, the chapter focuses on the triple helix model. Thereafter, the university as an organisation and its function are discussed. We conclude with a conceptual model.

2.1 Economic development, based on institutional theory

This research mainly focuses on dimensions of LED, whereby we build on Pennink (2013) his developing global value chain model. The complex model, based on Stimson (2009), creates diverse and influencing levels. “By adding the extra levels, new research questions will arise” (Pennink, 2013, p.9). This research starts reasoning with entrepreneurial activities at the local level of the multi-level, multi-actor model for local economic development (figure 3, red marking). Subsequently, we tend to focus on the interaction between institutions at a local level (figure 3, green marking). More specifically, the research develops the relation between institutions, whereby we focus on the university and local civic society as units of analysis.

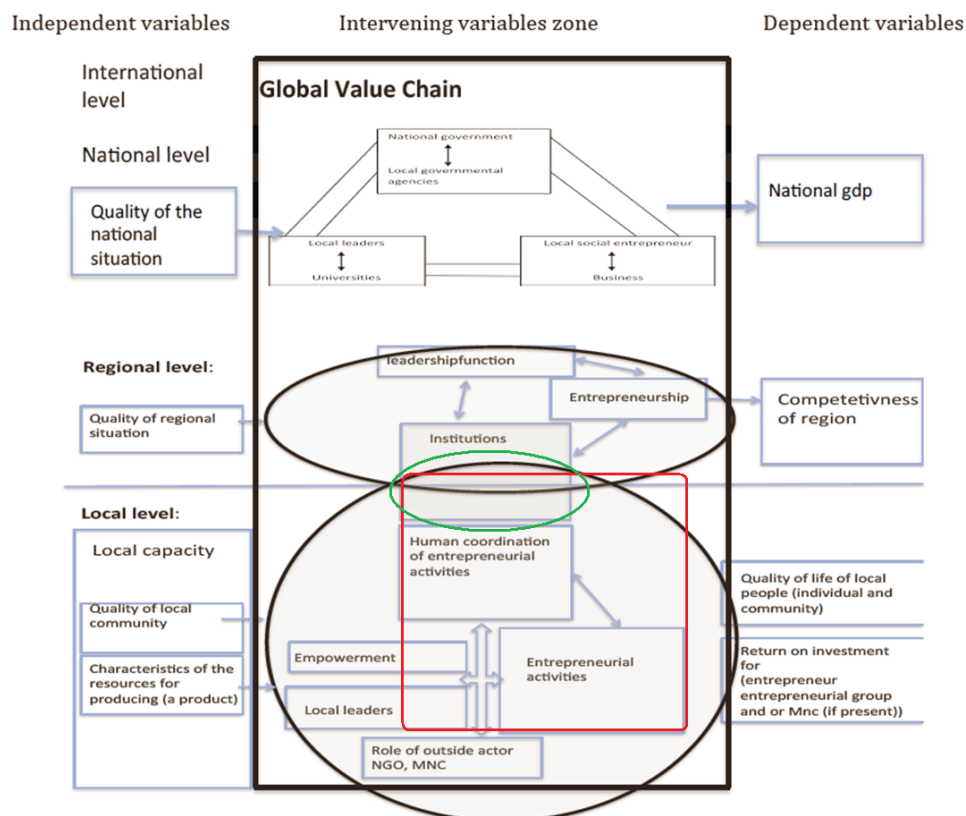


Figure 3: Multi-level, multi-actor model for local economic development (Source: Pennink, 2013)

Institutions can be defined as systems of established and widespread social rules that structure social interactions (Hodgson, 2006), or one can explain it as “the rules of the game” (North, 1990, p.36). Institutional theory emphasizes that the institutional environment can strongly influence the development of formal structures in an organisation, regularly more strongly than market pressures as the market based perspective suggests. We presume that organisations are embedded in institutional environments (DiMaggio et al., 1983; Tolbert, 1985; Greenwood and Hinings, 1996; Teo *et al.*, 2003). DiMaggio et al. (1983) suggests that the more an organisation depends on the environment or the more it is exposed to uncertainty or ambiguous targets, the rate of institutional isomorphism increases. Consequently, institutional theory supposes a pressure on organisations to be conventional to the outside world, and other organisations (Kanter, 1972; DiMaggio et al., 1983). These pressures include moral prescriptions and expectations in order to obtain and keep legitimacy. “From institutional theory, the following conclusions can be drawn: first, it is considered of vital importance to be regarded as a legitimate body of institution. Second the rules of attaining legitimacy and the way to achieve it varies depending on what kind of pressure the organisation is exposed to. Lastly, the rules of gaining and keeping legitimacy differ between them” (Brundin et al., 2008, p.83).

From an economic development perspective, this research focuses on the relation between local institutions. Explicitly we are interested in specific organisations, namely: governments, universities and the industry. The next paragraph will focus on modelling of the three institutions, in relation to LED.

2.2 Triple helix: A theoretical overview

“The build-up of innovation capacities has played a central role in the growth dynamics of successful developing countries” (OECD, 2012 p.4). Innovation can be seen as anything that offers a new perceived benefits to LDCs, hence we determine innovation as: a significant positive change (Berkun, 2013). In economic development challenges, “innovation” can make a difference, whereby we assume it is a fundamental element. The search for innovativeness in local institutions, to stimulate LED, can be structured via different theoretical models. Scientific concepts like “national systems of innovation” (Lundvall 1988, Nelson 1993), “regional innovation systems” (Cooke 1992), “Mode 2” knowledge production” (Gibbons et al. 1994) and THM (Etzkowitz and Leydesdorff 1995, 2000) validate the significant role of innovation and knowledge infrastructure for LED. This research focuses on the latest concept.

Henry Etzkowitz, former professor of the Newcastle University Business School, and currently employed as Senior Research Fellow at the Stanford University, first suggested the THM (Etzkowitz et

all, 1995). The basic assumption of the model is that universities, in the context of increasingly knowledge-based societies, can presume a superior responsibility in innovation. Thereby, a growing overlay of communications between university, industry and government can be determined (Etzkowitz et al, 2000).

2.2.1. The traditional model and its limitations

The traditional THM comprises three basic facets, which are described in figure 4. Originally, industry operates in the THM as the initiator of production, government as the source of certain and stable interactions and lastly, the university functions as a source of innovation and knowledge. The increasing importance of knowledge gives the university a prominent place in the institutional environment (Stanford University Triple helix International conference, 2011). The THM becomes increasingly a platform for institution formation, whereby the interaction between the actors can originate the creation of new organisational formats (Etzkowitz, 2003). The emergence of these new institutions or elements, supports the underlying argument of the THM, that the university is positioning itself as a leading institution, along with industry and government, in the promotion of LED (Rodrigues, 2013). Since the adaption of roles by institutional entities is flexible within the system (figure 4), there are implications but also opportunities for new interactions, elements and institutions.

Traditional elements THM

- 1:** A prominent role for the university in innovation, on a par with industry and government in a knowledge-based society;
- 2:** Collaborative relationships among the three major institutional spheres, in which innovation policy is increasingly an outcome of interaction rather than a prescription from government;
- 3:** In addition to fulfilling their traditional functions, each institution also takes the role of the other, performing new roles as well as their traditional function. Institutions taking non-traditional roles are viewed as a major potential source of innovation in innovation.

Figure 4: Traditional elements THM (Source: Stanford University Triple helix International conference, 2011)

The THM represents a critical and sometimes limited foundation for further theoretical reflection on innovation dynamics and LED. Recent research has discovered unsuspected interesting elements, relevant for the model (Thune 2010; Marcovich, 2011). Discussion rises about the presence of a fourth helix, as an addition to the traditional model. Connected to this debate, there is a lot of diversity in the determination of a potential fourth helix. One can suggest: labour (Etzkowitz, 2006) venture capital (Etzkowitz, 2006), eco-innovation dynamics (Yang, 2012; Ranga, 2005), civic society

(Rodrigues, 2013; Toledano, 2012; Lombard, 2012; Perente, 2012; Marcovich, 2011), entrepreneurship (Etzkowitz, 2002) and the informal sector (Stanton, 2007; Affaa and Dalkir, 2006) as a complementary element or institution. Concluding, contemporary literature designate the possible existence of another helix and points out the evaluation of the THM, which will be discussed in the next paragraph.

2.2.2 Evolution of the THM, through (social)entrepreneurship

As described in subparagraph 2.1 the role of the institutions is subject to change. Therefore, the THM has been developed over the years and will stay in a continuum of an evolutionary process. Figure 5 shows the development of the model, and describes the change of the role of the government, which moved away from a controlling (TH I) towards a stimulation role (TH II). Also, the industry and university became more independent institutions (TH II). The separation of institutions (TH II) eventually developed to a generation of a new overlay of institutional structures, focusing on the interaction between the institutions to fill in gaps in the innovation systems (TH III) (Etzkowitz and Leydesdorff, 1999; Etzkowitz et al, 2000; Etzkowitz, 2008).

It is likely that the initiated development of the THM will continue, especially because there is no scientific consensus about the existence of a fourth helix, or fourth institution which needs to be included in the model.

Carayannis and Campbell (2010) introduced an extension of THIII, whereby they underline the significance of the society in a knowledge-based economy. The extension is determined as the quadruple helix. Another addition of the THM is the N-tuple helices model of innovation, introduced by Leydesdorff (2011). It stresses the increasing complexity of the arena of innovation. Based on the increasing complexity of knowledge generation and innovation both models emphasize the importance of a fourth helix. Concerns for the commons imply an explicit focus on local society, Non-government organisations (NGOs) and the local community (Platform of European Social NGOs 2001). “These non-profit organisational entities representing public interest towards decision-makers, channelling concerns, viewpoints and values within the political process” (Yang et al, 2012 p.376). As Teegen (2004) commented: In cases where important services, representation, and social cohesion are lacking, NGOs play critical roles in governance and value creation for social ends. Nonetheless, NGOs, local society and communities are not stressed in the THM, as a critical institution (Yang et al, 2012).

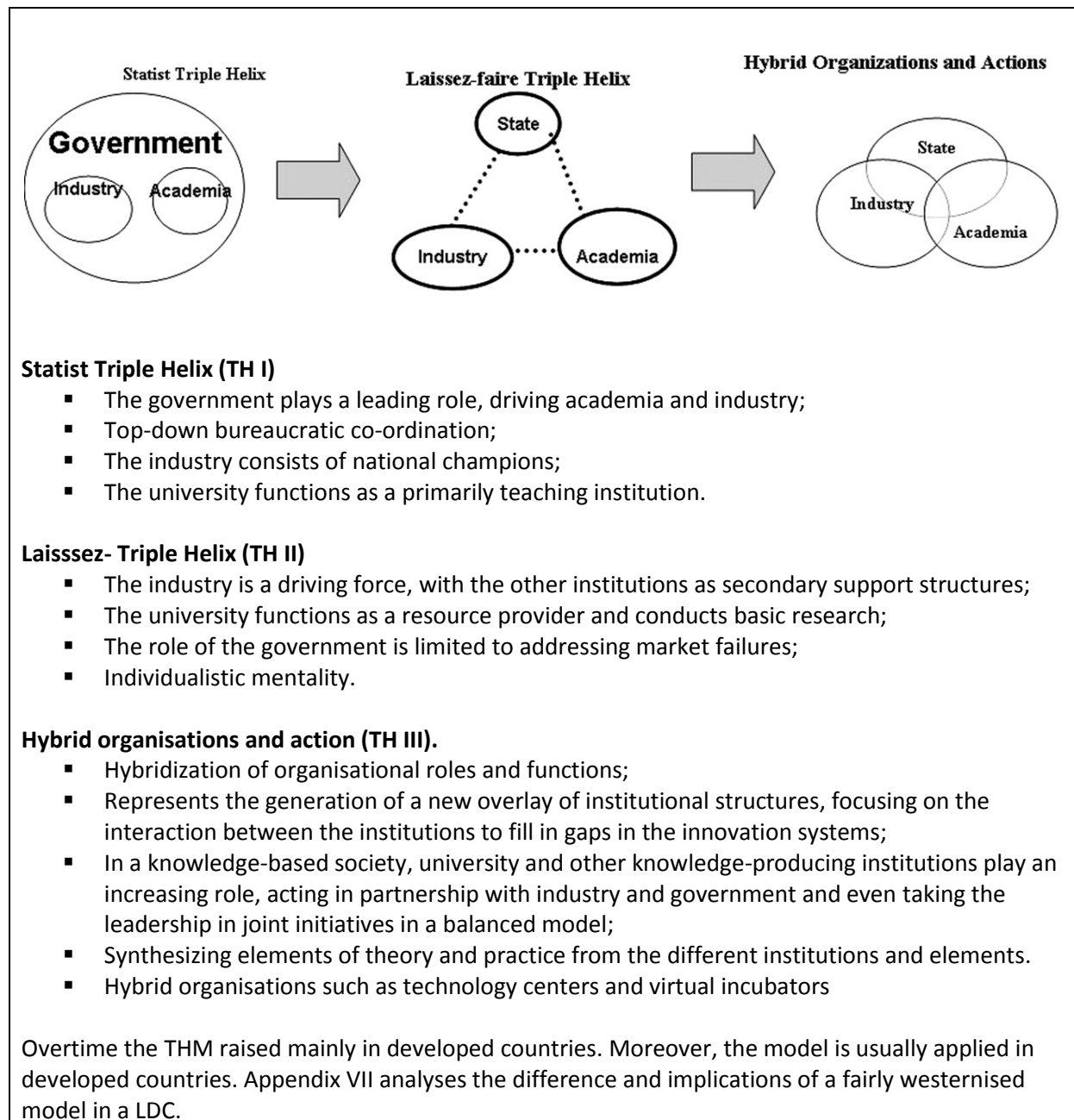


Figure 5: The Evolution of the THM (Source: Etzkowitz et al, 2000; Etzkowitz, 2008)

Another approach to the extension of THIII can be found in (social)entrepreneurship theory. Brundin et al (2008) studied the THM in a multicultural context and emphasizes the fatal interpretation of the model, without the addition of a fourth helix, namely: (social)entrepreneurship. To stimulate LED and develop the THM one should study (social)entrepreneurship influences, in order to determine potential new institutions or influences (Marques, J.P.C., Caraça, J.M.G, 2006; Razat et al, 2007; Myung-Hwan Cho, 2008; Brundin et al, 2008; Peijun, 2010). Both social entrepreneurship and entrepreneurship are seen as sources and contributors to innovation, what we believe is fundamental for LED in LDCs. This research continues with the influence of (social)entrepreneurship

on the THIII, which might lead to the determination of a fourth helix. In this research we will refer to THIII as the traditional THM or just THM.

2.2.3. (Social)entrepreneurship

Entrepreneurs can be seen as innovative people, alert to business opportunities that might emerge, from which they search for disproportions in the economic system (Marcotte, 2014). Entrepreneurial activities are defined in figure 6.

Entrepreneur: “Is one who creates new business in the face of risk and uncertainty for the purpose of achieving profit and growth by identifying opportunities and assembling the necessary resources to capitalize on them. Although many people come up with great business ideas, most of them never act on their ideas. Entrepreneurs do” (Zimmerer and Scarborough, 2002, p.4).

Entrepreneurship : “Is a dynamic process of vision, change and creation. It requires an application of energy and passion toward the creation and implementation of new ideas and creative solutions. Essential ingredients include: the willingness to take calculated risks, the creative skill to marshal needed resources, the fundamental skill of building a solid business plan, and finally the vision to recognize opportunity where others see chaos, contradiction and confusion” (Kuratko and Hodgetts, 2004, p.30).

Social entrepreneurship: is determined as an innovative process of creating value by combining resources and institutions, intended mainly to explore and develop opportunities to generate social value by stimulating social change or meeting social needs. Hereby, the process involves the exploitation of services and products but can also refer to the creation of new institutions. Examples of social entrepreneurship include: microfinance institutions, educational programs, providing banking services in underserved areas and helping children orphaned by epidemic disease. The main goal of a social entrepreneur is not to earn a profit, but to implement widespread improvements in society (Mair & Marti, 2006).

Entrepreneurial activities in relation to LED: The identification of opportunities (entrepreneur), the process of change (entrepreneurship) and the value creating strategy (social entrepreneurship) which are discussed in these theories are seen as sources and contributors to innovation, which has played a central role in the growth dynamics of LDCs. Therefore, these theoretical backgrounds might help to determine fundamental institutions in LED processes. We assume that entrepreneurial activities are one of the many sources and contributors to innovation and LED.

Figure 6: Entrepreneurial activities defined

A (social)entrepreneur operates with innovative ideas with the prospective to solve a community problem. Hereby, (social)entrepreneurship can be designated and found within multiple aspects of the society, including parts of the public sector, business sector and the citizen sector (Johannisson, 2005; Pennink, 2012). Bjerke (2010) argues, that it is most likely to find (social)entrepreneurs at

markets in the business sector, institutions in the public sector and in private or public places in the citizen sector. Therefore, it is improper to determine (social)entrepreneurship as an isolated institution. Bjerke et al (2013) stress out the increasing importance of entrepreneurial activities within the citizen sector. It is important to realise that not all that takes place in either business, university, governmental institutions or local society is entrepreneurial. (Social)entrepreneurial activities take place where many non-entrepreneurial activities take place. The increase of importance of the citizen sector leads to adjustments in the institutional environment, whereby the rules of the game for other sectors are likely to transform as well (Coombs & Potts, 2013; Bjerke et al, 2013). It unlocks opportunities for social inventiveness's and stimulates a more proactive role for citizen. A development important for LED.

Earlier models suggested that entrepreneurship should be seen as a fourth helix in the THM Brundin (2008). We assume that (social)entrepreneurship is an aspect of multiple institutions and a source or contributor to innovation, which is arguably relevant for LED, but not a single institution. Ultimately, after registration, an entrepreneur legally transforms into a business institution. Bjerke et al (2013) describe the main institutions for (social)entrepreneurship as: the public sector, business sector and society (Toledano, 2012; Lombard, 2012; Perente, 2012). Therefore, it is a limitation of the earlier suggested THM, whereby it is not correct to state (social)entrepreneurship in an institutionalised model. If we follow the theory behind (social)entrepreneurship, the importance of the earlier mentioned institutions appears, complimented with the local civic social as a fourth institution. Hereby, the local civic society institution can be seen as: the wide array of non-governmental and non-for-profit organisations that have a presence in local public life. This leads to the following proposition:

Proposition 1: The local civic society institution should be part of the Triple Helix model, whereby it represents a quadrilateral network between the state, industry, university and local civic society.

One should be aware that Etzkowitz and Zhou (2006) have doubts about any modification of any new helix, since the dynamic aspect might get lost. We consider: first, the necessity to reconsider earlier assumptions, second, the evident from recent literature and lastly, Etzkowitz et al (2006) own statement: "nevertheless, an expanded model is required to incorporate a critical dimension" (Etzkowitz et al, 2006, p.79). In favour of proposition one, we argue that all three helices remain intact. Developments in the institutional environment and especially changes in role and functions cannot be ignored.

2.3 The university and local society, operating institutions

Based on the THM and the suggestion that local society should be part of the model, this research focuses on the university as institutions and local civic society institutions (LCSI). Both concepts are defined in figure 7. This paragraph will deepen into the role of the university institution and separately focus on its interaction with LCSI.

University: “An institution of high-level education in which students study for degrees and academic research takes place, which have the authority to award higher degrees” (The World Bank, 2013).

Local civic society institutions: “Refer to the wide array of non-governmental and non-for-profit organisations that have a presence in local public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations, including: community groups, NGOs, labour unions, indigenous groups, charitable organisations, faith-based organisations, professional associations, and foundations” (The World Bank, 2013).

Figure 7: Institutions defined

2.3.1 The role of universities as driver of the Triple Helix Model

A recent study determined that universities contributed nearly 60 billion GBP to the economy of the United Kingdom (In Focus publication: Patterns and trends in UK higher education, 2012). Higher educational organisations increasingly generate economic growth, focus on LED and transform themselves into economic institutions by taking on specific tasks, such as: superior technology transfer, increasing number of exclusive rights, employment, and commercialization. The university is a fundamental institution within the THM, and becomes increasingly important since knowledge develops into a key strategic resource necessary for prosperity and well fare in a region. Unlike natural resources, such as iron and oil, that have driven earlier economic transformations, knowledge can be seen as unlimited. Since society becomes more knowledge-intensive it becomes even more dependent on social institutions, such as the university, to create knowledge, educate people, and provide those people with learning resources (Sprinvas, 2008; Razak et al, 2008; Leyden, 2012; Sedlacek, 2013).

Based on the assumptions of the THM, this research focuses on the role of a university from an institutionalised perspective. Before we can continue with the determination of the role of an educational institution, one must be aware of the existence of other founded perspectives on the

function of a university as an organisation. Appendix I provides an analysis of other principle theoretical perspectives, based on: knowledge as a unique resource (Resource based view), knowledge as a competitive entity (Market based perspective), relationships as external networks (Relational view), knowledge sharing as an expenditure (Transaction cost theory) and the university as mediator in network structures (Social and Economic Network Theory).

In this research the THM constitutes a basis for the determination of the university's role, which mainly includes an institutional perspective. The role of universities has developed over the past decades. According to Gunasekara (2004), universities were previously described as 'ivory tower' institutions focusing merely on the traditional academic practices of teaching and research. Since knowledge and innovation became important factors in LED, the role is expanded towards a supplementary public role in which learning, dialogue and the development of new knowledge is fundamental (Gibbons, 1994; Gunasekara 2004). The role of universities has become more significant with the emergence of the knowledge-based economy. Nowadays, the function of a university is increasingly described as the powerful driver of innovation and main actor in the knowledge generation and distribution process (Razak et al, 2008; Leyden, 2012; Karrison and Zhang, 2001). The university externalize distinctive human and technical capital that might not be available in the business or government sector. The university makes such unique capital available to other institutions with which it collaborates, and may also act as a facilitator of synergies among institutions, by providing them with: physical facilities for collaborations, joint research, sponsoring and conferences. In doing so, a university can increase the quality of interactions among institutions (Leyden, 2012).

Multiple theoretical concepts are applicable and valid in the description of the role of a university. Aware of the limitation, that four roles give an imperfect representation of the infinite methods and perceptions in describing this role, one can distinguish the following four functions:

Role 1: The research university

The research university can be defined as an academic institution "committed to the creation and dissemination of knowledge, in a range of disciplines and fields, and featuring the appropriate laboratories, libraries, and other infrastructures that permit teaching and research at the highest possible level" (Altbach & Baltán, 2007 p.1). The research university is a relevant concept for society interaction since much of its research is conducted in association with financial support and sponsorship from non-university sources. Furthermore, Albach et al (2007) argues that all countries need academic institutions linked to the academic system, in order to understand innovations in

their environment. Research universities are a specialised and crucial part of any academic system and fundamental for LED. Appendix II amplifies the characteristics of the successful creation of such an institution. Research universities are at the top of the academic hierarchy and are central to the accomplishment of any modern knowledge-based economy (Altbach et al, 2007). In favour of LED the participation of educational institutions is fundamental in the development of infrastructure, innovation, entrepreneurship and the creation of a competitive advantage as a nation. The research university is an institution serving many societal roles, and it creates opportunities for countries to join the global knowledge society and compete in sophisticated knowledge economies (Altbach et al 2007; Altbach, 2004; Lee, 1996).

Role 2: The entrepreneurial university

The entrepreneurial university can be defined as: “those universities providing opportunities, practices, cultures and environments conducive to actively encouraging and embracing student and graduate entrepreneurship”(National Council for Graduate Entrepreneurship(NCGE)). According to the NCGE, the necessity for entrepreneurial universities arises largely from the complexities and uncertainties generated by globalisation, impacting upon organisations and individuals in work, family, community and consumer life (Etzkowitz, 2004; Larionova, 2012; Arokiasamy, 2012; NCGE). Based on entrepreneurial university literature, the role of such a university is to provide an opportunity for individuals and organisations in the society, resulting in: decreasing of uncertainty, stimulation of LED and it raises the quality of life. Therefore, entrepreneurship education should focus upon: innovativeness, entrepreneurial behaviours, developing understanding and teaching skills. The NCGE conducts research towards an appropriate model for entrepreneurial universities. An alternative to the traditional teaching model embraces a number of key characteristics, including: development of the capacity for strategic thinking, creating the capacity for relationship learning, stimulating entrepreneurial performances and encourage compassion with entrepreneurial principles. Furthermore the new model includes development of: knowledge, trust-based personal relationships, process management and organisational structures. Appendix II includes a template for entrepreneurial universities, which provides the basis for the concept and measurements for such an institution.

Role 3: The university as foundation for the creative class

According to Van Doren (1995), the key economic relationship that has strengthened thinking about LED had changed over time. Hereby, knowledge and innovation became more important. “New technologies and new products give those who can exploit them a competitive advantage”(Hague 2011, p33). “In a knowledge economy, know-how, ideas and talented people are the key forces for

profitability” (Hague 2011, p33). The role of a university can be portrayed as one of the main drivers of LED via the stimulation and creation of knowledge, innovation and innovators.

According to Florida (2005), successful LED depends on: technology, talent and tolerance. It is suggested that the creative class has a significant role in the process. Hereby, the creative class can be seen as: scientists, engineers, university professors, artists, cultural figures, think-tank researchers, analysts and other knowledge-intensive sectors (Hague, 2011; Florida, 2005; Markusen, 2006; Florida, 2012). Florida (2005) states that members of the creative class seek to reside in locations that offer abundant high-quality experiences and an openness to diversity of all kinds. Universities offers a central hub for the creative class and encourage their economic activities. Furthermore, the university should stimulate the local environment, including incentives to encourage people to invest in research. The role of a university comprehends the recognition and creation of a central hub for the creative class and encourage their economic activities. Lastly, significant important are university policies that will create an urban environment and a type of place where the creative class would want to live.

Role 4: The civic university

In the discussion about the role of a university and the purpose of such an institution, one can discern the civic university. In essence, a university formerly instituted as a higher education college serving a particular city or local environment. According to Goddard (2013), the civic university focuses on the integration of multiple public domains, including healthcare, sustainability, social expectations, social inclusion and informal institutions. The Newcastle University, the University of Sheffield and the University of Manchester present themselves as a civic university, and distinguish via the delivery of benefits to individuals, organisations and to society as a whole. Thereby, putting academic knowledge, creativity and expertise to work, to come up with innovations and solutions that make a difference (Newcastle University, 2014). Therefore, the concept is also described as the quadruple helix embracing civic society (Goddard, 2013; Goddard, 2011; Goddard, 2009).

In the domain of LED, the civic university builds on a couple of assumptions. First, it embraces ideas about the co-production of knowledge, including contribution via: research-based knowledge exchange, knowledge transfer through work-based learning, and engagement with civic society through cultural activities and community-based initiatives to promote the adoption of social innovations. Secondly, the concept supposes “that all publicly-funded universities have a civic duty to engage with wider society on the local, national and global scales, and to do so in a manner which links the social to the economic spheres” (Goddard, 2009 p.3). Calhoun argues that public support for

universities is based on the effort to provide education in general and to distribute knowledge, including economic development.

According to the conception of the civic university theory, there has been a continuum whereby the role of the university changes. Heretofore, the university focused on two main fields, namely: teaching and research, whereby professors, students and other researchers based their main activities on knowledge gathering and sharing. The role of the university management team comprehended the connection between the two fields and control via rankings or excellence measurement methods. The linkage with the environment was limited via the university management and their need for funding and collaborations (Goddard, 2007; Goddard, 2013). This perspective is schematically shown in figure 8A.

Although some theories might believe that the role of a university is limited to the outlined traditional perspective, the theory behind the civic university presumes an extended role. Figure 8B represents a comprehensive responsibility, whereby the fields of teaching, research, society and engagement have an overlap. The theory describes a soft boundary between the field, which stimulates each other via participation, enhancement, LED and socioeconomic impact (Goddard, 2007; Goddard, 2013).

Concluding, the role of a civic university moves away from the entrepreneurial university in which the principal driver is to act as a business, towards involvement in a diverse external environment across a wide range of disciplines and activities with an equally wide range of stakeholders. Subsequently, the concept builds on linkage of economic and social domains, a quadruple helix and long term adaptability through generating new knowledge (Goddard, 2007; Goddard, 2009; Goddard, 2013). Appendix IV provides an overview of dimensions of the civic university and concrete recommendations.

