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Abstract

This study discusses the importance of diasporas' knowledge with regard to the national competitive advantage of Finland. The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers, with two sub-objectives: to seek which features are crucial for productive interaction between a host government and diasporas, and to scrutinize the modes of interaction currently effective in Finland.

The theoretical background of the study consists of literature relating to the concepts of diaspora and knowledge. The empirical research conducted for this study is based on expert interviews. The interview data was collected between September and November 2013. Eight interviews were made; five with representatives of expert organizations, and three with immigrants. Thematic analysis was used to categorize and interpret the interview data. In addition, thematic networks were built to act as a basis of analysis.

This study finds that knowledge, especially new combinations of knowledge, is a significant input in innovation. Innovation is found to be the basis of national competitive advantage. Thus the means through which knowledge is transferred are of key importance. Diasporas are found a good source of new knowledge, and thus may aid the innovative process. Host country stance and policy are found to have a major impact on the ability of the host country to benefit from diasporas' knowledge. As a host country, this study finds Finland to have a very fragmented strategy field and a prejudiced attitude, which currently make it difficult to utilize the potential of diasporas.

The interaction framework based on these findings suggests ways in which Finland can improve its national competitive advantage through acquiring the innovative potential of diasporas. Strategy revision and increased promotion are discussed as means towards improved interaction. In addition, the importance of learning is emphasized. The findings of this study enhance understanding of the relationship between the concepts of diaspora and knowledge. In addition, this study ties the relationship to economic benefit. Future research is, however, necessary in order to fully understand the meaning of the relationship, as well as to increase understanding of the generalizability of the interaction framework.

Key words	diaspora, knowledge spillover, innovation, competitive advantage
Further information	





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Tiivistelmä

Tämä tutkimus käsittelee diasporista lähtöisin olevan tiedon merkitystä Suomen kilpailuedulle. Tutkimuksen tavoitteena on esitellä vuorovaikutuskehikko, joka osoittaa, miten diasporat voivat hyödyttää isäntävaltiota suunnitelmallisten tiedon ylivalumien avulla. Lisäksi tutkimukselle asetettiin kaksi alatavoitetta: tutkia, mitkä piirteet ovat tärkeimpiä tuloksellisessa vuorovaikutuksessa isäntävaltion ja diasporan välillä; sekä millaisia vuorovaikutuskeinoja Suomessa tällä hetkellä käytetään.

Tavoitteen saavuttamiseksi tutkittiin diasporia ja tietoteoriaa käsittelevää kirjallisuutta. Lisäksi toteutettiin empiirinen tutkimus asiantuntijahaastattelumenetelmää käyttäen. Haastatteluja tehtiin syys-marraskuussa 2013 kahdeksan; viisi asiantuntijajärjestöjen edustajien ja kolme maahanmuuttajien kanssa. Haastatteluaineiston jäsentämisessä hyödynnettiin temaattista analyysiä. Haastatteluaineiston perusteella rakennettiin myös temaattiset verkot tulokinnan pohjaksi.

Tämä tutkimus osoittaa, että tieto – etenkin uudet tietoyhdistelmät – on tärkeä osa innovaatiota. Innovaation osoitetaan olevan pohja kansalliselle kilpailuedulle. Siksi tiedonsiirtomenetelmät ovat ensiarvoisen tärkeitä. Diasporat todetaan hyväksi uuden tiedon lähteeksi, joten diasporat voivat myös edistää innovaatioprosessia. Isäntävaltion asenteet ja politiikka todetaan tärkeiksi määrittäviksi tekijöiksi siinä, kuinka paljon diasporaperäistä tietoa isäntävaltiossa hyödynnetään. Tätä tutkimusta varten kerätyn aineiston perusteella Suomi on isäntämaana ennakkoluuloinen. Lisäksi Suomen poliittinen kenttä todetaan hajanaiseksi. Nämä syyt vaikeuttavat diasporaperäisen tiedon hyödyntämistä Suomessa.

Näiden löydösten pohjalta rakennettu vuorovaikutuskehikko osoittaa tapoja, joilla Suomi voi parantaa kansallista kilpailuetuaan hyödyntämällä diasporaperäistä tietoa paremmin. Strategiamuutokset ja Suomen mainostaminen hyvänä isäntävaltiona todetaan tärkeiksi keinoiksi parantaa Suomen ja diasporien välistä vuorovaikutusta. Tämän tutkimuksen löydökset lisäävät ymmärrystä diasporan ja tietoteorian välisestä suhteesta. Edelleen tämä tutkimus sitoo kyseisen suhteen taloudelliseen hyötyyn. Lisätutkimusta kuitenkin tarvitaan, jotta diasporan ja tietoteorian välisen suhteen käytännön merkitys selkeytyy. Lisätutkimusta tarvitaan myös, jotta vuorovaikutuskehikon yleistettävyyttä voidaan tarkastella.

Asiasanat	diaspora, tiedonsiirto, innovaatiot, kilpailuetu
Muita tietoja	





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AN INTERACTION FRAMEWORK FOR DEPLOYING THE KNOWLEDGE OF DIASPORAS

Using Finland as an example

Master's Thesis
in International Business

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1 INTRODUCTION

1.1 Context

The concept *diaspora*¹ has been studied for decades without achieving a universal agreement on what the term actually refers to (see, for example, Bakewell 2006, 6; Stratton 1997, 303–304). The conceptualizations of “diaspora” vary from simple definitions of the word (see, for example, Butler 2001, 189) to very specific typologies (see, for example, Butler 2001, 200–202; Cohen 1987, 178). Historically, the term has been most closely connected to the Jewish diaspora, although the Greek and Armenian diasporas have also received attention. When the term was first widened to include other instances, objections were raised from the members of these original diasporas. Although now commonplace, the practice of applying the term freely does present problems in finding a common understanding to the foundation and universal definition of the concept. (Tölölyan 1996, 9–10.) Consequently, it can be argued that the non-universal way of defining the meaning of diaspora hinders the collective understanding of the concept. Seeking a proper definition should, therefore, be the basis of any study aiming at discovering the potential embedded within diasporic groups.

Although the concept lacks a universal definition, the impact of diasporas is widely acknowledged (see, for example, Vertovec 1997, 277). For instance, diasporas have been found to be important agents of international learning (Kuznetsov & Sabel 2006), sources of remittances to countries of origin (see, for example, Leblang 2010), facilitators of foreign direct investment (Javorick, Özden, Spatareanu & Neagu 2011), development enhancers in their country of origin as returning entrepreneurs (Lin 2010), and institutional change catalysts (Riddle & Birkenhoff 2008). The many roles diasporas take to benefit their country of origin seem to stem from the continuing emotional connection to the country of origin that diasporas nurture (Barnard & Pendock 2012, 3). However, considering the vast array of ways in which diasporas can impact their country of origin, it can be proposed that there is untapped potential in the impact diasporas have in their host country. In seeking this untapped potential, consideration should be given to what forms such potential could take, and what sorts of concepts are necessary to understand the dynamics of diaspora – host country interaction.

In the past thirty years, the importance of knowledge in generating economic growth has increased (Caniëls 2000, 1). Linking knowledge with economic growth is quite an

¹ According to the Compact Oxford English Dictionary (2005), “diaspora” means “*the dispersion of any people from their original homeland*”. The term will be thoroughly explained in chapter 2.

old idea (see, for example, Schumpeter 1928). In the modern society, however, its role is even greater due to the technological developments which make the sharing of information easier than ever before (cf. Caniëls 2000, 8). Even so, it should be noted that knowledge flows are not a given; not all knowledge spreads quickly and evenly on an international scale (Grossman & Helpman 1990, 811–812) – the pooling of knowledge takes time. However, when such pooling happens on an international scale, it allows for differentiation without further investments in research and development – a concept more commonly known as *knowledge spillovers*² (Branstetter 2001, 54). Nevertheless, the diffusion of knowledge is not a simple process. It takes place in two ways; by spreading from one hub to another, and by spreading from a central location to outer regions. Moreover, the diffusion of *tacit knowledge*³ often requires face-to-face interaction. (Caniëls 2000, 8, 21–22.) Therefore it can be concluded that knowledge, and more particularly the effective dissemination of knowledge, is one of the keys to sustained competitive advantage, which in turn leads to economic growth.

However, knowledge is not an easy tool to work with; it has many forms that may prove out to be difficult to manage. Even so, since knowledge is not a purely endogenous product (cf. Kuznetsov & Sabel 2006, 45–46), countries seeking to improve their national competitiveness, and pursuing economic growth, should not overlook the importance of outside knowledge. Since evidence seems to elevate the importance of endogenous knowledge spillovers (Branstetter 2001, 75), it appears logical to look for ways of tapping into foreign knowledge residing within national borders. Diasporas make this possible.

Even though research on the diffusion of skills and competences from immigrants is well established, recent studies have heightened the importance of knowledge transactions. Host countries have the ability to affect such transactions for example via policy making. (Williams 2007, 30, 35.) Furthermore, studies have shown that diasporas possess the ability to transfer information quickly and efficiently, allowing also for easier flows of tacit knowledge. Moreover, highly innovative environments have been found to include many interacting diasporas. (Meyer 2007a, 18–20.) Thus the host country would, most likely, benefit from knowledge spillovers from resident diasporas.

Drawing all of the above together, it seems possible that there is untapped potential beneficial to the host country embedded within diasporas. This notion, however, requires further study. This study will propose several interesting ideas relating to the combination of the concepts of diasporas and knowledge. The topics discussed in this

² Knowledge spillovers refer to often unplanned international diffusions of knowledge of which the creator of the knowledge does not receive payment (Caniëls 2000.) A full description is given in chapter 3.

³ Knowledge that is embedded within people and often difficult to vocalize (Caniëls 2000).

study have also gained interest in various international conferences. The Institute of African Studies (Institute for African Studies 2013), the 16th International Conference on Business Information Systems (BIS 2013), and the 14th European Conference on Knowledge Management (ECKM 2013) have called for papers on, for example, African diasporas in Europe, knowledge-based cooperation, knowledge creation, tacit knowledge capture and dissemination, and knowledge sharing.

In addition, Audretsch and Feldmann (2004, 2726, 2734) state that the economic impact of knowledge spillovers should be considered in public policy discussions. Furthermore, they note that the diffusion of knowledge spillovers may play a key role in public policy with regard to economic growth, and that there is yet a vast array of research to be done in the field. As examples of necessary further research, they mention the interest of nations in determining a strategic way of enhancing the effect of knowledge spillovers, and the impact investing in knowledge spillover mediums has on economic growth. Correspondingly, Oettl and Agrawal (2008) have found that cross-border labor movement benefits the new host country more than the new workplace in terms of knowledge flows. Therefore it seems plausible that knowledge spillovers can enhance economic growth, and that diasporas (as cross-border migrants) may be the required source of new knowledge. However, according to the preliminary research conducted for this study, such a combination has not yet been fully explored. This study will add to the discussion on diasporas and knowledge spillovers by bridging the two concepts together in order to uncover an interesting field of emerging theory. Moreover, whereas numerous economic impacts to the country of origin have been studied (chapter 2.2), it seems that very few studies examine diasporas solely in the host country perspective. Thus an imbalance exists. This study aims at filling that gap.

1.2 Purpose

The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. In light of the many economic impact diasporas have been found to have on the country of origin (chapter 2.2) it seems logical that diasporas may also have a more profound economic impact on the host country than previously studied. The knowledge transactions between diasporas and host governments are a recent topic of interest in the field. Seeing as knowledge has become a key concern in modern innovation societies, governments are arguably interested in widening their pool of knowledge. This study suggests that diasporas may provide a host country with a wider pool of knowledge through purposeful interaction. Because this study wishes to examine the impact of diasporas in the host

country, an example nation is chosen to be portrayed in the final framework. The chosen example nation is Finland.

The choice to conduct empirical research in Finland has three distinct advantages. First, as the research project is undertaken in Finland, it seems highly logical to tie the empirical part to the same country; it can be assumed that people residing within Finland have knowledge and experience of the country. This adds to the quality of the study. Second, the choice of examining a country geographically close greatly decreases the timescale and increases the ease of research. Generally speaking, the geographical and cultural closeness of empirical research makes it easier for the researcher to reach potential informants. It particularly enables the researcher to relatively easily conduct empirical research face-to-face rather than via electronic means; a point which is justified in chapter 3.2. This makes the empirical study more viable in the required timescale as well as aids in determining the trustworthiness and suitability of the raw data. Furthermore, the personal familiarity ensures that the researcher is aware of the usual cultural norms – for example in language or address – that affect conducting research in Finland. Third, tying the framework to an empirical setting gives further insight into the practical implications of the results. Although this point does not add to the rationale behind choosing Finland as the example, it does help validate the overall choice to conduct empirical research.

The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. In addition, this study utilizes two sub-objectives that guide the study towards building an interaction framework. The sub-objectives of this study are:

- to seek which features are crucial for productive interaction between a host government and diasporas, and
- to scrutinize the modes of interaction currently effective in Finland.

The first sub-objective is important in understanding the means of interaction. This sub-objective deals with finding the players and methods that make interaction possible, as well as defining the setting in which fruitful interaction is feasible. The second sub-objective wishes to examine to what extent the discovered principles are currently in place in Finland. This facilitates the making of practical suggestions and building a framework not merely leaning on theory but on existing circumstances.

Figure 1 provides a simple visualization of the scope of this study. The scope of this study is limited to bridging theory relating to diasporas and knowledge transfer, and seeking the practical implications of such a combination in Finland.

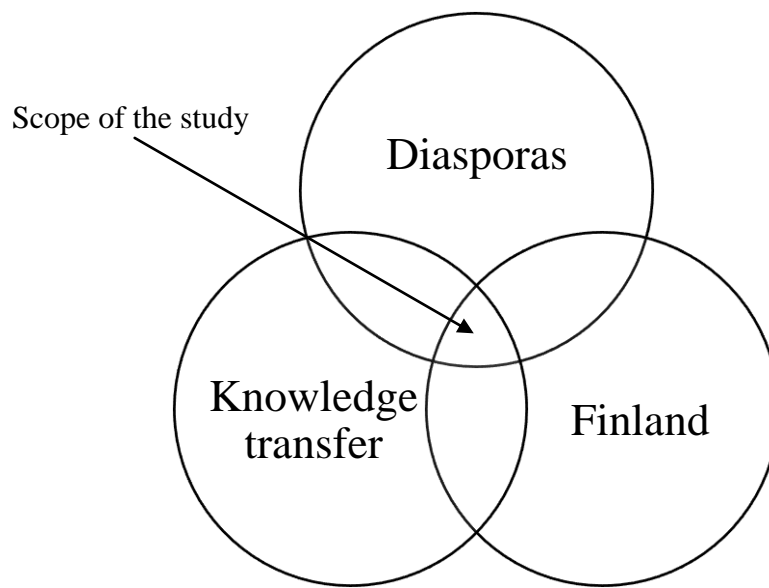


Figure 1 Scope of the study

This study assumes that diasporas may prove out to have a major impact in the innovative capacity of the host country that is, for now, inadequately researched. If such an impact can be found, and above all if it can be harnessed, host country interest in diasporas is likely to increase. Seeing as knowledge has become a key concern in modern innovation societies, countries should be interested in widening their pool of knowledge. Although there are, arguably, countless ways in which a group of individuals can impact the innovative capacity of any given country, this study finds the concept of knowledge spillovers to be of paramount interest. In order to research the impact of knowledge spillovers in terms of diasporas, a closer look on the actual nature of knowledge is needed. Therefore this study analyses the concept of knowledge as well as the concept of knowledge spillovers. A more thorough understanding of the ways in which knowledge can flow between individuals and regions is critical in determining the impact diasporas may have on this process. In a knowledge intensive economy, this may prove out to be a critical factor in sustained national competitive advantage.

In Europe, the role of the public sector in promoting innovative practices has been elevated by scholars. European nations often emphasize the importance of infrastructure created by policy. Policies related to innovation and infrastructure most often originate from the European Commission, but national governments have been known to endorse such policies individually as well. This presents a problem of over-reliance on public involvement, which may actually lead to lessened efficiency of innovative practices. Even so, the future is believed to rely upon the development of public policy, along with

private sector support for stronger institutional and organizational spheres. (Cooke 2001, 946–947.)

The Lisbon strategy proposed a new policy regime to the European Union in 2000. Under the Lisbon strategy, the European Union and many member states introduced policy programs aimed at attracting talent. Due to the vast array of factors affecting the migration patterns of highly skilled immigrants, these policies impact a wide selection of policy fields. The notion of using policies to attract highly skilled immigrants is relatively new in the European Union. The current attempts can be seen as an endeavor to catch up to the long-standing competition over talent that is seen in, for example, the United States and Canada. (Reiner 2010, 450.) Public policy tools aimed at attracting and retaining highly skilled immigrants may, thus, be of key importance for this study.

In order to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers, all of the above must be carefully considered and conclusions drawn. However, it is equally important to consider the practical implications of the objective. The relevance of the study is in finding a theoretical solution to help host countries promote economic growth. The relevance is thus twofold; first, the study suggests a new theoretical framework, and second, the study suggests a way for host countries to benefit from diasporas. The theoretical speculation adds to the existing literature on diasporas on the one hand, and the literature on knowledge and knowledge spillovers on the other hand. This study implies ways in which the two fields of theory are connected, and how the connection can be advantageously used. The practical contribution of this study suggests a way for host countries to harness the potential revealed in combining the abovementioned fields of theory.

1.3 Limitations

In order to reach the objective of suggesting an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers, the study will have to focus on specific literature. Mainly two areas of research are applied; research on diasporas, and research on knowledge. For the purpose of the study, it is important to clarify the terminology and to expand the research into relating studies in order to arrive at a suitable review of previous literature. In contrast, it is equally important to limit the scope of the study in order to facilitate a deeper analysis of relating theory.

For the purpose of this study, a broad definition of diaspora is adopted. This study consults a combination of the simplistic and checklist classifications along with choos-

ing a suitable typology to be utilized as the basis of both theoretical and empirical discussion.⁴ In effect, this study examines diasporas of a voluntary nature that 1) have dispersed from their country of origin, 2) could also be called immigrants, yet 3) fulfill the criteria set by the checklist, namely dispersion to at least two destinations, strong bond to the country of origin as a foundation of identity, and a conscious understanding of ethnographic identity. This study does not, however, consider second generation diasporans – children born in the new host country. The reasons for adopting this view are 1) to ensure a sufficient number of individuals that fit the criteria, 2) to increase the number of individuals that are suitable to be discussed in the knowledge point of view presented in this study, and 3) to ensure that the number and characteristics of individuals fitting this criteria is such that it may have a real impact on the Finnish economy, which this study uses as an example for empirical assessment.

However, the empirical part of this study does make further limits to the aforementioned definition of diaspora. The empirical part focuses mainly on highly skilled diasporans due to their assumed superior knowledge of the ways to impact economic growth both in their country of origin and the host country. Furthermore, it is assumed that highly skilled diasporans have more knowledge of the international economy that may be of use to the objective of this study. In addition, it should be noted that the study often also uses the related term *migration*. This term is deemed to include diasporas, but also other types of migration, which do not fall under the definition presented above. Moreover, for the purpose of this study diasporas are considered with regard to their country of birth rather than citizenship. Accordingly, also migrants that have acquired Finnish citizenship, provided that they maintain an emotional link to their parents' native country, are considered diasporans.

This study is based on a belief that there is untapped potential embedded within diasporas. Furthermore, this study assumes that said potential is likely to be beneficial to the host country. As seen above, the field of diaspora research is somewhat scattered. Thus this study chooses to begin with a literature review of current trends in diaspora research. However, said literature review is limited to studies relating to the objectives of this study, namely studies seeking to define the term diaspora, and studies explaining the economic impact of diasporas.

In addition, this study strongly advocates the importance of knowledge as an economic input. Therefore the study also examines literature on knowledge. In order to reach the objectives of the study, research on the nature of knowledge, the dissemination of knowledge, and the importance of knowledge as a factor in economic growth is scrutinized.

⁴ These terms will be thoroughly discussed in chapter 2. Table 2 gives an overview of the terms.

As the boundaries of the study still leave a vast array of research to consider, the study will further limit the end result by considering the theory in light of an empirical setting. The empirical research is based on the opinions and experience of Finnish government officials, organizations, and diasporans residing in Finland. Thus the interaction framework suggested in this study is to be reviewed in this highly contextual light. It is, however, a step towards building a more comprehensive and large-scale framework, and as such a worthy addition to the diaspora literature.

2 CHARACTERISTICS OF DIASPORAS

2.1 Defining diaspora

The word *diaspora*, at its simplest, means the dispersal of people from their native country. However, although human beings have been in constant movement throughout history, not all motion results in diasporas. Until recently, the term was most used in connection with the Jewish people. (Butler 2001, 189.) The newer terminology – which disregards the previous labels of exile groups, overseas communities, minorities, and so forth – originates from the late 1960s (Tölölyan 1996, 3). The generalization of the term has occurred in two steps. The first step was the change in the shape of population movement, which differed from the pre-1960s diasporas deriving from colonial capitalism requiring the resettlement of labor. The second step was the more general adoption of the term diaspora to the broader sense of the concept. The term has become a natural expression in both scholarly and everyday contexts to an extensive mixture of situations. (Stratton 1997, 303–304.)

In the modern world, mass movements of people have become increasingly common, due to the new technologies that ease international movement. Moreover, globalization, economic restructuring, and warfare have made a growing number of people leave the home country of their ancestors. Whilst diasporan populations continue to multiply, communities previously labeled immigrant, nomadic or exilic have also been renamed diasporas. Thus the concept has moved further away from the feelings of powerlessness, longing, displacement and exile previously connected to the Jewish diaspora. (Butler 2001, 189–190.) On the contrary, the modern diasporas convey a strong relation to their historical roots that can be deemed empowering. The association diasporas have to their country of origin adds weight to their claims. Furthermore, the collective nature of diasporas mediates the separation pains arising from relocation. (Clifford 1994, 310–311.) In the last twenty years, the term has stretched even further; so far that today it seems to be used to describe any group of migrants who sustain a bond with their country of origin (Bakewell 2006, 6).

In addition to the above descriptions of diasporas, three further classifications can be made. First, diasporas can be defined as a social form. In this sense diasporas are ultimately seen as specific groups that are characterized by 1) their relationships tied to history and geography, 2) the divided political loyalties arising from the duality of focus on host country and country of origin, and 3) economic strategies relating to international trade. Additionally, the social form includes a triadic relationship between globally dispersed ethnic groups, the geographic location of such groups, and their country of origin. Second, diasporas can be defined as a type of consciousness. This relates to an

awareness of multi-locality. The awareness results in a need to connect with others of similar origin both in the host country and in the country of origin. Third, diasporas can be seen as a mode of cultural production. This notion is closely connected to globalization, and concerns the making and duplication of social and cultural phenomena. (Vertovec 1997, 277–282, 289.)

The problem with defining diasporas is in the multitudes of different groups to which the term refers. It is difficult to formulate an overall definition, because most definitions stem from specific studies among a specific diaspora. Even so, three basic characteristics of diasporas can be identified. First, the diaspora must disperse to at least two destinations. This allows for internal linkages between the different groups of the diaspora; a unique feature that separates the diaspora from other types of migration. Second, there must be a bond to the country of origin, which acts as the foundation of the diasporan identity. Third, the group must have a conscious understanding of their ethnographical identity, which allows for ties not only to the other diasporas from the same origin, but to the country of origin as well. The importance of the third characteristic is heightened in cases where the country of origin no longer exists, or the diasporas have been separated from the country of origin for many generations. However, even this checklist approach is not without problems. Connecting the definition of diasporas to the group itself presents a problem of reification. Trying to emphasize the diasporan identity is an unsustainable means due to the unfixed nature of identity; identities can change. In addition, there is a risk of the diasporan scholar focusing on observing the group rather than the process of diasporization. Consequently, there is a danger of the term diaspora becoming an ethnic label as opposed to a framework of analysis. (Butler 2001, 191–193.)