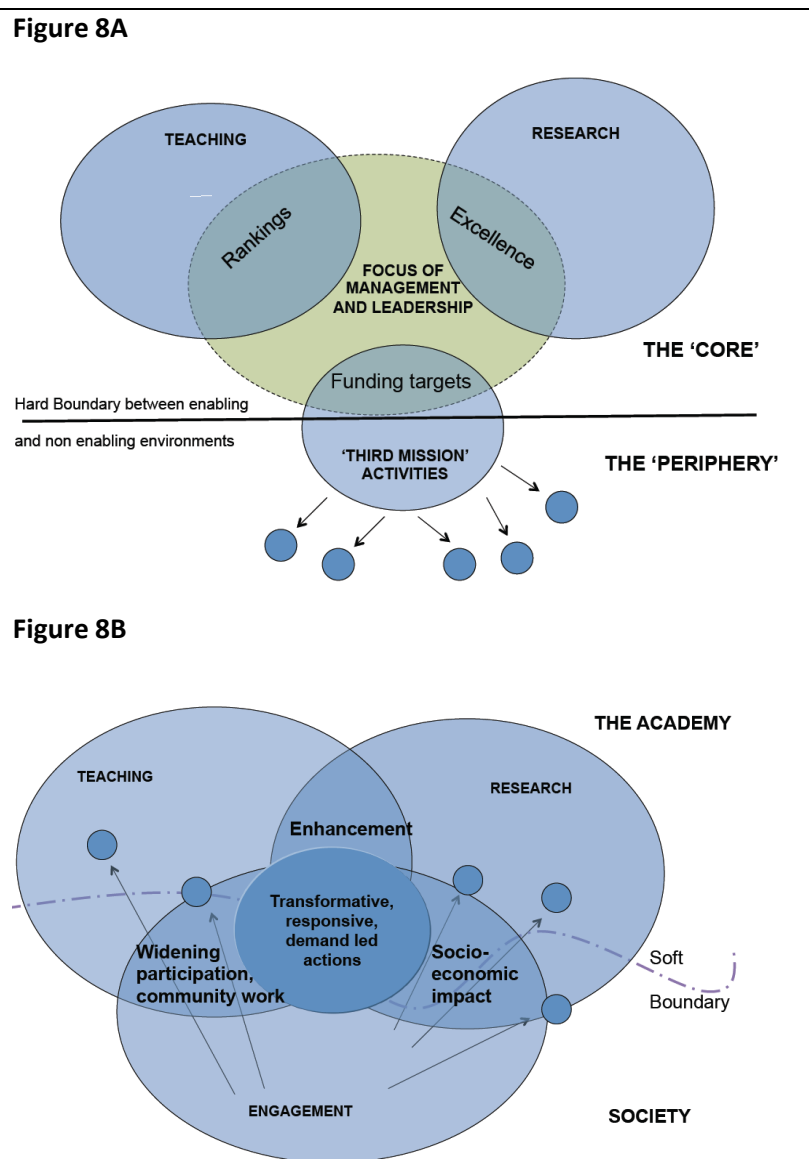


Figure 8: The civic university conceptualized (source: Goddard, J. Center for urban and regional development studies)

Comparatively, the role of a university can be described differently. Nonetheless, all explicated roles recognize the function of a university as non-isolated. Consistent with the THM, universities operate in an institutionalised environment. As suggested by the first proposition, this environment includes the LCS. The determination of the specific functions of a local society in the suggested THM is out of the scope of this research. Nevertheless, we focus on the interaction between the university and the local society as element of the THM. Appendix V gives a brief analysis of local society as an operating institution. Based on this analysis, the next paragraph focuses on the role of a university within a less-developed local society.

2.3.2 The role of a university within a LDC local society

In this research we have introduced an addition to the THM. Based on that conceptualization of innovation and economic development, this research focuses on the university and its interaction with LCSi. Whereby we assume that LCSi should be part of a quadrilateral network. Scientific literature supports the perception that innovation and LED can be stimulated via the LCSi (Ghaus-Pasha, 2004; Pouligny, 2009; Edwards, 2009; Gang, 1998; Inglehart, 1997; Almond et al., 1963). LCSi build strong communities by sustaining lively town centers and social life, linking individuals in a network of economic and social relationships, and contributing to local causes. Via LCSi important decisions are made locally by people who live in the community and who will feel the impacts of those decisions. In an increasingly homogenized world, LCSi that safeguard their unique character have an economic advantage on the world market. Also in terms of environmental sustainability, LED can be stimulated via LCSi, since they help to sustain vibrant, compact, town centers and community centers which in turn are essential to reducing sprawl, automobile/motorbike use, habitat loss, and air and water pollution. Lastly, compared to non-local institutions, LCSi reprocess a much larger share of their revenue back into the local economy, enriching the whole community (Institute for Local Self-Reliance, 2014).

The traditional THM institution's function can be described in different ways. Nonetheless, all explicated roles recognize the function of a university as non-isolated (Lee, 1996; Markusen, 2006; Altbach, 2007; Hague, 2011; Florida, 2012; Goddard, 2013). Consistent with the THM, universities operate in an institutionalised environment, whereby we suggest a positive influence on the local society and LED relationship. This leads to the assumption that the university can stimulate LED through the interaction with local society. Before we convert the assumption into a research proposition, we should focus on another comparison issue. To acquire a more specific formulation we focus in this subparagraph on LDC's society.

Appendix VII comprehends an analysis of the THM in developed and LDCs. One can conclude that there are differences in the structure of the THM relations between university, governments and business in developed and developing countries (Ye, Yu and Loet Leydesdorff, 2013). Many empirical studies based on cross-country data have found a high correlation between institutional quality and the level of economic development, but there is little research concerning the THM in LDCs, as shown in Appendix VII (Ezkowitz et al., 2004; Saad et al., 2005; Atiqul Haq, 2012; Nakabashi et al., 2013; Ye et al., 2013; Sachsida, 2013; Triple Helix Research Group; IMF; World Bank, 2013). Partly caused by complications with the application of a knowledge-economy based model on agriculture and manufacturing-based economies. Therefore, we point out the importance of further research and the implications of the THM in LDCs. It would be recommendable to research the THM in these

regions and focus on case studies outside South African, Brazilian and the developed regions. This specification of the earlier assumption about the scientific support that innovation and LED can be stimulated by a university via the LCSi, induce the following proposition:

Proposition 2: The university in a LDC can stimulate local economic development through the interaction with local civic society institution.

The propositions formulated can be elaborated into a conceptual model. The next paragraph will focus on the research specific conceptual model.

2.4 Conceptual model

Based on the previously discussed propositions, a conceptual model can be constructed. In order to research the interaction between a university and the LCSi, we focus on the relationship between the interactions of LCSi and perceived performance of LED. Consistent with proposition 2, we expect a positive influence of university involvement. Figure 9 comprehends a schematic representation.

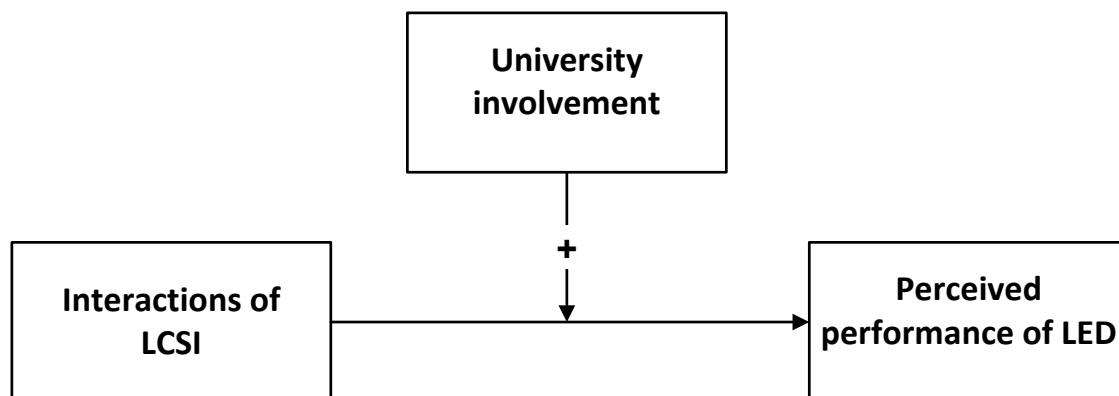


Figure 9: Conceptual model

As an independent variable, the interactions of LCSi are related to the level of economic securities, social connectedness via cohesion, participation in society, the number of NGOs and the increase of economic, political, social and educational strength of the society. We assume that the number of interactions are a positive indicator of the quality of local society. Logically, if the level of education, safeguarding and other social and economic elements rise, the quality in general will rise. The quality of local society is seen as an important relationship with LED or perceived performance (Pennink, 2013). A sociologically grounded measure of the quality of local civic society, well-being of society and the individuals within it can be found in the Social Quality model (Abbot and Wallace, 2012). The

multi-dimensional model comprehends four main domains: economic security, social cohesion, social inclusion and lastly the conditions for social and cultural empowerment. Appendix VIII elaborates on the modelling of interactions of LCSi, quality of local civic society and the Social Quality model.

To measure the number of interactions of LCSi and the involvement of the university as a moderator variable, we should elaborate on the measurement of LED. In order to scale the level of LED, we use perceived performance of LED as measurement in this research. The dependent variable includes the performance which can be observed on a local LDC level, and is therefore very useful for field research. Perceived performance of LED is divided into economy, capabilities and achievements and can be defined as the perceived amount of attribute outcomes received. The concept comprehends perceptual and evaluative performance and is expounded in figure 10.

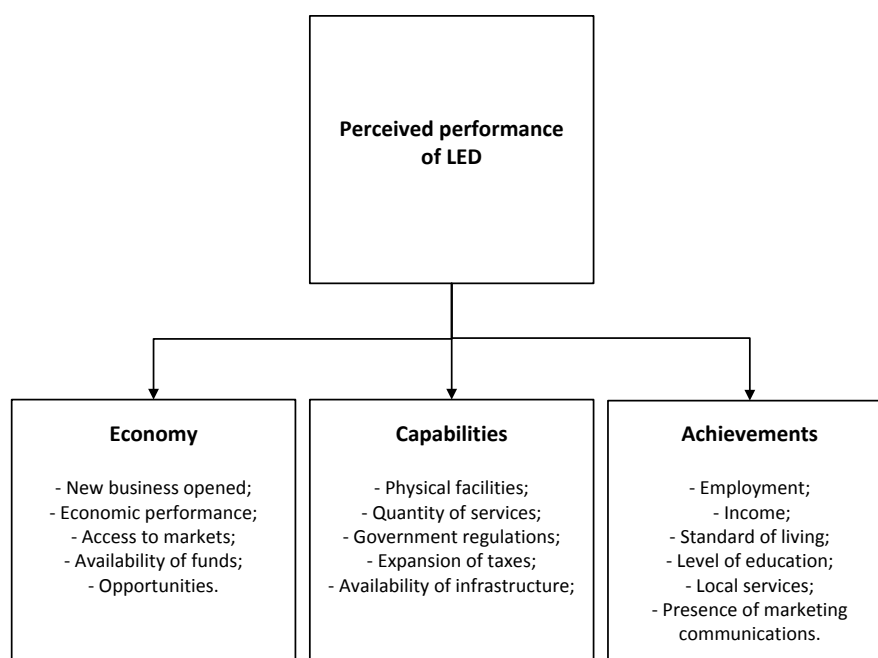


Figure 10: Measurement of perceived performance of LED (Source: Ammon, D. Morgan, J. 2011; Economic Developers Association of Canada (EDAC), 2011; The World bank 2013; Economic Development Research Group, Inc, 2014)

To find evidence for the two propositions and answer the main research question, a case study will be used to illustrate the interactions in LCSi and the university involvement in LED. The research aims to develop the THM and promote theory development for LDC cases. Hereby, LED actions and policies are reviewed, cooperative relationships are assigned and a university's functions in LED will be explicated. The perceived performance of LED will be exemplified by a measurement of perceptual performance at the case study university, divided into attributes and elements as shown in the figure above. The next chapter will continue with the research design and methodology.

3. Methodology

This chapter presents the data gathering methods used for researching the main research question and propositions. First the research design is explicated. Subsequently, paragraph two focuses on the data collection method, including case study selection and participant selection. This chapter concludes with a description of the data analysis.

3.1 Research design

This research aims to answer the main research question: “how can the interaction between a university and the local society contribute to local economic development (LED) in a less-developed country (LDC)?”. A comprehensive research design is necessary, since the application of the THM in a LDC is complicated and the number of historical researches applied in LDCs on this theme is limited. To get a better understanding of the influence of a university on the relation between the quality of the LCS and perceived performance, we have conducted a qualitative research. When addressing an open research question, a qualitative research methodology is favourable (Gelo, 2008; Caldwell, 2011; Daymon and Holloway, 2011). In a study to perspectives, opinions, relationships, behaviours and perceived effects it seems logical to question local population about these matters. Based on the considerations made and presented in figure 11, a structured interview method would be the most favourable qualitative research method for the research.

To collect data from everyone in a LDC community seems to be time-consuming or even impossible. Therefore, the research focuses on a specific case and on a selection of participants. A case study is an example of a qualitative research method and makes it achievable to study a specific case in depth, to gain new insights and use these to build and test theory (Thomas, 2004). Yin (1984) defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used. The specific participants will be selected via a snowball sampling method (figure 12). A snowball sample is a non-probability sampling technique that is suitable to use in research when the members of a population are difficult to locate. Since the researcher is unfamiliar with the complex LDC environment, it causes dependence on local participants and their network relations. This method realises opportunities to identify potential participants in an uncertain environment.

Methods

The most universal qualitative research methods include: participant observation, in-depth interviews, and focus groups. Every method is predominantly useful for obtaining a specific type of data.

- **Participant observation** is appropriate for collecting data on occurring behaviors in their normal contexts.
- **Interviews** are optimal for collecting data on individuals' personal histories, perspectives, and experiences, particularly when sensitive matters are being researched.
- **Focus groups** are valuable in obtaining data on the cultural norms of a group and in generating overviews of issues of concern to the cultural groups or subgroups represented.

Considerations

According to Saurab (2010) it is complicated to measure what causes or determines the behaviours of research matters, like LED, in observational studies. It is particularly difficult, and sometimes impossible to establish cause-and-effect relationships in understanding specific behaviours. "The observational report in most cases turns out to be descriptions of events rather than explanations for the event that can be used for prediction and control" (Saurab, 2010 p2). Since this research focuses on the function of a university, we determine the participant observation method as not the most applicable of the research.

In the decision to use interviews or focus group techniques, one should focus on the nature of the required data. Since we focus on a general function of a university in LDCs, specific perspectives, as researched by interviews, are more useful than cultural norms or values, as researched by focus groups. Hence, within different LDCs multiple cultures and subcultures might exist. Therefore, interviews are favorable in the study.

Structured interview focus

"A main objective when selecting and contacting interviewees is to avoid bias" (GAO, 1991 p.42). In order to increase validity of the data we use a standardized research method, through a structured interview focus. The main argument to do so, is the creation of the ability to apply this method to a large, representative sample of people in a short period of time. Although the same questions have to be asked to the diverse group of participants, in terms of education and topic specific knowledge, this method includes the opportunity to compare the standardized data with other LDC data in future researches. To reduce the risk of research bias a couple of procedures are recommended, including:

- "When you interview an individual for the interviewee you should, make the interview arrangements, including time and site, as convenient as possible for the interviewee. On balance, it is more important to conduct the interview in a setting in which the interviewee feels comfortable than to insist on a setting that offers no distractions" (GAO, 1991 p.19).
- "To obtain cooperation from interviewees and improve the quality of the data and the response rate, you may need to grant some kind of assurance to the interviewees that the data collected will not be used in a manner that could harm them" (GAO, 1991 p.19).
- Giving the Interviewee a reason to participate is fundamental to stimulate involvement.
- Face-to-face interviews are normally more successful with participants whose reading levels are low in comparison with the complexity of the questions. Especially in LDC there might be an issue with an illiterate population.
- It is fundamental to confirm that the questions being asked and the manner in which they are asked are adequate to answer the research question.
- It is fundamental to confirm the intended interviewee group will have the knowledge to answer the questions.

Research assumptions and techniques

- A structured interview is the most suitable qualitative research method;
- The structured interview should contain a confidential statement and a reward for participating. Thereby it should take place in a comfortable setting for the interviewee and will be a face-to-face data collection.
- The list of questions will be checked and translated by an external party, a professor specialised in English and Nepali language and afterwards by the supervising professor.
- The research takes place, conform ethical guidelines, as determined in Newcastle PGT ethical procedure.

Figure 11: Qualitative research methods considerations. (Source: GAO, 1991; Mack et al., 2005; Thomas, 2004; Hennink, M. Hutter, I. Bailey, A., 2011)

In qualitative research, only a sample of a population can be selected for any given study. Three of the most common sampling methods used in qualitative research include:

1. **Purposive sampling:**

Groups participants according to pre-selected criteria relevant to a particular research question;

2. **Quota sampling**

Decide while designing the study how many people with which characteristics to include as participants;

3. **Snowball sampling**

Participants or informants with whom contact has already been made use their social networks to refer the researcher to other people who could potentially participate in or contribute to the study. Snowball sampling is often used to find and recruit “hidden populations,” that is, groups not easily accessible to researchers through other sampling strategies.

Figure 12: Sampling methods in qualitative research. (Source: Mack et al., 2005; Thomas, 2004; Hennink, M. Hutter, I. Bailey, A., 2011)

3.2 Data collection

To research the suggested expansion of the THM and focus on the functions of the university and the interaction with LCSi, we have conducted a case study analysis designed by a field study. The collection of data in case studies can be done in several ways including document analysis, observations or interviews (Thomas, 2004), in this case we have used a structured interview method.

To ensure substantial primary data collection within the timeframe, certain issues needed to be tackled. To overcome uncertainty about availability of appropriate participants, general availability issues, ethical issues, language issues, accessibility and infrastructure issues, religious issues and cultural differences in a divergent local environment, we have chosen for a structured interview. Hereby, the researcher was able to contact people quickly, easily and efficiently. In comparison with other data collection methods, the structured interview enabled the constrain of research limitations. A structured interview involves the researcher asking another person a list of predetermined questions about LED issues, whereby explanation of a question is allowed. This helps to overcome confusions, language and cultural issues. This method can be used to investigate a participant his vision before using a second method to gather a greater depth of information, such as observation or in-depth interviewing. It provides a reliable source of standardized and quantitative data. Based on apprehension and the comprehension of cultural bias, we have selected the structured interview as best data collection method to overcome: research bias, incomplete

questionnaire and low response rates. In this paragraph we discuss the case study, the interview and its structure.

3.2.1 Case study

A single case study has been chosen to facilitate complex theory construction and enable an in-depth research and deep understanding of the THM in a LDC. Therefore, a single case study research is recommendable. However, multiple case studies seem less likely to yield the same quality of understanding and theorizing (Thomas, 2004). Hence, this research will do a field study in Nepal, focused on the case of the KU.

According to The Netherlands Consulate based in Lalitpur, Nepal, this will be the first field study research conducted by a Dutch Master of Science student. The case of the KU in Nepal has been chosen for several reasons, which are structured and presented in figure 13.

- Earlier we have concluded that there are differences in the structure of the THM relations between university, governments and business in developed and developing countries. Many empirical studies based on cross-country data have found a high correlation between institutional quality and the level of economic development, but there is little research concerning the THM in LDCs, as analysed in Appendix VII. Therefore, we point out the importance of further research and the implications of the THM in LDCs. It would be recommendable to research the THM regions outside South Africa (African continent), Brasilia (Latin America) and the developed regions. No publications were found whereby the THM has been researched in Asia, hence we selected an Asian country to study.
- We have selected Nepal as a LDC in Asia, since it is one of the poorest countries in the world and formerly ranked 157th out of 187 countries on the Human Development Index. Hereby, in Asia only Afghanistan has a lower position on the GDP per capita rank list. In terms of economic development there are some major problems. Poor reliability and access to power are the most serious infrastructure bottlenecks to growth. Increasing access to electricity in a timely and cost-effective manner is one of the most significant development challenges facing Nepal today. Also, poor physical connectivity has been another major challenge to Nepal's development efforts. Its road density is one of the lowest in South Asia. Paragraph 4.1 will enlarge the analysis of Nepal as a LDC.
- In Nepal one can distinguish four main universities: namely: Kathmandu University, Pokhara University, Mahendra Sanskrit University and Tribhuvan University Kathmandu. Hereby, the KU is recognized as the most leading and dominant university in the country, and therefore selected as the best case study. Academic performance and institutional prestige are best assessed at the KU, evaluated on visibility, presence, openness and excellence by Webometrics Ranking. Based on their criteria, the KU represents the best operating university of the country (place 6,549 on the world rank list).

Figure 13: Selection and considerations of the KU as a case study

3.2.2 Interviews

The interviews were conducted in the Kathmandu valley, Nepal, in the period between 01 April 2014 and 01 June 2014.

A total number of 47 structured interviews are conducted, divided into two groups. Hence, we distinguish a Group “I” consisting of 25 participants and a Group “E” consisting of 22 participants. Hereby, Group I comprehends participants considered as internal university members, including: students, professors, school management, university management or non-academic KU staff. On the other hand, Group E comprehends participants considered as external parties, including business, government or LCSl actors. Basically, both groups were asked the same questions. The subdivision into two groups has been made in favour of the question formulation in the structured interview and to prevent time-consuming questions which are not relevant for the particular participant.

In the data analysis we maintain the subdivision of both groups, to preserve a balance between the number of participants. Due to the limited time and research limitations, it turned out to be difficult to interview an equal number of participants in the business, government and LCSl sectors, in comparison to the number of university participants. Since this research focuses on the function of a university, the distinction of the remaining THM actors, and their distinctive functions to LED is less relevant and out of the scope of this research. As presented in figure 14, we maintain a balanced subdivision of participants within the different groups, to keep every group equally important. The number of participants seems to be sufficient, since the later interviews seem to be a repetition of collected data earlier in the process.

Confidentiality and anonymity are a fundamental base in this research. Therefore, we do not have access to specific characteristics or names of participants. To give an impression of the composition of both groups, figure 14 presents their activities¹ and subdivision.

¹ Different activities can be performed simultaneously by one participant

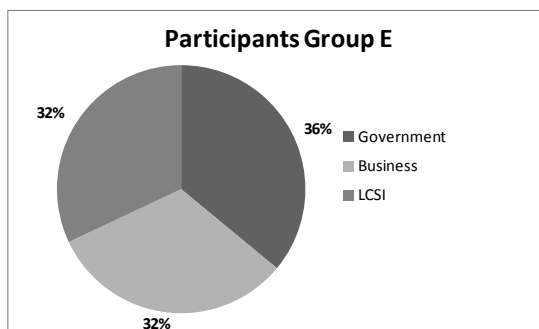
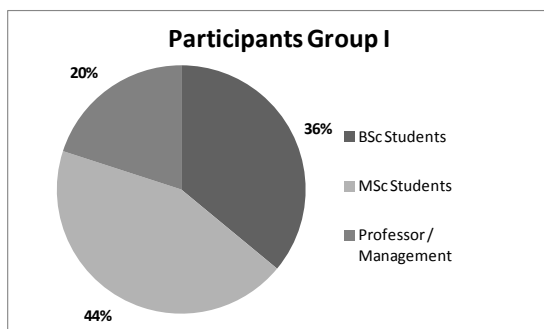
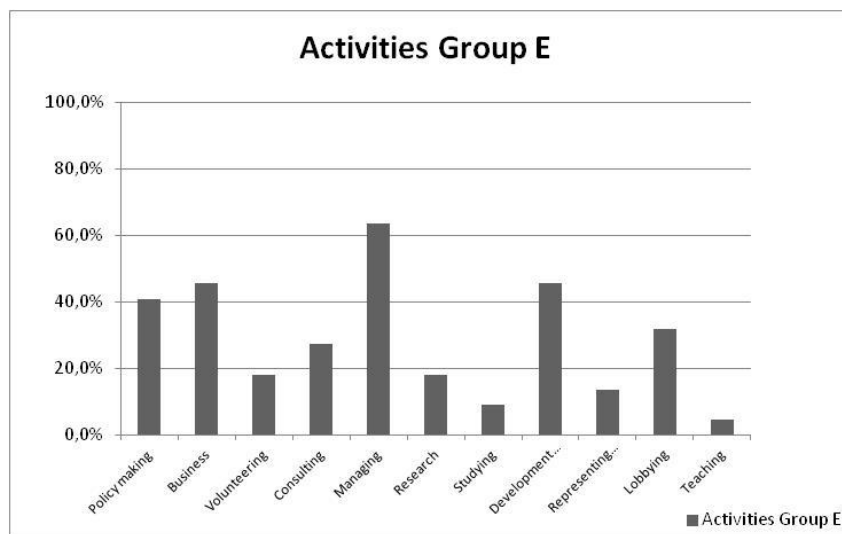
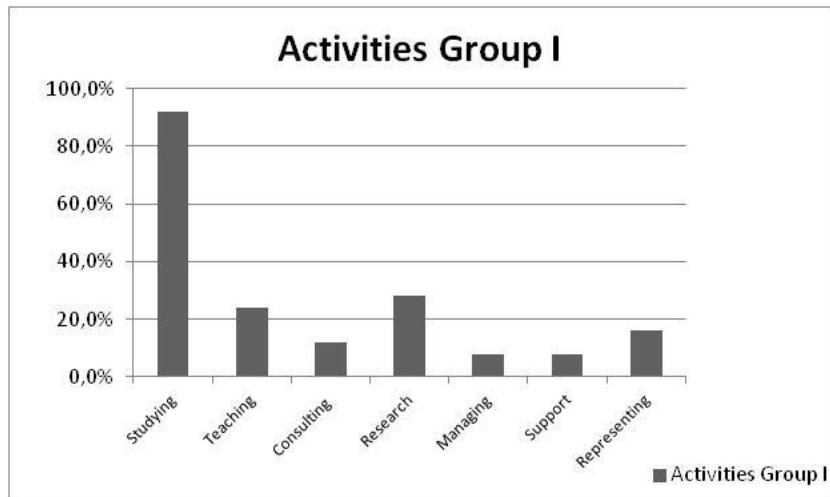


Figure 14: Composition participants Group I & Group E.

The selection criteria for Group I and Group E are identical. Before an individual can be seen as a research participant it needs to comply with the following requirements: First, he/she has the characteristics as formulated in figure 15. Second, he/she is aware of the topic of the research and took notice of the research information sheet and lastly he/she is willing to participate.

<p>Characteristics Group I:</p> <ul style="list-style-type: none"> ▪ Direct relationship with the KU, through employment or study. ▪ Active as student, professor, school management, university management or non-academic KU staff. ▪ Operating at the School of Arts, School of Management or School of Education. <p>Characteristics Group E:</p> <ul style="list-style-type: none"> ▪ Direct relationship to the suggested THM actors, through government, business or LCSl. ▪ No direct relationship with the KU, through employment or study. ▪ Active in a business organisation, government organisation, LCSl or part of LCSl in general. ▪ An understanding or idea of the concept of a university and LED. ▪ Operating within the Kathmandu valley. <p>Participating organisations Group E:</p> <ul style="list-style-type: none"> ▪ Mercy Corps; ▪ Unesco educational sector; ▪ UNICEF South Asia; ▪ Largest producer and exporter of Nepalese handicraft based in Kathmandu; ▪ Everest foam industry company; ▪ Local textile producer; ▪ Small-medium sized retailer; ▪ Government departments; ▪ Purna Wood carving industry; ▪ National campaign for education-Nepal; ▪ One to Watch impact investor. ▪ Steel company; ▪ Utensils company; ▪ Textile producer; ▪ Stichting Nepal Sambandha; ▪ Everest youth club; ▪ LCSl representatives or individuals.

Figure 15: Group characteristics

As an addition to the 47 structured interviews held with internal university and external university institutions or individuals, we have conducted unstructured interviews and informal conversations in the field. These dialogues did not follow the outlined research design and happened sometimes accidentally during the field trips, but provided sometimes useful information. A total number of four conversations comprehends such valuable information that we have included them in an additional appendix, which we refer to Appendix XIII. Although there is no scientific consensus about the correctness of the combination of two methods, like structured and unstructured interviewing², we believe in the utility of the used methods, since Nepal is a rather informal society, with an significant informal economy as well.

² When referring to an unstructured interview, the interview code ends with "UI"

To get a deeper understanding and more knowledge about the determination of different university functions, we have interviewed other universities as well, as presented in Appendix XV. Additional to the 47 structured interviews and the four unstructured interviews, very specific questions are asked to senior professors, senior officers and university management about their vision of a specific university function. Consulted institutions include: Newcastle University, University of Manchester, University of Birmingham and University of Groningen. Although it is not the aim to conduct a comparative study we found it useful to test specific assumptions before they were included in the analysis.

In favour of the data collection phase, the KU provided a local research assistant. We would like to determine “local assistant” as someone who is familiar with the local language, culture and environment, but has not a direct relationship with the research. He mainly acted as a driver/guide but also help with informing participants, making participants comfortable, reducing non-response, explaining questions and translation activities.

Arising from the research design the risk of non-response is minimal. Hence, we use snowball sampling method, address a hot topic in Nepali society, make use of a local assistant in the data-collection process, are connected to the most leading and dominant university in the country and we make use of other response enhancing measures, including: rewarding complete interviews by raffling prizes. Also the need to exclude collected data, because it is incomplete or not representative, is not present.

3.2.3 Interview structure

This research investigates three domains via structured interviews. First, we focused on the existence and interaction of a university with the local society relation. Secondly, cooperative relations outside the university have been studied, whereby relationships between the THM actors needed to be explained. Thirdly, the session continued with the involvement in LED. Making use of statements, ranking exercises and explanatory questions. Hereby, we have also focused on the effects or outcomes of policies and actions. Hence, we have used the conceptualisation of perceived performance to measure LED, the influence of the local society and the involvement of the university.

Conducting a structured interview, we aimed to collect the visions and perceptions of the THM actors, including: government, business, university and local civic society. The structured interview has been made transparent and is represented in appendix IX. Here, we have included three versions: version I (used for participants within the university), version E (used for participants

outside the university) and version N (used for participants outside the university, who are facing difficulties with the English language). Version N is an identical copy of version E, translated into Nepali language.

3.3 Data analysis

A central issue in the use of qualitative data is that methods of analysis are not well formulated (Miles, 1979). To analyse the collected data, theoretical material of Grosshans (1991) and Folkestad (2008) suggest a three phase method. As presented in figure 16, we distinguish a descriptive data level, individual question analysis and the analysis of complex relationships between data. In our data-analysis we maintain these steps. Also making use of the interview structure, the data analysis results will be presented in the next chapter.

Data-analysis phases

Level 0: Before the actual data analysis took place, structured interview forms and notes were digitalized and codenamed. Raw data, which can be a section or the entire answer to one question, is as accurate as possible presented. The presented data is supplemented with a disclaimer, including the following information: “This appendix presents the main conclusions, perspectives and personal visions on the questions for every participant. We did not aim to outline a perfect representation of the discussions held, but summarized the important points for the research only. The limitations as described in the report are applicable. Every effort has been made to ensure that this information is accurate and of a high standard. Confidentially, anonymity, respect to the Kathmandu University and respect to people, culture and their religion are the fundamental assumptions in this research. Readers are requested to respect these assumptions at all time and report risks of compromise in this promise”.

Level 1: In the first phase the research focused on the analysis of descriptive data. This includes questions like: how often did you have contact with business organisations. The results are descriptive and give an idea how often events happen, show response rates and focus on percentages.

Level 2: In the next phase the analysis begins where the description of the data stopped. The other data is analysed, one question at a time. Having completed the single-question analysis, the process continues with testing the associations between pairs of questions. In this phase questions like “can you describe how you, or how the Kathmandu University in general, is involved in the stimulation or research about local economic development?” and “what else can the Kathmandu University do to stimulate local economic development?” are researched and analysed.

Level 3: The last phase is the most complex level of analysis. Multiple relating questions and collected data should be combined to address more complex research questions and assumptions. The different variables pointed out and the different perspectives were combined in this phase. Making use of the theoretical background, as presented in chapter 2, helped to make the connections and supported idea development.

Figure 16: Data-analysis phases (Source: Grosshans, 1991, Folkestad, 2008)

4. Analysis & findings

The conducted case study of the KU will give an impression of the applicability of the THM in a LDC, the function of a university in a LDC and the university's interaction with LCSI in order to stimulate LED. Paragraph 1 amplified the object of analysis, after which we continue with the activities and policies regarding LED. Paragraph 3 and 4 will focus on cooperative relations and the institutions involvement in LED. We conclude this chapter by multiple implications.

4.1 Object of analysis: The Kathmandu University operating in a LDC

In this research we focus on the case study of the KU Nepal. First we analysis Nepal as a LDC, thereafter we continue with a focus on the case university.

4.1.1 Nepal as LDC

Nepal is a LDC in Asia, located between India and Tibet (China). The 30 million inhabitants are predominantly Hindu or Buddhist. Nepal is among the poorest countries in the world and formerly ranked 157th out of 187 countries on the Human Development Index. About 25 per cent of the Nepalese population is living below the poverty line and one of the main economic driver is still agriculture. Other economic indicators confirm the existence of a less-developed economy in Nepal. First, according to the CIA World fact book (2014), the GDP per capita has been estimated on 1,500 USD (2013). This is sufficient for rank 205 on the world list. Hereby, in Asia only Afghanistan has a lower position on the GDP per capita rank list. Secondly, the unemployment rate is extremely high. 46% in Nepal, in contrast to 2,7% and 2,8% in the United Kingdom and The Netherlands. Lastly, an inflation rate of 9,6% places the Nepal in the top 20 of highest inflations of the world. In Asia only India, Uzbekistan, Bhutan and Iran have higher rates. Appendix X comprehends an overview of economic, social and transnational issues and figures, including: population pyramid and Purchasing Power Parity figures. The Nepalese GDP of 42.1 billion USD seems to be very minor in comparison to for example the marketing budget of Samsung, which already comprise 14 billion USD in 2013. Lastly, Figure 17 demonstrates the dispersion of population, by economic status. Those dots represent people, whereby the brighter the dot, the more people live in a certain area. We can conclude that Nepal is an LDC, similar to many African countries.

In terms of economic development there are some major problems. "Poor reliability and access to power are the most serious infrastructure bottlenecks to growth. Increasing access to electricity in a timely and cost-effective manner is one of the most significant development challenges facing Nepal today. Also, poor physical connectivity has been another major challenge to Nepal's development efforts. Its road density is one of the lowest in South Asia" (World Bank, 2014).

In Nepal one can distinguish four main universities: namely: Kathmandu University, Pokhara University, Mahendra Sanskrit University and Tribhuvan University Kathmandu. Hereby, the last one is the oldest university, established in 1959. Furthermore, the KU is recognized as the most leading and dominant university in the country. Academic performance and institutional prestige are best assessed at the KU, evaluated on visibility, presence, openness and excellence by Webometrics Ranking³. The KU publishes relatively more high impact academic papers in international journals, which plays a very important role in the ranking of Universities. According to Webometrics Ranking, one cannot simply use the total number of papers, but one should be restricted to the indicator of only those excellent publications. Figure 18 presents an overview of the world ranking of these universities, based on these assumptions. In this research we use the KU as a case study, whereby the next subparagraph will zoom in on the case university.

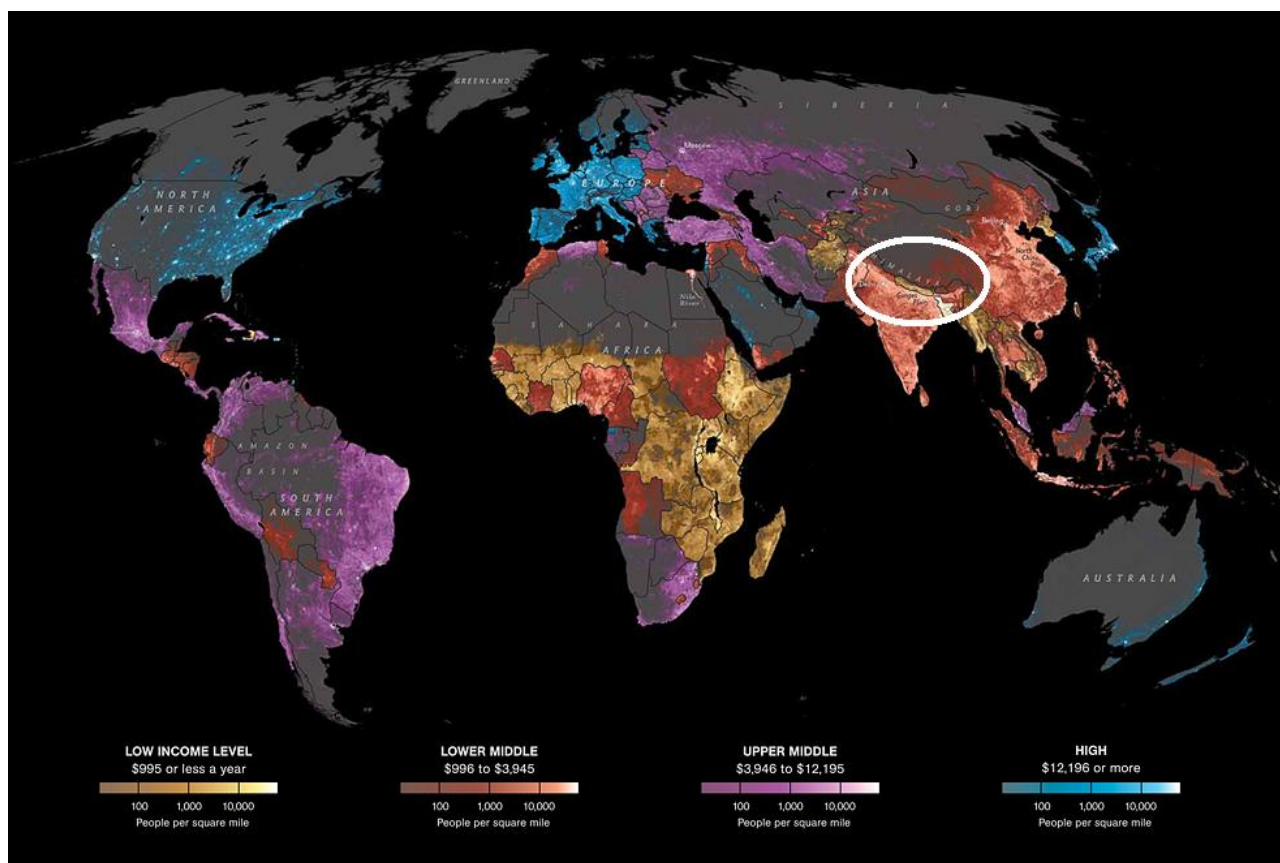


Figure 17: Dispersion of population, by economic status (National Geographic Magazine, 2014)

³ A scientometric research which focuses especially on leading but also less developed universities, performed by the Cybermetrics Lab (Spanish National Research Council)

Webometrics Ranking of World Universities		
Country	University	World Rank
USA	Harvard University	1
USA	Stanford University	3
The Netherlands	University of Groningen	146
United Kingdom	Newcastle University	260
United Kingdom	Northumbria University	1,234
The Netherlands	Hanze University Groningen	3,483
Nepal	Kathmandu University	6,549
Nepal	Tribhuvan University Kathmandu	9,003
Nepal	Pokhara University	12,136
Nepal	Mahendra Sanskrit University	21,036

Figure 18: Webometrics Ranking of World Universities 2013

4.1.2 The KU as object of analysis

As we have concluded in the previous subparagraph, the KU is one of the leading universities in one of the poorest and least developed countries in the world. The KU is an autonomous institution, which offers education on an undergraduate, graduate and postgraduate level. The university is divided into different schools, including: School of Science, School of Management, School of Engineering, School of Medical Sciences, School of Education and School of Arts.

The KU is located in the mountainous landscape in Dhulikhel, nearby the city of Kathmandu. It is the second oldest and second largest university in Nepal, established in November 1991. In addition to 3,695 students studying in its campuses, another 7,500 students are in its affiliated colleges. The university is committed to develop leaders in professional areas through quality education and research. The KU is being developed with the aim to promote all-round development of the student's abilities and personality. Secondly an important goal in LED, namely: the development of an awareness of the role of science and its application in the understanding of problems of the contemporary society. Third, the university aims to extend and disseminate knowledge and to foster its application. Lastly, the institution focuses on the establishment of a community of scholars, students, and staff in which understanding and wisdom can grow and flourish (publication: Kathmandu university [online] www.ku.edu.np/university/). The formulated goals result in multiple effects, relevant for LED research. Within a period of 23 years, the KU has not only established a track record of academic excellence, but also built reasonable infrastructure in the local environment. Furthermore, it offers a master degree in development studies, which is a multidisciplinary program offered to meet the growing complexity of development activities.

4.2 KU activities and policies regarding LED

This paragraph will focus on the current activities and policies of the case study university regarding LED. Supplemented by an analysis of the effects on society and suggestions for future improvements.

4.2.1 Current activities KU

The KU is well-known for the quality of education and its active behaviour regarding LED. The university management produced a 10 year strategic plan, including an important section about corporate social responsibility goals and the stimulation of LED. As part of this mission the KU is involved in multiple actions, as presented in figure 19. The current activities and policies can be assessed in two different perspectives. First, based on the case study analysis one can distinguish a not significant influence on the LCSi, since the volume of its impact is rather small. As one of the professors states: “sometimes only two students go back to their much larger society, whereby the impact is not significant” (I2UK3054P). The majority of the participants and the university management describe another vision. This second perspective focuses on the high status which the KU has in society, the outstanding educational quality, its economic strengths, the availability of tangible and intangible resources and their obligation to stimulate LCSi. As one of its students states: “The KU is giving us adequate knowledge about local economic development programme, by giving lectures, discussions, information and knowledge transfer on the related topics. Also, community work is an essential part of the study program” (I2UK4009B). In the next two subparagraphs we will focus on the effects of these activities and future actions of the KU.

As part of their LED mission the KU is involved in:

- Field trips and internships for students;
- Research programs and education;
- Knowledge transfer programs and creation of databases for knowledge sharing routines.
- Internal policies, regarding e.g. employees.
- Blood donation projects;
- Providing water taps in rural areas;
- Providing streetlights around the university complex;
- Funding opportunities and scholarships for talented people;
- Providing electricity facilities to the direct area;
- Involvement in solar energy projects;
- Cook programs for a better quality of primary needs;
- Raising awareness of importance via its LCSi contacts and network;
- Experience learning program to support individuals;
- Doctor learning programs;
- The creation of an alumni network. The old students have sometimes important functions within the business, government or civic society organisations. The network can help to influence other institutions and get things done.

(Source: Appendix XI & Appendix XII Interview statement)

Figure 19: current activities KU regarding LED.

4.2.2 Effects

To measure the perceived influence of the involvement of the KU as a moderator variable in this research, we have elaborated on the measurement of LED. In order to scale the level of LED and measure the perceived effects of the described activities and policies, we use perceived performance as measurement tool. Hereby, in the data collection phase we have focused on: economy, capabilities and achievements. Figure 20 gives a schematic overview of the perception of participants and its research findings.

The results show the score per group, per element and per attribute. Logically, it appears that Group I appraises the effects of all elements better than Group E. Nevertheless, we can distinguish similarities in findings. The effect of KU activities and policies have an effect on society, whereby the general achievements for society are positive, including: more jobs and a better income. Also, the level of education in society and the opportunities in society rise. Both groups point out the weakness of underlying capabilities. The LCSi needs more fundamental improvements in: infrastructure, access to local markets and facilities. This vision has been confirmed in interviews by the participants (E1SE3013, I2UK4001M, I2UK4019M, E1SE1012). Hereby, they also point out the importance of the business sector and funding opportunities.

4.2.3 Future activities KU

From the current activities and the measurement of effects we can conclude that the case of the KU has an important effect on the stimulation of LCSi and on LED. The participants generally experience a higher level of achievements and have got more opportunities in life. Based on the provided information one can differentiate more opportunities for the KU, as explicated in figure 21.

The next sub-paragraph will focus on the KU activities and policies in cooperation with other institutions, since the case study analysis point out the importance of governmental organisations, business sector and LCSi.

	ECONOMY			CAPABILITIES					ACHIEVEMENTS					The activities do not have any effect	Other
	New business	More funding opportunities	More opportunities in society	More access to local markets	Better facilities available	More services available	Expansion of raising taxes	Better infrastructure	More jobs	A better income	A higher standard of living in general	Better level of education	More marketing communication or commercials		
Group I															
Score per attribute	11	10	21	5	15	12	2	7	19	17	15	21	5	0	
% per attribute	44,0%	40,0%	84,0%	20,0%	60,0%	48,0%	8,0%	28,0%	76,0%	68,0%	60,0%	84,0%	20,0%	0,0%	
Score per element	47,0%			36,0%					61,6%						
Group E															
Score per attribute	6	3	14	8	5	6	2	5	11	11	7	17	7	0	
% per attribute	24,0%	12,0%	56,0%	32,0%	20,0%	24,0%	8,0%	20,0%	44,0%	44,0%	28,0%	68,0%	28,0%	0,0%	
Score per element	31,0%			18,0%					42,4%						

Figure 20: Perceptual measurement of perceived performance at the KU⁴.

⁴ The figure represents the perception of participants, expressed in scores and percentages, founded in a qualitative research.

1. To get a visible impact the Kathmandu University needs volume. It should work on a larger scale to make any impact to the society or the economy.
2. Support other institutions in their tasks and obligations, including government, LCSi and business.
3. Cooperation with other institutions, including government, LCSi and business.
4. In the cooperation with business, focus on entrepreneurial programs. The focus on Small and Medium-sized enterprises in society can be considered as underdeveloped. Students do have important skills and knowledge, but are less pragmatic and have lower skills in implementation and creative processes. The valuable traditional family based entrepreneurs might need more university attention to get stimulated.
5. Research & Development. The university should invest in innovation and development. It needs creative ideas to bring their action to a higher level.
6. Student fees at the KU are high. The university can search for alternative funding opportunities, in order to reduce study costs. This will give more students the opportunity to go to the university.
7. The KU is active in the knowledge or educational sector. Protection of intellectual property through patterns and licenses are fundamental. The university should help to reduce appropriability hazards.
8. Provide more scholarships and grants to students.
9. Educate students to be critical citizens with their own opinion. Other sectors are especially looking for: skilled manpower, more entrepreneurs, qualitative lawyers, efficient government administrators and so on.
10. Give attention to implementation of current visions and missions.
11. Focus on the future needs of society in order to support them and find legitimacy.
12. Invest in fundamental improvements in: infrastructure, access to local markets, business sector, funding opportunities and facilities. Whereby the university should research the specific needs of the LCSi.

(Source: Appendix XI & Appendix XII Interview statement)

Figure 21: Suggested future activities KU regarding LED.

4.3 Cooperative relations

The suggested future activities, but also the current KU activities confirm the theoretical suggestion that a university is non-isolated (Lee, 1996; Markusen, 2006; Altbach, 2007; Hague, 2011; Florida, 2012; Goddard, 2013). For the purpose of LED modelling, we have researched the cooperative relations of the case study university.

The analysis shows⁵ a couple of interesting focus points, see also figure 22. First, notable are the perceptual cooperative relationships of Group I. There exist a relative high amount of cooperative relations which take place with LCSi. Second, one can observe a very limited number of participants expressing not a single interaction. These individuals who did, are mainly first years bachelor students without any field or internship experience. Third, it is notable that the business interactions are less represented in Group I. Furthermore, Group E is a mix of government, business and LCSi. One can observe an equal percentage of perceptual cooperative relationships with the university as with other institutions. Although many organisations have relative more interactions with government organisations.

⁵ Based on the perception of participants, founded in a qualitative research.

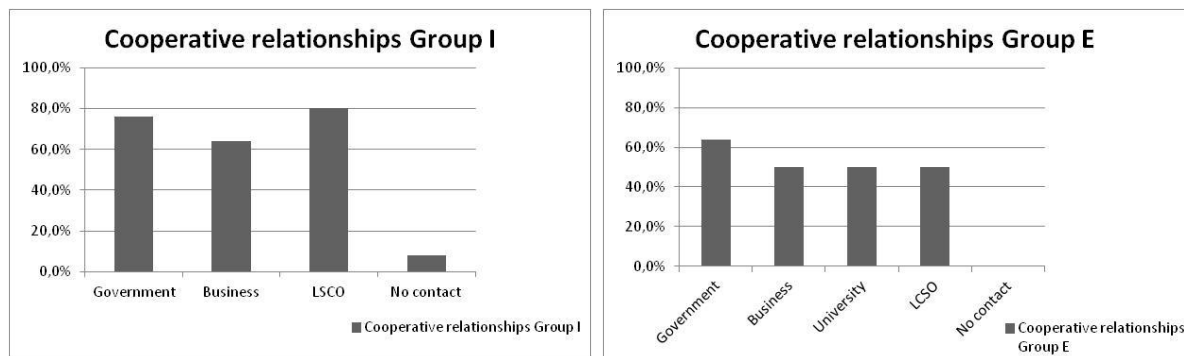


Figure 22: Perceptual cooperative relationships Group I & Group E⁶.

We can distinguish three relationship in our case, including the university along with government, business and LCSi.

University along with government.

Here one can see multiple official, political, policy creating and legal connections. One of the participants states: “I had contact with the government, because you simply cannot ignore them. They are an official institution which requires contact. You have to inform them and include them in the activities around the local communities. You do not want to ignore the government, hereafter they might give the organisation a hard time” (E1SS1508). Furthermore, the university conducts research with the government, gives trainings, receives limited financial support (e.g. PhD scholarship) and might receive feedback on the relevance of topics.

The relationship for students is mainly limited to collect information for school papers, issuing citizenship certificate, passport and driving license application. In the KU case the government is a significant part of their LED cooperative relationships.

University along with business.

There is not a strong relationship between the university and business. One of the professors states: “opportunities which rise within both separate organisations are hard and difficult to combine. There are definitely opportunities for innovations together, but collaboration and synergy are hard to realise. Some students do internship at business organisations, also fundraising for research might occur. Both situations are rare and happens on a minimal frequency” (I2UK3050P). Nevertheless, one can in the case of the KU distinguish relationships, like: revenue generating, training support, guest lectures, a buyer & seller relationship, consulting activities and some partnerships. With many participants there is no relation found between university and business (I2UK4004B, E1BS2001, E1BB1017, I2UK3051A, I2UK4013M, I2UK4004B, I2UK4003B). Businesses do offer internship

⁶ The figure represents the perception of participants, founded in a qualitative research.

opportunities and need qualitative human resources, but declare to have a very limited amount of contact. An interviewed 'impact investment entrepreneur' stated: "my business focuses on entrepreneur development, and that is where I need the university for. It is a search for good business man, who are reliable and responsible. Currently it is difficult to get ideas and plans investment ready, so we need people who can realise and implement these initiatives" (E1BO1010).

University along with LCSi.

As we have seen in paragraph 4.2 one can distinguish many interactions and relationships between the university and LCSi. It is considered as a very important relationship. Therefore, the stimulation of the society is one of the strategic goals of the KU. The university needs to meet the expectations of the LCSi in order to be successful and legitimate. The university express themselves through: conducting local research, field trips and student internships in the local society, training programs and development programs. Primary data collection shows that especially (master) students are very active in LCSi, including the following specific examples: member human rights society, rotary club member and youth initiative group-member, supporter of woman groups and "Maiti Nepal". The can be seen as an important part of the LCSi. A LCSi states: we focus on the quality and stimulation of the LCSi. We have quite often contact with the university, whereby they send students for internships or doing field research" (E1CV6020). Another LCSi states: "The students needs to know and understand the structures and institutions in Nepal , before they can successfully work with the local communities. The most successful communities have informal orientated leaders and are mostly established by themselves. Also, I think that students need to be critical and should be teach how to think holistic" (E1SS1508). Nevertheless, the research shows also the case whereby a former professor and ex management member of the university is unemployed because of his health situation. The support he got for his specific LCSi is minimal. Since this is a very specific situation, we can conclude that the relationship is important.

One can conclude from the KU case that the university has many activities and policies in favour of LCSi. Since the connection between LCSi and the university is described as a very important relationship regarding LED, we found support for our proposition.

Proposition 1: The local civic society institution should be part of the Triple Helix model, whereby it represents a quadrilateral network between the state, industry, university and local civic society.

The KU case supports our proposition, since the local culture and composition of Nepali institutions require a focus on LCSi. We substantiate this claim by the results of the perceptual contact frequency

analysis. Figure 23 shows the occurrence of contacts with other institutions, researched within Group I and Group E. The size of the bubbles represent the number of participants who have chosen for a specific answer. Hence, we perceive a large amount of participants within the university, who have sometimes, frequently or often contact with LCSI. Since Group E is a diverse group of institutions, the results are diverse as well. Nevertheless, we observe that most consulted representative have regularly contact with LCSI. It supports the proposition. Notable in our analysis is the remarkable low contact frequencies between university and business.

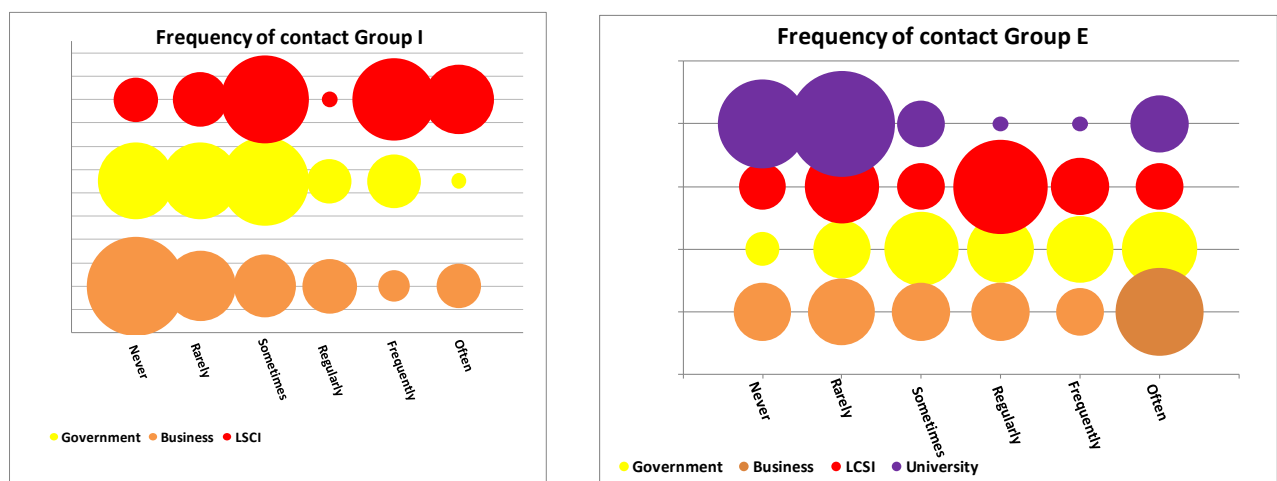


Figure 23: Frequency of contact with other institutions, as a perception of participants, in the KU case⁷.

More support for proposition 1 can be found in the analysis of the additional conversations and unstructured interviews on top of the structured interviews. An NGO organisation states: “we believe that secure, productive and just societies emerge when the private, public, and civil society sectors are able to interact with accountability, inclusive participation and mechanisms for peaceful change” (E1SM1001UI). This institution works on a system approach as explicated in appendix XIII. Hence, private sector/business, the public sector/government and LCSI are critical institutions, which need to be involved, in order to pursue the organisation’s mission. Individuals, institutions and organisations within these three sectors need to be strong, accountable and participatory. Beyond that, they need to be able to interact effectively with one another. The NGO states: “a bottom-up approach is very common in Nepal. Therefore, interaction with LCSI is very often the start of any procedure” (E1SM1001UI). We conclude that there is enough evidence to support proposition 1 in the KU case.

⁷ The figure represents the perception of participants, expressed in a bubble chart, founded in a qualitative research.

4.4 Involvement in LED

In the former paragraphs we have analysed the current actions and policies of the KU and its cooperative relationships. Also these other institutions state to be involved in LED, for example via: creation of employment opportunities, technology development, providing tangible and intangible resources, supervisory tasks, specific development projects, lobbying and the creation of awareness. Since we believe that the university operates in a quadrilateral network with other institutions, the question rises how the university should be involved in LED, and what its function is.

4.4.1 Role of the university

In this research we assume a significant role of innovation and knowledge infrastructure for LED. As we have seen the KU is an active institution in the stimulation of LCSI and LED. We have analysed the different roles a university can represent. In the case study analysis we distinguish the following three roles:

Role A: Educational function

The university should mainly focus on their primary obligation to educate people and produce knowledge. By providing scholarships and lower the student fees, the university can contribute to LED, since more people will get access to the university's facilities. The task of the university should be limited to the focus on educational movements, whereby it needs to educate students to be critical citizens with their own opinion. Other institutions expect the university to deliver: specific knowledge, entrepreneurs, efficient administrators and specialised and pragmatic employees. The case study university is acting conform its obligation by, field trips and internships for students, research programs and education, knowledge transfer programs and creation of databases for knowledge sharing routines, providing funding opportunities and scholarships for talented people, via experience learning programs to support individuals and via doctor learning programs.

Role B: Resources providing function

The university should mainly focus on the providing of fundamental and critical resources. The most of the areas in Nepal are underdeveloped and can be seen as rural areas. The geographical composition makes it difficult to carry out development works. For the overall economic development of Nepal, everything should be managed and developed, including: roads, sewer management, health posts in rural areas and electricity supply. The assistance of a university in providing or safeguarding resources is fundamental in a LDC. Apart from infrastructure and healthcare, the university should facilitate: local business, knowledge sources, educated manpower, technical manpower, HR resources and other fundamental elements.

Role C: Interaction and cooperation function with LCSi, government and business

The university should be aware of its extended function in society. It should focus on the support of other institutions, or should take the leading role in fundamental elements in society. The government alone will never be able to realise a significant better situation. Everyone need intellectual capabilities. The university is important to provide this to more people and help other organisations, like the government, in their duties. The same obligations exists to business and LCSi, if the university want to contribute to LED. The university might be able to use its power to negotiate, mediate and collaborate with all institutions involved. If the university wants to be successful in LED they should be unlimited in the focus on social classes, social income, economic classes and castes. They should develop opportunities for everyone. (Source: Appendix XI & XII Interview statement)

4.4.2 Role of the society

In the KU case study we found important relationships between the university and the LCSi. We distinguish important elements within the LCSi, which stimulate LED through the interaction of the university. Implementation support, legitimacy, stimulation projects, awareness, initiative and informal institutions turned out to be very important. Except from the cooperative relationship and the interaction between the institutions, the role of the LCSi as independent institution is beyond the boundaries of this research. The in chapter 3 amplified research method does not give significant opportunities to support or reject the theoretical functions of the LCSi in the LED stimulation.

4.4.3 The role of a university within a LDC local society

Now we have determined the role of the university in the case, we move towards the research question, and the interaction between the two institutions with regard to LED. One of the KU missions is "to become a world class university devoted to bringing knowledge and technology to the service of mankind". Furthermore, the participants express the believe that education, information and especially are awareness of the local environment by students and local community members will be useful in the local communities. (E1SS1108, I2UK3052P, E1BF1003, I2UK3050P, E1SS1508, I2UK4003B, I2UK4020M). Hence, we have found support for proposition 2, namely:

Proposition 2 The university in a LDC can stimulate local economic development through the interaction with local civic society institution.

The KU case support our proposition, since participants indicate a direct and indirect impact on the LED through the interaction with LCSi. An indirect stimulation can be found in the depended relationship between the two institutions. Mutual support is needed for both institutions to be

successful in their LED operations. Furthermore, students are trained to work in their broader society, country or economy. As participants describe the indirect impact: “this is seen as an important relationship. Students, professors and the university as a whole is part of that society. We have to meet expectations and need to adapt to social rules and norms, in order to stimulate LED” (I2UK3051A). One distinguishes also a direct impact through the interaction with LCSi, namely: “The dialogue between both institutions helps the university to develop its ideas and bring this into practice. The role of the local society is fundamentally important in order to implement the ideas generated within the university. Also measurement and monitoring of development and innovations are impossible without this close interaction” (I2UK3050P). In a LDC as Nepal, the LCSi is depended on the support they got from other institutions. The university makes a constructive contribution to the LED by the interaction with LCSi. This can directly occur via: research projects, field work, facilities and supporting projects. If a university wants to do so, the most important and beneficial element would be communication and interactions. Knowing them better and understanding their lifestyles, understanding their needs, wants and even their desires, the university can fulfil their requirements as much as possible to contribute in developmental activities.

4.5 Implications

In the previous paragraph we found support for both propositions. Meaning, the LCSi should be an element of the THM and the university can stimulate LED through the interaction with LCSi. The assumptions made will have an impact on the traditional THM and the university’s function within the model. This paragraph will focus on the implications.

4.5.1 The university as part of the new model

In the case study analysis we found support for the suggestion that the THM is not applicable in a LDC. Although we have researched only one case and the scientific literature does not provide other references, we believe that the traditional THM is not applicable in LDC. As we have seen in the KU case, there is a strong relationship between the university and the LCSi. This missing element in the THM makes application in a LDC difficult or impossible. Therefore we suggest an expansion of the traditional model towards a Quadrilateral network model (QNM) with four institutional actors.