Furthermore, the renaming of dispersions as diasporas represents problems with the ideas that accompany the alteration of traditional discursive categories. Renaming most often also attempts to impact how the category is understood. The attempt aims at placing the new term and novel description of the category in the center of future intellectual debate on the subject. (Tölölyan 1996, 4–5.) In effect, different foundations for diasporization create different types of diasporas. Although there are many labels that can be attached to diasporas, the typology is more fundamental. (Butler 2001, 197.)

One possible typology is the primary action of the diasporas. It has been argued that trade has been a significant factor in human history with regard to change – along with subjugation. Trade settlements can be dated as far back as the first emergence of city life. Traders would move from their home town to another community, and slowly adapt to that community in order to act as middlemen between the trade from their original home town and their town of residence. Following this first “internationalization”, the merchants discovered the greater benefit of more than one settlement, and set up networks – arguably the first diasporas. These trade communities were one of the most

widespread institutions organized by human beings between the invention of purposeful agriculture and the industrial revolution. (Curtin 1984, 1–3.)

Trade, however, is not the sole cause for diaspora movements. Diasporas can also be categorized with regard to the reasons of migration. Cohen (1987, 178) identifies five categories of diasporas; victim/refugee, imperial/colonial, labor/service, trade/business/professional, and cultural/hybrid/postmodern. More interestingly, these categories can be described in terms of gardening. The victim/refugee category is portrayed in weeding; in a garden, there always seem to be either too many weeds, or too prominent ones, that need attending to. The diaspora equivalents of weeding would include, for instance, exile, genocide, and ethnic cleansing. The second category, imperial/colonial, is akin to sowing; increasing the number of plants by scattering seeds. This is analogous of the scattering of people, which constitutes diasporas. Transplanting is the gardening counterpart of the labor/service category. Transplanting is the practice of uprooting plants from one place in order to plant them into another; this is a drastic process that can have rather high failure rates when human beings are the subject of uprooting. The fourth category is similar to layering; the process of carefully taking cuttings without separating them from the parent plant until they have their own roots. This describes the trade/business/professional type of diasporas; comparable to, for example, the setting up of a new branch or outpost. Finally, the cultural/hybrid/postmodern category equals the gardening practice of cross-pollination. Pollination is a prerequisite for the growth of fruit, and cross-pollination allows for superior crops. Just like pollination (which can occur through water or air), cultural diasporas can be in effect through physical movement as well as “airwaves” – the sharing of ideas. (Cohen 1987, 178.)

A similar typology divides between six categories; captivity, state-eradication exile, forced and voluntary exile, emigration, migration, and imperial diaspora. The first category, captivity, refers to involuntary removal in which the host country actively prevents remigration to the country of origin. The second type, state-eradication exile, also prevents remigration, but in this case due to the obliteration of the country of origin, for example due to military conquest. The third group, forced and voluntary exile, stems from a hostile relationship with the country of origin. In some cases, migration is forced, while in others exile is the choice of the exiting people. The fourth category, emigration, is formed by individual decisions that cumulate over time. One of the most distinctive reasons for emigration is the search for better economic situations. Emigration refers to permanent relocation. Conversely, the fifth group – migration – refers to situations where diasporas can move between the host country and country of origin. The last group, imperial diaspora, refers to a dominant country of origin sending a group of nationals to enforce their rule and culture in the host country. (Butler 2001, 200–202.)

Diasporas, it seems, still have multitudes of different definitions and descriptions based on a myriad of factors. These are all briefly categorized and summarized in table 1.

Table 1 Classifications of diaspora

Classification	Source	Categories
Simplistic	Bakewell 2006; Butler 2001; Tölölyan 1996; Clifford 1994	<ul style="list-style-type: none"> • dispersal of people from their native country • immigrants, nomads and exilic communities in the modern world • groups with a strong connection to their country of origin
Emotional/cultural	Vertovec 1997	<ul style="list-style-type: none"> • social form • type of consciousness • mode of culture
Checklist	Butler 2001	<ul style="list-style-type: none"> • dispersion to at least two destinations • strong bond to the country of origin as a foundation of identity • conscious understanding of ethnographic identity
Typology	Cohen 1987	<ul style="list-style-type: none"> • victim/refugee • imperial/colonial • labor/service • trade/business/professional • cultural/hybrid/postmodern
	Butler 2001	<ul style="list-style-type: none"> • captivity • state-eradication exile • forced and voluntary exile • emigration • migration • imperial

Table 1 divides the classifications of diaspora into four categories; simplistic, emotional/cultural, checklist and typology. The simplistic classifications include those based on the interpretation of the word diaspora, and the re-naming of previously known categories. The emotional/cultural classifications refer to the categories that have intangible

or abstract definitions. The checklist classification refers to the list of traits a group must have in order to be considered a diaspora. The typologies stem from the different reasons for migration. In addition to the reasons for migration, the effects of diasporization have been a topic of interest to many scholars.

2.2 Impact of diasporas

Diasporas can act as a source of information. One of the major benefits of diasporas over other sources of international information is that they abet mutual benefit instead of politicized power struggles. Development is largely dependent on learning. Learning, correspondingly, necessitates research. Therefore development connects any nation to other, foreign, nations due to the relative certainty of any nation's incapability of constructing superior competitiveness in seclusion. The advantage of diasporas in this process is that they are simultaneously free of prejudice against foreign nations and of the imperialistic motivation often associated with foreign multinationals. Moreover, the country of origin sees diasporas as a patriotic group, furthering their confidence in the diasporas' trustworthiness. Even so, it must be noted that diasporas are not born out of thin air or lacking context; they develop inside and in connection with the environments of both their host country and country of origin. (Kuznetsov & Sabel 2006, 45–46.)

Economic strategies that are connected to diasporas, it seems, play an important role in international finance and trade (Vertovec 1997, 279). To boot, migration has become increasingly important to the countries of origin in terms of remittances and return flows of information and talent. In addition to these, a further role can be placed upon diasporas; namely that of an actor in the global allocation of capital. Since diasporas provide connections between host country and country of origin, they smooth the progress of international investments. Due to their knowledge, diasporas can also provide more accurate information of their country of origin to host country investors. (Leblang 2010, 584–585, 592, 595.) Migrant networks have been found to possess also further traits desirable to facilitating foreign direct investment. Diasporas have relevant information of the business conditions and opportunities that exist in their country of origin. The information diasporas possess may reduce the costs of foreign investment via a reduction in the spending a foreign investor would have to devote to other ways of acquiring relevant information. Furthermore, there seems to be a stronger link with foreign direct investment when the diasporas are highly educated, which implies that educated diasporas may further the advancement of the economy of their country of origin. (Javorick et al. 2011, 231–232, 239.)

Similarly, when searching for the drivers of venture capital, two categories have been found; namely economic opportunity driven, and network driven. Economic opportunity

driven processes respond to traditional factors of market attractiveness, such as good quality entrepreneurial activity, fully functional capital markets, and good exit options. Conversely, the network driven approach suggest that investment decisions respond to the prominence of the market. According to this approach, global networks, such as diasporas, serve as exploring forces that help investors target their actions. (Madhavan & Iriyama 2009, 1243–1244.) More importantly, diasporas may become a part of transnational technical communities (Madhavan & Iriyama 2009, 1244);

communities that span national borders. A by-product of improved communications, better transportation, and free trade laws, transnational communities are in a sense labor's analog to the multinational enterprise. Unlike their corporate siblings, however, their assets consist chiefly of shared information, trust, and contacts. As the members of these communities travel back and forth, they carry cultural and political currents in both directions. Their emergence complicates our understanding not only of global trade but also of immigration and national identity. (Portes 1996, 74.)

The idea of transnational communities is supported also by other scholars. Returning highly skilled immigrants build strong connections between their countries of origin and innovative hubs. These connections, consequently, build networks where technologies and skills can flow between regions more efficiently and quickly. Thus transnational communities may greatly enhance a region's place with regard to the global economy by offering superior skill sets and know how, as well as connections to global innovative hubs. Furthermore, these transnational networks are personal in nature, and thus more flexible, receptive and adaptive than rigid corporate networks. (Saxenian 2002, 183, 185, 200.)

One of the problems with regard to migration is the theory of brain drain, which accounts for some part of the difficulty developing countries face in building national innovative capacity. The concept of *contemporary diasporic entrepreneurs* could be a solution to this problem. Even though international trade stimulates the development of the country of origin, constructing innovative capacity solely through the learning from trade practices takes an immense amount of time, and may not even be possible. Although diasporas often send money back to their country of origin, they rarely have other targets than the immediate relief to their families via raised consumption expenditure. Similarly, the impact of conventional investment in the diasporas' country of origin does not focus on innovation capability. However, the return of highly skilled diasporas, and their subsequent involvement in venture creation, does make a difference. These contemporary diasporic entrepreneurs utilize their knowledge and learning from the migration experience in exploiting opportunities arising in their country of origin. (Lin 2010, 124–126.)

Contemporary diasporic entrepreneurs hold three advantages in comparison to foreign enterprises operating in developing countries and the developing countries' indigenous entrepreneurs. First, and in close relation to the arguments of Kuznetsov & Sabel (2006, 45–46), they have a perceived patriotic identity with overseas experience which overcomes the fear of foreignness related to foreign companies, and the bias against private property associated with indigenous entrepreneurs. Second, contemporary diasporic entrepreneurs have appropriate knowledge from both overseas and the country of origin, whereas foreign enterprises lack local knowledge, and local companies are deficient in technological understanding. Third, they have better cognitive capability. Contemporary diasporic entrepreneurs are able to integrate, whereas foreign enterprises may experience difficulty in re-contextualizing their business to fit the local environment. Conversely, the indigenous companies suffer from absorption difficulties. (Lin 2010, 128–130.)

Similar to the impacts of contemporary diasporic entrepreneurs is the concept of *brain circulation*. Instead of the concept of brain drain, the abovementioned hinder to building innovative capacity, brain circulation stems from the increased mobility of talent across borders. As a replacement for *brain drain*, where a country loses skilled workers due to emigration, and *brain gain*, where a country receives talent via immigration, the concept of brain circulation takes into account the movement of human capital between the countries of brain drain and brain gain, which in fact leads to a win–win situation. (Tung 2008, 298–299.) Brain circulation also enables immigrants to transfer knowledge between regions more efficiently. Whereas highly skilled immigrants once had to choose between the better economic situation and career prospects of their host country versus the emotional attachment yet not so tempting professional situation of the country of origin, nowadays skilled immigrants often become carriers of knowledge between host country and country of origin. Brain circulation does not require the physical movement of people. In addition to physical migration between host country and country of origin (permanent or not), investments in the country of origin are a form of brain circulation. (Saxenian 2005, 35–36.)

Returning diaspora entrepreneurs can also facilitate institutional change. The notion of diaspora entrepreneurs having an impact on the institutional environment of their country of origin originates from the concept of institutional acculturation. In their host countries, diasporas face institutional environments that are based on different values, norms, and practices than those of their country of origin. If diasporas accept and adopt the institutional environment of their host country, acculturation occurs. Consequently, if they return to their country of origin, and advocate the institutional environment of their former host country, they may trigger changes in the institutional environment of their country of origin. (Riddle & Brinkerhoff 2008, 670, 673.)

Diasporas also impact international migration flows. Existing migrant communities ease the costs and assimilation of new migrants. This is visible, for instance, when looking at the Turkish diaspora, which in Germany is vast and educated, whereas in countries very similar to Germany, such as Spain and Luxembourg, Turkish migrants are few and less educated. Family reunification programs are a major source of migration growing from earlier migration, which impacts also host governments' ability to attract mainly highly skilled immigrants. Another deciding factor seems to be the education level of the existing migrant community; a high percentage of educated migrants are likely to be found in countries with a small migrant community: larger diasporas seem to attract lower skilled migrants. This is very likely to be the result of the importance of geographical distance (which affects the cost of migration) and language barriers that are more significant to low skilled migrants. However, it has also been found that the *Schengen agreement*⁵ favors highly skilled migration. (Beine, Docquier & Özden 2011, 30–32, 36–39.)

The described impacts of diasporas are summarized in figure 2. In figure 2, the roles diasporans may take with regard to the country of origin and host country are stated and connected to the realm most likely impacted by each role. It is visible in figure 2 that most of the roles seem to have an impact in the country of origin. Where the role extends to impact the host country, in most cases the impact is divided between the country of origin and the host country. More research seems thus necessary to deepen the understanding of diasporas' impact in the host country.

⁵ A European Union agreement that permits the free movement of people in Member States and other signing states (European Union 2013).

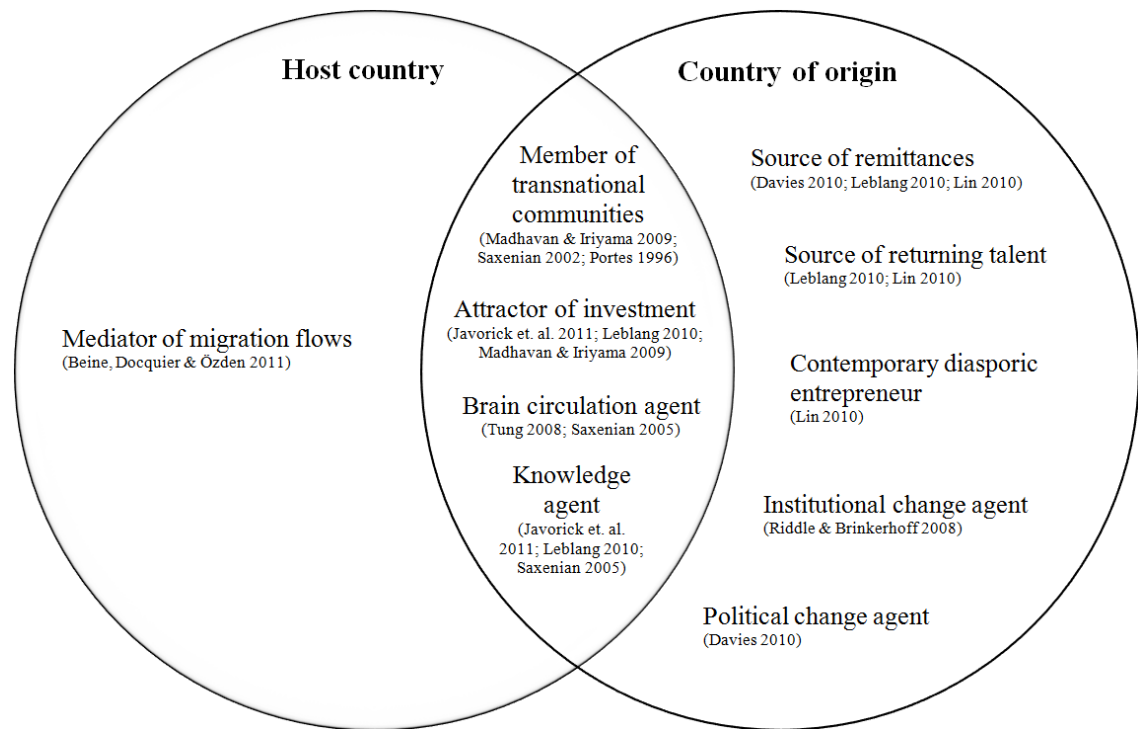


Figure 2 The impact of diasporas' roles

As seen above, diasporas are habitually recognized as benefactors of their country of origin. This is possible due to the continuing interest in and identification with the country of origin that is mentioned as one of the criteria separating diasporas from other migrants. The underlying assumption of this notion is that diasporas want to contribute to their country of origin. Even though diasporas identify themselves with the country of origin, it should be noted that they have chosen – or been forced – to leave said country. Thus it can be assumed that the feelings connected to the country of origin are not solely positive. Therefore it has been argued that the nature of the feelings diasporas have with regard to their country of origin and the migration process will make them more or less willing to aid their country of origin. A number of factors impact the behavior of diasporas. Feelings of pride with regard to the country of origin, as well as satisfaction with the migration decision, seem to increase the willingness of diasporas to benefit the country of origin. Similarly, a sense of guilt relating to the decision to leave the country of origin seems to act as a boost for aiding the country of origin. (Barnard & Pendock 2012, 3, 13.)

Similar findings with regard to the problematic nature of remittances have been made in Africa. The African Union has been active in promoting diaspora engagement in the development of the continent. The most studied form of engagement is, arguably, remittances to the country of origin. Although remittances are a vast source of income for developing countries, the division between income groups and geographical locations

seems to suffer from considerable disparity. Moreover, the true impact of remittance flows is, to date, unclear. In Africa, the unique political sphere adds to the complexity of researching the developmental potential of African diasporas. The post-colonial restructuring of the continent impacts not only local government, but also migration and diaspora involvement. This has led to the wide spectrum of diaspora contribution from simple remittances to the ability to impact political decision-making and social change. The understanding of political and economic disparity within the continent proposes a major challenge in constructing policies to further the benefit from diasporas. (Davies 2010.)

Despite these mediating factors, this study assumes that diasporas have a major role in international economy. Considering the roles described in figure 2, some seem to be more pliable to the host country setting than others. Therefore this study mainly focuses on the knowledge agent (chapter 3.3) role of diasporas. Nevertheless, this role is closely connected to the roles of brain circulation agent, member of transnational communities, institutional change agent, and political change agent. This study assumes that, when the correct framework is in place, diasporas may act as knowledge agents also in the host country and thus deepen the impact of brain circulation, elevate the importance of transnational networks, and impact institutional and political decision making (chapter 4).

3 KNOWLEDGE AND INNOVATION AS ECONOMIC INPUTS

3.1 The nature of knowledge

In the past three decades the importance of knowledge as a factor in generating economic growth has increased (Caniëls 2000, 1). Knowledge, as an economic input, has some peculiar characteristics. Even though knowledge has characteristics different to other economic inputs, it can be treated like any other good in terms of production and usage. Knowledge, like other goods, can be stored, depreciate, or become irrelevant in the face of new technologies. However, although knowledge can be created, the creation thereof has unique features. Newly created knowledge will not take a tangible form (although it may be partially codified for example in patents, blueprints, and so forth). In addition, knowledge will, rather easily, spread from the original source. Furthermore, public knowledge is, essentially, a non-rival good; the usage thereof will not drain the pool. Regardless of its atypical nature, knowledge can be studied like any other capital good. Knowledge has been found to be an endogenous product of economy; therefore economic principles apply. (Soete & Weel 1999, 298–299.)

Descriptions of knowledge often derive from a distinction between information and knowledge. Information, it is claimed, is a public good that can be easily shared and does not lose value when used. Information is easy to codify and transfer between people and regions. Knowledge, on the other hand, also implies a level of proficiency and aptitude – what can be done with the information. Information, therefore, can be seen as an input in the creation of knowledge. (Antonelli 1999, 244–245.) Knowledge is a contextual good; without the context, knowledge does not exist (Alwis & Hartman 2008, 134). True knowledge, it would seem, is in fact the product of personal backgrounds combined with existing information, which results in new information. Consequently, knowledge can be labeled a rival good. Knowledge can also be highly localized; it tends to reside within companies, industries or regions, and can thus be difficult and costly to utilize elsewhere. The localized nature of knowledge decreases its tendency to flow through different regions. Furthermore, localized knowledge may be highly idiosyncratic. Thus the sharing – and creation – of knowledge requires efficient communication channels. (Antonelli 1999, 244–245.)

Apart from the distinction between information and knowledge, knowledge itself can be divided in two categories. These categories have been named *explicit* and *tacit*. (Polanyi 1964, 144). Explicit knowledge includes sources the user is aware of, such as journals or books. It can be portrayed, for example, as data or models. Conversely, tacit knowledge is a highly personal product of action, values, feelings, and so forth. Tacit knowledge exists without awareness; it is very difficult to codify. Both types of know-

ledge are necessary for the creation of new knowledge. The importance of tacit knowledge, however, is heightened by the difference in the ease of sharing; whereas explicit, codified knowledge is relatively easily diffused, tacit knowledge can be kept secret. (Alwis & Hartman 2008, 134.) Furthermore, it should be noted that knowledge cannot exist without a tacit part. Even explicit knowledge must be interpreted through tacit means of understanding. Thus explicit knowledge is also rooted in tacit knowledge. Knowledge cannot be wholly explicit. (Polanyi 1964, 144; cf. Antonelli 1999, 244–245.)

The division between tacit and codified (explicit) knowledge does not mean that there is a barrier preventing the flow of knowledge from one form or carrier to another. In contrast, the interaction between different forms of knowledge possessed by different actors is the basis of organizational knowledge creation. Tacit knowledge can flow from one actor to another via interaction. Such interaction consists of sharing experiences, which in time deepens to a shared level of know-how. This type of interaction may also lead the actors to create new knowledge on the basis of their shared pool of existing knowledge. The flow of tacit knowledge most often requires close proximity; even face-to-face interaction. Thus it is, essentially, a localized process. Tacit knowledge can, however, also become codified knowledge; via the building of models, theories and so on. Additionally, this process of conceptualization helps knowledge flow between regions, and even on a global scale. Codified knowledge can, correspondingly, be used to create new codified knowledge. This type of interaction may occur on an international scale, since the modern information technologies allow the efficient flow of codified information between regions. Finally, codified knowledge can also be transformed into tacit knowledge. This refers to a learning process, where new actors become familiar with, and build their own capability through existing codified knowledge. (Cohendet, Kern, Mehmanpazir & Munier 1999, 231–233.)

The tacit and explicit categories can be further divided between an internal and external scope (table 2). These four pieces of knowledge are divided between two axes; tacit or codified, and internal or external. Tacit and internal knowledge is created through intra-organization learning by doing or using. Tacit and external knowledge is obtained via informal exchanges of knowledge, and enable the diffusion of knowledge between regions and industries. Codified, internal knowledge is the result of formal research and development processes. Lastly, codified external knowledge is attained by recombining existing information and applying the gained information to new purposes. (Antonelli 1999, 245.)

Table 2 The four parts of knowledge (Antonelli 1999, 246)

	Tacit	Codified
Internal	Learning	Research and development
External	Socialization	Recombination

This study takes particular interest in the tacit and external form of knowledge. More particularly, the concept of knowledge spillovers, which belongs to the tacit and external group of knowledge (Antonelli 1999, 245), is examined (chapter 3.2). It has been argued that tacit knowledge is a crucial element in building competitiveness (Alwis & Hartmann 2008, 133). At the same time, the dissemination of tacit knowledge requires personal contact and a shared language; thus it does not flow easily across the globe. This trait makes it increasingly important to invest in skilled employees and professional networks. Connectedly, it has been found that foreign public knowledge, in effect knowledge produced in foreign universities, is the most difficult to absorb. In contrast, it is easier to benefit from foreign applied knowledge. (Pavitt 2002, 7–9.)

The above descriptions of knowledge seem to suggest that in addition to the essence of knowledge, the channels through which knowledge disseminates should be investigated. *Knowledge transfer* is a process in which a *knowledge provider* transfers knowledge to a *knowledge receiver*. Because knowledge takes many forms, it is not always easy to transfer it from one person to another. Thus knowledge transfer is not a self-explanatory process, but can take many forms. (Jasimuddin, Connell & Klein 2012, 197–198.) The characteristics of knowledge transfer are discussed more thoroughly in chapter 3.2.