An important issue for the university in this QNM is the search for a balance between the multiple actors. In the case study we have seen that the KU has a strong focus on LCSi and might overlook the importance of the business sector in a LDC. Although this research’s aim is not to do a comparative study, the KU case gives some important issues for the application of the THM in developed countries. The system approach of participating NGOs points out the importance of an effective and

balanced interaction between all institutional actors. In the KU case, the question rises whether this LDC university focuses too much on the LCSI actor. It would be interesting to research the generalisability of this effect in other LDC cases. Also, the balance or unbalance of interactions with business and government institutions in developed countries would be interesting. Further research is required. The KU case learns us the importance of a balance and integration of all institutional elements to be a successful university in LED. The function of a university will be further explored.

4.5.2 The function of a university

In this research the THM constitutes a basis for the determination of the university's function, which mainly includes an institutional perspective. Based on theoretical research we have determined four roles of the university, in relation to the stimulation of LED. Furthermore, based on a case study analysis we found support for proposition 1 and 2, which consolidate the idea that LCSI should be part of the THM, whereby LED can be stimulated by the university. Figure 24 and figure 25 link the roles of a university as found in the case study analysis to the theoretical functions as determined in chapter 2. Although the function of a university in a new model has implications, we can use theoretical suggestions to determine the role, as presented in figure 26.

KU Case study analysis		Corresponding characteristics		Theoretical functions
Role A: Educational function	→	Focus on the creation and dissemination of knowledge, in a range of disciplines and fields, and featuring the appropriate infrastructures that permit teaching and research at the highest possible level. Hereby the university is at the top of the academic hierarchy.	←	Role 1: the research university
Role B: Resources providing function	→	No corresponding characteristics found with institutional theory, since the theoretical foundations are limited to an institutional perspective. The resource providing function has a more significant linkage to the Resource Based View (RBV) (Appendix I). Nevertheless, the description as explained by role 2 is integrated in the different functions of institutions. Therefore these duties are intertwined in the next role.	←	
Role C: Interaction and cooperation function with LCSi, government and business.	→	Focus on private sector, entrepreneurial behaviours and teaching skills.	←	Role 2: the entrepreneurial university
		Focus on a specific social class, and therefore on the LCSi. Based on the needs and desires of a LCSi group.	←	Role 3: the university as foundation for the creative class
		Focuses on the integration of multiple public domains.	←	Role 4: the civic university

Figure 24: The connection of case study functions of a university linked to theoretical descriptions.

KU Case study analysis		Theoretical roles		THM functions
Role A: Educational function	↔	Role 1: the research university	→	Function A: Research university
Role B: Resources providing function	↔	Significant linkage to the Resource Based View	→	
Role C: Interaction and cooperation function with LCSi, government and business.	↔	Role 2: the entrepreneurial university	→	Function B: Entrepreneurial university
	↔	Role 3: the university as foundation for the creative class	→	Function C: Creative class university
	↔	Role 4: the civic university	→	Function D: Civic university

Function A: Research university

The university contributes to LED by the creation, development and distribution of knowledge.

Case related aspects: internships, research programs, knowledge sharing routines, funding opportunities, infrastructure development, learning programs, creation of alumni network, research & development, funding opportunities and intellectual property right issues.

Function B: Entrepreneurial university

The university contributes to LED by providing opportunities, practices, cultures and environments conducive to actively encouraging and embracing entrepreneurship.

Case related aspects: internships, knowledge sharing routines, funding opportunities, infrastructure development, development projects, external orientation, collaboration with private institutions, commercial importance (E1SP6081UI, E1BB1017, E1GO4015), entrepreneurial programs, conform system approach (E1SM1001UI) and intellectual property right issues.

Function C: Creative class university

The university contributes to LED by providing opportunities and a suitable environment for economic activities of creative, cultural, scientific or knowledge intensive institutions.

Case related aspects: internships, research programs, knowledge sharing routines, funding opportunities, infrastructure development, development projects, external orientation, search for legitimacy in society, creation of a high-end class for LED, collaboration with civic institutions, research & development, intellectual property right issues, conform system approach (E1SM1001UI) and the focus on future needs of society.

Function D: Civic university

The university contributes to LED by knowledge generating and stimulation activities, in relation to economic and social domains.

Case related aspects: internships, research programs, knowledge sharing routines, funding opportunities, collaboration with public institutions, infrastructure development, development projects, external orientation, conform system approach (E1SM1001UI) and intellectual property right issues.

Modelling of functions

The university's tasks regarding LED can be described as the four presented functions. As one can see there is a significant overlap with the case related aspects between the different functions. Hence, the concept of non-isolation can be confirmed. Based on theoretical underpinnings and the case study findings we assume a non-isolated perspective, whereby the function of a university will always be a combination of the distinguished elements (Lee, 1996; Markusen, 2006; Altbach, 2007; Hague, 2011; Florida, 2012; Goddard, 2013, E1UM1001, E1UN3001, I2UK4007B, E1GP3016, E1SM1001UI, E1CV6022).

(Source: Appendix XI & Appendix XII Interview statement)

Figure 25: Development of new THM functions

Function A the research university is described as a specialised and crucial part of any academic system. The academic hierarchy is an important element in the focus on LED, whereby we assume a rather traditional orientation within the institutional framework. We suggest a traditional orientation on its own internal institutional environment, whereby the university is of course an non-isolated institution.

Function B the entrepreneurial university, should focus upon: innovativeness, entrepreneurial behaviours, developing understanding and teaching skills. According to the NCGE, the necessity for entrepreneurial universities arises largely from the complexities and uncertainties generated by globalisation, impacting upon organisations and individuals in work, family, community and consumer life. Caused by the work and consumer life implications, we suggest a university function, mainly orientated on business, whereby the university is of course an non-isolated institution.

Function C the university as foundation for the creative class, has a significant importance in the creation of an urban environments and a type of place where the creative class would want to live. Florida (2005) states that members of the creative class seek to reside in locations that offer abundant high-quality experiences and an openness to diversity of all kinds. Universities offers a central hub for the creative class and encourage their economic activities. According to Florida (2005), successful LED depends on: technology, talent and tolerance. Although we can not underestimate the role of the government and business in the stimulation of the creative class, we suggest a university orientation directly on a specific social class, and therefore on the local civic society institutions. Supported by theoretical research, one can determine drivers of economic prosperity and rising living standards, based on human capital, the quality of LCSI and the presence of the creative class. Despite predictions of U.S. technological decline and the rapid rise of the BRIC countries, advanced nations continue to hold an overwhelming lead in technology and innovation. We suggest a critical relation between the presence of the creative class and economic status, as analysed in appendix IX. Furthermore, the KU case points out the importance of a legitimate dominant improvement group supported by the local society (I2UK3050P, E1SS1508, I2UK3051A, I2UK3054P, E1SM1001UI, I2UK4005B, E1CV6022, E1SU2003UI). These collaborative individuals can stimulate LED, via: knowledge, creativity, inspiring and relationships.

Function D the civic university, is in essence instituted as a higher education college serving a particular city or local environment. According to Goddard (2013), the civic university focuses on the integration of multiple public domains, including healthcare, sustainability, social expectations, social inclusion and informal institutions. As we have seen earlier, the role of a civic university moves away from the entrepreneurial university in which the principal driver is to act as a business, towards engaged across a wide range of disciplines and activities with an equally wide range of stakeholders in a diverse external environment. Hereby the public domain and the support of a city or local environment is important. In this situation the interaction with government, business and civic society might be equally important. Nevertheless, the role tend to focus specifically on the interaction with the government, in order to stimulate local society, business and LED. We have asked a number of universities in the United Kingdom, which presents itself actively as a civic university, about their vision on civic universities actors. Hereby, the interview focused on the determination of the most important actor and the underlying motives. The interviewee is asked to produce a top three actors, important for this concept, and the significance of specific relations. Interviews where held with senior management and specialised senior professors only, presented in appendix XV. The results confirm some important theoretical outcomes, including: the role of a civic university moves towards a concept interaction with a wide range of disciplines and activities with an equally wide range of stakeholders in a diverse external environment. The function of a university can not be seen as isolated. Although outcomes are not conformed by all interviewee, it is suggested that the civic university concept builds on an important actor in the local environment, namely: the government. We have found support for the hypothesis that the civic university is government orientated, but moreover builds on the interaction with many other actors.

Figure 26: Subdivision of theoretical functions of the university into a new THM

What we can conclude from the subdivision of theoretical functions of the university and the case study connection (figure 25 and 26), is that the new QNM has four institutional actors, with four theoretical functions. First, the interaction between university and business can best be described by the entrepreneurial university theory. Second, the civic university concept helps to describe the interaction with the university and mainly the government. Third, when we see the university as foundation for the creative class, the institute mainly focuses on the local civil society. Lastly, the research university theory can be seen as a traditional orientation, generally orientated on its own institution. Figure 27 presents the suggested quadrilateral network THM. We have to be aware of the interaction and importance of all actors involved, which results in a critique on the limited and proposed subdivision of the functions.

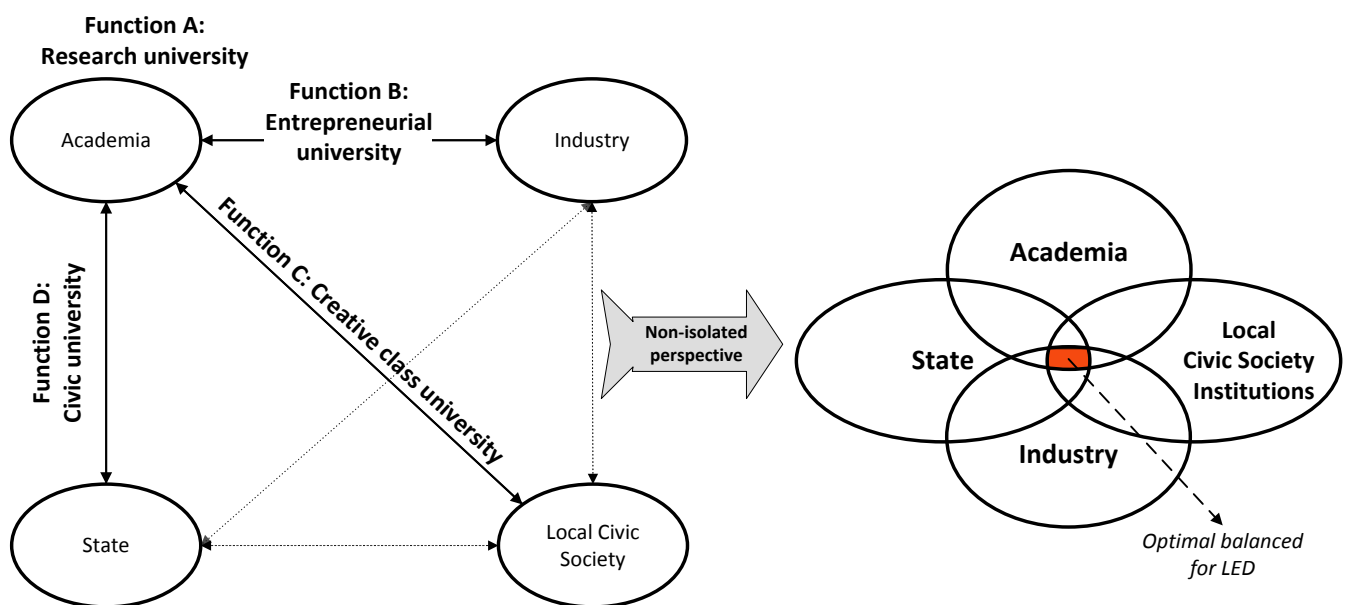


Figure 27: Suggested quadrilateral THM

The model above shows the proposed subdivision of the functions. From the university's perspective this suggested quadrilateral THM helps to answer the central research question: how can the interaction between a university and the local society contribute to LED in a LDC? Hence, the university can stimulate LED in a LDC through the interaction with LCS, by focussing on the creative class university concept. Nevertheless, this perspective has a limited vision on the university's duties. The presented quadrilateral THM should lead to an overlapping model as shown on the right side, whereby the university functions as a non-isolated institution (Lee, 1996; Markusen, 2006; Altbach, 2007; Hague, 2011; Florida, 2012; Goddard, 2013, E1UM1001, E1GP3016, E1SM1001UI, E1CV6022).

4.5.3 The implementation of a university's duty

The research focuses on the interaction between a university and the LCSi regarding LED. Hereby, the overlapping model determines the optimal point as a perfect balance between the four institutions involved. Universities around the world should focus on this balance and move towards the optimal balance for LED, in order to succeed in a LDC. A university should criticise its own institutional policy in order to develop its LED operations. As we concluded, function C focuses the most on: LED via the LCSi. What we have found in our theoretical analysis and case study analysis is the need of a creative class university concept. The function or duty of a university in relation to the LCSi can be explained as the creation of an urban environment and a type of place where the creative class would want to live.

A subgroup of the creative class, but very closely related to the university are scientists. From a historical perspective we can distinguish multiple genius individuals who make a major contribution to the society, for example: Albert Einstein, Stephen Hawking and Guglielmo Marchese Marconi. All of them realised an enormous contribution in the advancement of human civilization. The relevant matter for this research embrace the specific elements crucial for their success, as described in their own bibliographies. What the three scientists have in common is that their success is partly based on unique facilities, policies or cooperation whereby the university is involved. Appendix XVI describes their cases. We might conclude that the duty of a university is to create an environment where a new generation of genius people live and want to live.

The optimal environment is case specific, since formal institutions, informal institutions and cultural differences might differ per country, per area and per university (E1SS1508, I2UK3054P, I2UK4020M, E1CV6020). Nonetheless, universities can learn from each other and can be challenged by each other, in order to stimulate the institution to find an optimal balance for LED for their specific case. In their search for legitimacy, the KU's main focus is on the LCSi. Hence, the KU case is characterised by some specific elements, in order to find their balance. Figure 28 describes current and recommended measures of the KU in relation to their creative class activities, which might be supportive for other cases as well.

KU measures to stimulate the creative class:

- The educational function and creation of a critical group of students who are aware of opportunities and threats in their society are fundamental in a LDC environment;
- Active involvement in society via field trips and internships for students;
- Providing resources, including: knowledge recourses, funding opportunities, computers and electricity facilities;
- “The stimulation of the society is one of the goals of the KU. As part of their overall strategy the corporate social responsibility goals are important for the university. As part of this mission the KU is involved in: blood donation projects, providing water taps in rural areas, providing streetlights around the complex, scholarships for talented people it provides electricity facilities to the direct area, is involved in solar energy projects, starts cook programs and also realises water facilities. One of the objectives include the aim to raise awareness of importance via its LCSI contacts and network” (I2UK3050P);
- Experience learning program to support individuals;
- Infrastructure development
- Development activities via research programs, training and knowledge **transfer programs**
- Internal policies to provide more internal and external opportunities, in favour of the class.

Recommended measures to stimulate the creative class in the KU case in the future:

- Important elements for a future creative class include: “research work and collaborations within the society. Funding opportunities and scholarships. Creation of databases for knowledge sharing routines and the creation of an alumni network. The old students have sometimes important functions within the business, government or civic society organisations.” (I2UK3051A).
- Create volume to increase the creative class its impact on society and LED. Hereby, funding opportunities are fundamental.
- Cooperation with other institutions, including government, LCSI and business.
- In the cooperation with business, focus on entrepreneurial programs. The focus on Small and Medium-sized enterprises in society can be considered as underdeveloped. Students do have important skills and knowledge, but are less pragmatic and have lower skills in implementation and creative processes. The valuable traditional family based entrepreneurs might need more university attention to get stimulated.
- In the cooperation with the government, focus on environment specific elements which are fundamental. Infrastructure like roads, public transportation, access to local markets, electricity network, water supply and internet are issues in Nepal, which keeps the creative class away from significant development. Also facilities are necessary to attract and maintain a creative class, including: qualitative healthcare, places to meet and places to start business or creative activities.
- A bottom-up approach is very common in Nepal. Therefore, interaction with civil society is very often the start of any procedure. A top-down approach is very uncommon and only useful in the creation of awareness in society (E1SM1001UI).
- Research & Development. The university should invest in innovation and development. It needs creative ideas to bring their action to a higher level.
- Protection of intellectual property trough patterns and licenses are fundamental. The university should help to reduce appropriability hazards.
- Educate students to be critical and open-minded citizens with their own opinion, to allow them to join a high level creative class.
- Focus on the future needs of society in order to support them and find legitimacy.

(Source: Appendix XI & Appendix XII Interview statement)

Figure 28: Creative class measures in the KU case

A university needs to think out of the box, determine which facilities and services and which quality is necessary to create the most suitable atmosphere. Furthermore, the university needs to revolve what can be done to stimulate and support other institutions, like business and government, in order

to create an environment where the creative class wants to live. According to the Creative Class Group, there are four principals which needs to be researched, in order to implement a creative class driven strategy. Figure 29 presents a theoretical roadmap to develop and implement such a strategy. Universities and also the KU can use these steps to improve their focus on LCSl.

1. **3T Benchmark**
To determine a community's economic position, challenges, comparative advantages and marketing strengths, one should focus on Technology, Talent and Tolerance indicators as described in Florida (2004).
2. **Talent Locator**
To determine and forecast the future workforce needs and future jobs within the local society. Hereby, one should also focus on the assessment of a region's in-house talent.
3. **Industry Cluster Analysis**
Within this analysis one variables like: employment, labour availability, industry growth, firm formation, wages and venture capital. It determines a community's target clusters and suggests which industry clusters are fundamental for the LCSl.
4. **Economic Development and Cluster Strategy**
Once the industry and talent clusters are determined the university should focus on a appropriate strategy. Basically a plan for each challenge. Hereby the considerations of labour force, business climate, connectivity, financial incentives, costs and support programs are fundamental elements.

Figure 29: Implementation principals for a creative class driven strategy (source: Creative Class Group, 2014)

An important issue for the university in this QNM is the search for a balance between the multiple actors. Universities should be triggered to think about their position in the model and their main institutions. LED can be stimulated if no institution is underestimated or overestimated. In the KU case, the question rises whether this LDC university focuses too much on the LCSl actor. It would be interesting to research the generalisability of this effect in other LDC cases. Also, the balance or unbalance of interactions with business and government institutions in developed countries would be interesting. Further research is required. The KU case learns us the importance of a balance and integration of all institutional elements to be a successful university in LED.

If the university wants to stimulate LED through the interaction with LCSl, one should be aware of the need of a creative class in society. The function of a university in relation to the LCSl can conceivably be explained as the formation of an environment and a type of place where the creative class would want to live. This can be designed by a creative class driven strategy, focussing on: the specific environment, future talent and industry competitive advantages.

4.5.4 The LCSi as a fourth helix of the THM

We found support for the LCSi as fourth helix of the THM. Hereby, the institution consisting of non-governmental and non-for-profit organisations that have a presence in local public life, constitutes a equally balanced cooperation with the university, public and private organisations. LED in a LDC can be effectively stimulated if a university finds a balance between the cooperation of all institutions involved. Universities in LDC but also developed countries should be triggered to revise their institutional interactions in order to stimulate LED.

This research focuses specifically on the university and LCSi. If a university wants to reinforce its interaction with LCSi, the creative class concept (function C) appears to be significant. Hence, support has been found in scientific literature (Hague, 2011; Florida, 2005; Markusen, 2006; Florida, 2012) and has been confirmed by the case study, related to the need for a legitimate dominant improvement group supported by the local society (I2UK3050P, E1SS1508, I2UK3051A, I2UK3054P, E1SM1001UI, I2UK4005B, E1CV6022, E1SU2003UI). Both literature and the interviewees agreed on a non-isolated perspective, which focuses attention on the fact that the functions A, B, C and D will always operate together. The interpretation of the function composition is case specific, since formal and informal institutions differ per environment (Högberg, 2009; Yami, 2009). Nevertheless, universities can develop by comparing other policies and can learn from the KU case. Most actions are specifically developed for Nepal or developed for the direct KU environment, although all universities need to think about: their level of infrastructure, a sufficient level of facilities, local stability, cooperative relations, resources and a level of innovation. Logically, this level differs if LED is applied to Silicon Valley⁸ (US) or Kibera⁹ (Kenia).

The underlying literature presents a lot of diversity in the determination of a potential fourth helix. Many of these suggestions can be found in the new composition. A creative class has specific needs to be satisfied or successful in their environment, including: employment (Etzkowitz, 2006), financial resources (Etzkowitz, 2006) and creative possibilities (Yang, 2012; Ranga, 2005). Also suggested concepts like entrepreneurship (Etzkowitz, 2002) and the informal sector (Stanton, 2007; Affaa and Dalkir, 2006) are found in the interaction between the four institutions. Hereby, the new THM comprehends earlier suggested fundamental aspects.

⁸ The world's leading location for technology corporations and development, located near San Francisco.

⁹ The largest urban slum in Africa, located near Nairobi Kenya. Kibera is estimated to be housing anywhere from 200,000 to one million people.

Discussion & Limitations

Summarizing, in our research we found support for current scientific suggestions towards an expansion of the quadrilateral THM (Rodrigues, 2013; Toledano, 2012; Lombard, 2012; Perente, 2012; Marcovich, 2011). The support is based on an indebt study to innovation in LDCs related to the underlying (social) entrepreneurship theory. The suggested institutions are tested in a unique case study analysis, whereby the THM is applied in a LDC in Asia for the first time. We found support for both propositions, which implies: first, the LCSi should be part of the THM when applied in a LDC, since the connection between LCSi and the university is described as “a very important relationship regarding LED”. Second, the university in a LDC can stimulate LED through the interaction with LCSi, whereby the concept of the creative class university is fundamental. The KU case learns us the importance of a balance and integration of all institutional elements to be a successful university in LED.

In this research we raised the question: how the interaction between a university and the LCSi can contribute to LED in a LDC environment? It appears, if the university wants to stimulate LED through the interaction with LCSi, one should be aware of the need of a creative class in society. The function of a university in relation to the LCSi can conceivably be explained as the formation of an environment and a type of place where the creative class would want to live. This can be designed by a creative class driven strategy, focussing on: the specific environment, future talent and industry competitive advantages. Since the university functions as a non-isolated institution, the balance and interaction with the other four suggested institutions are fundamental (Lee, 1996; Markusen, 2006; Altbach, 2007; Hague, 2011; Florida, 2012; Goddard, 2013). In this chapter we discuss the implications of the suggestions and the research limitations.

Research execution and further research

Doing research in a developed country is different and less complicated than a research in a LDC. “Some of the problems of scientific research in developing countries, such as creating an pool of trained people, finding the correct resources and strengthening the research conclusions, can only be solved through time” (Vose and Cerellini, p.4). The research conclusions can be strengthened by a comparative research with other universities in developed and LDCs. Since the research timeframe is limited, there might occur limitations in the applicability of the research conclusions, regarding: generalizability and comparability. In the current subdivision of Group I and Group E, the total number of 47 participants seems sufficient. An increase in participants, under the same selection criteria, does not have an added value, since provided information became consistent and in

accordance with other collected data. It is worth considering the extension of participant selection, towards other relationships and away from a snowball selection method.

The research focuses on the THM and the function of a university in LED, whereby the model has been applied on a specific case study. One should be aware of the limitations of a single case in a very specific institutional environment. Nepal has specific formal and informal institutions which might represent a unique case, based on cultural and religious backgrounds. Although the constraints on generalizability, we have found some solid suggestions for the function of a university in a LDC environment. To draw significant conclusions the issue of a single case scenario holds. The scientific confirmation of other LDC case studies is not available, whereby we suggest to research the implications of a quadrilateral THM in other LDC cases.

The application of the THM in other LDC cases is fundamental to research another critical element. As mentioned, in the research a distinction is made between developed countries and LDC (appendix VII). Country specific elements as a centralised government (UK, Nepal) or decentralised government (US) are not taken into account. Since it might change the institutional interactions, case specific studies are required.

The research comprehends a qualitative research, whereby we mainly focus on the case of the KU. Although it will be very interesting and relevant, a comparison with universities in developed countries, like The Netherlands or the United Kingdom, is currently seen as too time-consuming. Conclusions or suggestions made, which focus on a university other than the KU, or are based on qualitative data, are not researched. These are specifically included to create a supporting image. To draw significant conclusions on the differences between developed economies and LDC, we suggest to conduct a comparison study, whereby the need of more LDC case study analysis still holds.

In the execution of the case study research we expected cultural, religious and language differences. To point out a practical point: in Nepal it is very uncommon to express a choice in a questionnaire by indicating an “X”, which has been seen as a sign of disapproval, whereas a “v” sign would be more suitable. Regardless, how small the differences might look like, in our perspective it is good to be aware of the existence of these differences. We have aimed to overcome these differences by: addressing and discussing the opportunity of differences, support of a local assistant, the support of a local university which applies a fairly westernized educational system and the support of a local professor. Hereby, we determine “local assistant” as someone who is familiar with the local language, culture and environment, but has not a direct relationship with the research. He mainly acted as a driver/guide but could also help with the reduction of cultural, religious and language

differences. We believe that these differences have a very limited influence on the research, since we have worked with the most dominant and developed university in Nepal.

One might argue that both the THM and the civic university concept are applied or developed by the Newcastle University. Therefore, the close cooperation with the University Groningen and moreover the local university's feedback are fundamental to overcome research bias. The assistance of a local professor and local assistant also reduces the risk of research bias. Furthermore, the research has a significant focus on the multi-level, multi-actor model for LED, which is reasonably based on the University of Groningen its perspective. Nevertheless, the research challenges existing theory and strengthens it.

One should be aware of the unilateral perspective. The collected data completely focuses on the function of the university. The role of other fundamental THM actors are not studies, while it might produce relevant insights.

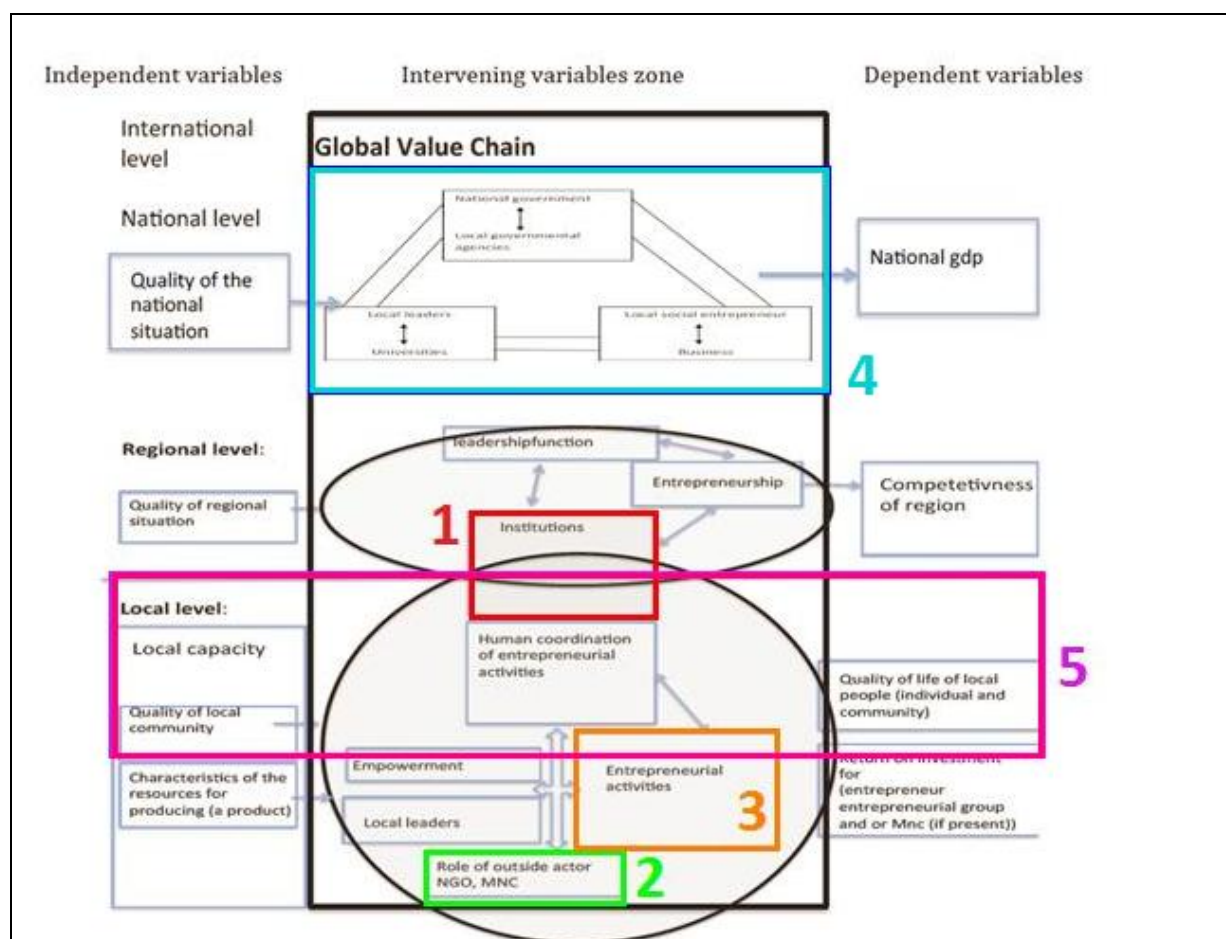
Application of the suggested model

In this research we suggest a quadrilateral THM, whereby we distinguish four conceptual functions: the research university (function A), the entrepreneurial university (function B), the creative class university (function C) and the civic university concept (function D). We have to be aware of the interaction and importance of all actors involved, which results in a critique on the limited and proposed subdivision of the functions. A university is a non-isolated institutions, whereby the focus on its function to create a creative class environment should be equally important as the other functions.

In this specific case study we have aimed to present the applicability of the THM in a LDC. Although it is difficult to measure the effect of a single KU policy or action on LED, we have suggested an expansion of the model. We have determined the level on LED according to a perceived performance method. This resulted in case specific recommendations, like the need of more fundamental improvements in: infrastructure, underlying capabilities, access to local markets and facilities. Hereby, they also point out the importance of the business sector and funding opportunities. These suggestions might be case specific, the fact remains that the THM requires an expansion for LDC application. These conclusions are founded in theoretical research and confirmed by a broad analysis of the KU case, resulting in expectations for the future perspective for LED (Toledano, 2012; Lombard, 2012; Perente, 2012; Bjerke et al, 2013).

Implications and effects on the multi-level, multi-actor model for LED

This research mainly focused on dimensions of LED, whereby we built on Pennink (2013) his developing global value chain model. The research developed the relation between institutions and innovative concepts into local institutional issues, whereby we focused specifically on the university and LCSI as units of analysis. Figure 30 evaluates the conclusions and results of our study on the basis of the multi-level, multi-actor model for local economic development (Pennink, 2013).



1: Determination of institutions

In the application of the multi-level, multi-actor model for LED one should be aware of the complexity of the determination of institutions involved. According to the extended THM, the institutions on a local level by all means include the university, government organisations, business institutions and LCSI. This assumption might have implications for the composition of regional institutions as well, whereby one might expect an overlapping structure.

2: Outside actor versus critical institution

The model determines the “role of outside actor”, like NGO and MNC, as intervening variable. The question rises to what extent the function determination of the outside actor is correct. The research showed a significant role of the LCSI in LED in LDCs.

The determination as “outside role” might not be appropriate and undermines the function of the LCSI and other institutions. We would suggest to be clear and consistent with the determination of the local institutions and include LCSI as a fundamental aspect.

3: Determination of entrepreneurial activities

An important issue for the university in this QNM is the search for a balance between the multiple actors. Universities should be triggered to think about their position in the model and their main institutions. LED can be stimulated if no institution is underestimated or overestimated. The case study analysis presents an underdeveloped or forgotten institution, including the relevance of the business sector for the KU environment. Although we do not conduct a comparative study, the question rises whether or not universities focus too much on a specific institution. Operating universities might focus mainly on their research, entrepreneurial or civic function. This research puts these individual functions in another perspective. Although we have not determined other university's focus, the University Groningen might focus too much on entrepreneurship¹⁰. Maybe the University Newcastle realises it focuses too much on their civic or research function¹¹. Based on these thoughts, the entrepreneurial activities appointed in the model should be determinate clearly. This research relativises entrepreneurial activities, which should be equally important as other university's functions. Except from the determination of entrepreneurial activities, the "local leaders" should be determinates as well. Does this include a relation with the representatives of the creative class (function C)? The developing university's bias (University Groningen) should be precluded as much as possible.

4: Design national level

Cook (1997) suggests, innovation and economic development should be studied intellectually by specifying the institutions and their interactions. However, he stresses out the difficulties of researching this on a national level and suggest that studies should be conducted at a regional or local level, which collectively can give a national perspective. Based on our research on a local level we suggest a quadrilateral THM. The implications and the effects on a national level are not included in the research. One might expect a significant function of LCSi on a national level as well.

5: Research the local level

The model determines: first, quality of local community as independent variable. Second, quality of life of local people as dependent variable. Lastly, institutions as intervening variable. We note that the used conceptual model has noteworthy similarities. In the development of the model the Social Quality model and the measurement via perceived performance of LED can contribute, similar to our approach. Besides, the used "university involvement" can be replaced by the involvement of other institutions to further substantiate the arguments.

Figure 30: Evaluation of research findings on the basis of the multi-level, multi-actor model for local economic development (Source: Pennink, 2013)

¹⁰ "University of Groningen stimulates entrepreneurship" [online] available at:

www.rug.nl/education/find-out-more/career-advice/university-of-groningen-stimulates-entrepreneurship

¹¹ Newcastle University: a World-Class Civic University [online] available at: www.ncl.ac.uk/about/values/civic/

Our main findings include the suggestion of a quadrilateral THM and draws attention to the relevance of the creative class theory, if a university wants to stimulate LED through the interaction with LCSi. Hereby, we conclude that the duty of a university is to create an environment where a new generation of genius people live and want to live, in order to stimulate local economy, build a strong community, maintain cultural identity, keep revenues locally and to center decision making locally by people who live in the community and who will feel the impacts of those decisions. We believe these conclusions are significant for the KU case, and represents the situation in Nepal. Genuinely, it is a single case study, whereby there is no comparison study conducted with developed countries. Furthermore, other LDC cases are not present (except from South Africa and Brazil). Future research on the institutions involved and the comparison with other cases represents an added value.

Conclusions

In Nepal we have conducted a qualitative research, whereby we have used a structured interview method and a non-probability sampling technique. To facilitate complex theory construction and enable an in-depth research and deep understanding of the THM in a LDC, the study focuses on the case study of the KU.

In the case study we have tested the suggestion of multiple researches, concerning a quadrilateral THM (Rodrigues, 2013; Toledano, 2012; Lombard, 2012; Perente, 2012; Marcovich, 2011). The THM has been applied generally in developed societies. Merely, a similar research has been done in Brazil. Therefore, this research contributes to the understanding about the THM in a LDC. We found support for our propositions making use of the case study, but we also add value to scientific literature by the confirmation of our point of view via innovation stimulation concepts, like: (social)entrepreneurship. Innovation has played an critical role in the development of economies. Whereby, we assume, innovation is a fundamental component for economic development. The similarities between relevant institutions in innovation stimulation theory and our case study findings are significant. This chapter discusses the main findings and conclusions of the theoretical study and case study analysis, supplemented with recommendations for universities.

Scientific findings

One can conclude from the KU case that the university has many activities and policies in favour of LCSi. Since the connection between LCSi and the university is described as a very important relationship regarding LED, we found support for our suggestion that the LSC should be part of the THM, whereby it represents a QNM between the state, industry, university and LCSi. Hereby, we distinguish a direct and indirect impact on LED through the interaction with LCSi. An indirect stimulation can be found in the depended relationship between the two institutions. Mutual support is needed for both institutions to be successful in their LED operations. The direct impact can be described as the importance and direct collaboration in the implementation processes. Also measurement and monitoring of developments and innovations are impossible without this close interaction. We found support for both propositions. Meaning, the LCSi should be an element of the THM and the university can stimulate LED through the interaction with LCSi. Hereafter, the study focuses on the main research question: how can the interaction between a university and the LCSi contribute to LED in a LDC? What we can conclude from the theoretical and case functions of the university, is that the new QNM has four institutional actors, with relating functions. These results from an analysis of three case study functions and four theoretical functions, as described in figure 31. Besides, figure 32 relates the determined functions to the suggested quadrilateral THM. The

underlying literature presents a lot of diversity in the determination of a potential fourth helix. Many of these suggestions can be found in the new composition. A creative class has specific needs to be satisfied or successful in their environment, including: employment (Etzkowitz, 2006), financial resources (Etzkowitz, 2006) and creative possibilities (Yang, 2012; Ranga, 2005). Also suggested concepts like entrepreneurship (Etzkowitz, 2002) and the informal sector (Stanton, 2007; Affaa and Dalkir, 2006) are found in the interaction between the four institutions. Hereby, the new THM comprehends earlier suggested fundamental aspects.

<i>KU Case study analysis</i>		<i>Theoretical roles</i>		<i>THM functions</i>
Role A: Educational function	↔	Role 1: the research university	→	Function A: Research university <i>Main focus on: University</i>
Role B: Resources providing function	↔	Significant linkage to the Resource Based View	→	
Role C: Interaction and cooperation function with LCSI, government and business.	↔	Role 2: the entrepreneurial university	→	Function B: Entrepreneurial university <i>Main focus on: Industry</i>
	↔	Role 3: the university as foundation for the creative class	→	Function C: Creative class university <i>Main focus on: LCSI</i>
	↔	Role 4: the civic university	→	Function D: Civic university <i>Main focus on: State</i>

Figure 31: The connection of case study functions of a university linked to theoretical descriptions.

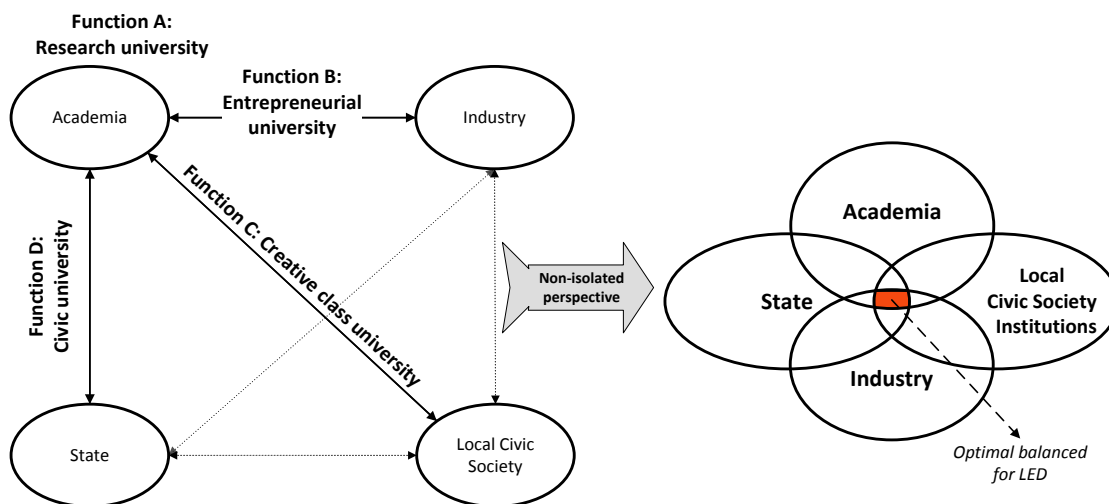


Figure 32: Suggested quadrilateral THM

The overlapping model determines the optimal point as a perfect balance between the four institutions involved. Universities around the world should focus on this point and move towards the optimal balance for LED, in order to succeed in a LDC. A university should criticise its own institutional policy in order to develop its LED operations.

The research focuses on the interaction between a university and the LCSi. As we concluded, function C focuses the most on: LED via the LCSi. If a university wants to reinforce its interaction with LCSi, the creative class concept (function C, as explicated in figure 33) appears to be significant. Both literature and the interviewees agreed on a non-isolated perspective, which concentrates on the functions A, B, C and D, which will always operate collectively.

Function C: Creative class university

The university as foundation for the creative class, has a significant importance in the creation of an urban environments and a type of place where the creative class would want to live.

Support has been found in scientific literature (Hague, 2011; Florida, 2005; Markusen, 2006; Florida, 2012) and has been confirmed by the case study, related to the need for a legitimate dominant improvement group supported by the local society (I2UK3050P, E1SS1508, I2UK3051A, I2UK3054P, E1SM1001UI, I2UK4005B, E1CV6022, E1SU2003UI). These collaborative individuals can stimulate LED, via: knowledge, creativity, inspiring and relationships. The university contributes to LED by providing opportunities and a suitable environment for economic activities of creative, cultural, scientific or knowledge intensive institutions.

Case related aspects: internships, research programs, knowledge sharing routines, funding opportunities, infrastructure development, development projects, external orientation, search for legitimacy in society, creation of a high-end class for LED, collaboration with civic institutions, research & development, intellectual property right issues, conform system approach (E1SM1001UI) and the focus on future needs of society.

Figure 33: Function C explicated

The interpretation of the function composition is case specific, since formal and informal institutions differ per environment (Högberg, 2009; Yami, 2009). Nevertheless, universities can develop by comparing other policies and can learn from the KU case. Most actions are specifically developed for Nepal or developed for the direct KU environment, although all universities need to think about: their level of infrastructure, a sufficient level of facilities, local stability, cooperative relations, resources and a level of innovation. Although this research's aim is not to do a comparative study in relation to developed economies, the KU case gives some important issues for the application of the THM in developed countries. In the KU case, the question rises whether this LDC university focuses too much on the LCSi actor. It would be interesting to research the generalisability of this effect in other LDC cases. Also, the balance or unbalance of interactions with business and government institutions in developed countries would be interesting. Further research is required. The KU case learns us the importance of a balance and integration of all institutional elements to be a successful university in LED.

Recommendations for universities

In the scenario a university wants to focus on the LCSi, the concept of the creative class university is fundamental for LED. We might conclude that the duty of a university is to create an environment where a new generation of genius people live and want to live. Therefore, the institution needs to think out of the box, determine which facilities and services and which quality is necessary to create the most suitable atmosphere. The optimal environment is case specific, since formal institutions, informal institutions and cultural differences might differ per country, per area and per university. Nevertheless, universities can learn from each other and can be challenged by each other, in order to stimulate the institution to find an optimal balance for LED for their specific case. The KU case is characterised by some specific elements, which are described in figure 34. These might be helpful for other cases as well.

Concluding the master thesis, ask yourself the questions: How is your organisation involved in LED? Can a changing focus on another composition of institutions help you to be successful? If LCSi are undervalued, can the concept of the creative class help you to focus? Improve economic future!

Creative class stimulation of the KU:

- Creation of a critical group of students;
- Active involvement in society;
- Providing resources;
- CSR projects;
- Providing jobs and income;
- Learning, research and knowledge transfer programs;
- Infrastructure development.

Suggested measures to encourage the KU's creative class:

- Focus on the future needs of society, a bottom-up approach is very common in Nepal;
- Educate students to be critical and open-minded citizens
- Stimulate protection of intellectual property;
- Invest in Research & Development;
- Stimulate class specific capabilities;
- Create volume to increase the creative class its impact on society and LED;
- Cooperation with other institutions, including government, LCSi and business;
- In the cooperation with business, focus on innovative and entrepreneurial programs;
- In the cooperation with the government, focus on environment specific elements. Infrastructure like roads, public transportation, access to local markets, electricity network, water supply and internet are issues in Nepal;
- Promote facilities, including: qualitative healthcare, places to meet and places to start business or creative activities;
- Create funding opportunities and scholarships;
- Create databases for knowledge sharing routines.

Figure 34: The creative class in the KU case

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Appendix I. Analysis of principle perspectives on the role of a university

Recourse based view: The recourse based view builds on the assumptions that university's resources are on the basis of sustainable competitive advantage. Hereby the view is based on two assumptions in analyzing sources of competitive advantage. First, it assumes that organisations within an environment may be heterogeneous with respect to the resources they control. Second, these resources are not entirely transportable across organisations, according to Barney (1991). Barney identified the following as the key characteristics for a resource to be strategically important: valuable, rare, inimitable and non-substitutable. These assumptions influences the university's suppositions to interorganisational cooperation. This collaboration can be defined as the practice of multiple organisations working together for a common purpose or benefit (Waver, R. 2007). According to the Resource based view, an individual university should attempt to protect, rather than share, valuable proprietary knowhow to prevent lose of knowledge, which could eliminate its competitive advantage. Concluding, a university should focus on knowledge, research and innovativeness to strength its resources and its unique position in the society, whereby knowledge sharing should be protected against treads regarding unimportance of the knowledge, getting more common, imitation and substitution.

Market based perspective: The market based perspective typically stresses advantages and end-product market positions as a foundation for extraordinary future returns and higher current value. A competitive advantage is due to barriers to competition arising from the structure of the market. Concluding, market power provides a valuable base for competing in the evolving environment. A university should make appropriate adjustments for differences in quality and quantity. Hereby, a valuable position in the market can be created through the basis of the prices at which similar items are available or were sold. This also means, when knowledge is rare, the university should receive higher returns for knowledge sharing.

Relational view: The relational view, analysis the network routines and processes of an organisation. According to Dyer and Singh (1998) a university can develop competitive resources by apprehensively managing relationship with external networks, including suppliers, customers and governments. Therefore, a firm can gain a competitive advantage by reproving their key resources in a way that spans the boundaries of the university, in accordance with THM. Competitive advantage can be embedded in these relational boundaries, rather than be located inside an individual university. Concluding, an effective university strategy from a relational view is to systematically share valuable knowhow with partners and other THM entities.

Transaction cost perspective: The transaction cost perspective supposes that organisations try to minimize the costs of exchanging resources with the environment, and that they try to minimize the bureaucratic costs of exchanges within the organisation (Business mate, business resources, 2014). According to Williamson (1981), a transaction cost occurs when a good or a service is transferred across a technologically separable interface. Therefore, transaction costs arise every time a product or service is being transferred from one stage to another, where new sets of technological capabilities are needed to make the product or service. Universities are therefore weighing the costs of exchanging resources with the environment, against the bureaucratic costs of keeping knowledge in-house. According to Ronald Coase (1937), every university will expand as long as the costs are lower than outsourcing or sharing the knowledge or operations to external providers in the market. Concluding, a university should weight the transaction costs relating to knowledge sharing, which can be reflected by: environmental uncertainty, opportunism, risks and bounded rationality factors.

Institutional perspective: The institutional perspective considers the processes by which structures, rules, norms, and routines, become established as reliable guidelines for social behaviour. It inquires into how these elements are created, diffused, adopted, and adapted over time. Therefore, the fundamental institutions can be defined as cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life (Bjork, 2004). Institutions are transmitted by various types of carriers, including symbolic systems, relational systems, routines, and artefacts. These social structures are both imposed on and upheld by the actors behaviour. Concluding, a university functions within a critical socialization process and institutional environment, which influences the university's behaviour. In accordance with THM a university should behave conform social rules and according to norms and values in order to seek for legitimacy.

Social and economic network theory: Jackson (1996) states: informal social networks are frequently the means for communicating information and for the distribution of goods and services which are not traded via formal economic traffic, including: information about employment, business opportunities and LED issues. In the context of a university, the formal network through which relevant information is shared among the stakeholders may have an important effect on the university's impact and its efficiency. In both scenarios, the university acts as a mediator or instrument within a broader network, whereby its influence and dominance and bargaining position relative to others and this might be reflected (Jackson, 1996). According to this theory, network structures represent a significant function in the organisation of some major economic relationships.

This research will mainly focus on the institutional perspective, as a base for the determination of a university's function in LED. The institutional perspective represents the underlying assumptions of the THM, which has been chosen because: first, the integration and research opportunities in relation to the multi-level, multi-actor model for local economic development (Pennink, 2013). Second, the THM suggests a more prominent role in innovation for the university, caused by the changes towards a knowledge-based society and a movement towards collaborative relationships. Hereby it remains unclear how this changing role can be determined. Third, the THM represents a relatively developed model for innovation, whereby it is mostly allied in developed economies. Hereby, we found it interesting to research the applicability in a LDC, instead of using the perhaps more valid, but less-developed models for informal economies.

Appendix II. Characteristics of successful research universities

Successful research universities comprise several characteristics, including:

1. Practically all research universities are a part of a differentiated system, standing at the top of an academic hierarchy and receiving appropriate support for their operations.
2. Research universities are considered as public institutions. The private sector can rarely support a research university, although some private institutions are emerging with a research focus.
3. Research universities are most successful in regions with little or no competition from non-university research institutes or with strong ties between the universities and such institutes. The academy of science system in LDCs lack connections to universities. Some countries are trying to better integrate research institutes and top universities, in some cases merging them this would undoubtedly strengthen the universities.
4. Research universities are expensive, requiring more funding than other universities. To attract the best staff and students and to provide the infrastructure necessary for top research and teaching, the cost per student is higher than the average across an entire system. Adequate salaries for faculty, well-equipped libraries and laboratories, and scholarships for bright but needy students are examples of the expenditures required.
5. Research universities must have adequate and sustained budgets. They cannot succeed on the basis of inadequate funding or severe budgetary fluctuation over time.
6. Research universities have the potential for significant income generation. Students are often willing to pay higher fees because of the prestige attached to a degree from them, quality academic programmes and access to top professors. Research universities also generate intellectual property and discoveries and innovations with value in the marketplace.
7. Research universities require physical facilities commensurate with their missions, including expensive libraries and laboratories and sophisticated information technology. The infrastructures of research universities are complex and expensive. Not only do they need to be built but they must also be maintained and periodically upgraded.
8. Research universities require autonomy to shape their programmes and practices. The balance between autonomy and accountability in developing countries may be complicated.
9. Academic freedom is a requirement for all post-secondary institutions but especially research universities.

(Source: The role of research universities in developing countries. The university world 2013. No.282)

Appendix III. A template for the entrepreneurial university

A benchmarking template, designed by National Council for Graduate Entrepreneurship

A Entrepreneurial behaviour, attitude and skill development	
Key entrepreneurial behaviours, skills and attitudes have been developed (these will need to be agreed and clearly set out)	<p>To what degree does a programme have activities that seek clearly to develop:</p> <ul style="list-style-type: none"> - opportunity seeking - initiative taking - ownership of a development - commitment to see things through - personal locus of control (autonomy) - intuitive decision making with limited information - networking capacity - strategic thinking - negotiation capacity - selling/persuasive capacity - achievement orientation - incremental risk taking
B Creating empathy with the entrepreneurial life world	
Students clearly empathise with, understand and 'feel' the life world of the entrepreneur	<p>To what degree does the programme help students to 'feel' the world of:</p> <ul style="list-style-type: none"> - living with uncertainty and complexity - having to do everything under pressure - coping with loneliness - holistic management - no sell, no income - no cash in hand, no income - building know-who and trust relationships - learning by doing, copying, making things up, problem solving - managing interdependencies - working flexibly and long hours
C Key entrepreneurial values	
Key entrepreneurial values have been inculcated	<p>To what degree does the programme seek to inculcate and create empathy with key entrepreneurial values:</p> <ul style="list-style-type: none"> - strong sense of independence - distrust of bureaucracy and its values - self made/self belief - strong sense of ownership - belief that rewards come with own effort - hard work brings its rewards - belief that can make things happen - strong action orientation - belief in informal arrangements - strong belief in the value of know-who and trust - strong belief in freedom to take action - belief in the individual and community not the state
D Motivation to Entrepreneurship career	
Motivation towards a career in entrepreneurship has been built and students clearly understand the comparative benefits	<p>To what degree does the programme help students to:</p> <ul style="list-style-type: none"> - understand the benefits from an entrepreneurship career - compare with career as an employee - have some entrepreneurial 'heroes as friends' acquaintances - have images of entrepreneurial people 'just like them'

E Understanding of processes of business entry and tasks	
Students understand the process (stages) of setting up an organisation, the associated tasks and learning needs	<p>To what degree does the programme take students through:</p> <ul style="list-style-type: none"> - the total process of setting up an organisation from idea to survival and provide understanding of what challenges will arise at each stage - how to handle these challenges
F Generic Entrepreneurship competencies	
Students have the key generic competencies associated with entrepreneurship (generic how to's)	<p>To what degree does the programme build the capacity to:</p> <ul style="list-style-type: none"> - find an idea - appraise an idea - see problems as opportunities - identify the key people to be influenced in any development - build the know-who - learn from relationships - assess business development needs - know where to look for answers - improve emotional self awareness, manage and read emotions and handle relationships - constantly see yourself and the business through the eyes of stakeholders and particularly customers
G Key Minimum Business how to's	
Students have a grasp of key business how to's associated with the start up process	<p>To what degree does the programme help students to:</p> <ul style="list-style-type: none"> - see products and services as combinations of benefits - develop a total service package - price a product service - identify and approach good customers - appraise and learn from competition - monitor the environment with limited resource - choose appropriate sales strategy and manage it - identify the appropriate scale of a business to make a living - set standards for operations performance and manage them - finance the business appropriately from different sources - develop a business plan as a relationship communication instrument - acquire appropriate systems to manage cash, payments, collections, profits and costs - select a good accountant - manage, with minimum fuss, statutory requirements
H Managing relationships	
Students understand the nature of the relationships they need to develop with key stakeholders and are familiarised with them	<p>How does the programme help students to:</p> <ul style="list-style-type: none"> - identify all key stakeholders impacting upon any venture - understand the needs of all key stakeholders at the start-up and survival stage - know how to educate stakeholders - know how to learn from them - know how best to build and manage the relationship

(Source: National Council for Graduate Entrepreneurship)

Appendix IV. Dimensions of the civic university

Seven dimensions of the civic university

1. The civic university is actively engaged with the wider world as well as the local community of the place in which it is located.
2. The civic university takes a holistic approach to engagement, seeing it as institution wide activity and not confined to specific individuals or teams.
3. The civic university has a strong sense of place whereby it recognizes the extent to which its location helps to form its unique identity as an institution.
4. The civic university has a sense of purpose and understanding not just what it is good at, but what it is good for.
5. The civic university is willing to invest in order to have impact beyond the academy.
6. The civic university is transparent and accountable to its stakeholders and the wider public.
7. The civic university uses innovative methodologies such as social media and team building in its engagement activities with the world at large.

(Source: Leading and Managing the civic university, an international comparative study, 2014. Goddard, J. Center for urban and regional development studies)

Recommendations for universities

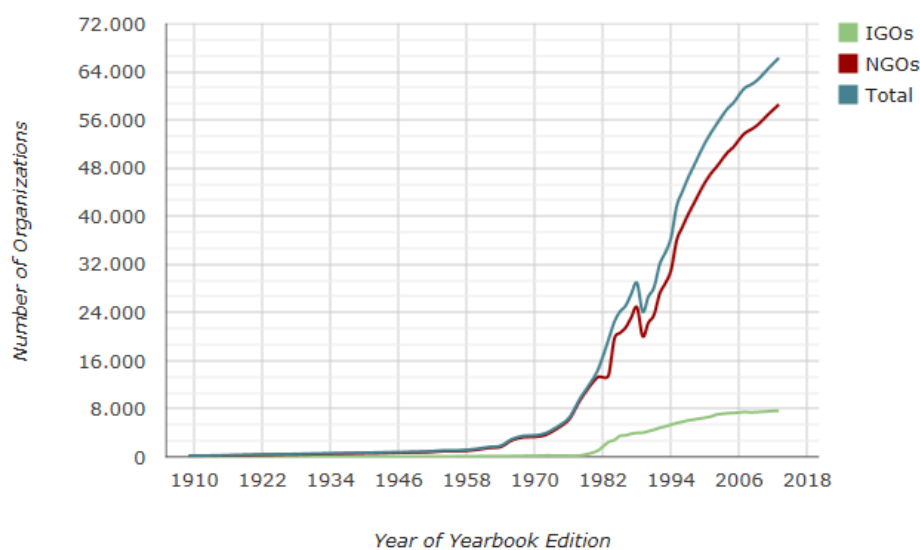
1. A university should have civic engagement on local, regional, national and world scales as key parts of their mission.
2. University leaders need to engage with this priority.
3. The funding system should encourage this priority because the alternative is a university system of dwindling local and world importance.
4. It should be on a par with teaching and research as a university mission.
5. The current government review of the future of universities should stress this priority.
6. A wider view of the economic and social role of a university, going far beyond technology and skills transfer, is developing and should be encouraged.
7. A university inherently have a national and global role, but their status as important regional bodies with a uniquely broad remit is vital and needs to be developed.
8. Companies, local government, development organisations, NGOs and the public have much to gain from thinking about how to interact more effectively with local universities. Cooperation is essential.

9. This interaction needs to be at the operational level as well as via top-level agreements and concordats.
10. Universities should be asked to bid for civic status, with access to substantial amounts of money, in exchange for demonstrating their ability to generate worthwhile impact.
11. This impact should be seen in corporate terms, not just via specific departments, centres or projects.

(Source: Goddard, J. (2009) Reinventing the Civic University)

Appendix V. Analysis of the role of a local society as element of the Triple Helix Model

As we have seen earlier, the local civic society can be determined as the wide collection of non-governmental and not-for-profit organisations that have a presence in local public life, expressing the interests and values of their members or others (The World Bank, 2013). Founded in ethical, cultural, political, scientific, religious or philanthropic considerations one can distinguish local civic society organisations (LCSI), like: community groups, NGOs, labour unions, professional associations and foundations. The raising importance of LCSI is apparent from a significant expansion of organized private and non-profit activities in countries of Asia, Africa, Latin America and the rest of the world (figure 35). The function of LCSI transforms from a philanthropic function, like promoter of human rights, towards a stimulator of LED and stimulator of civic and social infrastructure.



IGOs: Inter-Governmental Organisation, with the main purpose to: preserve peace through conflict resolution, stimulate international relations, promote social development, economic development and promotion of international cooperation.

NGOs: Non-Governmental Organisation, with the main purpose to: emphasize humanitarian issues, increase developmental aids, stimulate economic development and to keep sustainable development.

Figure 35: Expansion of organized private and non-profit organisations (Source: Union of international associations, Yearbook of International Organisations)

The THM aims to model the structure of economic development and innovation. Focusing on the role of local society as element of the THM, one can distinguish multiple cases and situations whereby LCSI play a significant role in LED, including:

1. LCSI have become significant players in global development assistance. The Organisation of Economic Cooperation and Development announced that, LCSI provided approximately USD 19,3 billion per year (2011, as published in 2013) of official development assistance. Therefore, the financial support provided by these institutions is vital to LED.
2. LCSI have become important actors for delivery of social services and implementation of development programs, as a complement to government support, particularly in environments where government presence is weak.
3. LCSI have an influence on shaping public policy, examples include issues as: banning of land mines, debt cancellation, economic stimulation measures and environmental protection.
4. LCSI serve as implementing agencies. Therefore, they are crucial for realization of LED incentives.
5. LCSI can constitute a bridge to other forms of social institutionalization, in particular at the local community level.
6. LCSI have become significant elements in promoting good governance like transparency, effectiveness, openness, responsiveness and accountability. Appendix VI includes an actual case, which underlines the LCSI importance in the recent conflicts in Ukraine.
7. LCSI represent community-based approaches and conduct community development activities which stimulates LED. (World Bank, 2013; Ghaus-Pasha, 2004; UIA, 2014; OECD, 2013; Pouligny, 2009; Edwards, 2009)

The suggestion that there is an important interaction between local society and the THM actors, still does not determine the role of the newest institution. The controversial function of civic society contributes to the indistinctness how formal and informal institutions are related to each other in different contexts. According to Edwards (2009) one can determine three bases, including: an economic role, on financial securities and providing services where governments and business are weak. Second, a social role, whereby LCSI can be a representative of values, cultural life and intellectual innovation. They provide a framework of citizenship and local culture. Lastly a role in good governance, whereby LCSI provide channels to share voices and visions in favour of transparent and accountable decision-making. Social consensus will stimulate performance and LED (Edwards, 2009). Based on these assumptions one can determine three roles:

Role 1: The economic function of society

The first role which can be distinguished within academic literature includes an economic function. One can argue that norms, values and networks of civic society engagement will foster LED (Putnam, 1996; Foley & Edwards, 1996). Besides, there are also contradicting perspectives on the economic functions of civic society. Putnam argues, “that small interest groups have no incentive to work toward the common good of society and every incentive to engage in costly and inefficient rent-seeking, colluding to restrain competition” (Putnam 1993 p.176). Taking into account the adverse perspectives, Inglehart (1997) concludes that relatively close LCSIs seem to be beneficial to LED in the earlier stages of development. Meanwhile, the conviction, power, and excessive values and goals of LCSIs in advanced societies do not stimulate LED, since they defend well-organized interests at the expense of overall economic growth (Inglehart, 1997; Putnam, 1996, Foley et al, 1996; Gang, 1998).