Table 3 presents the main characteristics of the aforementioned features of knowledge as an economic input. In table 3 it is visible that knowledge has many modes, each of which proposes different challenges and opportunities. Table 3 also argues that it is possible to draw connections between the characteristics of knowledge and economic potential in multiple ways.

Table 3 Knowledge as an economic input

Characteristic of knowledge	Clarification of the characteristic in terms of knowledge	Potential economic impact of the characteristic
Capital good	Knowledge can be treated like any other good in terms of production and usage. (Soete & Weel 1999)	Like any other capital good, knowledge can be described as an economic input.
Implies a level of proficiency and aptitude	Knowledge is different from information. (Antonelli 1999)	Whereas information is often readily available to anyone, it is possible to gain competitive advantage through a pool of knowledge that is unique.
Explicit or tacit	Explicit knowledge is easy to codify and diffuse, whereas tacit knowledge is embedded within individuals. (Alwis & Hartmann 2008; Polanyi 1964)	Whereas explicit knowledge may be easily diffused, tacit knowledge presents a possibility for gaining competitive advantage through unique combinations of knowledge.
Internal or external	Explicit and tacit knowledge can further be categorized internal or external. The four subcategories thus formed are research and development, recombination, learning, and socialization. (Nonaka 2002)	Because knowledge can be transferred, it is possible to widen the unique pool of knowledge. Especially the benefits of tacit knowledge make it possible to build new, economically beneficial combinations.
Contextual	Knowledge does not exist without context. (Alwis & Hartmann 2008)	If knowledge created in different context is successfully brought together, new, potentially beneficial combinations arise.
Localized	Knowledge may reside within a certain entity and thus be difficult to utilize elsewhere. Knowledge may also be idiosyncratic. (Antonelli 1999)	The benefits are similar than those of tacit knowledge. Possessing knowledge no, or very few, others have presents an opportunity to build entirely new combinations.
Dependant on human networks	Human interaction is crucial for the successful transfer of tacit knowledge. (Koskinen, Pihlanto & Ruuska 2003)	The benefits are equal to those of recombination from different sources and context, as well as to those of tacit knowledge.
Transferrable (chapter 3.2.)	Knowledge can flow from one actor to another, and between the explicit and tacit categories, and be used to create new knowledge. Knowledge can also be transferred from one agent to another. (Jasimuddin, Connell & Klein 2012; Liyanage, Elhag, Ballal & Li 2009; Cohendet, Kern, Mehmanpazir & Munier 1999)	The benefits are equal to those of recombination from different sources and different contexts.

Table 3 aims at clarifying the economic potential that can be linked to knowledge. Table 3 argues that knowledge can be a source of competitive advantage different from information due to its relative uniqueness that can be deemed stemming from individual learning and interpretation. This uniqueness seems to be heightened when tacit knowledge is considered. In most instances described in table 3 the transferability of knowledge seems to play a role. Thus it is of key interest for this study.

3.2 Knowledge transfer process

Knowledge transfer is a medium through which critical knowledge can be acquired. The term is closely connected to knowledge sharing, but whereas sharing is a process most often occurring between individuals, knowledge transfer is a more controlled and planned process. Moreover, knowledge can be transferred not only between individuals, but larger entities. The communication tools knowledge transfer processes can utilize vary from personal communication to communication technologies and intermediaries. It should be noted, however, that communication is not the sole requirement; successful knowledge transfer also necessitates methods of transmitting and receiving knowledge. (Liyanage, Elhag, Ballal & Li 2009, 122–123.)

A simplified process model of knowledge transfer (figure 3) portrays the flow of knowledge between the source and receiver. The receiver identifies required knowledge that the source possesses and is willing to share. The required knowledge is transmitted, for example via data or information, and transformed to the appropriate form and context for the receiver. The transformed knowledge is then related to a need of the receiver, and thus becomes useful for the receiver, who may now apply the required knowledge. Finally, the receiver recounts the knowledge transfer experience with the source. (Liyanage et. al. 2009, 125–127.)

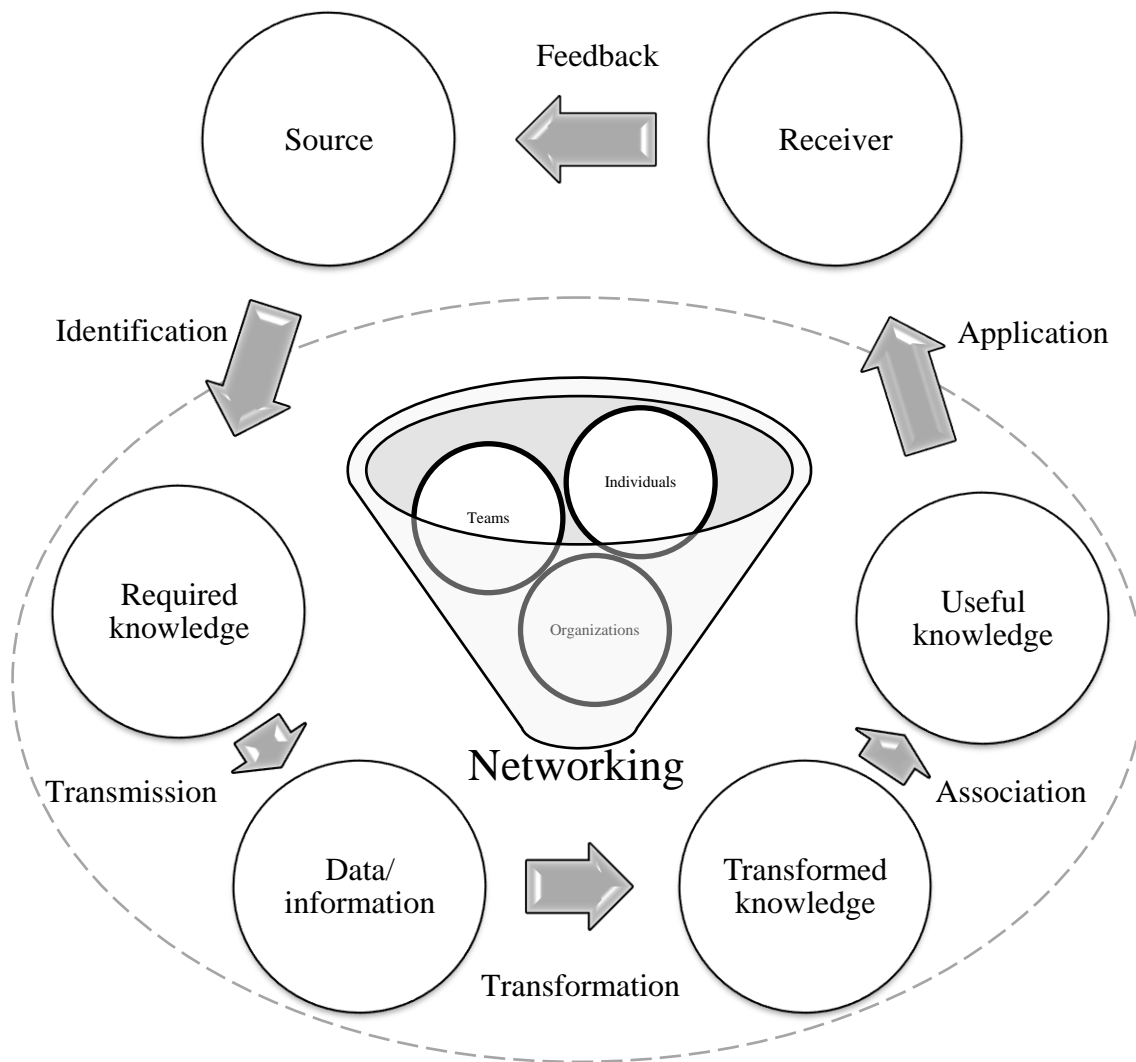


Figure 3 A process model of knowledge transfer (adapted from Liyanage et. al. 2009, 126)

In order to compete in the global marketplace, a company should find a balance between core competencies and inter-organizational connections in order to build knowledge transfer networks that reach beyond the company itself. A *knowledge network* is essentially a network of several organizations that have agreed to share knowledge in order to enhance their mutual ability to explore and exploit new technologies. Self-sufficiency is no longer the norm, as cooperation has been found to strengthen the knowledge base of a company. (Peña 2002, 469–471.) The crucial benefit of knowledge transfer networks is that they enable access to outside sources of knowledge otherwise beyond the reach of an organization (Bond, Houston & Tang 2008, 643).

It has been argued that it is precisely the available *human* networks that determine the ease and possibility of access to knowledge. Due to the personal nature of tacit knowledge, its diffusion presents some particular challenges. The key to effective tacit knowledge transfer seems to be social engagements. Face-to-face interaction is, possibly, the most multi-faceted means of communication. Face-to-face interaction allows the simultaneous use of multiple ways of communication. Furthermore, this type of interaction includes a constant possibility for feedback and repetition in order to maximize understanding. These specific features make face-to-face interaction especially suitable for transferring tacit knowledge. It does, however, present the problem of differences in understanding stemming from the differences between individuals' styles of communication. Thus face-to-face interaction heightens the importance of listening skills. (Koskinen, Pihlanto & Ruuska 2003, 281–282, 285–286.)

Economic growth has been linked to innovation since the first half of the 20th century. In those days, innovation was, quite simply, defined as the practice of placing resources to uses different from their customary purpose. Already in the early literature the discontinuous nature of innovation is understood. (Schumpeter 1928, 378.) Another point of long-standing agreement is the importance of knowledge accumulation with regard to growth (see, for example, Soete & Weel 1999, 294). Consequently, it has long been accepted that capital increases are not the sole – or even the main – explanation of growth. Growth is affected by the international economic environment. Research and development has been identified as one of the determinants of competitiveness that leads to economic growth. However, it should be acknowledged that not all knowledge flows freely and quickly after conception, especially across national borders. Thus it may be assumed that knowledge formed in one country is first and most easily disseminated in the same country, whereas international penetration may take time. (Grossman & Helpman 1990, 796–797, 811–812.)

However, over time the pool of common knowledge grows, which facilitates further differentiation without an increase in research and development expenditure. This process is referred to as *knowledge spillovers*, stemming from the notion that knowledge not only benefits the initial inventor, but “spills over” to benefit others as well. (Branstetter 2001, 54.) Figure 4 simplifies the relationship between *knowledge carriers*⁶, knowledge spillovers, and the pooling of knowledge.

⁶ Individuals as private persons or representatives of companies or other entities that possess knowledge.

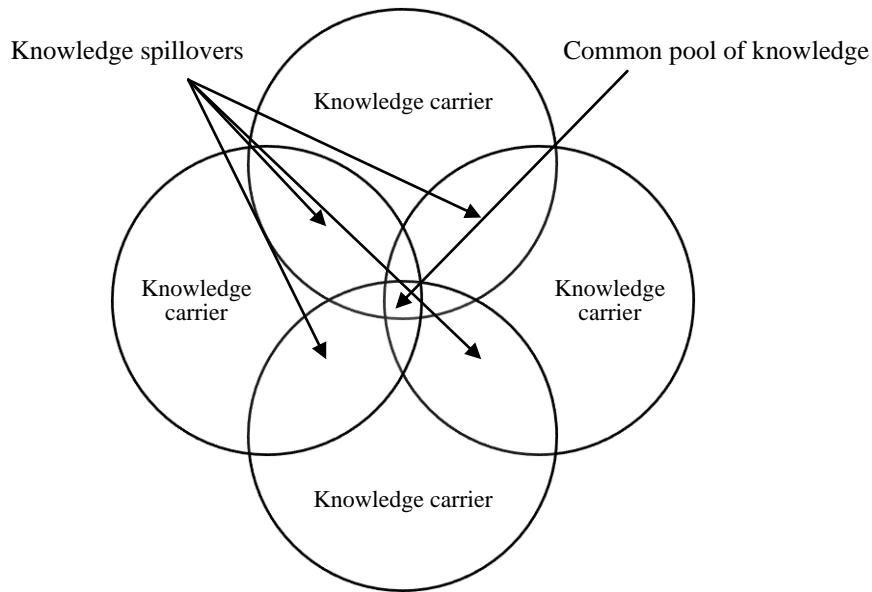


Figure 4 The pooling on knowledge

From figure 4 it is easily perceivable that knowledge spillovers are not a one-way street, but a network process, as it can be assumed that new knowledge does not flow from or accumulate within a single carrier. Accordingly, the accumulation of knowledge has been confirmed as a driver of long-run growth. Due to the nature of knowledge, the creation of new knowledge is not an easily predictable process. Moreover, the creation of knowledge holds an externality insomuch that knowledge created by one firm most often spreads to the use of other firms as well; it is difficult to keep knowledge perfectly secret. Furthermore, knowledge seems to be an attribute to increasing returns in the production of consumer goods. (Romer 1986, 1003.)

As discussed above, since technological development has made the diffusion of information increasingly easy, the role of tacit knowledge is heightened. The term tacit knowledge refers to knowledge that is rooted in people, specific to their individual skills and history. (cf. Alwis & Hartman 2008, Polanyi 1964.) The best – if not only – means to diffuse tacit knowledge is face-to-face interaction (cf. Koskinen et. al. 2003). Thus it can be argued that knowledge cannot be diffused merely by spreading information. Consequently, knowledge spillovers refer to purely *intellectual* exchanges where the creator of the knowledge does not receive remuneration. These spillovers may happen in business meetings, conferences, and other face-to-face situations. (Caniëls 2000, 8, 20.) Accordingly, it has been argued that geography is an important determinant of the scope of knowledge spillovers. Because the diffusion of tacit knowledge requires spatial proximity, a localized nature of knowledge spillovers seems logical. The spatial consideration has widened the scope of knowledge spillover research from single companies to

geographical areas. In localized research, it has been found that geographically bound innovation inputs yield results in the same area. (Audretsch & Aldridge 2009, 202–203.)

Although traditional diffusion theory does not reflect on spatial diffusion, since the 1980s research has progressed to also include considerations of cross-border dissemination. In early spatial diffusion literature, two categories of dissemination flows are identified. First, spatial diffusion can happen from region to region, starting with a growth centre and spreading to neighboring areas. After the diffusion reaches a limited area surrounding the centre, it halts; smaller, more distant regions are not reached. This process most often happens in developing areas. The second category proposes a more hierarchical structure. According to this view, diffusion spreads from the original centre to other centers. Over time, diffusion spreads also to smaller and peripheral areas. This type of diffusion most often takes place in developed countries. However, in reality the two types of processes often occur simultaneously; the hierarchical model is seen in the beginning of a diffusion pattern, whereas once the diffusion starts to spread, the more general spatial diffusion takes over. (Caniëls 2000, 16–17, 21–22.)

There is an ongoing debate with regard to the spatial scope of knowledge spillovers. The notion of *localized knowledge spillovers* – knowledge spillovers which are tied to space – suggests that companies located near to the source of the innovation can benefit from the innovation more quickly than companies located farther away from the point of origin. However, the term has been elaborated to include any kinds of knowledge flows that have a spatial limitation. Therefore the concept has become somewhat ambiguous. This problem of ambiguity stems from the issue concerning the wider terminology of knowledge spillovers, which has also been widened to include multitudes of knowledge flows in addition to the original meaning of knowledge externalities. Furthermore, the localized view of knowledge spillovers presents a policy making problem. The notion promotes the use of policies aimed at overcoming information related market failures, which leads to an assumption that the returns of such policies would be enjoyed in the same community they were implemented in. This, however, is an incorrect assumption. It is, in fact, difficult to pinpoint the extent of the impact innovative practices have on an industry. (Breschi & Lissoni 2001, 975–979.)

Similarly, the impact of knowledge spillovers is difficult to quantify. In studying R&D spillovers, it has been found that as far as an innovation is embedded within an artifact, for example a new product, the returns can be quantified. The impact of the artifact can also be traced to related industries. However, when the impact reaches beyond the natural scope of the creator (that is, when knowledge spillovers spread the innovation to others interested in the same field), it becomes increasingly difficult to pinpoint. The impact is no longer embedded within an artifact (even though the medium of knowledge spillovers may be an academic journal or other tangible intermediate). To

estimate the aggregate impact of such spillovers is a complex process, leading to studies often giving a glorified result. (Griliches 1994, 30–31, 33.)

Nevertheless, it has been found that knowledge flows (knowledge spillovers being an example of knowledge flows) are economically significant for the reason that they amplify the effectiveness of the innovation process. Because innovation is driven by the search and discovery of new combinations of knowledge, it can be argued that access to a wider pool of knowledge enhances the proficiency of innovation due to the lessened need to rediscover external knowledge. (Oettl & Agrawal 2008, 1242.) Knowledge carriers that enable knowledge flows have a major impact in this process. Knowledge carriers are closely connected to the concept of *knowledge agents*, key participants in every stage of the movement of knowledge. Whereas knowledge carriers can be simplistically defined as vessels, knowledge agents take on a more active role as the transmitters of knowledge.

3.3 Knowledge agents

The sharing of ideas (Cohen 1987, 178) has another important implication in the context of diasporas, namely the competitive advantage that can be gained through the sharing of knowledge. *Knowledge management* is a concept which refers to the creation, transformation, and application of knowledge in order to provide economic benefit. Knowledge management can be regarded as an agent driven process in which key players, or *knowledge agents*, optimize and ease the flow and transformation of knowledge from creation to application. In the knowledge management context, agents⁷ are individuals that intermediate between the phases of the knowledge management process. Knowledge agents can also work as knowledge brokers; catalysts and organizers of internal and external network ties that enable knowledge transfer. Moreover, agents can provide links between different clusters, thus widening the available pool of knowledge. (Datta 2007, 288–290.)

Knowledge agents take many roles in the process of knowledge creation and application. Figure 5 (Datta 2007, 293) provides a simple overview of these roles. Figure 5 presents a model of knowledge movement between two actions; *knowledge creation* and *knowledge application*. These can be further divided into sub-actions. Knowledge creation consists of acquiring and standardizing information, and creating and codifying knowledge, while knowledge application includes promoting creativity, transforming creative ideas into innovations, and diffusing innovations through data and knowledge.

⁷ Software agents (Datta 2007, 291) also exist, but are not of key interest in this study.

In the first instance, knowledge agents play a key role in finding and restructuring data into information (*information agents*). In the second step of knowledge creation, knowledge agents distinguish between useful and redundant information, and successfully codify tacit knowledge (*knowledge agents*). In the second instance, agents utilize the newly created knowledge to formulate new ideas (*creativity agents*). The process moves further along the line when agents actualize feasible ideas as advances in products or processes (*innovation agents*). Finally, agents divide between sensitive and non-sensitive knowledge with regard to the new innovation, and make non-sensitive data and information available to the public (*diffusion agents*). (Datta 2007.)

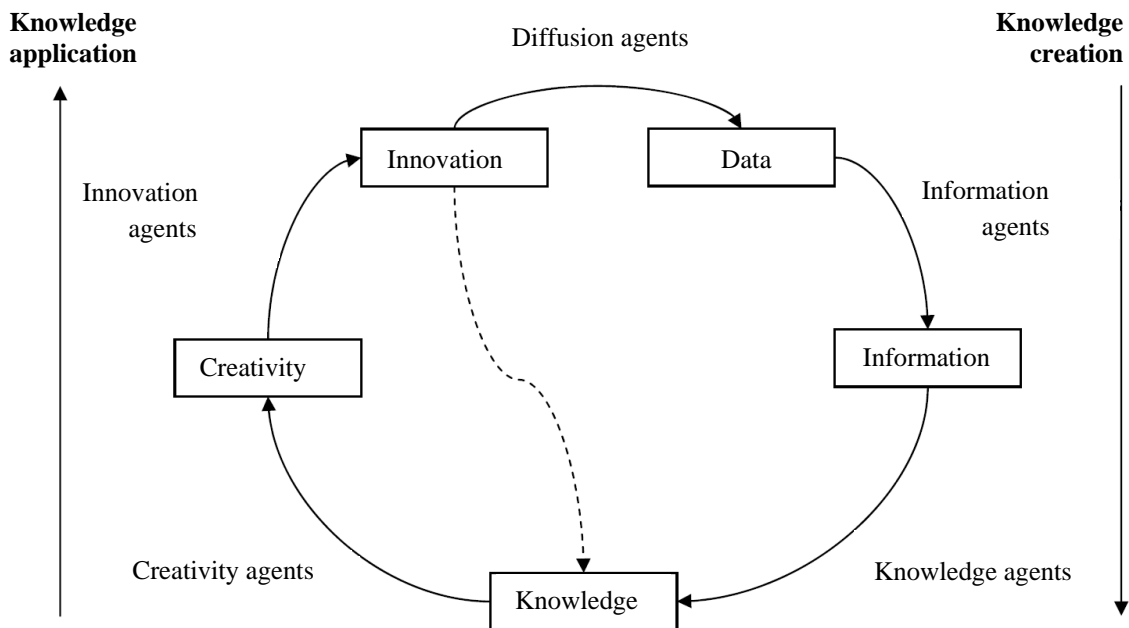


Figure 5 Knowledge movement and agent roles (Datta 2007, 293)

The knowledge agent role can also be discussed in the point of view of knowledge spillovers. A *knowledge spillover agent* act as catalysts and enablers of superior knowledge flows between organizations and nations via knowledge networks as well as personal movement (Trippl & Maier 2010, 229). Knowledge spillover agents are those individuals who, by means of their own movement, enhance the flow of knowledge between different regions (Maier, Kurka & Trippl 2007, 1). By this definition it is easy to argue that diasporas are exactly such knowledge agents. Because the mere word “diaspora” resonates movement, it is self-evident that diasporas form some sort of bridge between regions. That this bridge should include a knowledge element is not quite as self-explanatory, but still highly believable, seeing as the reasons for diasporic movement include professional aspiration (cf. Butler 2001, Cohen 1987).

The bridge across regions can, in fact, be seen as a network of individuals and organizations. This network often acts as a mediator between migrants and job opportunities

outside their country of origin. The impact of such a network is heightened in the case of highly skilled migration. More specifically, diaspora networks have been studied as a way to further “brain gain”. These diaspora networks should be seen as an asset; they connect different parts of the world together. Furthermore, diasporas have been found to commit to the host country as well as the country of origin. Thus they have become part of the host society, and are active professionals working within that society. (Meyer 2007b, 93–94, 97, 100.) As a result, diasporic knowledge agents may be the key to connecting local knowledge creation efforts to a wider pool of knowledge.

The role of knowledge agents seems to be important in many aspects of organizational knowledge flow. However, it is not self-evident that knowledge agents are willing to perform these tasks as best as they can. Incentive designs have been discussed as a medium to enhance the knowledge sharing function within organizations. However, knowledge sharing presents two distinct challenges for incentive programs; the asymmetry of information, and the variations of the intangibility level of knowledge. The first challenge refers to the difficulty in determining the level of effort offered by a knowledge possessor in a knowledge sharing process. This means that a knowledge possessor has the ability to impact their individual level of commitment; if they do not wish to do so, they may not try their best. A suitable incentive design can overcome this problem by assuring that commitment to the knowledge sharing scheme is suitably awarded. The second challenge refers to the necessity of defining different incentives for revealing knowledge of different intangibility levels. (Nan 2008, 102.)

Above, the economic importance of knowledge and innovation has been discussed. Furthermore, it has been argued that individuals have the potential to learn, share, combine and create knowledge – skills which seem to be a prerequisite of purposeful innovation. The impact of these skills on a larger scale, and the environment in which they are most likely to occur, is the basis of the following discussion on innovation societies.

4 HOST COUNTRY PERSPECTIVE ON DIASPORAS

4.1 Characteristics of an innovation society

Assuming that investments in research and development yield in innovative results, it follows that the capacity to which a society is able to harness the full potential of such investment largely determines the scale of economic activity in a region. However, it has been found that investing in research and development is not the sole determinant of economic activity. In fact, different areas tend to vary in performance despite of investment levels. One of the reasons is the type of research and development the area is most invested in; long-term research tends to yield fewer results. Another influencing factor is the local economic structure, along with the characteristics of production factors. For example, high technology companies tend to achieve greater results. Nevertheless, a societal determinant exists and should not be overlooked. The capacity of a region to build a successful innovation infrastructure is linked to the social structure of the area. Innovation prone societies are able to transform a larger share of their research and development inputs to innovative outputs and economic activity. (Rodríguez-Pose 1999, 80–82.)

“-- it is a serious mistake to treat an innovation as if it were a well-defined, homogeneous thing that could be identified as entering the economy at a precise date” (Kline & Rosenberg 1986, 283). Innovation is, rather, an uncertain process consisting of the creation and marketing of novel inventions. As a rule of thumb, when the level of novelty rises, so does the uncertainty relating to the marketability of the invention. It is useful to separate between invention and innovation; for example, not all patented ideas ever reach the market. It is also useful to note that innovations need not necessarily stem from technological discovery, but can also be the answer to specific market needs. More commonly, an innovation will utilize both technology and a market opportunity. It does not automatically follow that the technology should be cutting-edge; the utilization of simple technologies in a novel way can be quite as effective. (Kline & Rosenberg 1986, 275–278.)

“Society is where we live, love, and work. We do so in interaction with others. The arrangements that determine how we interact may be regulated by formal rules or they might reflect implicit norms, habits, and routines.” (Lundvall 2010a, 18.) These arrangements, or institutions, increase the predictability of life. Whilst they may reach different levels of approval, they will never become optimal in the eyes of the surrounding society. Nevertheless, an ongoing debate exists with regard to the most favorable arrangements for the entire society. Because a society is a complex system, it is sometimes more beneficial to look upon it as a combination of sub-systems. One such is the

economy, in which growth is in close connection with product innovation. Product innovation, on the other hand, is dependent on interactive learning. Thus it can be argued, that the economy is not separate from society; innovations include an element of cooperation, communication, and learning. Innovation can, in fact, be seen as a result of interaction between diverse actors. How these actors differ from each other is crucial; learning in a homogenous group is limited. Then again, increased diversity also increases the difficulty of interaction, for example due to different languages and behavioral norms. Thus it is important to create an environment with few barriers to interactive learning, if innovation is to flourish. (Lundvall 2010a.)

The shift towards a new economy is visible in the valuation of assets; whereas financial capital was the key determinant in the old economies, the modern measure is market value, which is often multiple times greater than the physical value of a company. Intangible assets, or *intellectual capital*, such as patents, skills, or capabilities, are nowadays the key attributes. Imagination, the ability to find creative solutions, has become a necessity where innovation is concerned. (Tewari 2011, 89–90.) If a society wishes to be actively innovative, it depends on the one hand upon the government's resource allocation strategy, on the other hand on companies' ability to create positive returns. At its simplest, a stream of innovations hinges on two actions; companies' investment seeking, and investors' funding. (Millar, Udalov & Millar 2012, 224–225.)

If knowledge is described as the ability to initiate something, it follows that innovation can be described as the ability to set forth a novel competence. This thought presents an interesting question; which human attributes promote the aptitude towards finding novel answers to problems. One possible answer is the concept of *knowledgeability*; a mixture of social and cognitive competencies that amount to capability. (Adolf, Mast & Stehr 2013, 16–17.) The most important innovation-driving competencies are;

- 1) *The capacity to exploit discretion: -- means that while rules may exist, an actor is able to explore the boundaries of these rules in ways that reveal their ambiguities, grey areas, or loopholes, and thus be in position to exploit them if so desired.*
- 2) *The facility to organize protection: The capacity to put protective devices and measures in place --.*
- 3) *The authority to speak -- is the capacity to place items on the political agenda or to challenge the discourse of experts.*
- 4) *The faculty to engage (possibly conflicting) multiple viewpoints.*
- 5) *The ability to mobilize defiance and organize resistance.*
- 6) *The capacity of avoidance and resilience -- ensure that some of the risks of modern society are distributed differentially --.*
- 7) *The ability to generate new and persuasive ideas.* (Adolf et. al. 2013, 17–19, numbering added.)

These human competencies allow for the creation of innovation fostering social environments (Adolf et. al. 2013, 20).

In addition to human attributes, an innovative organizational culture can help set competitors apart. In the modern competitive climate, innovation is not merely a coincidence, but a key part of strategy. As a strategic asset, it is nurtured via supporting values, rules, and actions. In innovative cultures creativity is appreciated, opportunity seeking encouraged, risks accepted, and collaboration promoted. (Kalyani & Vihar 2011, 84–85.) These claims are supported by the literature review and subsequent table of Hogan and Coote (2013, 4)⁸. Table 4 presents a simplified version of the table listing the key value-based characteristics of an innovative organizational culture.

Table 4 Value dimensions of an innovative organizational culture (adapted from Hogan & Coote 2013, 4)

Value dimension	Clarification
Success	The degree to which an organization values success and strives for the highest standards of performance as well as values the provision of challenging goals and encouragement of employees to excel
Openness and flexibility	The degree to which an organization values openness and responsiveness to new ideas as well as a flexible approach to solving problems
Internal communication	The degree to which an organization values open communication that facilitates information flows within an organization
Competence and professionalism	The degree to which an organization values knowledge and skills as well as upholds the ideals and beliefs associated with a profession
Inter-functional co-operation	The degree to which an organization values coordination and teamwork
Responsibility	The degree to which an organization values employees' proactive approach, initiative, autonomy, and responsibility for their work
Appreciation	The degree to which an organization values, rewards and recognizes employees' accomplishments
Risk-taking	The degree to which an organization values experimentation with new ideas and challenging the status quo

⁸ In the original table (Hogan & Coote 2013, 4) underlying rationale is defined for each of the dimensions. In addition, Hogan and Coote combine and refer to an extensive number of studies that, although not included in this paper, the author encourages the reader to examine.

From table 4 it can be concluded that an innovative culture is not only open for ideas, but also inclusive, willing to learn from rather than stigmatize mistakes, and possibly less hierarchical than a traditional company. In addition, innovation, it can be argued, is largely dependent on creativity. An innovative organizational culture fosters creativity. However, the creativity of a group, which is especially important to organizations, has additional characteristics. It can be assumed that individuals belonging to a collaborative group share their thoughts, thus combining several personal information processing practices to a higher – group – level. Such combinations enable either the disregarding or re-analyzing of individual level thoughts. The extent to which individuals are willing to open up and share their thoughts in order to learn seems to be elevated in cases where individuals are open to new experiences and willing to work in a setting with little structure. These characteristics seem to increase the scope of and attention given to a research process. (Dreu, Nijstad & Baas 2011, 306–307.)

The prerequisites of an innovation society, described above, are important for any country seeking to find competitive advantage via innovation. This study argues that diasporas, as sources of knowledge, are a potential source of innovation. Thus it is important to discuss the role which diasporas can take in building the competitive advantage of their host country.

4.2 Diasporas' impact in the host country

Even though the benefits to the country of origin are vast, it should be noted that also host countries have a major role in the creation and development of diasporas. The impact of the host country is largely researched in traditional sciences such as anthropology, sociology, and political science. However, in addition to the country of origin and the diasporic group itself, the host country is one of the most crucial agents in diaspora formation. The host country has a decisive role in the enabling of interaction and communication, and the building of diasporic identity. The latter actualizes for example via host country attitudes towards the diasporas, which may further the solidarity between neighboring diasporic groups. (Butler 2001, 206–207.) It is thus evident that the host country has an impact on the diasporas. It can, however, also be argued that the diasporas have a major impact on the host country. The host governments should, arguably, attempt to cultivate this impact.

National competitive advantage can stem from many sources. Porter (1990) names four categories of attributes that affect the competitive advantage of nations; factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. This *diamond*, as it is commonly known, is the basis of national success in any given industry. Although the diamond is a complex and mutually reinforcing

system, primarily the factor conditions are of particular interest in terms of knowledge. The factor conditions imply simply the inputs necessary for production. As these conditions vary between nations, each nation should draw from their comparative strengths. One category of factors is particularly relevant for this study, namely knowledge resources. Knowledge resources refer to the reserves of knowledge that live, for example, within universities, research institutes, and literature. (Porter 1990, 71–75.)⁹

Porter's diamond (Porter 1990, 72) reinforces the discussion on the importance of knowledge. If we accept knowledge and innovation as key resources for building national competitiveness, it logically follows that countries should be interested in ways to promote them. Due to the importance of research and development as a determinant of growth and the acceptance of the factors that influence the spreading of knowledge (Grossman & Helpman 1990, 811–812), a nation's interest in advancing the circulation of knowledge should be advocated. Even though an international scope of knowledge spillovers has been suggested, evidence seems to point out that spillovers are stronger endogenously. This proposes that intranational knowledge spillovers may build competitive advantage. Therefore, in an endogenous context, host countries have the possibility to drastically impact the development of competitive advantage from knowledge spillovers. (Branstetter 2001, 57–58, 75.)

International migration is one facet that allows the development of situations in which knowledge can be transferred between individuals from various backgrounds. Traditionally, attention has been given to the diffusion of skills and competences from immigrants, but more recent studies have revealed that knowledge transactions are quite as interesting. The knowledge transactions from immigrants are often connected with highly skilled migrant employees. Host countries have the possibility to significantly influence the accumulation and sharing of knowledge within national borders via immigration and employment policies, as well as by building a national innovation system. (Williams 2007, 29–32, 35.) The concept of national innovation systems has been used over the past two or three decades to explicate the relations between innovation agents (Archibugi, Howells & Michie 1999, 1). The term has been defined as “*the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies*” (Archibugi, Howells & Michie 1999, 3¹⁰).

It has been argued that economic theories pay too little attention to interactive learning and innovation. The theory on national innovation systems takes this view into ac-

⁹ Porter's diamond has also received extensive critique. Although not considered here, the author encourages the reader to examine works such as Dunning 1993 or Penttinen 1994.

¹⁰ Original source: Freeman, C. (1987) *Technology policy and economic performance: Lessons from Japan*, Frances Pinter, London.

count. The focus on innovation stems from two sources; first, the assumption that knowledge is, today, the single most important resource, and second, that learning (which is a crucial process whenever knowledge is shared) is an interactive process set in a social environment, and cannot be understood outside its original socio-cultural context. Building on this basis, a system is viewed as a set of interrelated elements. Therefore, a *system of innovation* consists of elements and interrelations, which play a role in the creation, dissemination and use of knowledge. To become a national system, the innovation system must be spatially bound within one nation state. National innovation systems are based on learning and sharing; therefore they are both social and dynamic in nature. Moreover, a narrow and broad sense of understanding can be identified. National innovation systems, in the narrow sense, consist of organizations and institutions involved in research and exploration. The broad sense, in contrast, includes every part of the economic and institutional framework that has an impact on learning, research and exploration. (Lundvall 2010b, 1–2, 13.)

The most significant reason for creating an innovation policy is the assumption that innovation is a vital part of national economic growth. Thus, host countries should be on the lookout for an optimal innovation system, which would enable efficient allocation of resources. Furthermore, this innovation system should be dynamic and adaptable. It has been suggested, that the appropriate measure for the excellence of a national innovation system would be its ability to efficiently and effectively generate, disseminate and utilize economically valuable knowledge. Evaluating the effectiveness of the system, however, is not uncomplicated; most measures (such as expenditure on research and development, and number of patents) do not clearly portray the innovativeness of the actors. (Lundvall 2010b, 6–7.)

Knowledge creation has been considered a localized task due to the necessity of an appropriate institutional setting and easy communication. Additionally, the nature of knowledge exchange is such that close proximity may enhance the results, as face-to-face situations enrich the process. However, the modern economic system has greatly reduced the cost and risk of research and development overseas. Moreover, in the modern economy, fast and efficient knowledge sharing is possible through advanced technology. Meanwhile, the agreed source of competitive advantage has shifted from economies of scale and scope to the possession of and admission to knowledge. Whereas the traditional scope of internationalization would have included operations in North America, Western Europe and Japan, since the late 1990s the location of international research and development has increasingly included also developing nations. (Bruche 2009, 269–270, 273.)

It is reasonable to deduce, therefore, that since it has proven fruitful to tap into the research and development possibilities within overseas communities, tapping into diasporas from those communities could offer similar benefits. This has already been seen,

for example, in the United States, where a strong immigration policy has enabled an accumulation of foreign talent that benefits domestic companies (Bruche 2009, 282). It has been argued that highly innovative environments seem to include many interacting diaspora networks, between which tacit knowledge can flow easily and quickly. Diaspora networks seem to possess the ability to transfer information effectively, and thus allow for speedier and more reliable transactions. (Meyer 2007a, 18-20.) If the host country could access the superior means of knowledge transfer common to diaspora networks, the resulting development could increase mutual benefit.

The mobility of skilled labor can create knowledge spillovers if the workers contribute to a common pool of knowledge, which every employer of the workers (current or previous) is able to tap into. This notion separates the idea of individuals as knowledge carriers (and spreaders of knowledge) from merely shifting knowledge from one employer to another. The notion, however, proposes a problem if the tacit nature of knowledge is considered. The concept of tacit knowledge stems from the idea that not all knowledge can be codified; that some knowledge can be embedded within people. If this is believed to be true, it logically follows that as an employee leaves a company, said company loses that employee's knowledge. Consequently, if tacit knowledge is believed to be the product of the organization, the receiving employer may not receive a positive externality in their new employee. Nevertheless, the knowledge spillover theory suggests that employees can create a common pool of knowledge accessible to all their employers. Thus it can be argued that some codification or spreading of the knowledge has to happen. (Breschi & Lissoni 2001, 991–992.)

Table 5 argues that there are many ways in which diasporas can have a beneficial impact in host countries in an optimal setting. Table 5 also gives a clarification of how diasporas can be connected to some ideas born in wholly other contexts. In table 5 it is visible that diasporas may have vast potential in terms of the economy of the host country.

Table 5 Potential benefits of diasporas to the host country

Impact	Source	Clarification
Source of national competitive advantage	Porter 1990	Knowledge is one of the factor conditions that determine the competitive advantage of nations. As a source of knowledge (in addition to other factors), diasporas benefit the host country.
Catalysts for the promotion of knowledge circulation	Grossman & Helpman 1990; Branstetter 2001	Governments should be interested in promoting knowledge creation and innovation; diasporas' communication channels can be used to further enhance the circulation of knowledge. Working with resident diasporas should advance the extent of research whilst considering the endogenous nature of knowledge spillovers.
Widening the pool of knowledge	Williams 2007; Breschi & Lissoni 2001	International migration can be seen as a possibility to utilize foreign knowledge in a domestic setting, thus enhancing the potential of new knowledge creation.
Agents of interactive learning and innovation; Agents in national innovation systems	Lundvall 2010b	The importance of knowledge makes the sharing of knowledge crucial. Learning, consequently, is crucial for sharing knowledge. Diasporas may play a role in building a suitable socio-cultural context for mutual sharing and learning, especially as diasporas may possess different skills and socio-cultural backgrounds than domestic agents. Diversity should be beneficial for innovation.
Agents of knowledge creation	Bruche 2009	Knowledge creation is eased by efficient communication and close proximity. As modern communication technology has developed, knowledge creation has become a more international process. Diasporas can offer a different international viewpoint.
Creators of superior communication channels	Meyer 2007a	It has been argued that diaspora networks create superior communication channels for efficient flows of knowledge. Transactions via diaspora networks seem to be more effective, speedier, and more reliable.

Table 5 suggests that diasporas could have a major role in building the national competitive advantage of the host country for example as sources of knowledge, communication channels and novel combinations. If the potential suggested in table 5 truly exists, as this study argues, harnessing such potential should be of key interest to host countries.

4.3 Harnessing the potential embedded within diasporas

Government policy is a medium through which host countries can affect national advantage. The main goal of government policy is to optimize the usage of a nation's resources for maximum productivity. Another key concern is sustained productivity growth. Government policy also stimulates industry dynamism; the renewal of an industry's competitive advantages. Although governments cannot create competitive industries, they can mold the institutional framework and inputs that affect industries. A challenge in policy making is the wide array of fields that influence national competitive advantage. Thus nations easily have overlapping and confusing policies and institutions in place. As information is becoming an increasingly important asset for competition, governments are more actively expanding the national stock of knowledge and boosting knowledge dissemination. (Porter 1990, 617–618, 620, 626, 639.)

Government roles have long been studied with regard to facilitating technological change. Governments have various routes to promote behaviors that uphold the proficient creation, transfer and dispersal of innovations. To encourage innovation, governments can support publicly funded research institutions such as universities and science parks, they can give support to innovative practices in the private business sector, and they can provide the necessary infrastructure to facilitate the innovative practices. (Archibugi & Michie 1998, 315.) Nowadays the difference between technology policy and industrial policy is becoming less distinct. In fact, technology policy is becoming a crucial part of any industrial policy. The next step is a policy aimed at influencing all the factors supporting technological innovation. Thus it seems that governments are aware of the cumulative nature of learning. Moreover, internationalization has become a key concern in technological development. Foreign technology absorption has become a vital part of competitiveness. In addition, the decisive human factor connected to learning and knowledge has been acknowledged. (Lundvall 1999, 28.)

It has been argued that investments in knowledge accumulation can be expected to have a high social reward. Thus it is important to manage investments in knowledge, for example via policies. However, as the innovation processes change, this becomes increasingly difficult. Whereas earlier innovation was the product and source of technological advancement, nowadays innovation deals more closely with connecting suitable

pieces of existing knowledge in order to find new, exploitable combinations. In the modern world, there is very little need for huge technological leaps as the drivers of innovation; instead, access to existing technology is the key. Thus, it is increasingly important that knowledge is shared rather than stored within the original creator. In order to facilitate the sharing of knowledge, innovative hubs and national systems of innovation have emerged. Their purpose is to search through and merge existing knowledge into new innovations that lead to future economic growth. Nevertheless, this recombination method of innovation also presents a problem; how to best access existing knowledge. Intellectual property rights play a crucial role in protecting newly created knowledge from outside exploitation. (Soete & Weel 1999, 298, 300–301.)

One way to support a knowledge-intensive economy is brain competition policy, which “*is defined as attraction, retention, education, circulation and utilization of talent functioning as knowledge spillover agents in and between regional, national and supra-national economies*” (Reiner 2010, 451). Brain competition policy takes into account the multitudes of factors that impact the relocation decisions of highly skilled individuals. Brain competition policy is a multi-disciplinary concept, thus it should be addressed in various policy fields across different levels of policy (figure 6).

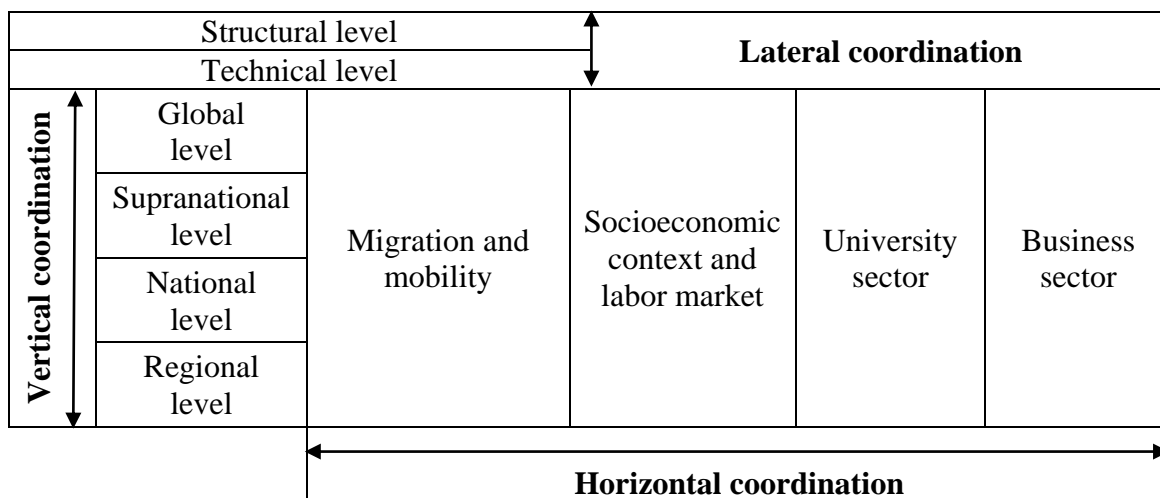


Figure 6 Policy fields affecting brain competition policy (Reiner 2010, 453)

If a brain competition policy is to succeed, three forms of coordination between these policies is necessary. Vertical coordination is required to harmonize policies across global, supranational, national and regional levels. Horizontal coordination calls for cooperation between different policy fields – migration, socioeconomic, university and business – often under the rule of different ministries. Finally, lateral coordination refers to the synchronization of structural (including, for example, informal institutions) and technical (including, for example, formal institutions) spheres. (Reiner 2010, 451–456.)

By coordinating these policies, governments may be able to more easily attract crucial talent and build national competitive advantage.

However, it may not be easy for governments to mold new policies and rules. After all;

The man who embraces a new paradigm at an early stage must often do so in defiance of the evidence provided by problem solving. He must, that is, have faith that the new paradigm will succeed with the many large problems that confront it, knowing only that the older paradigm has failed with a few. (Kuhn 1996, 158.)

Thus it may require a certain leap of faith to be among the first to adopt a new regime – something that may be difficult to endorse.

5 THE GROUNDWORK FOR AN INTERACTION FRAMEWORK

This study assumes that governments find national competitive advantage a key concern, and that knowledge and innovation are considered as crucial inputs in the creation of national competitive advantage. Thus it can be argued that governments find it necessary to put up policies that aim at supporting innovation via an increased focus on knowledge. Because the creation of new knowledge, which is a vital step in innovation, requires sources of existing knowledge, governments should be equally interested in promoting knowledge transfer. Knowledge spillovers, as a mode of knowledge transfer, are of particular interest due to their suitability for the difficult task of diffusing tacit knowledge. Because globalization presents host governments with increasing competition, it is also beneficial to look for sources of knowledge outside national borders. If foreign knowledge could, however, be found domestically, costs would reduce and the spillover effect would be more efficient. Thus governments find it beneficial to endorse policies that make immigration and cooperation attractive for diasporas. Furthermore, policy with regard to the enhancement of knowledge spillovers is needed in order to capture the knowledge from diasporas.

The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. This framework will be based on both theory and empirical information. A theoretical draft of the framework (figure 7) will help in finding synthesis within the different parts of theory presented in this study. Figure 7 combines varied theoretical notions and above argued assumptions into a theoretical framework of diaspora – host country interaction. The theoretical framework will be used as the basis of operationalization and will be modified according to the results of the empirical research in order to build the final framework.