Role 2: The stabilizing function of society

LCSIs represent multiple norms, values and interests. The role of these groups comprehends the importance of networks, willing to support and maintain culture, informal institutions, trust and cooperation. These are fundamental for the characteristics of a local society and essential to the successful functioning of democratic institutions. According to Inglehart (1997) LCSIs are strongly correlated with a stable democracy, and therefore have a stabilizing function in society. One can argue that LED depends on a strong rule of law, government and market sector, which together depends on the enforcing effects of its civic society (Inglehart, 1997; Putnam, 1996, Foley et al, 1996).

Role 3: The democratic function of society

The function of local civic society can be determined as a democratic function. LCSIs constitute united and collaborating networks, representing ideas, norms and values. Almond and Verba (1963) argues, that any membership, whether it is a membership in a non-political organisation or a passive membership, it has an influence on political capabilities. LCSIs stimulate the belief that there should be diverse and competing centres of power in society, so that there is a marketplace for ideas, also called pluralism. Herewith they contribute to one of the most important foundations of political democracy (Almond et al, 1963). Powell and Prewitt (1969) argue, that LCSIs stimulate political awareness, require political information and give a sense of personal political effectiveness. This effect leads to an enlargement in political participation. Finally, the role of LCSIs can be described as a democratic function, since they stimulate a counterbalance to governments and represent networks of informal institutions (Gang, 1998; Inglehart, 1997).

In this research we have introduced an addition on the THM. We argue that transformations in the cognitive, economic, organisational and cultural environment leads to the need to add a fourth helix, namely local civic society. Although LCSI can have multiple functions, we assume that innovation and LED can be stimulated by the local civic society (Ghaus-Pasha, 2004; Pouligny, 2009; Edwards, 2009; Gang, 1998; Inglehart, 1997; Almond et al, 1963). Therefore we presume an critical role of local society as element of the THM.

Appendix VI. The importance of LCSI. The case of disorder in Ukraine

"Ukraine's Public Enemy Number One: The Police"

"Why Ukraine's brutal riot police are one of the biggest obstacles on the path to reform"

BY: Dr. Erica Marat

JANUARY 24, 2014

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It's been two months since the start of Ukraine's Euromaidan protests, and things are only getting worse. Over the past week, Ukraine has witnessed some of the worst violence it's seen since gaining independence in 1991. In response to the passage of a series of laws limiting civic freedoms, protesters rallied with renewed fervor in Kiev's central square to continue a conflict that has spiraled into violence some commentators are calling "medieval." Hundreds have been injured, and at least four have been killed.

Ukraine's special riot police unit, known as Berkut ("golden eagle" in Ukrainian), has played a prominent role in violence against demonstrators. Over the past two months, President Viktor Yanukovich has scaled up Berkut's protest management tactics, ordering the unit to disperse the crowds using water cannons, tear gas, and rubber bullets. After Berkut's initial efforts to disperse the protests proved futile, the government resorted to more extreme methods to intimidate the crowd. On Jan. 23, according to protesters, the police opened fire against the crowds for the first time since Euromaidan began two months ago.

Despite Ukrainians' growing political awareness and blossoming civic society, Berkut remains one of the least reformed public institutions. If Ukraine is to embark on the path to greater democratization, its political leadership must make police reform a top priority. The police must learn how to protect Ukraine's increasingly diverse populace as they engage in new types of political dissent. A democratically reformed police with strong public oversight can safeguard political processes, including mass protests, and usher Ukraine into a peaceful future. The police forces, including Berkut, must be accountable to citizens and subject to the rule of law -- not to the political regime.

While other security and law enforcement agencies have undergone reform in the years since the Orange revolution, Ukraine's police remain largely unchanged. That makes for a stark contrast with some of Ukraine's closest neighbors, such as Moldova, Georgia, and the Baltic states, where police forces have experienced substantial change. In Ukraine, in fact, all of the notorious elements of the Soviet police remain intact: the traffic police, the militarized wing of the police, and local law-enforcement units that work on the community level. The police remain punitive and corrupt. Instead of serving the citizenry to prevent crime, the Ukrainian police use force to advance their own material interests, routinely employing torture tactics to force confessions. The police are just one part of an elaborate mechanism within the Ministry of Internal Affairs (MIA), the main government department responsible for internal security, that works to extract bribes from the populace. Top officials also benefit from this blatant corruption, and are also able to collect taxes imposed on their personnel's salaries. Other countries in the region have established public oversight over the police's work and have engaged civic society groups in designing police reform programs with public safety in mind. Ukraine has yet to undertake such a process.

Today's Ukrainian police are brutal and unresponsive not least because they are estranged from the population they are supposed to serve. Police chiefs rarely come from the communities in which they work, making them detached and uninterested in the needs of the people in their districts. In some parts of the country the police resemble a mafia-style organisation that intimidates local populations with impunity. Just last June, two policemen kidnapped a 29-year-old woman in Vradyevka and drove her into the woods of a surrounding town, where they brutally beat her, fracturing her skull, and took turns raping her. This heinous act sparked rage in the community not just because of its brutality, but also because the resident police department refused to take action against the officers responsible.

In the past decade, Ukraine has made several attempts to reform the police -- but none of these attempts responded to the public's needs, partly because no effort was made to incorporate any views from domestic or international experts. While serving as ministers of internal affairs under former president Viktor Yushchenko, Vasyl Tsushko and Yuriy Lutsenko (now a leading member of the opposition), undertook several initiatives to establish external oversight that led to positive changes in the behavior of police personnel. Lutsenko assigned human rights experts to monitor senior MIA officials and dispatched special mobile public oversight groups to assess MIA facilities across the country. This led to a significant drop in cases of police torture.

But though these reforms won praise from civic society groups and the international community, they were abruptly halted after Yanukovych came to power in 2010. Working with his close ally, Vitaly Zakharchenko, Yanukovych purged all human rights ombudsmen from the ranks of the MIA. The new president used the ministry to protect his government rather than the civic liberties of protesters on the streets of Kiev. By siding with the regime, the MIA could continue to benefit from corruption and count on further political patronage from the man at the top.

Civic society groups -- including legal research and policy institutions, human rights groups, volunteer organisations that monitor the traffic police, and individual activists who have fallen victim to police brutality -- have already developed a number of initiatives to transform the forces. The Association of Ukrainian Human Rights Monitors, for instance, works to educate citizens about their rights, teaching them how to respond to and report police abuse. The association also investigates and publicizes areas where police abuses are particularly widespread, and keeps track of which people are the most likely to be maltreated by the police. Other groups, such as the Center for Political and Legal Reforms, focus on the law, providing advice on the legislative process to government officials and lawmakers, including background research on prospective bills and reviews of existing legislation. Meanwhile, the Ukrainian Parliament Commissioner for Human Rights regularly addresses law-enforcement issues, often in collaboration with experts and humanitarian groups. Individual activists are also using their experiences with police abuse to develop recommendations on incremental changes that might reduce the frequency of brutality.

Appendix VII. Analysis of the THM in developed and less-developed countries

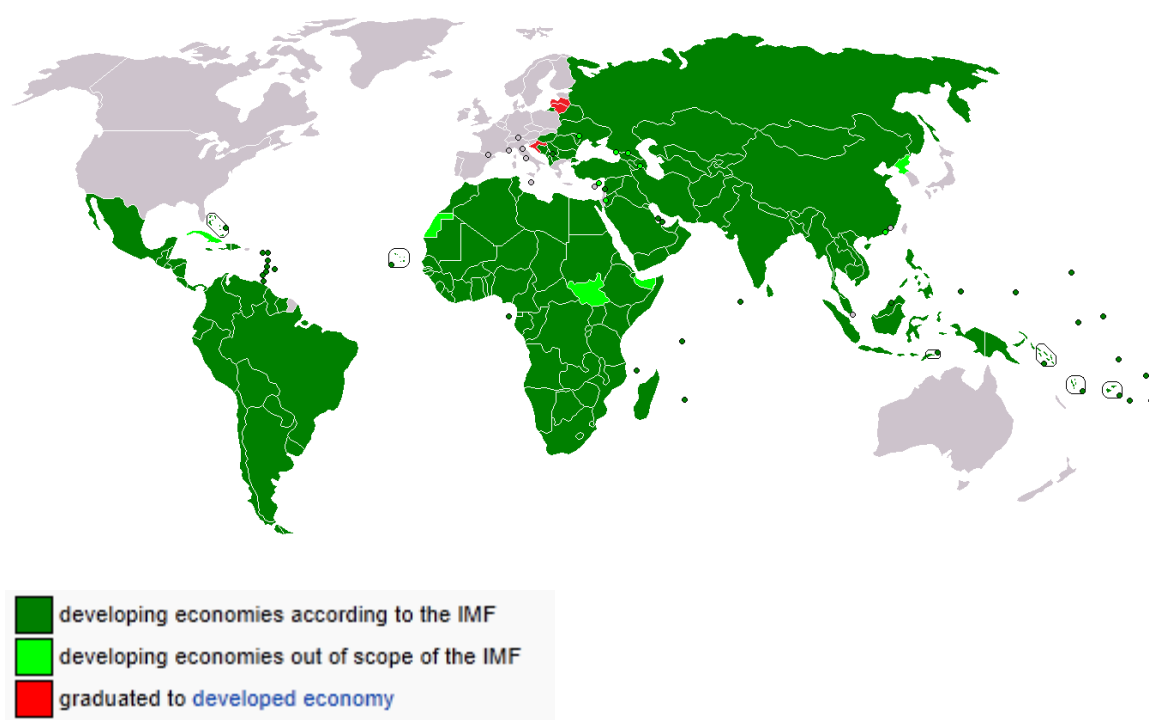
Implications

The THM is mainly a model for analyzing innovation and understanding LED in a knowledge-based economy. Hereby, a knowledge economy commonly makes up a large share of all economic activities in developed countries, while LDCs tend to have agriculture and manufacturing-based economies. The strategies that make up the Triple Helix are especially important for the LDC with low economic development, limited innovations and scarce research and development and limited activities undertaken by businesses. Although the THM mainly focuses on developed countries in knowledge-based economies, it might help in the analysis of crucial institutions for LED in LDC. Also Bunders and Broerse (1998) support the importance of other institutions by suggesting that NGOs have played a key role in technology transfer, especially in developing countries. The Triple Helix model in underdeveloped countries places the universities at the lead in the creation and diffusion of knowledge (Ezkowitz and Carvalho 2004, p.198).

Determination

In contemporary literature one can distinguish research on developed and LDC. Generally, the development of a nation is measured with statistical indexes, including: GDP, income per capita and life expectancy. Developing countries are seen as countries that have not achieved a significant degree of industrialization relative to their population, and have mostly a low standard of living. The United Nations has developed the Human Development Index to display the development of different regions.

Furthermore, the International Monetary Fund uses a classification that measures: income level, export diversification and the degree of integration into global financial systems. Below countries are classified in developing economies. In this research we will use this International Monetary Fund classification.



Previous research

Nowadays, the THM has been applied generally in developed societies. According to Atiqul Haq (2012), knowledge-based development is an international phenomenon, nevertheless the concept of THM is still limited applied in developing countries compared with developed countries.

Based on data from the Triple Helix Research Group (Stanford University), we can conduct an overview of previous research on the THM and the growing prominence of the university among innovation actors through national and regional case studies.

Region	Conducted research concerning the THM
United States of America	Campbell, 2004; Feldman and Desrochers, 2004; Boardman 2009; Wang and Shapira, 2012.
Europe	Klofsten, 1999; 2010; Inzelt, 2004; Geuna and Nesta, 2006; Lawton Smith and Bagchi-Sen, 2010; Geuna and Rossi, 2011; Svensson, 2012.
Latin America, mainly Brazil	Mello and Rocha, 2004; Etzkowitz, Mello and Almeida, 2005; Saenz, 2008; Bianco and Viscardi, 2008; Luna and Tirtido, 2008.
Africa, mainly South Africa	Konde, 2004; Kruss, 2008; Booyens, 2011.

These studies look at multiple aspects of the university relations within the THM, including: innovation, technology transfer, commercialization of academic research, entrepreneurship and contribution to LED. As we can conclude from previous research, the THM is mainly tested and applied in knowledge-based and developed countries, excluding limited research in Brazil and South Africa.

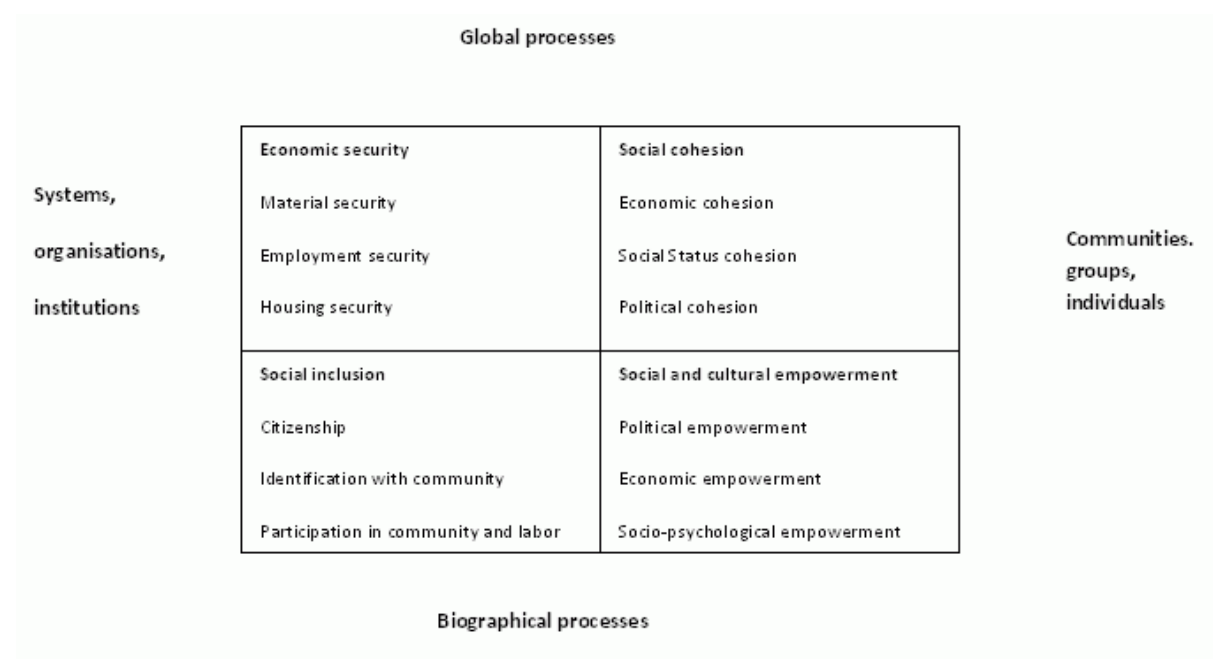
Research implications

The THM suggests that the institutions matter for the level of economic development because of their effects on political power distribution, innovation, generation of economic opportunities and human capital accumulation. There are differences in the structure of the THM relations between university, governments and business in developed and developing countries (Ye, Yu and Loet Leydesdorff, 2013). Furthermore, Charles (2003) claims that universities in developing countries have a significant function as a knowledge source in the growth innovation systems. Many empirical studies based on cross-country data have found a high correlation between institutional quality and the level of economic development, but there is little research concerning the THM in LDCs (Nakabashi, Pereira, Sachsida, 2013). Therefore, we point out the importance of further research and the implications of the THM in LDCs. It would be recommendable to research the THM in these regions and focus on case studies outside the developed, South African and Brazilian regions.

(Source: Ezkowitz et all, 2004; Saad et all, 2005; Atiqul Haq, 2012 ; Nakabashi et all, 2013; Ye et all, 2013, Triple Helix Research Group; IMF; World bank, 2013)

Appendix VIII. Modelling quality of local civic society

A sociologically grounded measure of the quality of local civic society, well-being of society and the individuals within it can be found in the Social Quality model (Abbot and Wallace, 2012). The multi-dimensional model comprehends four main domains: economic security, social cohesion, social inclusion and the conditions for social and cultural empowerment. The substantiation of the domains is based on global processes, the description of a person's life (biographical processes), systems, institutions and communities. A schematic representation has been shown below.



The four domains, which help to measure the quality of local civic society, are divided into:

Socio-economic security: focuses on securities in life, and ensuring that people have the resources over time to be able to cope with daily life, enjoy a enjoyable lifestyle and take advantage of the opportunities available to them. The domain includes also material, employment and housing security. Basically the necessities in life.

Social cohesion: provides for the rule of law fundamental for social participation and accommodate social stability and continuity. This domain can be seen as the generator of trust and finds its base in informal institutions. The domain contains the perception of social conflict, trust, economic cohesion, social status and political cohesion.

Social inclusion: can be described as the degree to which citizen are and feel integrated in formal institutions, organisations and social systems. The last domain requires that objective conditions exist and that individuals have the ability to make use of the opportunities available to them. The model includes: citizenship, identification and participation. These can be defined via: partner status, vote in elections and political party memberships.

Social and cultural empowerment: Important in this domain are political, economic and socio-psychological empowerment. Hereby, one should include: education level, self evaluation of health and complexity of life. Here, the model requires that individuals have the ability to make use of the opportunities available to them.

The social quality model is useful in measuring the quality of local civic society, whereby it combines economic securities, social connectedness via cohesion, identity, participation and the increase of economic, political, social and educational strength of the society. One can describe the model as a model that: “measures the quality of the social context of everyday life which is seen as the outcome of the dialectical relationship between the formation of collective identities and the self-realisation of the human subject. It provides the essential link between need, action and policies between economic and social development. It measures the extent to which the quality of daily life provides for an acceptable standard of living, taking account of the structural features of societies and their institutions as assessed by reference to their impact on citizens. It conceptualizes ‘the social’ as the space created by the interaction between the economic structure and the social structure and between structure and agency” (Abbot and Wallace, 2012 p.154). One have to take into account that the quality of a local civic society is strongly influenced by the position of individuals and groups in a society’s opportunity structure. Subjective satisfaction is a key indicator of the quality of the social system and provides the basis for understanding what makes a livable society (Beck, 1997; Veenhoven 2008; Abbot et all, 2012).

In this research we use the Social Quality Model as a measurement of the quality of local civic society.

Source: Abbot et all, 2012; The Network on Civic Society and New Forms of Governance in Europe (CINEFOGO), 2014

Appendix IX. Structured interview design

Version I

Dear Participant,

We are honoured that you are willing to participate in this research about local economic development, and the relation between the university and society. It is important to know that we will never ask your name. Confidentially, anonymity, respect to the Kathmandu University and respect to people, culture and their religion are the fundamental assumptions in this research.

Although the questions are formulated in English, please do not feel insecure about the language. A correct spelling or vocabulary is not important. Please feel free to ask questions, if you do not fully understand the question. The structured interview contains four parts, including: 1: general questions, 2: cooperative relations in society, 3: involvement in local economic development. To complete the interview will require a time investment of approximately 12 minutes.

Fully completed interviews will be rewarded! As a thank for your participation, prizes will be raffled among the fully completed interviews. You will have a chance to win: a colourful Amsterdam painting (sponsored by the University Groningen), traditional Dutch treats and more....

Your vision and help is very much appreciated.

Mr. Richard van Wijngaarden
Kathmandu University
University Groningen
Newcastle University Business School

Phone: +977- 9813068219

Supervision by: Dr. M.R. Dangal, Dr. B.J.W.Pennink and Doctoral Researcher E. Roelofse

1. Namasté!

1.1 My gender is:

Please select the applicable answer, by putting an 'X' in the corresponding box.

	Male
	Woman

1.2 My relation to the Kathmandu University can best be described as:

Please select the best applicable answer, by putting an 'X' in the corresponding box.

	University management (Senate / Director / Chancellor / Trustee / Chief)
	School management (Dean)
	Professor (Associate Professor/ Assistant Professor/ Lecturer/ Research Associate)
	Student (Diploma/Undergraduate/Graduate)
	Non-academic staff (Administrative/Technical/Information/Secretarial)
	Other:

1.3 In relation to the Kathmandu University I am involved in:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	Studying
	Teaching
	Consulting
	Research
	Managing
	Administrative or technical support
	Representing of collective interest (e.g. KU representative, students representative)
	Other:

2. Cooperative relations outside the university

2.1 In question 1.3 you have selected a number of activities in which you are involved. Please think about these activities and select the organisations you (sometimes) have had contact with:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	Government organisations
	Business organisations
	Civic society organisations (For example: community group / charity group / Non-Government organisation / labour union / foundation)
	Non of the above

2.2 How often did you had contact with:

Please select for every organisation the best applicable answer, by putting an 'X' in the corresponding box.

Government organisations

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

Business organisations

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

Civic society organisation (For example: community group / charity group / Non-Government organisation / labour union / foundation)

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

2.3 Can you explain the relation between you and: the government, business and civic society organisations?

Please explain your contact with the three organisations briefly. Please think about the activities in which you are involved (question 1.3). The contact might include internships (business), funding (government) or collective interest issues (civic society). If you have never had contact with such an organisation, please place an 'X' in the 'Not applicable' box.

	Please explain your relationship:	Not applicable
Government		
Business		
Civic Society		

3. Involvement in local economic development

3.1 Can you describe how you, or how the Kathmandu University in general, is involved in the stimulation or research about local economic development?

In question 1.3 you have determined your role and activities with the Kathmandu University. Based on these activities, please describe your possible contribution to local economic development. You might think about: projects, lectures or research. Please feel free to use as much space as you need.

3.2 As a result of the activities and policies of the Kathmandu University concerning local economic development stimulation, I can observe the following effects in society:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	New business
	More funding opportunities
	More opportunities in society
	More access to local markets
	Better facilities available
	More services available
	Expansion or raising taxes
	Better infrastructure, like roads, water supply, telecommunication or electricity
	More jobs
	A better income
	A higher standard of living in general
	Better level of education
	More marketing communication or commercials
	The activities do not have any effect
	Other:

3.3 What else can the Kathmandu University do to stimulate local economic development?

Are there additional activities or policies which you think are important for the university, please describe them briefly. Please feel free to use as much space as you need.

3.4 How can the interaction between a university and the local society contribute to local economic development?

Please describe briefly your vision on the interaction between the university and the local society, in order to stimulate local economic development. Maybe you have own experiences, knowledge of specific cases or just a vision. Please feel free to use as much space as you need.

3.5 Which organisation should have the leading role in the stimulation of local economic development?

Please rank the following organisations from 1 to 4. Hereby, 1 has the most important and leading function, 4 the most unimportant role. Please give every organisation a number in the corresponding box.

	Business organisations
	University
	Civic society organisation
	Government organisations

Your vision is very much appreciated. Thank for your participation.

Please hand in the hardcopy paper, or hand in via email trough:

r.van.wijngaarden.1@student.rug.nl

Dear Participant,

We are honoured that you are willing to participate in this research about local economic development. It is important to know that we will never ask your name. Confidentiality, anonymity, respect to the Kathmandu University and respect to people, culture and their religion are the fundamental assumptions in this research.

Although the questions are formulated in English, please do not feel insecure about the language. A correct spelling or vocabulary is not important. Please feel free to ask questions, if you do not fully understand the question. The structured interview contains three parts, including: 1: general questions, 2: cooperative relations in society, 3: involvement in local economic development. To complete the interview will require a time investment of approximately 12 minutes.

Fully completed interviews will be rewarded! As a thank for your participation, prizes will be raffled among the fully completed interviews. You will have a chance to win: a colourful Amsterdam painting (sponsored by the University Groningen), traditional Dutch treats and more....

Your vision and help is very much appreciated.

Mr. Richard van Wijngaarden
Kathmandu University
University Groningen
Newcastle University Business School

Phone: +977- 9813068219

Supervision by: Dr. M.R. Dangal , Dr. B.J.W.Pennink and Doctoral Researcher E. Roelofse

1. Namasté!

1.1 My gender is:

Please select the applicable answer, by putting an 'X' in the corresponding box.

	Male
	Woman

1.2 I am mostly affiliated with the following group:

Please select the best applicable answer, by putting an 'X' in the corresponding box.

	Government organisation
	Business organisation
	Civic society organisation (For example: community group / charity group / Non-Government organisation / labour union / foundation)
	University
	Other:

1.3 In relation to the selected group I am involved in:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	Policy making
	Business or business services
	Volunteering
	Consulting
	Managing
	Research
	Studying
	Development work
	Representing collective interests
	Lobbying
	Teaching
	Other:

2. Cooperative relations

2.1 In question 1.3 you have selected a number of activities in which you are involved. Please think about these activities and select the organisations you (sometimes) have had contact with:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	Government organisations
	Business organisations
	University
	Civic society organisations (For example: community group / charity group / Non-Government organisation / labour union / foundation)
	Non of the above

2.2 How often did you had contact with:

Please select for every organisation the best applicable answer, by putting an 'X' in the corresponding box.

Government organisations

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

Business organisations

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

University

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

Civic society organisation

	Never
	Rarely, only 1-3 times
	Sometimes, only 4-10 times
	Regularly, maximum once a month
	Frequently, several times a month
	Very often, several times a week

2.3 Can you explain the relation between you and the university?

Please explain your contact with the Kathmandu University, or other educational organisations briefly. Please think about the activities in which you are involved (question 1.3). The contact might include internships (business), funding (government) or collective interest issues (civic society). If you have never had contact with such an organisation, please place an 'X' in the 'Not applicable' box.

	Please explain your relationship:	Not applicable
University		

3. Involvement in local economic development

3.1 Can you describe how you are involved in the stimulation of local economic development?

In question 1.3 you have determined your role and activities. Based on these activities, please describe your possible contribution to local economic development. Please feel free to use as much space as you need.

3.2 As a result of the activities and policies of the Kathmandu University concerning local economic development stimulation, I can observe the following effects in society:

Please select all applicable answers, by putting an 'X' in the corresponding boxes.

	New business
	More funding opportunities
	More opportunities in society
	More access to local markets
	Better facilities available
	More services available
	Expansion or raising taxes
	Better infrastructure, like roads, water supply, telecommunication or electricity
	More jobs
	A better income
	A higher standard of living in general
	Better level of education
	More marketing communication or commercials
	The activities do not have any effect
	Other:

3.3 What should the Kathmandu University do to stimulate local economic development?

Are there activities or policies which you think are important for the university in order to stimulate local economic development. You might focus on current functions of the university, or additional opportunities. Please describe them briefly. Please feel free to use as much space as you need.

3.4 How can the interaction between a university and the local society contribute to local economic development?

Please describe briefly your vision on the interaction between the university and the local society, in order to stimulate local economic development. Maybe you have own experiences, knowledge of specific cases or just a vision. Please feel free to use as much space as you need.

3.5 Which organisation should have the leading role in the stimulation of local economic development?

Please rank the following organisations from 1 to 4. Hereby, 1 has the most important and leading function, 4 the most unimportant role. Please give every organisation a number in the corresponding box.

	Business organisations
	University
	Civic society organisation
	Government organisations

Your vision is very much appreciated. Thank for your participation.

Please hand in the hardcopy paper, or via email trough:

r.van.wijngaarden.1@student.rug.nl

आदरणीय सहभागी,

हामीलाई धेरै गर्व छ कि तपाईंले हामीलाई यस स्थानीय आर्थिक विकास अनि युनिभर्सिटी र समुदायको सम्बन्धको अनुसन्धानको लागि मधत गरिराख्नु भएको छ । तपाईंलाई यो थाहा पाउन महत्वपूर्ण छ कि हामीले तपाईंको नाम कहिले पनि सोध्ने छैनौ । गोप्यानीयता अनि युनिभर्सिटी, नेपाली संस्कृति र सम्पूर्ण नेपालीहरूको आदर गर्नु नै हाम्रो मुख्य अनुमान रहेको जानकारी गरौदछौ ।

यदि तपाईंलाई केहि प्रश्नहरू छ भने नहिचकिच्यायी सोध्नु हुन अनुरोध गर्दछु । यो संरचित अन्तर्वार्तामा चार भाग छन्: १: सामान्य प्रश्न, २: समुदायमा सहकारी नाता, ३: स्थानीय आर्थिक विकासमा संलग्नता र ४. त्यसको असर । यो अन्तर्वार्ता पुरा हुनको लागि अन्दाजिमा १२ मिनेट लग्नेछ ।

तपाईंको विचार र मधतको लागि हामी तपाईंको आभारी छौ ।

मिस्टर. रिचार्ड भ्यान वायनगारदेन
काठमाण्डौ विश्वविद्यालय
ग्रोनिनगेन विश्वविद्यालय
न्युक्यासल युनिभर्सिटी बिजनेस स्कूल

निरीक्षक: डा. मे. रा. दंगाल, डा. बि. जे, डबल्यु. पेनिंक र डोक्टरल रिसर्चर इ. रोलोफसे ।

१. नमस्ते !

१.१ लिङ्ग (कृपया सहि उत्तरमा X चिन्ह लगाउनुहोला ।)

	पुरुष
	महिला

१.२ म धेरै जसो तल उल्लेखित समूहमा आवद्ध छु:

कृपया सबैभन्दा मिल्ने उत्तरको छेउको कोठामा X चिन्ह लगाउनुहोला ।

	सरकारी संगसंस्था
	व्यापार संघसंस्था
	सामुदायिक संघसंस्था (जस्तै: सामुदायिक समूह, उदारता समूह, गैर-सरकारी संगसंस्था, मजदूर संघ, अरु कुनै संघसंस्था)
	विश्वविद्यालय
	अन्य (खुलाउनुहोस):

१.३ माथि मैले उल्लेख गरेको समूहमा म तलका कार्यहरूमा आवद्ध छु ।

कृपया सबै मिल्ने उत्तरहरूको छेउको कोठामा X चिन्ह लगाउनुहोला ।

	योजना निर्माण गर्ने
	व्यापार या व्यापारको सेवा गर्ने
	स्वयंसेवा गर्ने
	राय सल्लाह दिने
	व्यवस्थापनमा आवद्ध
	अनुसन्धानमा आवद्ध
	पढाई
	विकासका कार्यहरू
	सामुदायिक इच्छाहरूको प्रतिनिधि गर्ने
	बर्तालाब गरि निर्णयमा मधत गर्ने
	पढाउने
	अन्य (खुलाउनुहोस):

२. समाजमा सहकारी नाताहरु

२.१ प्रश्न नम्बर १.३ मा तपाईंले छान्नुभएको विभिन्न क्रियाकलापहरु छन् । ती क्रियाकलापहरुलाई सम्झेर बुझेर तपाईंले तल उल्लेख गरिएका संघसंस्थामा कहिल्यै सम्पर्क राख्नु भएको छ?

कृपया सबै मिल्ने उत्तरहरुको छेउको कोठामा X चिन्ह लगाउनुहोला ।

	सरकारी संगसंस्था
	व्यापार संघसंस्था
	विश्वविद्यालय
	सामुदायिक संघसंस्था (जस्तै: सामुदायिक समूह, उदारता समूह, गैर-सरकारी संगसंस्था, मजदूर संघ, अरु कुनै संघसंस्था)
	माथिका कुनैमा पनि छैनन् ।

२.२ तपाईंले तल उल्लेखित गरिएका संघसंस्थाहरुमा कतिको सम्पर्क राख्नुहुन्छ?

हरेक संघसंस्थाको लागि सबै भन्दा मिल्ने उत्तरको छेउको वक्समा X चिन्ह लगाउनुहोला ।

सरकारी संघसंस्था

	कहिले पनि राख्ने गरेको छैन
	धेरै थोरै राख्ने गरेको छु (१ देखि ३ पटक सम्म मात्र)
	थोरै राख्ने गरेको छु (४ देखि १० पटक सम्म मात्र)
	कहिलेकाही राख्ने गरेको छु (अधिकतम महिनामा एक चोटी)
	धेरै राख्ने गरेको छु (महिनामा कयौं पटक)
	जहिले राख्ने गरेको छु (हप्ता मा कयौं पटक)

व्यापार संघसंस्था

	कहिले पनि राख्ने गरेको छैन
	धेरै थोरै राख्ने गरेको छु (१ देखि ३ पटक सम्म मात्र)
	थोरै राख्ने गरेको छु (४ देखि १० पटक सम्म मात्र)
	कहिलेकाही राख्ने गरेको छु (अधिकतम महिनामा एक चोटी)
	धेरै राख्ने गरेको छु (महिनामा कयौं पटक)
	जहिले राख्ने गरेको छु (हप्ता मा कयौं पटक)

विश्वविद्यालय

	कहिले पनि राख्ने गरेको छैन
	धेरै थोरै राख्ने गरेको छु (१ देखि ३ पटक सम्म मात्र)
	थोरै राख्ने गरेको छु (४ देखि १० पटक सम्म मात्र)
	कहिलेकाही राख्ने गरेको छु (अधिकतम महिनामा एक चोटी)
	धेरै राख्ने गरेको छु (महिनामा कयौं पटक)
	जहिले राख्ने गरेको छु (हप्ता मा कयौं पटक)

सामुदायिक संघसंस्था

	कहिले पनि राख्ने गरेको छैन
	धेरै थोरै राख्ने गरेको छु (१ देखि ३ पटक सम्म मात्र)
	थोरै राख्ने गरेको छु (४ देखि १० पटक सम्म मात्र)
	कहिलेकाही राख्ने गरेको छु (अधिकतम महिनामा एक चोटी)
	धेरै राख्ने गरेको छु (महिनामा कयौं पटक)
	जहिले राख्ने गरेको छु (हप्ता मा कयौं पटक)

२.३ के तपाईंले आफ्नो र विश्वविद्यालयको सम्बन्ध वर्णन गर्न सक्नु हुन्छ?

कृपया आफ्नो र काठमाण्डौ विश्वविद्यालय या अरु कुनै विश्वविद्यालयासंगको सम्बन्ध वर्णन गर्नुहोस । कृपया प्रश्न नम्बर १.३ को आफ्नो उत्तर को ख्याल राखेर यो प्रश्न को उत्तर दिनुहोला । त्यो सम्बन्ध जे केहि पनि हुन सक्छ । यदि कुनै पनि सम्बन्ध नभएको खण्डमा लागु नहुने लेखिएको वक्समा X चिन्ह लगाउनुहोस ।

	आफ्नो सम्बन्धको वर्णन गर्नुहोस	लागु नहुने
विश्वविद्यालय		

३. स्थानीय आर्थिक विकासमा संलग्नता

३.१ तपाईं स्थानीय आर्थिक विकास जगाउनुमा कसरी संलग्न हुनुहुन्छ?

प्रश्न नम्बर १.३ का उत्तरहरूमा तपाईंले आफ्नो जिम्मेवारी र क्रियाकलाप जनाउनु भएकोछ । त्यो क्रियाकलापहरूमा आधारित आफ्नो सम्भावित योगदान वर्णन गर्नुहोस । आफुलाई चाहिने जति ठाउँ प्रयोग गर्नसक्नु हुन्छ ।

--

३.२ स्थानीय आर्थिक विकासको सरोकारमा काठमाडौं विश्वविद्यालयले जारी गरेको क्रियाकलाप र योजनाहरूले गर्दा समाजमा निम्न उल्लेखित भिन्नता देख्न सकिन्छ:

कृपया सबै मिल्ने उत्तरहरूको छेउ को वक्समा X चिन्ह लगाउनुहोला ।

	नयाँ व्यापारहरू स्थापना भएको
	धेरै कोषका अवसरहरू
	समाजमा अरु धेरै अवसरहरू
	स्थानीय बजारको लागि अझै धेरै पहुँच
	अझै राम्रो सुबिधाहरू
	अझै धेरै सेवाहरू
	बढ्दो कर
	राम्रो विकासहरू जस्तै बाटो, खानेपानी, दूरसंचार या बिजुली
	अझै धेरै जागिरका अवसरहरू
	अझै राम्रो कमाइ
	सामान्यमा उच्च जीवनशैली
	उच्च शिक्षाको सेवा
	धेरै बाणिज्य र व्यापारको सूचनाको आदान प्रदान
	ती क्रियाकलापहरूको केहि पनि अशर छैन
	अन्य (खुलाउनुहोस):

३.३ काठमाण्डौ विश्वविध्यालयाले स्थानीय आर्थिक विकासलाई कसरी प्रोत्साहन गर्न सक्छ?

के तपाईंलाई विश्वविद्यालयमा त्यस्तो कुनै क्रियाकलापहरु या योजनाहरु छन् जस्तो लाग्छ? तपाईंले विश्वविद्यालयको हालको कार्यहरुमा या अरु थप मौकाहरुमा ध्यान दिन सक्नुहुन्छ । कृपया छोटकरीमा वर्णन गर्नुहोस । आफुलाई चाहिने जति ठाउँ प्रयोग गर्नसक्नु हुन्छ ।

३.४ विश्वविद्यालय र स्थानीय समुदायको अन्तरक्रियाले कसरी स्थानीय आर्थिक विकासमा सहयोग गर्न सक्छ?

विश्वविद्यालय र स्थानीय समुदायको अन्तरक्रियाले स्थानीय आर्थिक विकासमा कसरी मद्दत गर्छ, कृपया आफ्नो दृष्टिकोण छोटकरीमा वर्णन गर्नुहोस ।

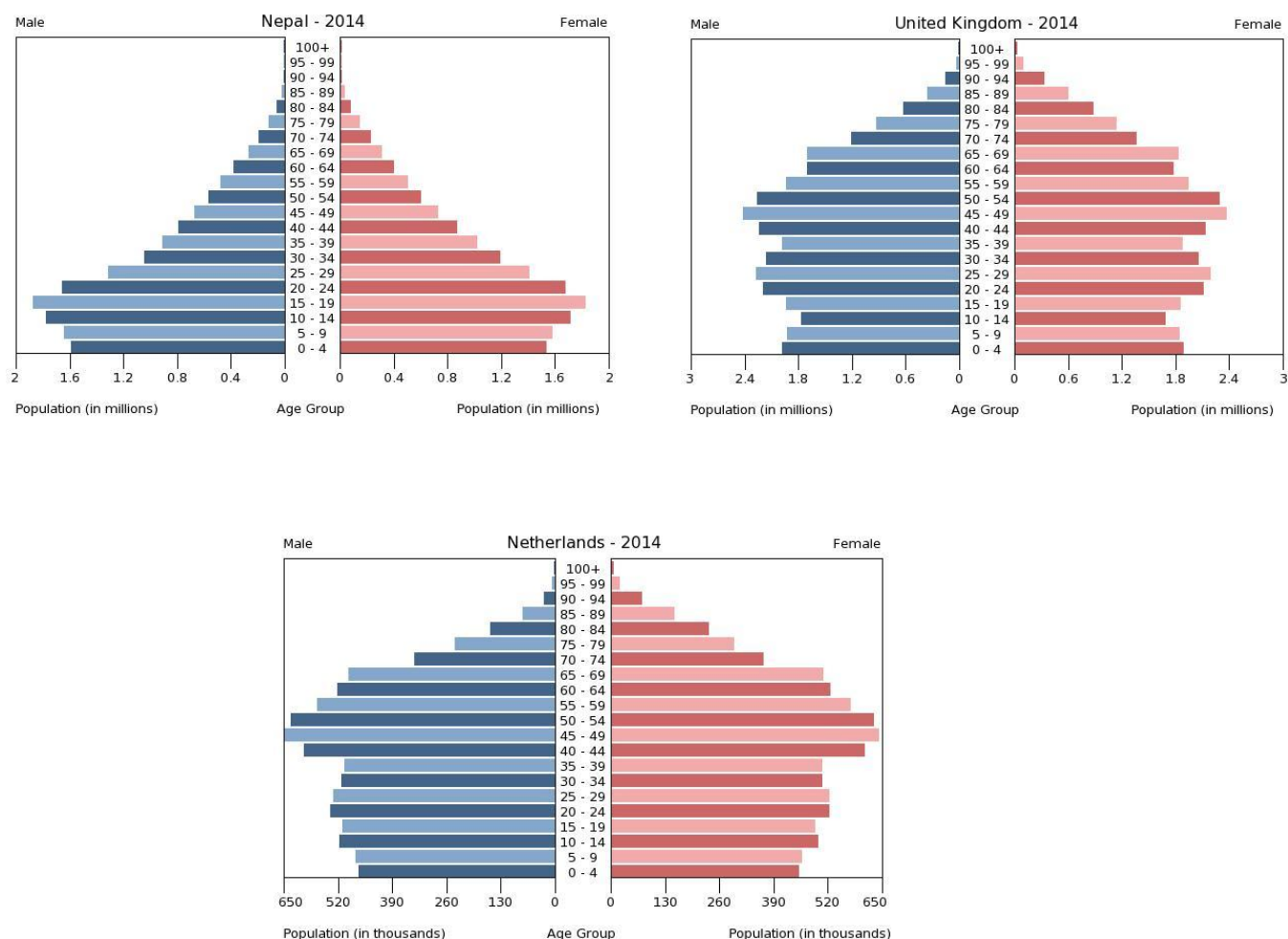
३.५ तल उल्लेख गरिएका संघसंस्थाहरु मध्ये तपाइको विचारमा कुन संघसंस्थाको सबैभन्दा महातापूर्ण भूमिका हुन्छ?

कृपया सबै संघसंस्थालाई महत्वपूर्णता को आधारमा १ देखि ४ सम्म अंकित गर्नुहोस । जहाँ १ ले सबैभन्दा महत्वपूर्ण संघसंस्था जनाउँछ र ४ ले सबैभन्दा कम महत्वपूर्ण जनाउँछ ।

	व्यापार संघसंस्था
	विश्वविद्यालय
	सामुदायिक संघसंस्था
	सरकारी संगसंस्था

Appendix X. Figures of Nepal as a LDC

Population Pyramid:



Economic figures:

	GDP (x 1 billion \$) Purchasing Power Parity	GDP per capita in \$	Unemployment rate	Inflation rate
Nepal	42.1	1,500	46%	9.6%
United Kingdom	2,378.0	37,300	7.7%	2.7%
The Netherlands	696.3	41,400	6.8%	2.8%

Source: CIA World fact book, 2014; World Bank Data, 2014

Appendix XI. Interview statement Group I

2.3 Can you explain the relation between you and: the government, business and civic society organisations?

	Please explain your relationship:
Government	<p>I2UK3050P Since we are active as a university, we have contact with the government. Especially the educational sector makes rules and regulations. In terms of policy creation there is a relationship. Furthermore, they support research and might give feedback on the relevance of topics. There is also a relation in terms of training government people and carrying out research.</p> <p>I2UK3051A We share knowledge and update knowledge. The government can be used for study materials, especially the educational sector. This sector provides also financial support for my PhD research.</p> <p>I2UK3052P Relation not found.</p> <p>I2UK2053P It consist of a need based contact. Therefore the frequency fluctuates. Contact might include: training of teachers, sharing knowledge, formal activities and consulting activities.</p> <p>I2UK3054P Based on governments needs the study curriculum has been changed recently. The policies changes in favour of society, or in order to create work opportunities for students.</p> <p>I2UK4001M To pay phone and electricity bills. To collect information for school papers. For citizen and vehicle licences.</p> <p>I2UK4002B My mother works in a government school, so I often visit it. I often visit government offices for own works (municipalities etc.)</p> <p>I2UK4003B No relation found</p> <p>I2UK4004B No relation found</p> <p>I2UK4005B I had contact with the government office for some government documents. Apart from it, there is not a relation between students and the government.</p> <p>I2UK4006B No relation found</p>

	<p>I2UK4007B Being a citizen, we come across various works that are to be conducted under supervision of the government. Such as issuing citizenship certificate, passport and driving license.</p> <p>I2UK4008B No relation found</p> <p>I2UK4009B No relation found</p> <p>I2UK4010B No relation found</p> <p>I2UK4011M When going out for fieldtrips related to my studies, we have to interact with the government officials sometimes.</p> <p>I2UK4012M To gain information regarding particular subjects. Especially when travelling during field trips.</p> <p>I2UK4013M No relation found</p> <p>I2UK4014M Official work</p> <p>I2UK4015M No relation found</p> <p>I2UK4016M I did my thesis in Bachelor degree with the local government.</p> <p>I2UK4017M No relation found</p> <p>I2UK4018M No relation found</p> <p>I2UK4019M To get information regarding study and practical needed for study.</p> <p>I2UK4020M The relation with the government is limited. Sometimes we have contact with government during a field trip. Next, we are related to the government in order to receive official documents, like driving license.</p>
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Business	<p>I2UK3050P There is not a strong relationship here. Opportunities which rise within both separate organisations are hard and difficult to combine. There are definitely opportunities for innovations together, but collaboration and synergy hard to realise. Some students do internship at business organisations, also fundraising for research might occur. Both situations are rare and happens on a minimal frequency.</p> <p>I2UK3051A No relation found.</p> <p>I2UK3052P Involved in consulting work. There is also a business relation related to education activities.</p> <p>I2UK2053P The KU is a private school, so there is a relation to business and commercialization in general. The training and education of business staff might be relevant as well.</p> <p>I2UK3054P 1: Revenue generation. 2: Training support. 3: Consulting services. 4: Global School Partnership Program. 5: Assignments.</p> <p>I2UK4001M I have done an internship at a bank. Visit banks and shops as a customer.</p> <p>I2UK4002B As a daughter of a businessman, I am concerned about the plans, activities and progress of my daddy's business. I am also a consumer, so I am much related with business.</p> <p>I2UK4003B No relation found</p> <p>I2UK4004B No relation found</p> <p>I2UK4005B Main contact with business, as being a customer.</p> <p>I2UK4006B No relation found</p> <p>I2UK4007B No relation found</p> <p>I2UK4008B No relation found</p>
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	<p>I2UK4009B No relation found</p> <p>I2UK4010B No relation found</p> <p>I2UK4011M While dealing with money matters related to my study, we have to interact with the bank officials. Also, sometimes while conducting research work during field trips we interact as well.</p> <p>I2UK4017M No relation found</p> <p>I2UK4012M Payment of fees. When dealing with money matters. We needed to study business especially during field trips. Hereby, observation is included as well.</p> <p>I2UK4013M I worked as one of the team members for a BPO business house.</p> <p>I2UK4014M To receive services and also as a consumer.</p> <p>I2UK4015M No relation found</p> <p>I2UK4016M No relation found</p> <p>I2UK4018M I did an internship for two months.</p> <p>I2UK4019M While dealing with money matters, related to shopping and paying bills. Also a relationship can be found with our study of local business in field trips.</p> <p>I2UK4020M The relation with business is also limited. I did an internship with a local company, which was interesting. Of course I am a customer as well.</p>
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Civic Society	<p>I2UK3050P The stimulation of the society is one of the goals of the KU. As part of their overall strategy the <i>corporate social responsibility goals are important for the university. As part of this mission the KU is involved in: blood donation projects, providing water taps in rural areas, providing streetlights around the complex, scholarships for talented people it provides electricity facilities to the direct area and also realises water facilities. One of the objectives include the aim to raise awareness of importance via its LCSI contacts and network.</i></p> <p>I2UK3051A It is considered as a very important relationship. As a university we need to meet the expectations of society. It is a close relationship. Therefore we do local research, many field trips and students conduct internships within the society as well.</p> <p>I2UK3052P The university is an important part of the local society. They are involved in policy making. As a professor I am also involved in consulting activities within this organisation.</p> <p>I2UK2053P There is a direct and indirect relationship with the society. The direct contact focuses on field research, field work programs and conducting multiple programs.</p> <p>I2UK3054P Internships, field work and research. Students go quite often development areas. Training programs.</p> <p>I2UK4001M Community group as a member. Member of human rights society. Rotary club member and youth initiative group-member.</p> <p>I2UK4002B I get involved in group discussions, programs and meetings conducted by my locality. I also participate in development work.</p> <p>I2UK4003B No relation found</p> <p>I2UK4004B I have been involved in an organisation which helps prisoners children to life and study. As a KU student we help them by teaching them.</p> <p>I2UK4005B I am a member of a youth club which is contributing to the environmental preservation of the society.</p> <p>I2UK4006B No relation found</p>
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	<p>I2UK4007B No relation found</p> <p>I2UK4008B As a student of community development, I have been volunteering in a non-profit organisation names “Engage”. Which helps voluntarily disabled and youth people.</p> <p>I2UK4009B No relation found</p> <p>I2UK4010B I often visit these organisations for volunteering. I volunteer there and spend my time reading books for blind people.</p> <p>I2UK4011M Again, while conducting research in field trips, we have to talk to the people of local organisations, like: woman groups, “Maiti Nepal” and so on.</p> <p>I2UK4012M Contacting particular organisations for work activities for research, questionnaires and surveys. A few which I had contact with include; woman’s group, cooperatives and “Maiti Nepal” officers.</p> <p>I2UK4013M Work as a member of a civil society that works for woman education and empowerment.</p> <p>I2UK4014M We discuss social issues with these kind of groups.</p> <p>I2UK4015M Research and internship relationship.</p> <p>I2UK4016M I have worked as a research officer.</p> <p>I2UK4017M Internship in program co-ordinator.</p> <p>I2UK4018M No relation found.</p> <p>I2UK4019M Organisations like: “Maiti Nepal”, woman societies, Peace Rehabilitation Centre etc. for necessary study.</p> <p>I2UK4020M During field trips we have quite often contact with these organisations. I am also active as a group-member of a youth initiative club.</p>
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3.1 Can you describe how you, or how the Kathmandu University in general, is involved in the stimulation or research about local economic development?

I2UK3050P

The stimulation of the society is one of the goals of the KU. As part of their overall strategy the corporate social responsibility goals are important for the university. As part of this mission the KU is involved in: blood donation projects, providing water taps in rural areas, providing streetlights around the complex, scholarships for talented people it provides electricity facilities to the direct area, is involved in solar energy projects, starts cook programs and also realises water facilities. One of the objectives include the aim to raise awareness of importance via its LCSI contacts and network. Therefore, the KU has an experience learning program to support individuals, doctor learning programs and research projects. Learning from each other is an important goal.

Within the university, the KU provides job opportunities. Since they belief it reduces internal conflicts, 60% of the staff on all levels can be considered as local area citizen. The KU provides training and skills to staff and society members, when specific skills or knowledge is needed.

I2UK3051A

- 1: The dean of the school produced a 10 year strategic plan. The plan includes a couple of important local economic development vision.
- 2: Research work and collaborations within the society.
- 3: Funding opportunities and scholarships.
- 4: Creation of databases for knowledge sharing routines.
- 5: The creation of an alumni network. The old students have sometimes important functions within the business, government or civic society organisations. The network can help to influence other institutions and get things done.

I2UK3052P

Training staff. Providing of essential language courses. Skills and knowledge development trough training.

I2UK2053P

The stimulation of local economic development and CSR are relevant parts of the university's strategic plans and missions. The stimulation occurs by the providing and raising of local resources.

I2UK3054P

Two perspectives:

- 1: Policies are not significant for the country as a whole and maybe not even for specific areas. Volume is an important issue. Sometimes only two students go back to their much larger society, whereby the impact is not significant. The Kathmandu University is a small university in a large country.
- 2: The other perspective can focus on the high status which the Kathmandu University has in society. It has an obligation to stimulate local economic development. The university should use its knowledge and economic strengths in favour of the local civic society and its economy. The accessibility outside the Kathmandu valley is an issue though.

I2UK4001M

Via lectures and research work, which are frequently carried out to help the local community (eg. teaching program in community school or via household research, related to the health infrastructure management).

I2UK4002B

KU provides jobs to the people from around its location. In its local environment you will find more and more hotels and grocery stores. By attracting and employing people, the university stimulates the area and helps in economic development.

I2UK4003B

As we have learned a lot of things at the university. We develop a skill level and a certain quality on how we can “give” to the society through knowledge. Generating income to balance life is important, but it's more important how our economy can develop towards a sustainable environment.

I2UK4004B

Actually, I don't have much idea about this. But we are studying community economic development.

I2UK4005B

KU has been providing jobs for the local people living around the university. And is also providing scholarships to their staff's children.

I2UK4006B

I am a student in KU, currently involved in a research about work placement in Nepal.

I2UK4007B

I have seen the research conducted by mechanical engineering group, called WAPIC (Water, Pasteurizations through Improved Cooking). Those devices were installed in rural villages of Kavre district. Villages were benefitted by modern cooking systems.

I2UK4008B

We have a subject related to community economic development in which we also study and learn about local and national economy development.

I2UK4009B

KU is giving us adequate knowledge about local economic development programme, by giving lectures, discussions, information and knowledge transfer on the related topics. Also, community work is an essential part of the study program.

I2UK4011M

KU is well-known for the quality of education. So the students are taken to the field to observe things at the local society. So students are contributing from their side to local economic development. In general, KU is creating manpower, which will eventually contribute to the quality of society.

I2UK4012M

From a student perspective, KU has been able to provide better education facilities. KU has a good learning environment, there is no disruption regarding teaching. No problems of students using discrimination and nepotism. KU has allowed local societies and committees to strive for change. Much more inside, as times are changing. They are involved in youth empowerment.

I2UK4013M

KU has started Bachelor in Economics and also a Bachelor in community development. From this starting point local development initiatives can be started.

I2UK4014M

A university can be involved in local economic development by initiating different courses, like: community development, bachelor in economics and different researches.

I2UK4015M

Kathmandu University and me as a student can conduct research and also carry out short projects and community internships to promote local communities.

I2UK4016M

The university is providing the course of economy and development to the students are stimulated to apply it in their daily life.

I2UK4017M

The theory thought in the university is being applied practically.

I2UK4018M

KU is involved in the stimulation or research about local economic development by introducing new and better courses, like: community development.

I2UK4019M

Education level has been raised and more qualitative education is produced. Also, local people are getting jobs, which certainly has raised their standard of living.

I2UK4020M

The university stimulates students to get involved in local economic development. They give specific lectures, we do field trips and internships.

3.3 What else can the Kathmandu University do to stimulate local economic development?**I2UK3050P**

- 1: The KU is active in the knowledge or educational sector. So, protection of intellectual property through patterns and licenses are fundamentals.
- 2: Cooperation with business.
- 3: Invest in real estate. There are enormous opportunities to make money on estate, whereby the prices are expected to raise dramatically. The generated money can be used for the local economic development stimulation.
- 4: Research & Development. The university should invest in innovation and development. It needs creative ideas to bring their action to a higher level.
- 5: The KU needs a broader vision on its markets. Globalisation and internationalization are relevant developments in the society. The KU needs this focus to stimulate local development.
- 6: Vision needs to get changed into action. The University should take a leading role in the process.

I2UK3051A

Student fees are high. The university can search for alternative funding opportunities, in order to reduce study costs. This will give more students the opportunity to go to the university. The university can also focus on book programs and scholarships.

I2UK3052P

The students are closely related to their own local society group. It is fundamental that they are trained to go back to these social groups, in order to bring rights and awareness in society. Think about human development and cultural development.

I2UK2053P

That depends on the specializations and specific knowledge within different schools. The school of education has for example a focus on female projects, whereas the school of management might focus on general economic issues or the tourist sector.

I2UK3054P

To get a visible impact the Kathmandu University needs volume. It should work on a larger scale to make any impact to the society or the economy. Collaboration with other universities might be an option.

Since a high amount of NGOs, foundations and other organisations base in Nepal, they seem to have an important role. A collaboration with these kind of organisations might be relevant as well. Labour migration towards Kathmandu, or even outside the country, is an issue to focus on as well.

I2UK4001M

KU can initiate a youth graduates of its own university, to carry out their work skill in the rural area at least for six months as a part of the course.

I2UK4002B

Provide scholarships and grants to students.

Invest in development works.

I2UK4003B

University can establish alliances with organisations which would have place for students who pass out. It could provide vocational training in how to initiate for any kind of economic development programme.

I2UK4004B

I think KU should provide practical education which actually can help to develop the local economy.

I2UK4005B

KU can organize awareness programs for the people, so that they will also be aware and participate in the creation of an environment where people want to life and want to help to develop the economy.

I2UK4006B

It can provide scholarships for students who need that, in order to create jobs. Via the creation of jobs it can stimulate the local environment and its economy.

I2UK4007B

Tie up with business houses and corporate offices to implement the findings of research projects.

I2UK4008B

More related courses.

I2UK4009B

KU can help us to join in the local economic development activities, by practically, and helping us to make bonds with them locally and giving help in finding different connections.

I2UK4011M

It can contribute by doing its job and focus even more on the quality of education. It can also join an council along the staff members and students. These task groups will help the local people with their needs and stimulate local economic development.

I2UK4012M

First, contribute within its current activities, i.e. focus more on education rather than socio-political activities. Second, Ku can provide more opportunities for students to work at a local level placement in either community or social organisations. (to work hands-on with local communities.

I2UK4013M

Ku has the ability of producing more entrepreneurs at the local level.

I2UK4014M

- 1: Provide training
- 2: Technology transfer

I2UK4015M

Provide job opportunities to the local people and scholarships to the students of the local community.

I2UK4016M

Provide more courses on local economic development and also scholarship to the deserving candidate.

I2UK4017M

Prioritize more on local economic development + education and provide job opportunities.

I2UK4018M

KU can conduct many research with the help of its students and other faculties in order to stimulate local economic development.

I2UK4019M

More projects can be located at local areas. Stimulate and start more projects for infrastructure development in the local environment.

I2UK4020M

I think it is important to focus on the needs of the society. Listening to the members of a group will help to determine what their needs are. The interaction with the group will help to work towards a common goal, in terms of local economic development. Maybe scholarships and more research as well.

3.4 How can the interaction between a university and the local society contribute to local economic development?

I2UK3050P

To be successful the university needs support from the local society. The dialogue between both institutions helps the university to develop its ideas and bring this into practise. The role of the local society is fundamentally important in order to implement the ideas generated within the university. Also measurement and monitoring of development and innovations are impossible without this close interaction.

I2UK3051A

This is seen as an important relationship. Students, professors and the university as a whole is part of that society. We have to meet expectations and need to adapt to social rules and norms.

I2UK2053P

The university has a leadership role and should negotiate for resources. Money and the availability of resources is an issue within each institution. The university should focus on a sustainability relationship between both. The interaction between the two is the base for local economic development stimulation. The university is also a hub for business relationships, which might be relevant for the society as well.

I2UK3054P

This is a good and very relevant question, which most universities can not answer right now. The contribution might be found in skill promotion, lectures or education in general. In my perspective it is important and crucial to meet the society's needs, in order to be successful.

I2UK4001M

By mitigating with the local community need with the help of research projects. Ultimately help to bring development activities.

I2UK4002B

An interaction is the main way of initiating a work or action. Both parties can discuss the possibilities and limitations of the resources available and the way they can be used.

I2UK4003B

Universities produce capable and skilled manpower required for society. Thus the relation between university and local society is linked to each other. They both are the counterpart for any kind of development activities.

I2UK4004B

The proper relationship between the university and local society can contribute to local economic development. KU should fulfil the social obligations towards the society.

I2UK4005B

The interaction can help to educate the local people and inform them more about the relevance of economic development.

I2UK4007B

Researches conducted in university should be applied in local society. Some of their findings might be beneficial for people. For example: I have seen the research conducted by mechanical engineering group, called WAPIC (Water, Pasteurizations through Improved Cooking. Those devices were installed in rural villages of Kavre district . Villages were benefitted by modern cooking systems. We contributed by the increase of people their living standard.