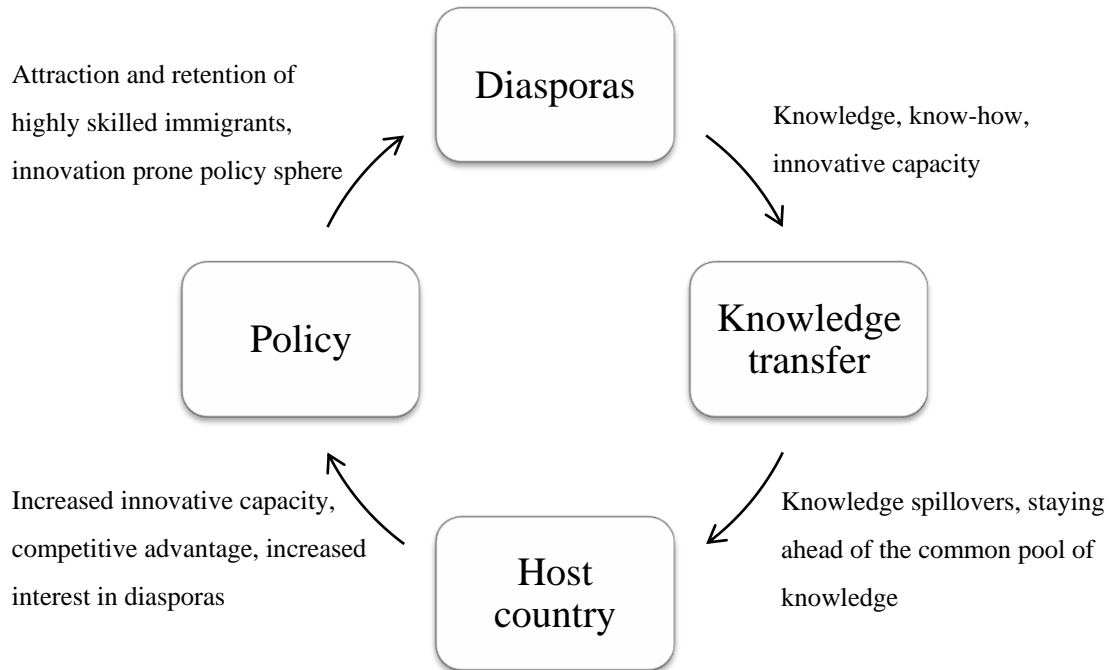


Figure 7 The foundation of the interaction framework

Although figure 7 portrays the synthesis between different parts of theory, the interaction element is still very limited in this draft. Thus, in order to get a more comprehensive view of the basis of the interaction framework, the draft presented in figure 7 should be elaborated. Figures 8-11 take each part of this draft and include additional theoretical and functional considerations. On the basis of these figures, the interactive element is also explained.

Figure 8 presents the diaspora part of the interaction framework more closely. The reason for migration should be considered when discussing the diaspora role in the interaction framework (cf. Butler 2001, Cohen 1987) – work-based migration might indicate a level of skills and willingness to commit to the host country superior to other types of migration, for example refuge. Diasporas are a source of knowledge (cf. Leblang 2010, Kuznetsoc & Sabel 2006) that can act as members of an explorative network (cf. Madhavan & Iriyama 2009) that expands over national borders (cf. Saxenian 2002). Furthermore, they enhance brain circulation (cf. Saxenian 2005), and act as knowledge spillover agents (cf. Tripl & Maier 2010, Maier, Kurka & Tripl 2007). However, in order to become a truly committed part of an organization, some sort of incentive plan may be needed (cf. Nan 2008). Incentives may also be necessary for the attraction and retention of skilled diasporans (cf. Reiner 2010). These aspects are important to consider when trying to extract the knowledge, know-how, and innovative capacity that diasporas possess. Diasporas are a part of the interactive ring as knowledge sources and network agents. They interact with their own personal network, as well as with the or-

ganization in which they work. They provide the organization with knowledge not only embedded within them, but spilling over from the explorative network.

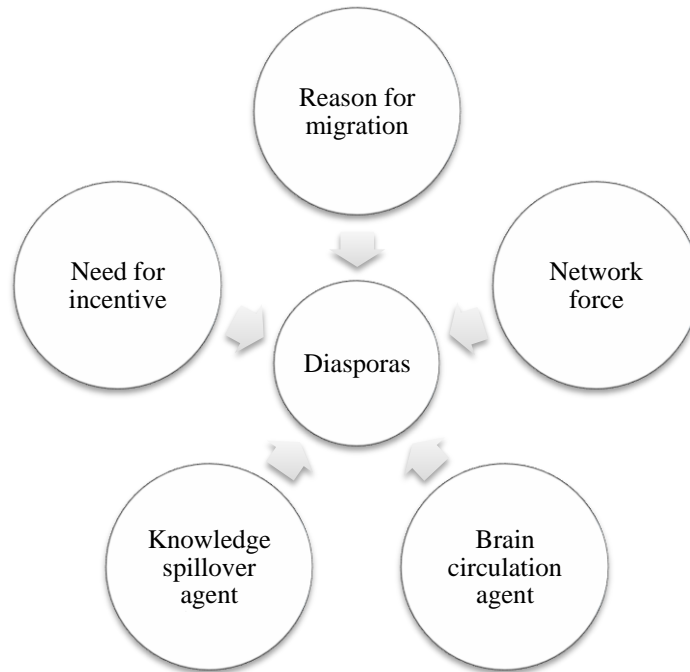


Figure 8 The role of diasporas in the interaction framework

Figure 9 focuses on the knowledge transfer part of the framework. When considering knowledge transfer, it is important to bear in mind the distinctive characteristics that knowledge has as an economic input (see, for example, Alwis & Hartman 2008, 134, Antonelli 1999, 244–245, Soete & Weel 1999, 298–299). In addition, the tacit and explicit (Polanyi 1964, 144) nature of knowledge should not be forgotten. This in particular presents a challenge in the dissemination of tacit knowledge, which is likely to occur mainly and most effectively in face-to-face situations (Koskinen, Pihlanto & Ruuska 2003, 281–282, 285–286). This trait makes the existence of knowledge networks (Peña 2002, 469–471) especially desirable; in such networks knowledge can be more easily shared. However, the sharing of knowledge ultimately leads to the emergence and enlargement of a common pool of knowledge (Branstetter 2001, 54). This is due to the knowledge spillover effect, which indicates that knowledge is more easily shared in social contexts both on purpose and unplanned (Caniëls 2000, 8, 20). This spillover effect, it has been argued, is even stronger in a localized context (Breschi & Lissoni 2001, 975–979). Thus it seems that knowledge agents that enhance the process of knowledge creation and application (Datta 2007, 288–290) may have more impact on a local scale. Seeing that diasporas may have superior networks to tap into for knowledge resources, it can be argued that diasporic knowledge agents are even more adept for the task. Thus

it would seem that in the knowledge transfer perspective, knowledge spillovers are the key to spreading tacit knowledge, and that diasporic knowledge agents may have an edge in finding suitable knowledge to be shared. Interaction, consequently, would be based on those knowledge agents interacting both with their networks and their employer organizations in order to create and apply new knowledge. This process should, in the end, result in improved innovative capacity and new innovations.

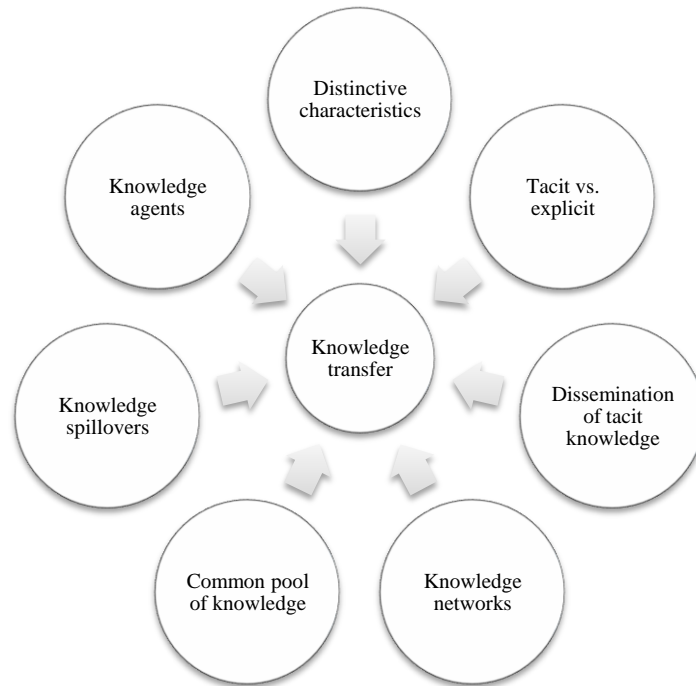


Figure 9 The role of knowledge transfer in the interaction framework

The role of the host country (figure 10) in the interaction framework culminates on fostering an innovation prone society (cf. Rodríguez-Pose 1999, 80–82). In an innovation prone society, interactive learning (Lundvall 2010a, Lundvall 2010b, 1–2, 13) is a decisive means towards innovative capacity. The cultivation of interactive learning requires a deep understanding of the surrounding socio-cultural context (Lundvall 2010b, 1–2, 13). Countries have the ability to influence this context through institutions (cf. Lundvall 2010a, 18). Interactive learning is a key asset in trying to stay ahead of the common pool of knowledge. A common pool of knowledge (see, for example, Branstetter 2001, 54, Breschi & Lissoni 2001, 991–992) is, by name, mutual to everyone who wishes to tap into it. If a nation wishes to remain competitive, it would seem logical that they should have additional resources available. Because interactive learning leads to increased innovative capacity (cf. Lundvall 2010a, Lundvall 2010b), it is highly logical that interactive learning among individuals with largely different backgrounds and know-how might, in cases of mutual interest, result in even better outcomes. Thus the host country interaction role is crucial in building a society which allows for interactive

learning, as well as ensuring that the institutional sphere does not hinder creative behavior. Whereas the host country may take little part in innovative behavior within firms, government policies are crucial in the attraction and retention of skilled migrants. Thus policy is considered as its own entity, even though it is an element of host country involvement.

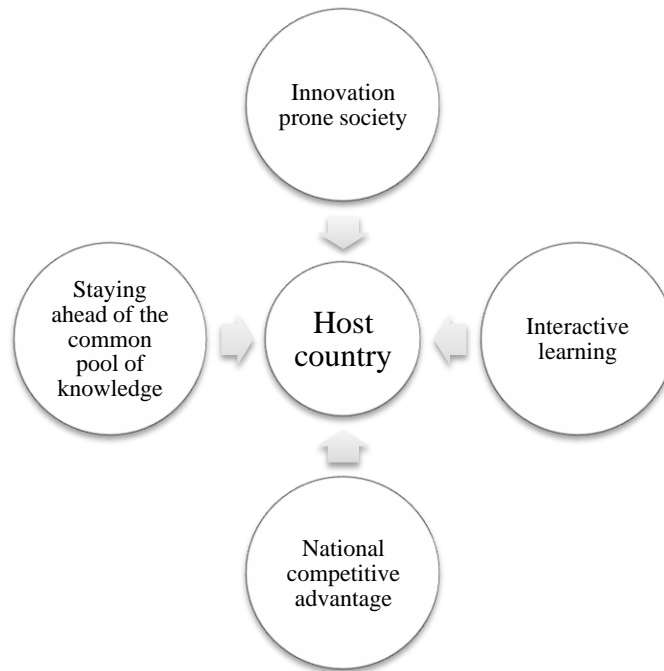


Figure 10 The role of the host country in the interaction framework

Government policies stem from the desire to optimize national resources (see, for example, Porter 1990). Such optimization enables economic growth. In the modern innovation society, managing investments in knowledge is of particular importance. It is not enough to be aware of the importance of knowledge, but knowledge creation must be actively promoted and knowledge creators valued and protected, for example via intellectual property rights (cf. Soete & Weel 1999, 298, 300–301). Brain competition policy (Reiner 2010, 451–456) addresses policy issues on a comprehensive scale. Thus it is a good yardstick against which to consider government policy. In order to create an inviting environment for outside talent, policy measures not only need to be in place, but should be harmonized across various fields. Thus, for example, immigration policy, employment policy, and education policy should not only be made inclusive, but synchronized to fit the objective of creating an innovation-prone policy sphere. The interactive part of policy is to bring together the host government and diasporas so that they can work towards a common goal in harmony. This means that the host government should be accepting and encouraging towards diasporas, and that diasporas should be

able to find the host country worthy of commitment. Figure 11 portrays the role of government policy in the interaction framework.

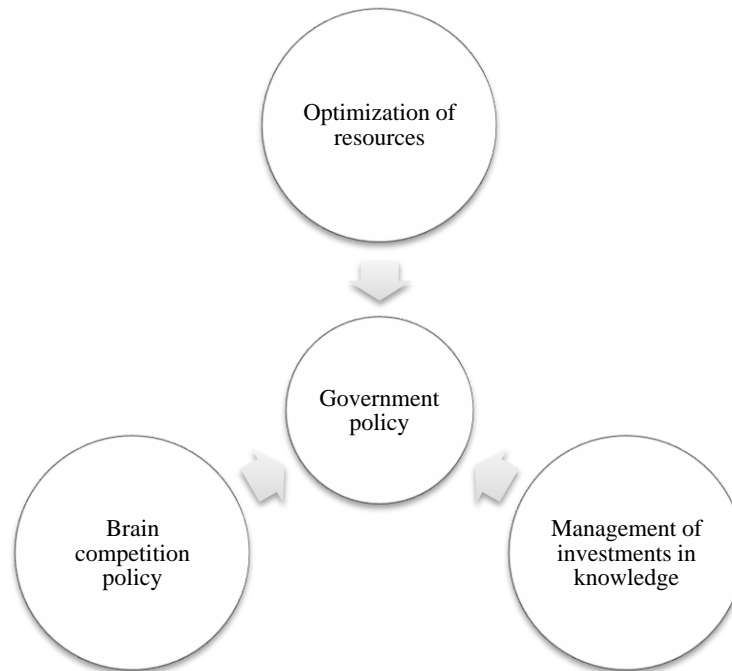


Figure 11 The role of government policy in the interaction framework

Drawing all of the above together, a better draft of the interaction framework is reached (figure 12). This draft takes into consideration the variability of each segment, as well as increases the visibility of interaction between the different segments. In effect, there are two actors between whom two actions take place. The actors are diasporas and host country, the actions knowledge transfer and policy-making. Whereas knowledge transfer is an action beginning from diasporas and ending to the host government (knowledge is, of course, transferred also from the host country to diasporas, but this study focuses on knowledge spillovers from diasporas), policy-making is the action of the host government aimed at the attraction and retention of skilled diasporas.

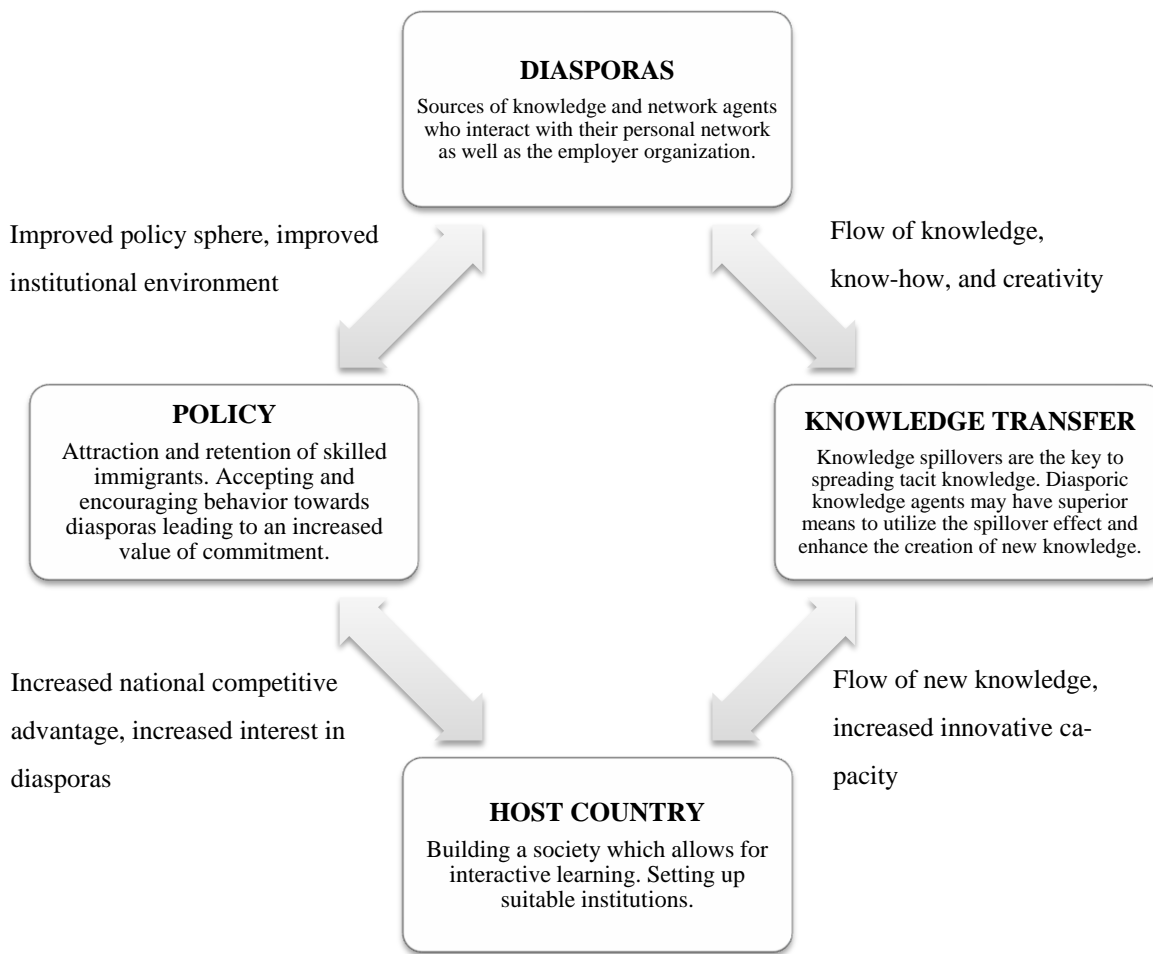


Figure 12 Theoretical interaction framework

Figure 12 presents a theoretical interaction framework which illustrates the fundamentals of how diasporas can benefit the host country via intentional knowledge spillovers. This theoretical framework is the basis of the empirical study. It gives the empirical study its structure as well as provides a framework for analysis. Figure 12 can be argued to indicate more interconnections than the ones examined in this study. For example, a link could be added between diasporas and the host country, as well as between knowledge transfer and policy. However, as this study aims at suggesting an interaction framework specifically illustrating how diasporas can benefit the host country via intentional knowledge spillovers, this study will focus on the cyclic interaction portrayed in figure 12.

6 RESEARCH DESIGN

6.1 Research approach

The very basic methodological decision each study that contains an empirical part faces is whether to use qualitative or quantitative methods. The chosen method should always answer the needs of the research problem in question (Eskola & Suoranta 1998, 14). Qualitative and quantitative methods differ mainly in the research procedure; quantitative methods produce quantifiable results. However, in some cases it is possible for qualitative data to be codified into a numerical form. Thus the two are not mutually exclusive. Instead, the differences stem from the chosen emphasis and objectives. Qualitative research is most often utilized when explorative designs are needed. Qualitative research typically focuses on processes, whereas quantitative research more often centers on structures. (Ghauri & Grønhaug 2002, 86.)

Although there are many types of qualitative studies utilizing a myriad of qualitative research techniques, it is possible to identify some characteristics which are common to most qualitative research (Hirsjärvi, Remes & Sajavaara 1997, 163, 165). First, qualitative research is *holistic and attempts to gather data in natural settings* (Hirsjärvi et. al 1997, 165). This study aims at suggesting an interaction framework. In order to reach this objective, this study attempts to take a holistic outlook on all centric theoretical concepts. Furthermore, this study attempts to examine the truthfulness of those concepts in a given empirical setting without trying to manipulate the data collection environment. Thus the first criterion is met. Second, a qualitative study *advocates human beings as means of data collection*. Instead of measuring, a qualitative researcher wishes to make observations and have discussions. (Hirsjärvi et. al 1997, 165.) The empirical part of this study is based on interviews (chapter 6.2) in which the researcher attempts to engage subjects to open, in-depth discussion. The researcher seeks to examine the subject and make conclusions based on personal interaction rather than via structured measurement. Thus the second criterion is met. Third, qualitative research most often *utilizes an inductive approach*. A qualitative study does not attempt to test formed hypotheses but to discover new information. (Hirsjärvi et. al 1997, 165.)

Inductive research draws conclusions on the basis of empirical evidence. Thus it generalizes assumptions. Because the conclusions are based on empirical findings, the researcher can never be completely certain of their trustworthiness. *Deductive* research, in contrast, uses logical reasoning as the basis of conclusions. Deductive research is aimed at examining theories and hypotheses in order to validate or contradict them. (Ghauri & Grønhaug 2002, 13–14.) Because this study uses a theoretical framework of diaspora – host country interaction as the groundwork for empirical investigation, it can

be categorized as a deductive study. However, instead of merely attempting to validate or contradict the theoretical framework, this study wishes to use empirical data to augment the framework. Thus, this study will inductively supplement the theoretical framework to better fit the reality. Because this study wishes to add to the emerging field of study which combines diaspora research with research on knowledge by using an inductive approach, it can be claimed that the third criterion is met, even though this study does present theoretical groundwork. In contrast, where the empirical data and theoretical framework clash, the theoretical framework may work as a signpost of possible best practices. Thus it can deductively be used as a source of guidelines towards enhancing the functioning of the interaction framework.

The fourth criterion for qualitative research is that the *data is collected using qualitative methods* (Hirsjärvi et. al 1997, 165). This study utilizes interviews (chapter 6.2.) as the data collection method. Fifth, a qualitative study *uses carefully selected informants instead of a random sample* (Hirsjärvi et. al 1997, 165). This study sought the informants from expert organizations and from individuals with personal experience of migration. By doing this, the study wishes to uncover in-depth information on the subject. Sixth, in qualitative research *as the project progresses, the research plan often changes* (Hirsjärvi et. al 1997, 165). In this study, the research plan was modified multiple times to fit both uncovered theoretical conclusions as well as the changing needs for empirical research. Although the subject matter is unchanged, the gap this study aims to fill has been further defined during the whole research process. Seventh, a qualitative study *does not wish to generalize, but analyses instances as unique* (Hirsjärvi et. al 1997, 165). This study wishes to suggest an interaction framework that is based on both theory and empirical research. Although this study discusses the theoretical and practical implications of the created framework (chapter 8), it does not wish to claim that the model formed on the basis of the situation in Finland can be generalized. Instead, this study wishes to emphasize the importance of discussion and research on the subject.

Judging from the above, it is clear that this study is qualitative in nature. However, behind the rather simplistic choice of qualitative or quantitative lies the philosophical questions of how the world is viewed. More particularly, research methodology is related to assumptions of ontology, epistemology and human nature. *Ontology* refers to the nature of reality; whether reality is a given – objective, constructed outside the consciousness of a human being – or whether reality is in fact the work of a human consciousness. *Epistemology*, conversely, discusses the nature of knowledge. Epistemology asks how a human being can construct and disseminate an understanding of the world. The underlying questions in epistemology deal with how one can determine what is true or false, and whether knowledge has a hard, tangible nature, or is actually a softer, more subjective construct. On the one hand, theorists claim that knowledge is gained as a result of causality and regularities. On the other hand, theorists argue for the notion of

knowledge as a subjective and relative understanding. In close connection to these issues of ontology and epistemology is human nature. More particularly, it is interesting to study the relationship between an individual and his surroundings. On the one hand, there are assumptions of human beings responding to their environment in an orderly fashion. On the other hand, there are views of human beings as the creators of the environment. These contrasting views essentially deal with control; whether human beings *are* controlled by the surrounding world, or whether *they* control the environment. (Burrell & Morgan 1979, 1–2, 5.)

The discussions on ontology, epistemology, and human nature impact methodology through the ways in which a researcher endeavors to attain knowledge. The standpoints taken to ontological and epistemological discussions as well as to the human nature steer the researcher towards certain methods. The two alternative views of the social world – the objective and the subjective – complement different kinds of studies. When social reality is looked upon as an objective existence, research is likely to focus on finding universal regularities. When social reality is seen as a subjective construct, research is more likely to focus on understanding how human beings shape and interpret their surroundings. (Burrell & Morgan 1979, 2–3.)

This study adopts a subjective outlook on social reality. This study assumes that human beings have the ability to shape their surroundings, and that knowledge – even at its purest – is subjectively learned. This standpoint enables this study to interpret the world not as a given, but as a social construct which can evolve – a prerequisite when change is considered. The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. The question ‘how’ suggests the necessity of an elaborate descriptive answer in addition to the framework. In answering ‘how’, the attention is turned not only towards causal relationships but on the reasons and modes of action.

Qualitative research implies an element connected to the real world. Most often, in qualitative research, the focus is not merely on facts, but on constructions, interpretations, and meanings related to experiences. Typical qualitative research aims at developing new concepts. (Gerson & Horowitz 2002, 199.) The purpose of this study is to suggest an interaction framework. This interaction takes place in the real world. Furthermore, the theoretical groundwork for such a framework (figure 12) predicts a circular process structure. In addition to facts, this study wishes to scrutinize the quality of interaction. Quality is, in this context, arguably a concept which is largely based on subjective experience and interpretation. Rather than depicting quality by setting a list of controls, quality is determined by perceived functionality.

6.2 Data collection

Qualitative data collection methods essentially produce data which is codified into text. The researcher may or may not be involved in the birth of the text. Researcher involvement may produce texts such as interview transcriptions or observation notes, whereas texts such as personal letters or diaries exist without the involvement of the researcher. A qualitative study often chooses to examine a limited number of cases in depth rather than a vast number of cases on the surface; instead of quantity, the scientific integrity of the data is determined by its quality. This type of data collection often requires the ability of the researcher to identify suitable participants according to a theoretical background. Field work enables the researcher to come into contact with the subject. (Eskola & Suoranta 1998, 15–16, 18.) By using qualitative methods, this study tries to utilize the expertise of chosen participants to the full. This study wishes to gain deep insight into the subject matter via a thorough exploration of a limited number of cases.

There are multiple methods available for qualitative data collection. The most popular sources of data include interviews, surveys, focus groups, observations, written documents, and databases. (Fisher 2010, 71.) Because this study wishes to engage participants in a discussion of their knowledge, perceptions, and experiences, an interview strategy is chosen. Moreover, interviews are chosen in preference to other types of interactive data collection methods due to their flexible nature, which allows for the use of a loose yet fruitful structure.

“Interview methodology begins from the assumption that it is possible to investigate elements of the social by asking people to talk, and to gather or construct knowledge by listening to and interpreting what they say and to how they say it” (Mason 2002, 225). Using interviews as the source of data in any study is not as simple as it may sound. Instead of choosing people at random, or those that are easiest to reach, and engaging them in formless discussion, a good interview strategy takes into account the theoretical background of the research problem. Suitable interviewees should be chosen according to their expertise in the subject matter. The interviewees should also be guided towards a focused conversation with regard to the objectives of the research rather than in an endless open discussion. The purpose of carefully planned interviews is to provide manageable data for analysis. Room should, of course, be allowed for surprising results, but this may, in fact, be easier with a focused group of interviewees and a suitable interview guide. (Gerson & Horowitz 2002, 204.)

Even though unstructured interviews have been a topic of discussion, it is, in fact, impossible to conduct an interview completely without structure; at the very least the plans and suppositions of both researcher and interviewee will shape the framework of the interaction. Thus, instead of whether or not to structure an interview, the question is how – and how far – should an interview be structured. Most qualitative researchers

adopt an interview structure which is meaningful to the interviewee as well as relevant to the research. Additionally, many qualitative researchers aim at minimizing their own involvement in the sequencing of the discussion. (Mason 2002, 231.)

In order to offer some structure to the interview process, a theme-based interview guide (appendix 1) is used. The four sections of the theoretical framework introduced in Chapter 5 (*diasporas, knowledge transfer, host government, and policy*) act as interview themes. Instead of very specific questions regarding each section, the interview guide provides the topic and some helpful questions that may be used as conversation starters if the discussion stalls, or as a checklist for making sure every important aspect has been covered. Figure 13 presents the operationalization of the key questions this study wishes to answer. The operationalization of the key concepts that enable the study to answer these problems is done on the basis of figure 12, which presents a theoretical draft of the interaction framework this study aims at building.

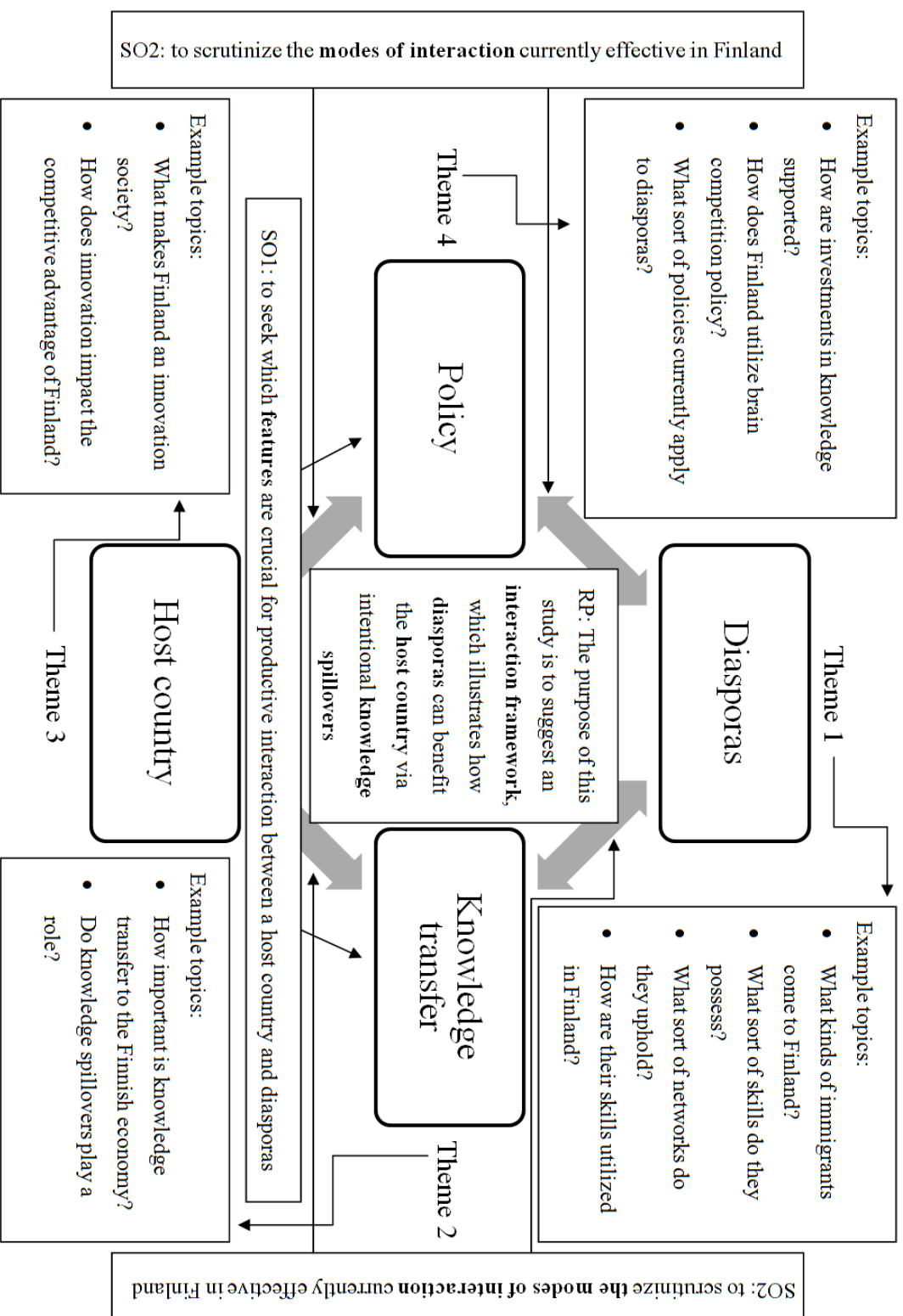


Figure 13 Operationalization

In comparison with alternate methods, *expert interviews* are deemed a highly efficient way of data collection. In addition to their individual proficiency, experts often possess contacts to other professionals in their field, thus enabling the researcher to access additional sources of knowledge. It has also been argued, that due to their efficiency, expert interviews yield good results in short time periods. Furthermore, a shared understanding of the importance of the subject acts as motivation and often is enough to justify participation. (Bogner, Littig & Menz 2009, 2.) The term *expert* in this context is of key importance. Whereas loosely used, anyone can be named an expert of something – at the very least their own life history – in scientific terms an expert is an individual who is presumed to possess knowledge that is not available for anyone acting in the same field (Meuser & Nagel 2009, 18).

This study utilizes expert interviews due to their perceived superiority with regard to the quality of information and speediness of data collection. The interviewees are chosen from different organizations representing the government and economic life, as well as from members of diasporas residing in Finland. The purpose of this division is to discover the current state of government attitudes and action, and how successful the economic sector as well as individual migrants find these actions. Five organizations were contacted for interviewees; the Finnish Immigration Service and the Institute of Migration as experts of migration, the Ministry of Foreign Affairs and the Ministry of Employment and the Economy as experts of the host country and government policy, and the Helsinki Region Chamber of Commerce as an expert of economic life in Finland. All five organizations participated in this study. In addition to these organizations, three immigrants participated in the study. The role of the immigrants was to portray how well the officials' point of view matches that of the individuals affected by drawn policies. Thus the interviews with immigrants did not focus on describing diaspora, but the immigrants' experiences of and within Finland. A more detailed description of the interviewees and information of the interviews are given in table 6.

Table 6 Interviews

Interviewee			Interview	
Name	Organization	Position in organization and role in study	Date and place	Length and language
Tiina Suominen	Finnish Immigration Service	Director Expert on migration	26.9.2013 Office in Helsinki	42min Finnish
Ismo Söderling	Institute of Migration	Director Expert on migration	9.10.2013 Office in Turku	1h21min Finnish
Jyrki Pulkkinen	Ministry of Foreign Affairs	Senior Advisor Expert on host country and policy	27.9.2013 Coffee shop in Helsinki	41min Finnish
Tapani Kojonsaari	Ministry of Employment and the Economy	Project manager Expert on host country and policy	27.9.2013 Office in Helsinki	1h21min Finnish
Markku Laitinen	Helsinki Region Chamber of Commerce	Manager Expert on economic life in Finland	26.9.2013 Office in Helsinki	1h10min Finnish
Organizations				
Name	Country of origin and length of residence in Finland	Role in study	Date and place	Length and language
Hülya Kytö	Turkey 42 years	Description of personal opinions and experience	9.10.2013 Office in Turku	1h17min Finnish
Walter Rodriguez	Guatemala/Germany 1 year	Description of personal opinions and experience	15.11.2013 Coffee shop in Helsinki	48min English
Jorge Baldeon	Ecuador 5 years	Description of personal opinions and experience	15.11.2013 Private residence in Helsinki	1h12min English
Immigrants				

The interviews were conducted between September and November 2013 in Helsinki and Turku. Three interview environments were used: the offices of the interviewee (in five instances), a public coffee shop (in two instances), and a private residence (in one instance). The interview environments within the offices and private home were quiet and most of the interviews were not interrupted. In the coffee shops background sounds were unavoidable but in neither of the interviews did the interviewer notice lack or loss of concentration. In two cases the interviewees needed to answer their phone during the interview, but the pause was not significantly long and the subject was readily continued after the interruption.

The interview guide (appendix 1) was used as a helpful tool to steer the discussion towards the central issues. The level to which the interview guide was used varied between interviews due to the fields of expertise of each interviewee as well as due to individual differences in tendencies to answer questions in a short concise form or elaborately. In each interview additional questions were made to elaborate on interesting points arising from the discussion. The length of the interviews varied between approximately 40 minutes and 1 hour and 20 minutes. The variations in length stemmed from the different styles of answering – some interviewees were very concise while others wished to give elaborate practical examples – as well as the different levels of expertise with regard to all four themes presented by the interviewer. In some cases the interviewee was willing and able to discuss all the interview themes (figure 13, appendix 1), whereas in others the interviewee wished to make no remarks on subject fields not directly connected to their field.

All of the interviewees consented to the recording of the interview. The researcher could see no alteration of the interviewees' attitude or the ease or form of speech when the recorder was switched on. Thus it is not likely, that the usage of the recorder impacted the willingness of the interviewees to speak. Six interviews were conducted in Finnish and two in English. Because the findings are reported in English, it is possible that the translation may increase the possibility of misunderstanding. However, due to the researcher's good level of proficiency in both languages and the aim of the interviews to yield common ideas instead of concise, directly translated descriptions the role of misunderstanding is deemed limited. In addition, it was agreed with all interviewees that they would have the possibility to check the reported findings with regard to the information they have given before this study is printed. In two instances the interviewee wished to know, whether their name would be made public; one of these interviewees specifically asked to be allowed to review the findings before the final version of this study is printed. The recordings from the interviews as well as the extensive notes taken by the researcher acted as the basis of subsequent data analysis.

6.3 Data analysis

The purpose of analyzing qualitative data is to yield new information of the research subject. Analysis aims at compressing the results and increasing the informative value of gathered data. Qualitative analysis often centers on building theory from gathered data and examining the data without presuppositions. Because there is an endless supply of qualitative data available, in qualitative analysis it is important to be able to set limits in a way which yields a suitable amount of quality data for analysis. It is natural that the researcher's understanding impacts observation. However, the researcher should not let his understanding limit the possibilities of qualitative research. Instead, a researcher should be able to embrace even surprising results. This requires the recognition of presumptions related to the outcome of the research. (Eskola & Suoranta 1998, 19–20.)

During interview data analysis the researcher tries to utilize the data from separate interviews in order to build a cohesive, theoretically sound picture of the subject matter. This process is aided by a carefully planned and executed research design. Transcripts of the interviews should be used as aids in analyzing the gathered data. Careful reading of the transcripts helps the researcher to form a picture of the group rather than individual participants. After close scrutiny and careful reading, analytic categories and concepts may be created. The reoccurring categories that emerge from analysis become the foci. When the foci categories have been identified, data should be re-examined to discover the factors that influence the foci. During this process the results can be compared with existing theory. (Gerson & Horowitz 2002, 216–217.)

Thematic analysis is one such way of processing and analyzing qualitative data. Thematic analysis is based on themes; patterns found in the data. These themes are descriptive and categorizing, and may even reach an interpretive level. Themes can be identified on two levels; directly detectable from the data (manifest level) or implicit (latent level). The themes may arise inductively from the data, but can also be formed deductively on the basis of theory. The main advantage of thematic analysis is that it enables the researcher to systematically utilize a vast set of data, thus increasing responsiveness and precision. (Boyatzis 1998, 4–5.) Because this study has identified four key themes (chapter 5) and built the empirical research design based on those themes (figure 13), it seems natural that those themes should be the basis of analysis as well. In addition to the theme sensitive nature of thematic analysis, its ability to aid the researcher in handling large quantities of qualitative data is desirable. Furthermore, thematic analysis is chosen above other similar analysis methods due to its perceived flexibility in categorizing and interpreting data.

Thematic analysis can be used to build a network perspective of the data (figure 14). Thematic networks organize the raw data into *basic themes* (low level characteristics of a higher level theme found in the data), *organizing themes* (middle level categorizing

themes that group basic themes together), and *global themes* (the highest level themes that portray major concepts of the data in full; global themes group together a set of organizing themes, which collectively convey insight into the data). It is possible that qualitative data yields more than one global theme. (Attride-Stirling 2001, 387–389.)

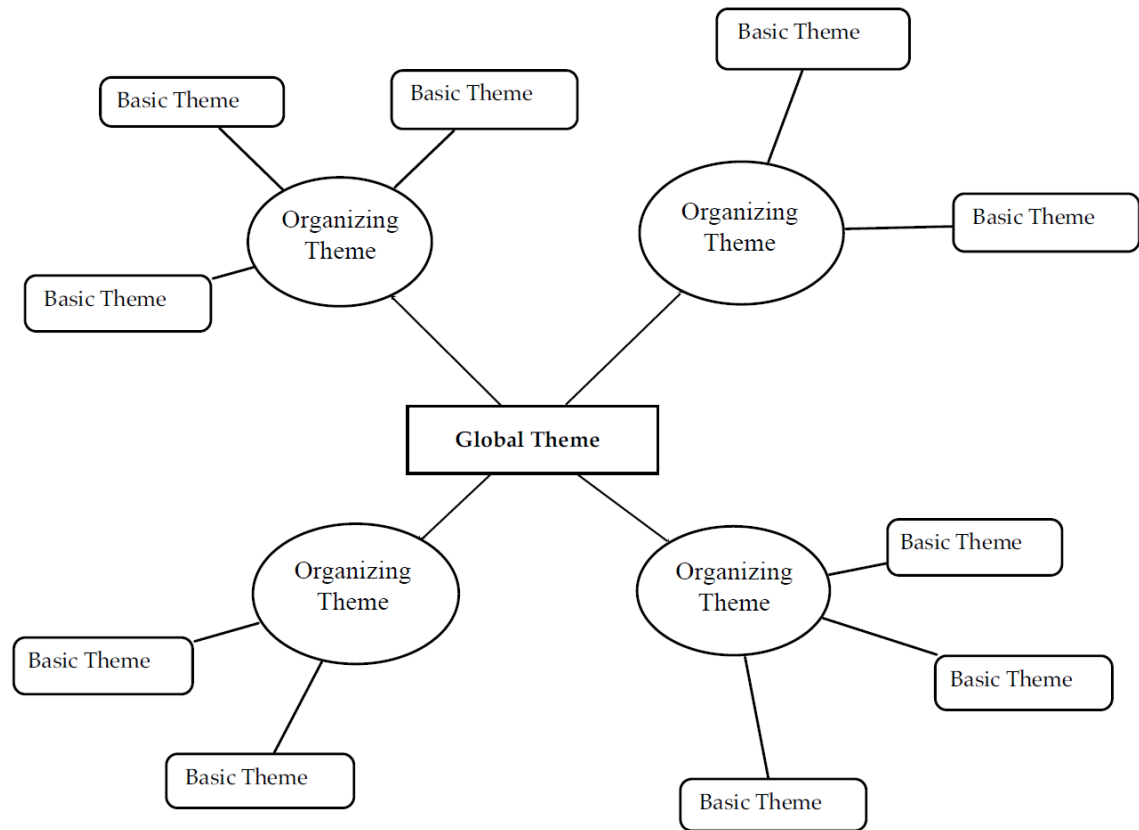


Figure 14 A thematic network (Attride-Stirling 2001, 388)

A thematic network is built from the ground up; first, basic themes are recognized, second, basic themes are grouped under organizing themes, third, organizing themes are grouped under global themes. Thematic networks are presented in a mind-map form which emphasizes the lack of hierarchy. These network images are, however, merely a tool for analysis, not the end result. The images should be used as an interpretive aid for both the researcher and reader. The actual analysis is based on describing the networks and screening for patterns. In this process, main themes that typify the networks should emerge. These themes and the patterns related to them are then described and compared to theoretical assumptions in order to address the research problem. (Attride-Stirling 2001, 389–390, 393–394.)

Even though this study intentionally utilizes four key themes (chapter 5, figure 13) as the basis of empirical research, thematic networks are used as a tool for categorizing the interview data. Because thematic networks should be built starting from the basic

themes, this study aims at illustrating these networks as they emerge from the text. Due to the utilization of the key themes as interview guidelines, it is assumed that the global themes will reflect a version of these key themes. Using these four global themes (*diaspora*, *knowledge transfer*, *host country*, and *policy*), the raw data is categorized for analysis. The thematic networks built for this study can be found in appendix 2.

The data analysis process was conducted both during and after the interviews. Interview notes were used as is, and recordings of the interviews were transcribed. This raw data was then scrutinized, categorized and reorganized according to the arising categories. When all interviews were conducted, transcribed, and categorized, the emerging themes were described and discussed in light of the empirical as well as theoretical findings of this study (chapter 7). In order to combine all relevant information into an interaction model, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers, the findings and discussion were then used to augment the theoretical model presented in figure 12 (chapter 8.1). On the basis of the final result, concluding ideas were presented and both practical and theoretical implications as well as suggestions for further research made (chapter 8.2). The principles that guided the analysis process, in addition to the principles of thematic analysis, are discussed in terms of the trustworthiness of this study.

6.4 Trustworthiness

An objective approach means the separation of the researcher's beliefs and values from the test subject. Although this may not be entirely possible, the researcher should try to recognize the presuppositions that may affect the process. An objective outlook on research is dependent on recognizing subjective thought processes. The attitudes of the researcher may also impact the formulation of the research design. Thus the researcher should also bear in mind the possibility to state these presuppositions in the research report in order to increase visibility. (Eskola & Suoranta 1998, 15–18.) In the first five chapters this study has stated multiple arguments and postulations that guide the study towards achieving its objectives. It is the purpose of this openness to portray that the researcher does possess a known and considered set of values and assumptions. However, this study seeks objectivity in that the data collection and analysis are done, to the best of the researcher's abilities, without selectivity based on theoretical assumptions. This means that should contradicting information arise, it will not be excluded from the report. Thus, although observer bias cannot be fully avoided, the presuppositions with which the researcher entered data collection have been identified and taken into account. To further aid objectivity, the interview guide was carefully constructed to in-

clude as few instances of clear reference to the theoretical framework (figure 12) as possible.

The objectivity of a study is often discussed from two further points of view; reliability and validity. *Reliability* means, at its simplest, the degree to which a similar study will yield the same results, while *validity* deals with how truthful the result is. Although these concepts are usually discussed with regard to measurement, the notion is also applicable to qualitative research. Reliability examines the independence of the results from accidental circumstances, while validity considers the truthfulness of the interpretation. (Kirk & Miller 1986, 19–20.)

The reliability and validity of a qualitative study faces four types of threats; “1) *observer-caused effects*; 2) *observer bias*; 3) *data access limitations*; and 4) *complexities and limitations of the human mind*” (McKinnon 1988, 37). The first threat regards the impact of the presence of the researcher in data collection. It has been argued, that this presence may cause subjects to alter their behavior, which inevitably results in skewed data. Thus it is important for the researcher to contemplate his role in the data collection. The second threat deals with the possibility of selectiveness in observation or interpretation. The researcher may be biased in how he hears, sees, or interprets information. Due to the nature of this threat, it may never be completely ruled out, but rather consciously managed. The third threat arises from limitations in either time-periods or openness. The issue with limited time-periods is that a researcher has little possibility of knowing what happens before or after the data collection. Thus it may be difficult to place the data in a correct historical viewpoint. In addition, it may be that the short time-period the researcher spends with the subject may coincide with a time of irregularity in the subject’s tasks. The issue with openness is that the subject may not, for one reason or the other, be willing to disclose everything to the researcher. The fourth threat deals with the possibility of subjects either knowingly or unintentionally misrepresent the reality. This may happen for example when the subject wishes to represent himself in the best possible light, or when they have simply forgotten something or paid little attention. (McKinnon 1988, 37–39.)