I2UK4008B

I think they are directly and indirectly related. Whichever field the student is studying or specialising, he/she has to work for the country, the economy and the local people.

I2UK4009B

Most important is, and beneficial would be that, as we stay in the bounded areas with full facilities but locally we can communicate with them, make interactions, knowing them better and understand their lifestyles, understand needs, wants and even their desires. By this, we can fulfil their requirements as much as possible to contribute in developmental activities.

I2UK4011M

The university can tie up with the local institutions and people and find out about their needs. Accordingly, different activities can be carried out on the basis of a need-based approach.

I2UK4012M

First, because KU creates fresh graduates with theoretical knowledge. These graduates can have thesis skills by working with the local community. Second, establishment of policies regarding collaboration with variations of local bodies and organisations is required. So that both institutions can contribute and learn from each other.

I2UK4013M

- 1: By knowledge sharing
- 2: KU and local level partnership
- 3: Technology transfer
- 4: Research by KU at local level.

I2UK4014M

When the university is able to transfer qualitative knowledge it will eventually help in local economic development.

I2UK4015M

When employment is provided to local people, their economic standard is improved, which can strengthen the social economy as well.

I2UK4016M

By conducting research and finding out the problems existing in the certain areas the university can uplift the socio economic condition of the area.

I2UK4017M

The research and findings helps in developing socio-economic conditions of the local society.

I2UK4018M

The interaction between a university and the local society can contribute to local economic development through: knowledge sharing and conducting seminars.

I2UK4019M

The university can join a club or any council to deal with local level problems. The determination of problems and finding solutions is important. Next, the university can implement its students in various fields, so the students can learn from it. Society will benefit from it.

I2UK4020M

See question 3.2.

Disclaimer

This appendix presents the main conclusions, perspectives and personal visions on the questions for every participant. We did not aim to outline a perfect representation of the discussions held, but summarized the important points for the research only. The limitations as described in the report are applicable. Every effort has been made to ensure that this information is accurate and of a high standard. Confidentially, anonymity, respect to the Kathmandu University and respect to people, culture and their religion are the fundamental assumptions in this research. Readers are requested to respect these assumptions at all time and report risks of compromise in this promise.

Appendix XII. Interview statement Group E

2.3 Can you explain the relation between you and the university?

	Please explain your relationship:
University	<p>E1BS2001 No relation found.</p> <p>E1BH1002 Not much relation based on the nature of the products. The handicraft products are not so much related to the activities of a university. Nevertheless, some people studying as guides or tourism related studies come for training and internships to the company. The company expects it people to be skilful and practical orientated, instead of theory based.</p> <p>E1BF1003 Business related. Supplying materials to universities. Furthermore, we offer internships to engineering students, in order to get the skilled people.</p> <p>E1GO3004 No relation found.</p> <p>E1GO3005 Kathmandu University is the very best university among other universities in Nepal. Its teaching method, exam period and research is very timely and best. Regularity is based on it. So I am pleased to have studied at that university.</p> <p>E1GO3006 No relation found.</p> <p>E1GO3007 Involved in the university as a former student in bachelors of Geography.</p> <p>E1SS1508 I have worked for the university. Now I am active and still involved via my foundation. I will explain my contact with different institutions. I had contact with the government, because you simply cannot ignore them. They are an official institution which requires contact. You have to inform them and include them in the activities around the local communities. The main reason is, you do not want the government feels ignored, hereafter they might give the organisation a hard time. For example: If you want to import the moonlight solar lamp, the government was involved in the AEPC. (Alternative energy promotion centre). See: www.aepc.gov.np. They needed to give permission so we could import the Moonlight solar lamp and we could introduce it in the local communities.</p> <p>Advice: Please contact the SNV. They cooperate with business and the government. They have developed a vision and mission how the local communities can be stimulated in the Neplai context. The SNV is located next to the Dutch embassy, nearby the Prithvi Cafe..</p>

	<p>Regarding business contacts. These occurred at a minimal level. I had contact with a few companies, specialised in solar energy in Nepal. They are all build on the funding opportunities and subsidies given on solar products and alternative electrical solutions.</p> <p>Furthermore, It might be interesting to request the KU statutes. As far I have concluded. The prime minister of Nepal has the final responsibility of the KU.</p> <p>Finally, the contacts with the civic society. When I was active for the KU, I was connected to the CEPP project. (Community education pilot project) School of engineers, Dulikhel. Hereby, I had to prepare the students to visit the local communities. In Dulikhel I have worked with students, engineers and community development workers. In my perspective, the students needs to know and understand the structures and institutions in Nepal , before they can successfully work with the local communities. The most successful communities have informal orientated leaders and are mostly established by themselves. Also, I think that students need to be critical and should be teach how to think holistic.</p> <p>From my foundation we work with local community only. All project are established and initiated by the local society. Also the evaluation is an community internal process, via: user groups or community groups.</p> <p>E1SS2009 Personally I have limited contact with the Kathmandu University. Our foundation however has contact with the university via one of the other board members. Therefore we know some people of the university. As an abroad foundation we need our KU contacts to keep in touch for doing help in Nepal with our fieldwork, where we can participate in advise of development and agriculture. Also the Nepali culture is much more different as the western culture, this makes that working together is a complementary for the succeed of the projects as a foreign foundation</p> <p>E1BO1010 Mainly business contact, but also via guest lecturers or internships. Since I am active as an impact investment entrepreneur, we search, develop and monitor projects. Its not giving, its not taking, its venturing together for results beyond profit. Impact investing is combining discipline of venture capital and results of philanthropy. “We think like Prahalad - Eradicating poverty through profits”. We are an asset-manager for the Western investors in Nepal, whereby our mission includes: to connect investors to Nepali entrepreneurs and accelerate growth for both financial results and social impact. To do so, we have a specialised team both in the Netherlands as in Nepal. My business focuses on entrepreneur development, and that is where I need the university for. It is a search for good business man, who are reliable and responsible. Currently it is difficult to get ideas and plans investment ready, so we need people who can realise and implement these initiatives.</p> <p>E1BH2011 Business relationship, through buy/sell connection. Further, a very limited relationship. No internships, only very specific students focused on my business goals.</p>
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	<p>E1SE1012 1) Research collaboration. 2) Advising university and consulting professors. 3) Internships.</p> <p>E1SE3013 We work together on research project, field trips of the university and students come to the organisation for internship. Our focus is on educational stimulation, so the university is an important element in this process.</p> <p>E1GO4014 No relationship found.</p> <p>E1GO4015 No relationship found.</p> <p>E1GP3016 No relationship found.</p> <p>E1BB1017 No relationship found.</p> <p>E1BT1018 Former bachelor student, focusing on management/ commerce.</p> <p>E1BU2019 Ex-student.</p> <p>E1CV6020 As a civic society organisation we focus on the quality and stimulation of the local civic society. We have quite often contact with the university, whereby they send students for internships or doing field research.</p> <p>E1CL3021 I am a former professor and ex management at a university. Since I have problems with my leg and health situation I am living here unemployed. Furthermore, I have got a certificate level of intermediate in law.</p> <p>E1CV6022 We work together with the university on local economic development and educational issues.</p>
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3.1 Can you describe how you are involved in the stimulation of local economic development?

E1BS2001

No relation found. No stimulation.

E1BH1002

We bring in raw materials, like: copper, brass, wood, Pashmina wool, silver, gold, stones and gems from the local society to the broader markets. Stimulation via providing jobs and employment to local people. About 70% of the employees is local.

E1BF1003

Involved in local economic development through the creation of jobs and job opportunities. About 70% of the employees belong to the local community, Lalitpur to be specific. The rest of the employees come from areas other than Lalitpur. We also have employees working in management and also production facilities coming from abroad, especially India and Bangladesh.

E1GO3004

I am not so closely involved in the stimulation of local economic development.

E1GO3005

In reality this university is involved in local economic development. It is closely involved in the development of multiple technologies.

E1GO3006

- 1: By collecting funds from different government organisations.
- 2: By collection funds from local people.
- 3: Physical involvement in development work.
- 4: By giving common and instructions for development work.
- 5: Bringing people from authorized organisations to investigate the development work.
- 6: Focus on the quality of different organisations.

E1GO3007

No relation found.

E1SS1408

When I was working at the Kathmandu University I was connected to the CEPP project. (Community education pilot project) School of engineers, Dulikhel. I had to prepare the students and engineers before they could actually start working with the local communities. In Dulikhel I have worked mainly with the engineers, in Hattiban the main focus was on the interaction with students. I found it difficult that professors in Dulikhel were not cooperative and willing to join the students to the rural areas to support them in their work. The difference between school is enormous, since the dean, professors and lecturers at the school of arts (SOA) are much more able and willing to support and join the students. In my perspective, the students need to know and understand the structures and institutions in Nepal, before they can work with the local communities successfully. The most successful communities have informal orientated leaders and are mostly established by themselves. Also, I think that students need to be critical and should be taught how to think holistic. This is an important element where the university can contribute.

In general, I think the students and lecturers are not critical enough. Students write lengthy assignments, but are not able enough to produce an own vision. Copying the vision of colleagues or the teacher is quite common. In the feedback to the students it is notable that when a student fails his/her assignment it is uncommon to explain why. In my perspective this is caused by the system of education and growing children in general. It should be the responsibility of KU students, staff and

lecturers. They need to be more critical towards their environment and system. It is important that the KU contribute to knowledge of history, current systems and future opportunities. Especially the awareness of these elements within their students, but also rural areas is in my perspective fundamental.

E1SS2009

With better understanding of the Nepali cultures and working together, we can improve things together with our mutual knowledge.

E1BO1010

My company is investing, and realise investments, in local opportunities, business and initiatives. We support local economic development through growth potential and capital investments.

E1BH2011

Local employment is about 70%, the other 30% of the staff comes from other areas or abroad. We do traditional preservation.

E1SE1012

Our organisation focuses on education, which leads to local economic development. We do so through education at the community level. Furthermore, we try to be a bridge between different levels, since we also have intensive contact at the central level. We participate through campaigns, quality development and monitoring principles.

Fundamental assumptions in my organisation include: education is a fundamental human right. It has been firmly proven to be an enabler in overcoming poverty and strengthening civic society.

E1SE3013

As said, we focus on the stimulation of the local society and the economy as a whole based on the fundamental assumption that education is a human right and very important.

E1GO4014

In terms of local development I give technological and technical suggestions and solutions.

E1GO4015

- 1: I have made land available for local development.
- 2: I have made roads and infrastructure available for local development.
- 3: Increased town planning, by participation. In order to stimulate the local community.

E1GP3016

See question 3.2

E1BB1017

By volunteering and financial support.

E1BT1018

By being involved in the company I will contribute to local economic development through the creation of employment opportunities. Hundred percent of the employees working in this company are local.

E1BU2019

To promote local economic development, as a company manager, I pay taxes. It is because of the company only that I have been able to provide employment opportunities to the local. About 50% of the total employees are local. CSR is an important value in the organisation, whereby we do charity projects for orphanages.

E1CV6020

See question 3.2.

E1CL3021

Developing infrastructure for schools, which is very important in these rural areas. I am also involved in various social clubs.

E1CV6022

With our organisation we aim to help local society to the next level, based on the development of educational issues.

3.2 What should the Kathmandu University do to stimulate local economic development?
E1BS2001

Increase the number of institutes. Make more space for students and their study. In the current situation education is too expensive.

E1BH1002

The function of the local government is more important in this situation. They need depreciation of taxes and customs, in order to stimulate the company's export activities. The university should have a passive role in the local economic development and let the job done by the government. The main task for a university is education and training of people. The university must provide skilled manpower to the local society.

E1GO3004

- 1: KU should interaction with local participants about their problem.
- 2: KU activities should focus on educational movements.
- 3: KU policies should be cheap in education.

E1GO3005

Kathmandu University needs to be involved in local economic development by offering the best quality of education, manage new employment opportunities and interact with local society.

E1GO3006

- 1: by providing the technical manpower and resources from the university.
- 2: By providing certain funds, if possible.
- 3: By providing manpower to investigate the processes of work.

E1GO3007

No relation found.

E1SS1208

Educate students to be critical citizens with their own opinion. See description above 3.1. and 3.3. Each student would or could bring their own socialization map. This helps to work and to contribute to local economic development and is also effectively stimulation the local communities

E1SS2009

I can imagine that the KU can set up a program where they inform local schools of the possibilities of economic development.

E1BO1010

From the perspective of my responsible investment organisation, the KU should primarily focus on the creation of more and better entrepreneurial programs. The focus on Small and Medium-sized enterprises is not there at all. Students do have important skills and knowledge, but are not pragmatic and do not have the ability to create and implement. I am convinced that the valuable traditional family based entrepreneurs are not able to use the university's knowledgebase. This society has a need for more entrepreneurs, qualitative lawyers, efficient government administrators and so on.

E1BH2011

Over think their current strategy.

E1SE1012

I am a former KU student. They should mobilize students to get involved. They can do this through qualitative education, field researches and collaborations. The KU is a good university with intensive courses. The disadvantage of the last stage might be the thesis. Students active in the field needs to go back to the university for their final stage. Some might lose contact.

Further points of attention: infrastructure should be developed and scholarships might help the development of a local economy.

E1SE3013

In my perspective the KU is very active in the field of local economic development. Although people get assistant, people are getting better educated and the standard of living certainly rises, the KU should focus on the fundamental elements. The quality of education is fundamental, furthermore they should focus on long-term projects like: development of infrastructure, the stimulation of local business and so on.

E1GO4014

The university has given education opportunities to different levels of students. Hereby, the KU should focus on different social classes, social income, economic classes and castes. They should develop opportunities for everyone.

E1GO4015

The university has been assisting in public awareness, by providing qualitative education to the students and society. For the economically weak students it has been providing scholarship opportunities as well.

E1GP3016

The most of the areas in Nepal are underdeveloped and can be seen as rural areas. The geographical composition makes it difficult to carry out development works. For the overall economic development of Nepal, everything should be managed and developed, including: roads, sewer management, health posts in rural areas and electricity supply. The university should select qualified teachers and professors and manage them in an efficient manner.

60-70% of the total population of Nepal are uneducated and they don't have the awareness that the university can help them or even exists. For the quality of education qualified staff should be provided by all the educational institutions and should be able to sustain the quality.

E1BB1017

The public should be aware of the economic activities.

E1BT1018

The KU can stimulate, by providing quality education to the students. Knowledge and education in general will stimulate the entire Nepalese economy.

E1BU2019

Universities produces capable and potential human recourses. HR resources are the base for economic development.

E1CV6020

From my perspective, the KU does a great job by education students and focusing on the interaction with civic society. Definitely an essential element in local economic development. Thereby, I think the interactions with other institutions, mainly profit orientated organisations, are neglected. To help the local economy and Nepal as a whole, we need a better balance between these institutions.

E1CL3021

The government alone will never be able to realise a significant better situation. Everyone need intellectual capabilities. The university is important to provide this to more people and help other organisations, like the government, in their duties.

E1CV6022

They should focus even more on the interaction with the local civic society. Furthermore, the government can help as well. The KU might be able to use its power to negotiate and collaborate with them.

3.3 How can the interaction between a university and the local society contribute to local economic development?

E1BS2001

Employment to the locals.

E1BH1002

There is no direct impact. But there is an indirect relationship.

E1BF1003

University its main purpose is education. The distribution of education trough the university itself helps the society and the economy as a whole.

E1GO3004

Every facility program should be at least three month compulsory to teach remote areas and focus on remote problems.

E1GO3005

It is necessary to develop employment opportunities. The university can start this development through its own policies and the interaction with society.

E1GO3006

- 1: By creating the manpower to give proper training.
- 2: By giving the way and resources to people.
- 3: By giving skilful training to people.
- 4: By giving advice of micro business.

E1GO3007

The university produces manpower which can stimulate new technology aspects to: agriculture sectors, industrial sectors, water resource industry, tourist sector and policy making.

E1SS1108

I believe that when students and local community members are educated or informed and especially are aware of the local environment, they can use these skills in the local communities.

"To improve the quality of life in rural communities, through community services, community education and business incubation"... Ms. [REDACTED] highlighted on the participatory approach and how to generate click with the community members. Mr. [REDACTED] highlighted on the importance of community service and shared his previous experience gained during community education tour to engineering first year students who are going in a community education tour next semester, April 2013."

Furthermore they mentioned: "To become a world class university devoted to bringing knowledge and Technology to the service of Mankind". The missing element for me would include the difficulties with the implementation. How are they going to realise their plans?

E1SS2009

If the local society knows about the possibilities of change, awareness they will possible ask the university for projects. Students should be for a long term working in local societies. Make local societies aware of the problems (as pollution, waste etc) which will effect there children.

Together with students this will lead to a change. Good example will be followed.

E1BO1010

Limited developed concept in Nepal. In my perspective a more western developed concept. The society need obviously support organisations. In Kathmandu and the valley there are useful organisations. Outside the valley there must be a lack of help.

E1SE1012

In my perspective there are many interactions between both. The university needs to listen to the needs of the society, in order to get accepted or be successful as an organisation.

E1SE3013

The university is part of the society where it operates in. For the local society the university provides opportunities in terms of: contacts, network, knowledge, jobs and so on.

E1GO4014

The intellectual manpower of the university should be able to give different suggestions on different levels of the community. The university should also be responsible for disbursing budgets for different levels and aspects in society. The university should also give incentives for the local youths and educate them.

E1GO4015

The university could filter out the capacities within the local communities, to attract new potentials. Thereby they can help the overall local economic development.

The recourses available within the university, especially the intellectual recourses, should be utilized by the full potential to help the stimulation of local development.

E1GP3016

For local economic development not only the interaction between the university and the community is not sufficient. There should also be interactions with the government. For this matter the government should be able to raise and provide payments, like salary, to fulfil minimum daily requirements for the employees of the educational institutions. Because of this reason they can provide quality education and hence help local economic development.

E1BB1017

The local community will be able to get information relating to economic activities. This will help with the economic development at the local level.

E1BT1018

I think that the interaction of the university and the local community is very less, especially in the government universities. Their main objective is to provide education to the students.

E1BU2019

Actually, the theoretical education is currently the main focus of the universities. While practical, commercial and vocational trainings should be provided for more development. The university should be able to produce human resources in such a manner that it meets the demands.

E1CV6020

Both institutions are depended from each other. The one might look for acceptance in society or opportunities to implement, whereas the other might need stimulations in terms of knowledge, resources or funding opportunities.

E1CL3021

Not all are experts in every field. So the recourses from both organisations can be maximalist in cooperation with another.

E1CV6022

Synergy is the key word here I guess. If these two organisations are able to develop their collaborations and interactions it would be beneficial for both. To be successful in the environment they operate in, they need each other. The search for acceptance might be important for the university. Opportunities are an important benefit for the local society.

Disclaimer

This appendix presents the main conclusions, perspectives and personal visions on the questions for every participant. We did not aim to outline a perfect representation of the discussions held, but summarized the important points for the research only. The limitations as described in the report are applicable. Every effort has been made to ensure that this information is accurate and of a high standard. Confidentially, anonymity, respect to the Kathmandu University and respect to people, culture and their religion are the fundamental assumptions in this research. Readers are requested to respect these assumptions at all time and report risks of compromise in this promise.

Appendix XIII. Additional interview report

As an addition the structured interviews held with internal university and external university institutions or individuals, we have conducted formal interviews and informal conversations. This appendix gives an overview of the highlights and useful information of these dialogues.

E1SM1001UI

- NGO organisation, with the philosophy: “They believe secure, productive and just societies emerge when the private, public, and civil society sectors are able to interact with accountability, inclusive participation and mechanisms for peaceful change”.
- Actors: Society members, donors, partners, governments and internal team.
- Actively working on a “system approach”, which includes:



- These actors are: the Private Sector/business, the Public Sector/government and Civil Society/voluntary civic organisations are critical institutions, which need to be involved, in order to pursue their mission. Individuals, institutions and organisations within these three sectors need to be strong, accountable and participatory. Beyond that, they need to be able to interact effectively with one another.
- A bottom-up approach is very common in Nepal. Therefore, interaction with civil society is very often the start of any procedure. A top-down approach is very uncommon and only useful in the creation of awareness in society.

E1SU2003UI

- Working in a monitoring and coordination unit, sent on a mission by the Executive office.
Focus: education sector.
- Main focus of the organisation is the interaction and conversation with government institutions. That's what they do.
Other organisations like UNICEF have other focuses, like: NGOs, civil society etc.
- "Government organisations are not sexy"
Therefore, it is much more difficult to sell this concept, and to find donors/partners.
Budgets are much lower than "sexy" organisations, like UNICEF.

I2UK3080UI

- Can you describe how you, or how the Kathmandu University in general, is involved in the stimulation or research about local economic development?
1. There are many programs under Kathmandu university schools. Arts particularly like development studies and bachelor in community development where the students are involved in research for not only local economic development but other community and development issues . Besides the program we have various projects and other PhD research involved in similar topics.
- What else can the Kathmandu University do to stimulate local economic development?
2. I Think KU should organize more field based programs where students and faculty in collaboration with other organisations can stimulate or contribute more towards local economic development

E1SP6081UI

- I am working for a non-profit charity organisation focusing on development for local communities. It is affiliated with government authorities and working for education, health and research issues among Nepal local communities.
- I am graduated at a UK university, hereafter I came back to my country of origin Nepal. To finance the activities of the charity organisation, we had a lot of issues to tackle. The organisation was not able to get enough funding and sponsorships to conduct their activities. Therefore, we need to focus on commercial sector.
I have started a travel agency specialised in trekking within Nepal. The generated cash flows can be used to cover agency costs, secure living expenses, but most of all provide a basis for a stable income for the charity organisation. This is the way I help the local people and stimulate local economic development.

Appendix XIV. Analysis of the relation between the presence of the creative class and economic status

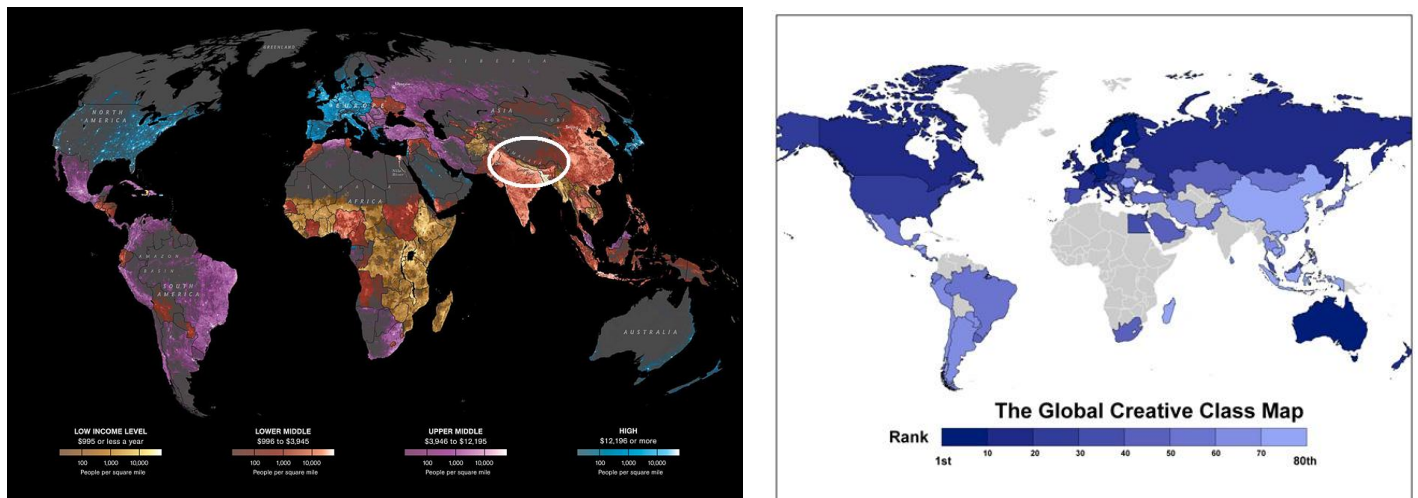


Figure: Dispersion of population, by economic status versus the presence of creative class.

The two maps above show a relation to the global areas where one can designate a high or upper-middle economic status and the presence of the creative class. The presence of this class is based on the quality and quantity of a country's workforce in high-skill, high wage, jobs suitable for this class, including the fields of science, engineering, technology, business, management, finance, architecture, arts, entertainment, culture, law, media, healthcare and education (The Atlantic Monthly Group, 2014). The global areas with the highest share of creative class members in society include: Singapore (47.3 percent), The Netherlands (46.3 percent), Switzerland (44.8 percent), Australia (44.5 percent) Sweden (43.9 percent). Within the BRIC environment we distinguish Russia (38.6 percent) and China (7,4%).

Economic status can be determined by different indicators. The map above is partly based on Economic freedom. Here we distinguish: Hong Kong, Singapore, Australia, Switzerland and New Zealand as top five economic free countries (Heritage, Index of economic freedom 2014). When we focus on the high level economic status areas determined by National Geographic Magazine, 2014, and shown above, we see significant similarities between the creative class areas and de high economic status areas. Therefore, we conclude and assume an important relationship between the presence of this class and the economic status of an environment.

Source: World Bank Data, 2014, National Geographic Magazine, 2014, Heritage and The Atlantic Monthly Group

Appendix XV. The position of the civic university within a quadrilateral framework.

Civic university a state, business or LCSI orientation?

We have asked a number of universities in the United Kingdom, which presents itself actively as a civic university, about their vision on civic universities actors. Hereby, the interview focused on the determination of the most important actor and the underlying motives. The interviewee is asked to produce a top three actors, important for this concept, and the significance of specific relations. Interviews were held with senior management and specialised senior professors only. The results are shown below:

E1UM1001

“These are very complex questions, and they are fundamentally affected by the different financial and regulatory systems for Higher Education in different countries, so no generalised answers are possible. Also, different Universities in the same city behave in different ways, partly because they occupy quite different positions in the hierarchy of Universities; the relative importance of teaching and research, their international status etc. Finally, it is important to understand that Universities do not have any financial relationship with the local city authorities; their income is derived from tuition fees, from national government funding, and from research contracts with public and private sector organisations. Consequently – the concept of a ‘civic university’ is not a clear or a stable entity, and will mean different things in different situations. Therefore your questions, as stated, are not really capable of being answered in a meaningful way. Sorry to not have a simple answer!”

E1UN3001

“The civic university model can have four variants depending on whether the focus is on citizens, firms, the public service sector or simply the better commercialization of university research by testing products and services with users:

1. A triple helix model with users added on
2. A firm centered living lab model
3. A public sector centered ‘living lab’ model
4. A citizen centered model

When I need to define a top three actors it is difficult and probably is depended on specific situations and environments. would determine relevant partners as:

1. Local authorities
2. Public service organisation
3. Social enterprises, foundations and charities.
4. National bodies”

The results confirm some important theoretical outcomes, including: the role of a civic university moves towards a concept interaction with a wide range of disciplines and activities with an equally wide range of stakeholders in a diverse external environment. The function of a university can not be seen as isolated. Although outcomes are not conformed by all interviewee, it is suggested that the civic university concept builds on an important actor in the local environment, namely: the government. We have found support for the hypothesis that the civic university is government orientated, but moreover builds on the interaction with many other actors.

Appendix XVI. An historical perspective on the environment of the creative class and genius individuals.

The duty of a university is to create an environment where a new generation of genius people live and want to live. A subgroup of the creative class, but very closely related to the university are scientists. From a historical perspective we can distinguish multiple genius individuals who make a major contribution to the society, for example: Albert Einstein, Stephen Hawking and Guglielmo Marchese Marconi. All of them realised an enormous contribution in the advancement of human civilization. In this appendix we examine their cases briefly.

Albert Einstein

Einstein can be seen as the most important scientist of the twentieth century. He received the Nobel prize for his contribution to physics, known as the theory of relativity.

The origin of these achievements may be found in Einstein's student days and is alluded to in personal correspondence. Concluded in Einstein his biography, it appears likely that his work derived partly from collaboration with his partner, Mileva Maric. Many sources suggest the significant contribution to Einstein's work. This woman had outstanding performance within her school carrier. In 1896 she got accepted as one of the first female students at a technical university in Zürich. Whether there is a significant correlation between the modern university policy and Einstein's theory of relativity might be doubtful, but might suggests the importance of out of the box thinking.

Stephen Hawking

Hawking was the professor of Mathematics of the University of Cambridge. He became a famous scientist with his big bang theory and black hole theory. Unfortunately Hawking had a physical illness, which limited his physical abilities. In his biography is written: "I was in Geneva, at CERN, the big particle accelerator, in the summer of 1985. I caught pneumonia and was rushed to hospital. The hospital in Geneva suggested to my wife that it was not worth keeping the life support machine on. But she was having none of that. I was flown back to Addenbrooke's Hospital in Cambridge, where a surgeon called Roger Grey carried out a tracheotomy. That operation saved my life but took away my voice". His physical illness could not make him stop from his eventually successful research. Although he was a genius individual of the society, certain facilities like the Hospital in Cambridge was a crucial element of his life. If universities want to develop the creative class, they might want to examine which elements, facilities and structures are fundamental. Lastly, we have to point out the fact that Hawking was able to conduct his research, since he have received an scholarship.

Guglielmo Marchese Marconi

Marconi received a Nobel Prize for his invention of Radio and he first introduced wireless telegraph system. An extensive and time consuming research leaded to a technology to communicate without wire. After his invention, he marketed this equipment for the commercial purpose and at that time he got a competitor free market in the United States. Within his career Marconi spent time on the protection of his inventions by patterns. As later on concluded in Oxley (1999), appropriability hazards are an important factor. The results of their research support the contention that the institutional environment matter a lot for development of organisations. The university might be able to contribute to the creative class society via the stimulation of patterns, licensing, law enforcement and so on via the collaboration with government and business institutions.

If a university want to contribute to the stimulation of the creative class, they need to create an environment where new genius people want to life. It is suggested that the university can:

1. Think out of the box.
2. Determine which facilities and services are fundamental and which quality is necessary.
3. Over think what can be done to support business and government tasks, in order to create an environment there the creative class want to life.

Source: American National Biography, History MCS, publications University of St. Andrews.