Due to the expert role of the interviewees, the impact of observer-caused effects is deemed very unlikely. Because the interviewees hold arguably higher, or at the very least similar, hierarchical positions than the researcher, it is more likely that data access limitations may have been in place. However, because of the perceived willingness – portrayed by early replies to enquiries as well as the perceived value of information – of each participant to partake in this study, the impact of data access limitations is deemed very low. Nevertheless, it is possible that the interviewees should have deliberately or accidentally either modified or limited their speech. To take this into account, the interviews were conducted in a way which allowed for follow-up questions and multiple angles to similar issues. This should help with the integrity of each individual interview.

In addition, using multiple interviews allows for cross-analysis should help either justify or contradict research findings.

Because the concepts of reliability and validity are more closely connected to quantitative research, it may be more productive to discuss qualitative research in another perspective. Some principles that should be considered when analyzing qualitative data are (Mäkelä 1990, 47–48);

- the significance of the data,
- the sufficiency of the data,
- the comprehensiveness of the analysis, and
- the extent to which the analysis can be evaluated and repeated.

Although it is difficult to specify the terms which qualify the societal significance of data, such significance is what makes the data worth analyzing (Mäkelä 1990, 48.) This study has attempted to increase the societal significance of the data by carefully choosing the participants amongst experts in different relating fields (table 6). Furthermore, this study has attempted to utilize an objective approach and conduct in-depth interviews in order to increase the value of the data.

In qualitative research it is sometimes difficult to measure when the data is sufficient. The common principle in use is saturation; when new cases no longer yield in new findings, the data is sufficient (Hirsjärvi et. al 1997, 181). The difficulty with saturation is that the researcher cannot know beforehand how much data is needed to find the saturation point. Thus it is useful to plan data collection with regard to assumed important categories. (Mäkelä 1990, 52.) In this study the used important categories were different areas of expertise with regard to diasporas in Finland. The considered areas of expertise where migration, host country and politics, and economic life in Finland. The interviews with the experts of these areas yielded largely similar results; thus the necessity of further expert interviews was ruled out. In addition, three interviews with immigrants were conducted to investigate whether a difference between the perceptions of experts and immigrants exist. The three interviews again yielded in largely similar results. Thus the data collected for this study reached a saturation point at which it is possible to make meaningful conclusions.

Correspondingly, the comprehensiveness of analysis means the systematic interpretation of all data instead of random points of data. Similar methods of analysis should be used to interpret all data. This increases the importance of the manageability of the gathered data. (Mäkelä 1990, 53.) In this study, the raw data was in the form of interview recordings and notes. In order to better manage the analysis process, the interview recordings were transcribed. All of the subsequent material was carefully read and categorized according to the four key themes of this study; diasporas, knowledge transfer, host country, and policy. This categorization was used as the basis of analysis in searching for commonalities. Surprising and contradictory statements were considered and re-

ported in addition to the similarities. Thus, the analysis of the data can be deemed comprehensive.

The extent to which the analysis can be evaluated means the ability of the reader to follow the logic and either accept or contradict the interpretation. Similarly, the extent to which the analysis can be repeated means the comprehensiveness of the description of used principles in a way which would enable another researcher to make similar conclusions if using the same principles. (Mäkelä 1990, 53–54.) In this study the researcher has attempted to describe both the used methodological concepts as well as the actual process of data collection and analysis as clearly and concisely as possible. The purpose of this is to make the logic behind the choices and interpretations as apparent as possible. By increasing the clarity of the underlying logic, this study wishes to enhance the credibility of the findings and conclusions.

7 FINDINGS AND DISCUSSION

7.1 Immigration as an asset

Because this study wishes to concentrate mainly on highly skilled diasporas, most of the findings are reported in terms of work-based or education-based immigration. When refugees are discussed, it is clearly stated. Due to the interviewees' vocabulary choices, the findings are reported using the term *immigration*. Chapter 8 discusses the results in a more diaspora-specific light.

Immigration into Finland happens through three different channels. One channel is designed specifically for the citizens of Nordic countries, one for citizens of the European Union, and one for third country (non-EU) citizens. The first two channels are easier¹¹, only third country citizens are required to apply for a residence permit with the Finnish Immigration Service. In the year 2012, the Finnish Immigration Service received over 21.000 applications. (Suominen, discussion 26.9.2013.) The most significant bases for residence permit applications are family ties, studies, and employment. Due to the various reasons for immigration, the know-how of immigrants varies greatly; from illiterate refugees to experts. (Kojonsaari, discussion 27.9.2013, Suominen, discussion 26.9.2013.) The know-how of immigrants is, however, not fully utilized (Kojonsaari, discussion 27.9.2013, Pulkkinen, discussion 27.9.2013). This elevates the importance of this study; how to improve the utilization of immigrants', more particularly diasporas', know-how in Finland.

Immigration is a two-sided asset; on the one hand, it provides labor; on the other hand, it provides a way for Finnish companies to remain flexible and alert. Immigrants, especially university students and academic researchers, have a high potential also in terms of innovation. In addition, they have a higher degree education which may enable them to offer ideas for the development of the Finnish university system. The value of foreign talent is portrayed also in Finland's GDP and competitive advantage. (Lahtinen, discussion 26.9.2013) Work-based immigration is currently a major concern (Söderling, discussion 9.10.2013), especially due to the demographic situation in Finland (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013, Suominen, discussion 26.9.2013). Although this number has risen gradually, the percentage of work-based immigration in Finland is much lower than the European average (Lahtinen, discussion

¹¹ Citizens of European Union countries are allowed to reside in Finland without permit for three months. For a longer stay, they must register at the local police office. (Poliisi 2013.) Citizens of Nordic countries need only notify the local registrar office of their move (Population Register Center 2006).

26.9.2013, Söderling, discussion 9.10.2013). Due to the ongoing difficult financial situation, work-based immigration is rather low, because there is an ample supply of unemployed Finnish labor. This may, in part, be due to the fact that until at the end of the last millennium, emigration out of Finland was dominant. This is still reflected in Finns' prejudiced attitudes towards immigration. It has only been during this millennium that immigration has become a concern of industrial rather than social policy. This adds to the difficulty of work-based immigration. (Kojonsaari, discussion 27.9.2013.)

The above seems to agree with the argument strongly advocated in this study that immigrants may have a significant impact on the innovative capacity of Finland. The benefits of foreign labor, discussed throughout this chapter, are numerous. Thus it seems necessary to find solutions which would aid work-based immigration in Finland. The attractiveness of Finland plays a key role in immigration decisions (Suominen, discussion 26.9.2013). Thus it is important to consider both the strengths and weaknesses of Finland in terms of attracting foreign labor. Finland is a country where strong organizations play a major role in politics; thus it is often a question of taking care of our own first (Söderling, discussion 9.10.2013).¹² Harnessing the true potential of immigration seems to call for opening up and seeking to modify the impact of the labor unions.

Intercultural interaction is one benefit arising from work-based immigration. Immigrants provide the opportunity of changing viewpoints, which may have a major impact in innovative capacity (Kojonsaari, discussion 27.9.2013). Someone with a different background may question the common ways of thinking or doing within a workplace and thus present a new creative element. This is a very good foundation for learning. (Pulkkinen, discussion 27.9.2013) The above is closely connected to the theory presented in chapters 3 and 4. Considering that learning and novel combinations of knowledge, which a new creative element would offer, are prerequisite of innovation, intercultural interaction seems like a valid source of innovation. Interaction with immigrants is especially suitable compared to cross-border interaction due to their personal experience of the ways in which Finns communicate. Although Finns should be culturally aware, it is always not easy to begin communicating with individuals from very different cultures. Thus immigrants could act as a good starting point for deepening cultural understanding.

Networking is a way of maintaining a grasp of the culture and language of the country of origin (Kytö, discussion 23.10.2013). Such networks within Finland are mainly social (Kytö, discussion 23.10.2013, Lahtinen, discussion 26.9.2013); occupational networks are very poor (Lahtinen, discussion 26.9.2013). The networks Finnish immi-

¹² Although not discussed here, the author strongly encourages the reader to examine Ristikari, T. (2013) *Finnish trade unions and immigrant labor*. Institute of Migration, Turku.

grants have are somewhat invisible. However, there are contacts both within and outside of Finland. (Söderling, discussion 9.10.2013.) The extent to which immigrants build and maintain networks depends somewhat on their origins. For example, people from India residing close to each other tend to know each other, whereas Finns rarely do. Finns living abroad are not equally capable of building professional networks and maintaining ties to Finland. (Pulkkinen, discussion 27.9.2013.) Networks seem to have many different roles. First, it helps immigrants stay in touch with their native culture. This is also a criterion of diaspora. Second, networks help upkeep contacts both within the host country and the country of origin. Thus, they tie the immigrant to widened social networks. This may, in time, also provide a window for Finns to access the same networks. Third, experience of superior networking skills the immigrants may have depending on their country of origin may help Finns understand and develop their own networking skills.

In the modern world, networking is an extremely important aspect of economic life (Lahtinen, discussion 26.9.2013, Pulkkinen, discussion 27.9.2013). Immigration provides Finland with increased international contacts and a widened skill pool (Lahtinen, discussion 26.9.2013). Modern networks are not merely social, but include a value element. Instead of a value chain, a company may be part of a value network. A skilled immigrant may connect the company with a value network. In some places the business network is built on top of the social network, whilst in others the business network comes first. This presents some difficulties with cultural compatibility. (Pulkkinen, discussion 27.9.2013.) What is commonplace in some cultures may seem like corruption in others. Similarly, what is commonplace in some cultures may seem cold and impersonal in others. The access to foreign labor also enables access to foreign networks. Due to the importance of networking in modern business, accessing foreign networks may increase the competitive advantage of companies, and consequently of the whole nation. In addition, accessing networks through an existing member is arguably easier than trying to create a wholly new a relationship (either social or business).

The importance of an immigrant for a company's ability to work on an international scale may be decisive. Immigrants can act as sources of knowledge of their country of origin, and thus expand cultural understanding, which is also an important aspect of business. This may open up new markets. (Lahtinen, discussion 26.9.2013, Pulkkinen, discussion 27.9.2013, Söderling, discussion 9.10.2013.) On the other hand, not many companies wish to hire immigrants on the basis of cultural diversity (Pulkkinen, discussion 27.9.2013). Although it seems that the importance of intercultural communication is understood, the limited amount of work-based immigration in Finland seems to suggest that more could be done to harness the potential. Thus more attention should be paid to increasing the number as well as utilization of work-based immigration in Finland. Cultural diversity should be considered an asset instead of a challenge.

In addition to work-based immigration, foreign students are a fundamental asset in Finland. In some cases, Finland does not even realize how skilled the students that come here are (Söderling, discussion 9.10.2013). The retention of foreign students is currently in the center of discussion (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). Foreign students that reside in Finland have an advantage of knowledge and experience of Finnish culture, which should make them highly desirable employees (Kojonsaari, discussion 27.9.2013). In addition, it should be considered that large investments are made in the education of foreign students, and those investments often leak abroad when the students are employed outside Finland. This is a major cost. Due to the imminent structural change in Finland, it would be beneficial to discuss the retention and employment of these students. (Lahtinen, discussion 26.9.2013.) Because the demographic situation in Finland (see, for example, Valtioneuvoston periaatepäätös maahanmuuton tulevaisuus 2020 -strategiasta 2013, Halonen 2012) will, in the near future, necessitate an increase in foreign labor, seeking to improve the retention rate of foreign student now may prove out to be an extremely important effort when the population ageing causes a peak in the retirement numbers of Finnish workforce.

Some concessions have already been made to aid foreign students in finding employment in Finland, such as allowing a 6 month residence permit after studies to enable the search for employment in Finland (Suominen, discussion 26.9.2013). On the other hand, students who move back to their country of origin take good word of mouth with them. Thus it is not always necessary to retain them. (Pulkkinen, discussion 27.9.2013, Suominen, discussion 26.9.2013.) Good word of mouth may help in achieving internationalization goals, as good experiences make it easier for others to decide to apply (Suominen, discussion 26.9.2013). Thus it seems that the benefit of foreign students is two-fold; on the one hand, they provide especially suitable foreign labor, on the other hand they provide a way for Finland to increase awareness abroad. Although both benefits are important, the study at hand will improve awareness with regard to the first one by offering suggestions on how to improve the utilization of foreign know-how in Finland.

Even so, it should be noted that the internationalization of the education system is a two bladed sword. On the one hand it increases interaction and internationalization, but on the other hand it may decrease the cultural originality and unique thought processes that have made Finland competitive in the past. (Pulkkinen, discussion 27.9.2013.) Thus it is extremely important to consider any changes also with regard to the maintaining of Finnish culture. Although internationalization is inevitable and beneficial, it should not mean that Finland should be turned into an unrecognizable mass of different cultures. Instead, it should be considered how different cultures and ethnic groups can interact in a meaningful way without obstruction to their integrity. When looking at innovation hubs around the world, they tend to harbor more diversity than other regions; thus it seems that tolerance is a key concern in innovation (Pulkkinen, discussion 27.9.2013).

7.2 The importance of knowledge transfer in practice

“The flow of knowledge through society creates the foundation of learning -- learning becomes innovation, and an innovation, when it is published, turns back into information” Pulkkinen, discussion 27.9.2013). This statement agrees with the theoretical conclusion that knowledge transfer (which enables the flow of knowledge) is a prerequisite of the functioning of the innovation process. Innovation, on the other hand, is the basis of competitive advantage.

Knowledge transfer, as a centric issue in competitive advantage, has a major factor in guaranteeing Finland a good future (Kojonsaari, discussion 27.9.2013). Migrants and their knowledge pool also have an obvious impact in competitiveness (Söderling, discussion 9.10.2013). These two notions are interconnected; even though the knowledge pool of migrants and the knowledge transfer process are important separately, their importance is heightened when in interaction. It is impossible to tap into the knowledge pool of migrants without proper knowledge transfer mediums. Similarly, knowledge transfer is meaningless without a source, for example the knowledge pool of migrants.

It should be noted that there is a major difference between information and knowledge. Knowledge is dynamic; it is always connected to action. Information, on the other hand, does not impose action. Only information can be transferred as is; the transfer of knowledge always includes a learning element. Learning takes into account the necessity of modification and application, which stem from the contextual nature of knowledge. Learning always requires interaction, be it face to face or via a medium such as a book. Learning is also creative, because it includes the formation of new constructs. Thus it is also innovative. (Pulkkinen, discussion 27.9.2013.) The division between information and knowledge seems to be the key to innovation; whereas information is readily available, the novel combinations which result in innovation always require the formation of new knowledge. Learning as such will not result in, but is a prerequisite of innovation. The creative process involved in building new constructs is, arguably, a fundamental step in innovation.

Knowledge is transferred at multiple levels; between individuals as well as between companies and markets (Lahtinen, discussion 26.9.2013). The transfer of tacit knowledge is of key importance (Söderling, discussion 9.10.2013). However, the transfer of tacit knowledge is a particular challenge (Kojonsaari, discussion 27.9.2013). In everyday life social media might aid the transfer of tacit knowledge, but in business life there is still much to do in order to be able to successfully transfer tacit knowledge (Pulkkinen, discussion 27.9.2013). The transfer of tacit knowledge requires a suitable environment (Lahtinen, discussion 26.9.2013). Informal information exchange, for example in conferences, plays a key role in tacit knowledge transfer (Kojonsaari, discussion 27.9.2013). In addition, for example mentoring is a good way to aid the flow of tacit

knowledge (Kojonsaari, discussion 27.9.2013, Söderling, discussion 9.10.2013). Tacit knowledge is created and flows most easily in closely connected teams. Created tacit knowledge is owned by the involved individuals, not by companies, if companies do not create a suitable organizational environment for tacit knowledge transfer. Language may be a concern both in the creation and transfer of tacit knowledge; even though English is nowadays common in many workplaces, individuals tend to communicate most efficiently in their native language. (Lahtinen, discussion 26.9.2013.)

The transfer of tacit knowledge is an important aspect of innovation (chapter 3). In companies the transfer of tacit knowledge yields in novel combinations which act as a basis of innovation. Thus the means through which tacit knowledge can be transferred are of extreme importance. An interaction framework, which pays special attention to the means of knowledge transfer, should aid in capturing tacit knowledge. The demographic situation in Finland means that a massive amount of tacit knowledge is about to disappear (Söderling, discussion 9.10.2013). Thus the transfer of tacit knowledge is not only a question of intercultural, but also of intra-cultural communication. Although the study at hand concentrates on intercultural interaction, similar principles should aid also intra-cultural interaction.

In the modern world, information is always available, but cultural and societal understanding is a different thing (Lahtinen, discussion 26.9.2013). Knowledge is never transferred as is, but recreated. The search and exchange of knowledge in Finland is active. (Pulkkinen, discussion 27.9.2013.) However, when it comes to information, Finland is dependent on other nations. Finland is a very small, remote country, and thus the successful transfer of knowledge is crucial in order to ensure sufficient access to information. (Lahtinen, discussion 26.9.2013.) Networks are important sources of information. Finland is connected to many official networks, such as the European Union and United Nations. In addition, many Finnish organizations have a presence abroad. Furthermore, individuals that work in international organizations have personal networks on a global scale. Networking is extremely important for a remote country like Finland not only to receive but to transmit information; Finland also has a lot to give. The downside of knowledge networks is the flooding of information. It demands a level of critique to be able to utilize such a vast pool of available information. (Kojonsaari, discussion 27.9.2013.)

Despite the importance of networking, it can be said that Finns do not know how to use personal networks and contacts to aid business. This may be due to the cultural and historical background, but whatever the reason, Finnish businesses have not yet realized the full potential of synergy benefits and cultural understanding. (Söderling, discussion 9.10.2013.) Thus it is of extreme importance to look into improving such interaction. Tapping into existing knowledge networks more effectively would increase the innovative capacity of Finland. However, it should be remembered that constant increases in

innovative capacity do not increase the competitive advantage of Finland without successful utilization.

It is necessary for Finland to specialize in order to remain competitive. It is not enough to think of current needs. Instead, it is necessary to take risks and develop solutions that may become winners in the near future. The cooperation between companies and universities should be boosted as a source of successful innovation. Flexibility and openness are also a concern. Flexibility aids the flow of knowledge as well as learning and thus increases the probability of finding new solutions. (Lahtinen, discussion 26.9.2013.) Knowledge transfer should thus not be considered as an end itself but as a means towards the successful utilization of innovative capacity. In this process, cooperation should be boosted. Interaction between different players is an important concern in cooperation. Thus new information of successful interaction should boost the successfulness of knowledge transfer and through knowledge transfer also increase the success rate of innovation.

7.3 Finland as a host country

Finland is an innovation society thanks to the high degree of education and basic research (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). The high level of information technology as well as a limited number of areas of specialization with regard to innovation has made Finland competitive (Lahtinen, discussion 26.9.2013). The availability of knowledge is a key concern in an innovation society. Free press and media, a good library system, a good educational system, and the willingness of individuals to learn also play a role. (Pulkkinen, discussion 27.9.2013.) In addition, the receptiveness to information and individual open-mindedness as well as the willingness to embrace innovations are closely connected to the innovation society (Kojonsaari, discussion 27.9.2013). Although a free press is a feature of an innovation society (Pulkkinen, discussion 27.9.2013), the attitude towards immigration that is visible from the Finnish press is rudimentary. Finnish press is quite inexperienced with regard to immigration. In addition, they lack expertise. The press should be more positive and focus on success stories. (Söderling, discussion 9.10.2013.)

Investments in research, development and knowledge aid the development of an innovation society. Investments in innovation are not merely investments in research and development, but also in education, the availability of knowledge, knowledge management systems, and the freedom of speech. The effectiveness of such investments, however, is a cause for concern; traditionally Finland has been a forerunner in the amount of investments, but lags behind in the results. The fact that Finland does invest in innovation is still visible in its strong industrial sectors and global companies. (Pulkkinen, dis-

cussion 27.9.2013.) Furthermore, Finland is currently undergoing a construct change, during which the innovativeness and the ability of companies to renew are measured (Kojonsaari, discussion 27.9.2013). Because there is a mismatch between the amount of investments and number of outcomes, there is evident room for improvement. The proper utilization of know-how may prove out to be one way in which the productiveness of investments can be improved. However, innovation for the sake of innovation is not a viable strategy.

It is not enough to merely innovate, but innovations must be successfully marketed. Correspondingly, the chain from idea to marketable invention must be shortened. In Finland, the game industry is a good example of how this chain ideally works. Although in the game industry the development has possibly been somewhat a result of necessity, it gives a good example of how internationalization and growth can be supported by an unprejudiced attitude. Prejudice and bureaucracy make it difficult especially for small employers to hire foreign labor. In addition to new labor, opening up may yield into new markets and the recognition of needs that could be fulfilled with existing innovations that have previously been unused. Thus the existing pool of knowledge would be better utilized. (Lahtinen, discussion 26.9.2013.) The better utilization of the existing pool of knowledge not only benefits the host country in terms of innovative capacity, but may also yield in added value to existing inventions. Thus it is of great importance to advocate any means that elevate the recognition and utilization of immigrants' know-how in Finland.

However, the Finnish society is not ready for major changes; the mental image of immigration as a challenge is too deep rooted (Söderling, discussion 9.10.2013). Prejudice is something that can only be fixed slowly. Not only customers but colleagues must be prepared to encounter and embrace foreignness. (Kojonsaari, discussion 27.9.2013.) Language is another difficulty. Although it is important for immigrants to familiarize themselves with the Finnish language, in some cases language concerns should perhaps be discussed in a more meaningful way. For example, in some vocations it is not necessary for the individuals to be able to communicate fluently in Finnish. By not allowing highly skilled individuals, for example scientist, to work in their own field even if they have a good knowledge of the English language is to waste talent. (Söderling, discussion 9.10.2013.) Language is an important aspect of interaction. Thus, language should also be considered a medium through which interaction can be improved. Although it is important for immigrants to learn Finnish as a part of social integration, it may be equally important for Finns to consider the extent to which English or another language could be used to further understanding.

The degree to which one experiences difficulty in settling depends on expectations (Baldeon, discussion 15.11.2013). Thus, more thought should be given to how Finland is portrayed abroad. The culture and everyday life should be made more visible for

those willing to immigrate. Issues such as what is socially acceptable and what is not, polite behavior towards peers, norms, values – these are things that the immigrants should be able to prepare for. (Kytö, discussion 23.10.2013.) Change often seems to cause a feeling of discomfort (Rodriguez, discussion 15.11.2013). For some immigrants, the Finnish culture may be somewhat difficult to adapt to (Baldeon, discussion 15.11.2013). The major challenges include the language, Finnish mentality, culture and the weather. Finns like to have thought-out plans. In addition, Finns prefer a rather short and concise way of discussing things, which may seem foreign at first but is actually quite nice. They also have a very strict notion of punctuality and personal space. In addition, the winter in Finland may be depressing – a social network is extremely important due to this. (Rodriguez, discussion 15.11.2013.) Furthermore there are major differences in how time is spent: in the university and in working life people have more time to themselves. People are not dedicated only to work, which may become as a culture shock for some immigrants. (Baldeon, discussion 15.11.2013.) Although something that Finns might never think of themselves, these issues are something that could be put forth in order to improve the social integration of immigrants.

Even though some challenges exist, Finland is a good host country due to the well-functioning society, democratic political system, equality, good education system, the existence of talent and international companies, as well as good basic services (Lahtinen, discussion 26.9.2013). Furthermore, Finland is transparent; Finns act as they say and keep their promises. There is a high level of ethics. (Kojonsaari, discussion 27.9.2013.) In the eyes of an immigrant Finland is quite open, friendly and accepting. Other assets include the free education, good living standards, excellent welfare system especially with regard to children, and the easy tax system. Health care is also competitive in comparison with other health care systems. (Baldeon, discussion 15.11.2013.) Finland has a beautiful nature and a good job market (Rodriguez, discussion 15.11.2013) in which the wages are competitive (Baldeon, discussion 15.11.2013). Finland is also a very safe country (Baldeon, discussion 15.11.2013, Rodriguez, discussion 15.11.2013). However, Finland has very little meaning compared to the major nations; Finland is unknown, has a difficult language, and a challenging climate. Geopolitics – particularly the closeness to Russia – may also play a role in the attractiveness of Finland as a host country. (Lahtinen, discussion 26.9.2013.) This heightens the importance of communication. Finland should learn to market itself as a host country better than currently.

There are some challenges immigrants face in Finland. For example, finding employment is difficult (Baldeon, discussion 15.11.2013, Rodriguez, discussion 15.11.2013). Personal contacts may help in this, but are not essential (Rodriguez, discussion 15.11.2013). The political system in Finland is a bit difficult to follow. It could, to some extent, be a topic of discussion for example in language courses. This would

help those interested in familiarizing themselves with Finnish politics. (Baldeon, discussion 15.11.2013.) A major difficulty is filling the paperwork related to immigration – help should be given to those who need it. There are also quirks in the system; for example online registration to important services that requires identification through online banking is impossible for a foreigner when he first enters the country. However, once the initial settling is over, the services work well. In addition, the social integration program in Finland works well. Courses for social integration are easy to enter and beneficial. This opportunity could maybe be advertized more. (Rodriguez, discussion 15.11.2013.)

Four decades ago immigration into Finland was very rare, and as such the necessity of strict procedures limited. Beginning from the refugee streams of the 1990s Finland has had to adapt to the challenges of immigration. Due to the lack of experience, the challenge has been a major one. One identifiable problem with the current system is the strong social security system. Although a necessity of a welfare state, the social security system may act against the social integration of immigrants. Especially immigrants with little or no education easily gain a false sense of the society, when instead of being paid for work they receive a social security payment for merely staying at home. This is a process that most likely does not exist where they come from, and thus the immigrants have no way of understanding the underlying logic of social security. Instead, they believe that this is as it should be. (Kytö, discussion 23.10.2013.) Social security is an issue that mostly impacts refugees. However, refugees should not be disregarded as a source of know-how, even though this study focuses on different groups of immigrants. Refugees also possess skills and know-how that may be unknown to Finns, and thus may advance similar processes as the work-based and education-based immigrants mostly discussed in this study.

7.4 Policy considerations

Finland currently has a self-protective atmosphere (Pulkkinen, discussion 27.9.2013). Finland is too territorial in action. Immigration is seen as a challenge instead of an asset. It should be considered that the impact of immigration is always positive. (Söderling, discussion 9.10.2013.) Finland has well-functioning services and bureaucracy and a stable society but permits make Finland one of the most difficult countries to enter. Finland has too many government officials involved in the procedure (appendix 3). There should rather be a one-stop-shop in which all the necessary officials would provide services under one roof (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). For example taxation, work permits and residence permits should be made more transparent (Lahtinen, discussion 26.9.2013). There also seems to be a difference

in the ease of immigration that relates to the place of application; a residence permit application made from New York was accepted more speedily than similar applications made in Peru (Baldeon, discussion 15.11.2013).

This seems to suggest that structural as well as psychological change is needed in order to truly harness the potential of immigration in Finland. Whereas structural change is a topic of discussion for the political decision-makers, psychological change is more dependent on individuals. Both forms of change require ample time. Knowledge and openness to change are a prerequisite for structural change. Knowledge is also important for psychological change; it seems logical that prejudice is, in part, a fear of the unknown. In psychological change area and generation differences are most likely to occur.

Apart from being difficult, coming to Finland is expensive. Finland recognizes immigration as an asset but does not know how to utilize it. (Kojonsaari, discussion 27.9.2013.) For example, it is too difficult for an immigrant to start a business in Finland (Söderling, discussion 9.10.2013). As mentioned above, it is also difficult for a foreigner to find employment in Finland (Baldeon, discussion 15.11.2013). Conversely, it is difficult for an employer to find foreign talent in Finland. It is important to make the skill pool of the immigrants visible for employers and to build contacts to labor markets. Unified recruitment channels would aid employers find talent. (Lahtinen, discussion 26.9.2013.) This suggests that visibility is necessary not only in immigration procedures but also in employment channels. More thought should be given to the recognition of immigrants' know-how in Finland.

After joining the European Union internationalization has increased and Finland is opening (Pulkkinen, discussion 27.9.2013). The progress, however, is slow (Kojonsaari, discussion 27.9.2013, Kytö, discussion 23.10.2013). Even so, major changes should take time, and people should be ready for them (Kytö, discussion 23.10.2013). It is a fundamental necessity that Finland should be able to open up and be more innovative; Finland's competitive advantage stems from innovation, opening up the economy and networking. However, traditional hierarchies are difficult to change. (Kojonsaari, discussion 27.9.2013.) Finland needs foreign labor in all industries. Thus Finland should be made an attractive environment, and hiring foreign talent should be made easier. Even though we have a demographic problem, in the long term Finland should find solutions through innovation rather than merely hiring workforce. (Lahtinen, discussion 26.9.2013.) This elevates the importance of work- and education-based immigration. Instead of simply labor, Finland should consider attracting talent.

Currently Finland is undergoing changes so violent it must be receptive and proactive. Finland is not an interesting market, which means that Finns must be very interested in what goes around in the world. Especially research and development, internationalization, and marketing are important. Finland is far behind compared to other Nordic

countries in this. (Lahtinen, discussion 26.9.2013.) Finns have difficulty in selling their products (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). A related problem is that Finland now considers immigration as one block, and work-based immigration is not considered separately. Finland lacks vision and strategy. In addition guidance should be offered and tailored to the needs of different groups of immigrants. Refugees have very different needs than academic researchers. (Lahtinen, discussion 26.9.2013.) Immigration strategy should, therefore, consider the different reasons for immigration and provide suitable solutions for each.

Finland lacks a concrete strategy with regard to work-based immigration (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). Companies work irrespective of the government but the government can facilitate and ease these concerns, as well as answer to the needs of companies. Currently Finland is undergoing a major structural change and many highly educated individuals are unemployed, but in the future Finland will need foreign talent. (Lahtinen, discussion 26.9.2013.) In addition, Finland should make the most of immigrants' market knowledge, language skills, cultural knowledge, and networks. The skills already here could be better utilized. Finding employment is difficult, but sharing experiences with other foreign employment-seekers may help individuals in the search. Finding employment also gets easier after initial entrance to the job market; finding the first job can be seen as a validation of the immigrant's know-how and experience. (Baldeon, discussion 15.11.2013.) Although Finland recognizes foreign degrees (Söderling, discussion 9.10.2013), it seems that the labor markets may still be more difficult for a foreigner to enter. Means through which the employment of foreign talent could be eased should, therefore, also consider the valuation of talent.

The current government policy with regard to immigration is rather narrow; a clear message and targets are necessary to improve the strategy (Kojonsaari, discussion 27.9.2013). A good strategy should direct conversation and action. There should be concrete measures, not merely wishes. For example, The Future of Migration 2020 -strategy is too superficial. This may largely be because experts were not included in the making. (Söderling, discussion 9.10.2013.) The Future of Migration 2020 -strategy promotes principles such as openness, integration and equality. According to The Future of Migration 2020 -strategy, Finland should seek to encourage active work-based immigration. This requires both openness and control. The relating legislation requires clarity and functionality. Special attention should be paid to the social integration of immigrants. In addition, positive interaction and the breaking of prejudices should be advocated. (Valtioneuvoston periaatepäätös maahanmuuton tulevaisuus 2020 -strategiasta 2013.) These principles are advisable, but without concrete measures to achieve and implement them, the impact of the strategy is very limited.

The government policy should note work-based immigration and create tools for employers to understand and utilize it (Lahtinen, discussion 26.9.2013). Currently there is

much too much bureaucracy; the field needs action instead of discussion. The best starting point for policy would be to get to know the immigrants as individuals instead of a mass. The current form of decision making yields only in results which sound good but have no practical meaning. An expert or a member of the target group should be involved in decision-making. The current decision-makers do not know the reality that exists at the grass-root level. Ideas from that level should thus be valued; they stem from necessity. But the political structures are difficult to change. In addition, the political decision-makers wish to avoid responsibility. The politics in Finland also call for rejuvenation. The young should be given a chance to make a difference. The young have more perception of the modern world; they should be trusted and taught to continue the political leadership. The older generation has become very detached from the modern reality. The young have the knowledge and the old the talent; these should be combined. The old are tired and stuck in their ways: a change of perspective is refreshing and a necessity for change overall. This works also in another setting: immigrants have new ideas. They should also be given a voice in parliament. (Kytö, discussion 23.10.2013.)

It seems clear that a more practical approach is needed in order to make a good strategy for immigration. Political decision-makers should consider the opinions of expert organizations. In addition to migration experts, the ideas of immigrant organizations should be heard. Progress requires change. Although changing well-established structures is difficult, it is also a necessity due to the ongoing change in the surrounding world. Some effort towards these goals is already being made.

Finland should be marketed better (Kojonsaari, discussion 27.9.2013, Lahtinen, discussion 26.9.2013). In order to make Finland attractive for foreign talent the social integration services should be made more effective and entrance into the labor market should be aided. For example, Finland lacks a website aimed at foreign talent; a “work in Finland” site should convey information, promote the best sides of Finland, and help in starting the bureaucratic processes regarding immigration. (Lahtinen, discussion 26.9.2013.) Such information should also be segmented for different groups; for example according to profession. Fast lanes to permits could be considered as a way to increase work-based immigration. (Kojonsaari, discussion 27.9.2013.) This requires a lot of cooperation between different government officials (Lahtinen, discussion 26.9.2013). Resources do exist, if one knows how to look for them. Still, visibility and ease of access to information, for example legal information on working in Finland, would help. (Baldeon, discussion 15.11.2013.) In addition, it should be considered that information services, including search engines, should work well also in English (Rodriguez, discussion 15.11.2013). The easier availability of legal and bureaucratic information, as well as the cultural issues discussed above, would aid in making the immigration procedures more transparent. In addition, employment specific information is necessary both for immigrants already residing in Finland and foreign talent looking to emigrate.

One effort to promote Finland as a host country is the Team Finland network.

The Team Finland operating model brings together key actors in these fields both at home and abroad. The actors are guided by shared goals annually approved by the Government. The aim of cooperation is to create a clear, flexible and customer-oriented operating model where projects falling under the scope of Team Finland activities are carried out in cooperation between state and private actors. (What is Team Finland? 2013.)

Team Finland includes different actors from ministries to the private sector. The main bodies that impact Team Finland are the Ministry of Employment and the Economy, the Ministry for Foreign Affairs, and the Ministry of Education and Culture, as well as organizations acting under the ministries' guidance. (What is Team Finland? 2013.)

Refugees are a major group which should be encouraged to work (Baldeon, discussion 15.11.2013). Finland is unable to bring immigrants to the labor market in the same time as other Nordic countries; the social integration is not as effective as it should be. Instead of merely language courses and similar measures, social integration should be looked at as a channel at the end of which the individual is ready to join the labor market. (Söderling, discussion 9.10.2013.) Social integration should also be non-discriminative towards those who succeed in finding employment. For example language courses are difficult to get to for the employed. A further concern with regard to language courses is that the taught language should be the one spoken, not the one grammatically correct. It is much better for a foreigner to be able to converse in Finnish than to be able to write perfectly. (Baldeon, discussion 15.11.2013.)

In the case of refugees, much talent is also wasted due to the lack of acceptability of unwritten know-how and experience. This makes it extremely important to guide immigrants towards suitable courses and learning environments. The know-how should be utilized. (Kytö, discussion 23.10.2013.) However, it can be highly unethical to discuss the skill sets of refugees. Finland refuses to "hunt" for talent in refugee camps, which is a common practice in many major host countries. This is a point which also makes the practice of discussing immigration as one concept highly questionable. (Söderling, discussion 9.10.2013.) In addition, this advocates the necessity of tailoring policy and strategy to include considerations of the needs of different groups of immigrants.

In addition to refugees, the place of second generation immigrants is difficult; if the two cultures are too far apart, a loss of identity may occur. This is a point in which mothers have the key role; how to improve their knowledge of the host culture and their ability to raise children in the duality of cultures is extremely meaningful when considering the second generation immigrants' role in Finland's future. Without help, second generation immigrants may grow to have no personal identity due to the difficulty of adapting to two separate cultures. Education of mothers is currently carried out in many

small organizations around Finland. The government should not forget these organizations as experts of immigration. (Kytö, discussion 23.10.2013.) This problem heightens the necessity of grass root level involvement. The political decision-makers are so detached from the everyday life of an immigrant that there are, most likely, many issues that never gain attention. Interaction seems to be, once more, a key concern.

8 BUILDING THE FINAL FRAMEWORK

8.1 Bridging the theory and empirical findings

The purpose of this study is to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. Chapter 5 presented a theoretical interaction framework, which the findings from chapter 7 should help modify towards becoming a functional framework. The importance of the framework has been argued in terms of increased national competitive advantage. Chapter 7 confirms the practicality of the assumption that knowledge and innovation are closely connected to the creation of national competitive advantage. Thus it is safe to assume that supporting knowledge transfer and innovation is beneficial.

This study wishes to concentrate particularly on one aspect of knowledge transfer; knowledge spillovers. It has been argued (chapter 3) that knowledge spillovers are more successful in a social situation. Thus it seems that personal interaction may be crucial for the functioning of knowledge spillovers. Because of the social aspect of knowledge spillovers, it can be claimed that the ease at which knowledge spills over is heightened when individuals are in constant interaction. Such constant interaction, however, is only possible if both parties recognize its importance and work towards building interactive capacity. This makes planned interaction crucial.

The immigrant role in the host country seems to be strongly related to three activities; immigrants are a source of labor, a source of international presence, and a source of intercultural understanding (chapter 7). The importance of diasporas, as a special group of immigrants, should be the same. Furthermore, diasporas have been proven to have increased interest in their country of origin (chapter 2) as well as superior networks (chapter 4). Thus it seems logical, that the last two impacts are equal if not greater, when the immigrant is a member of a diaspora. Figure 15 is a modification of figure 8, which presented the theoretical contribution of diasporas to the interaction framework. Figure 15 adds the empirical findings from chapter 7 to the theoretical findings from chapter 5.

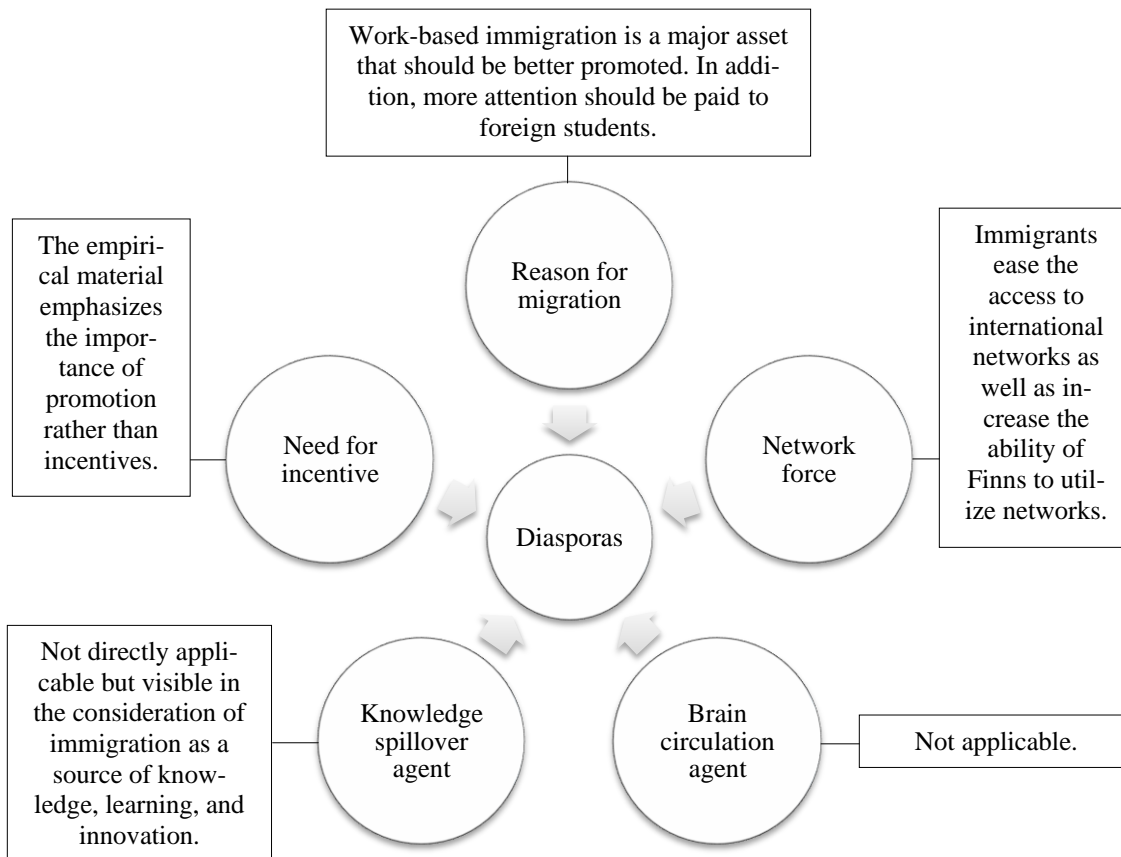


Figure 15 The role of diasporas in the final framework

In figure 15 the practical findings which seem most fruitful in terms of interaction are emphasized. It is interesting to note that students, who as a group were not a major topic of discussion in the research conducted for the theoretical part of this study, come up as one of the key objects of attention in the empirical study. As the theory suggested, work-based immigration was seen more fruitful in terms of competitive advantage. The network impact of immigration was also deemed great; immigration was not only seen as a way to tap into existing networks, but as a means to learn. Interestingly, the brain circulation agent role of diasporas did not come up in the empirical research. Similarly, the closely connected knowledge spillover agent role was not referred to by name. This might be due to Finland having relatively little experience as a host country, suggesting that the potential benefits of immigration are not yet fully understood. Low or imprecise recognition of the benefits would, arguably, lead to limited usage of accurate terminology. However, the extensive discussion with regard to the role of immigrants as sources of knowledge, innovation, and learning seems to suggest that although the term is not used, the impact of the knowledge spillover agent role exists. Whereas the theory suggests incentives as a way to increase attractiveness, the empirical findings focus on increasing awareness and promotion.

The empirical research on the knowledge transfer process presents two key themes; the perceived importance yet poor utilization of tacit knowledge transfer, and the necessity to separate between information, knowledge, and learning. This is in accordance with the theoretical discussion on knowledge (chapter 3). It is also interesting to note that the poor level of network utilization in Finland is a recurring theme. Figure 16 presents the key findings from the empirical research in comparison with the theoretical knowledge transfer figure (figure 9).

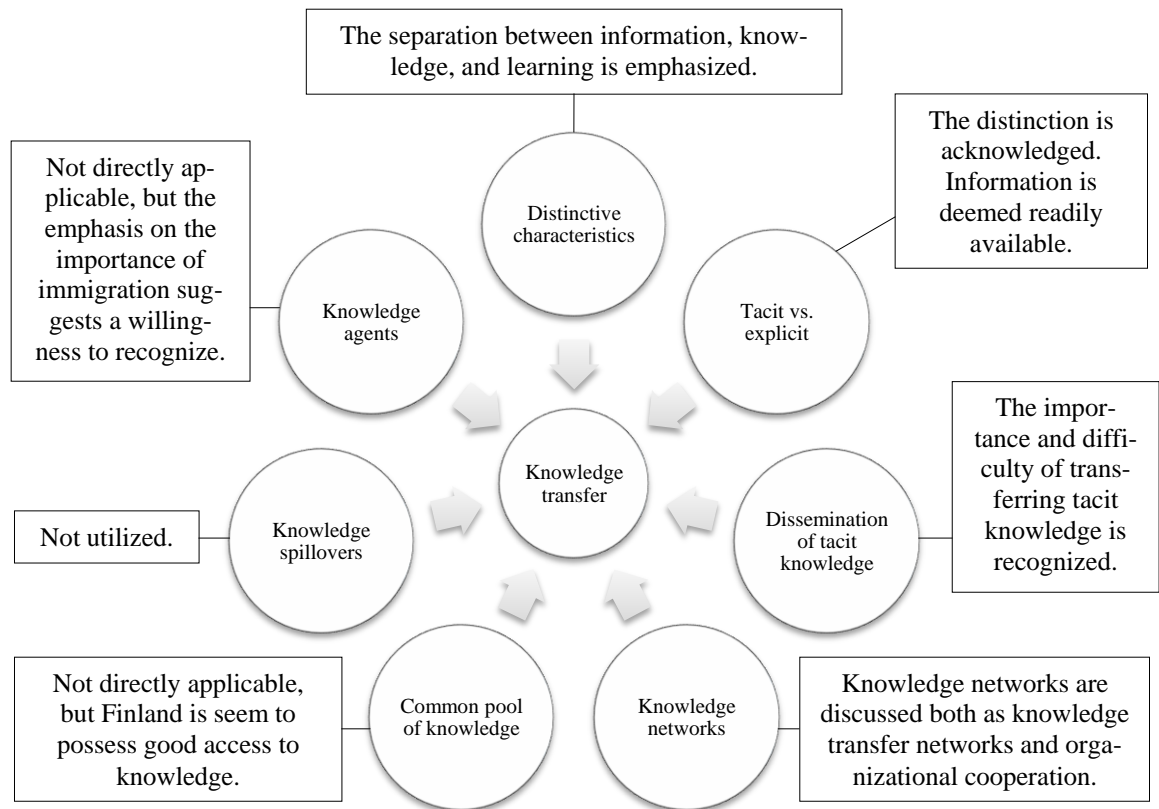


Figure 16 The role of knowledge transfer in the final framework

Figure 16 shows that the main characteristics of knowledge that have a practical impact are the differences between information, knowledge, and learning. In the empirical research, information is akin to explicit knowledge, and knowledge is akin to tacit knowledge. Learning is an interesting addition to characteristics; the empirical research suggests learning as a necessity for knowledge transfer. In addition, learning is found to be creative and innovative. The differences between tacit and explicit knowledge are recognized. Information is deemed readily available and the added importance of transferring tacit knowledge is acknowledged. In addition to being important, transferring tacit knowledge is deemed challenging. Staying ahead of the common pool of knowledge is not directly referred to, but Finland is considered to have good access to knowledge resources. Interestingly, knowledge spillovers are not discussed as an option of harnessing know-how. Similarly, knowledge agents are not recognized. However, the

emphasis put on the importance of immigrants as sources of information suggests an underlying notion of willingness to utilize knowledge agents.

In the empirical findings, Finland as a host country is seen to have potential but lack skills. Finns are said to be traditionalist, making change difficult. Figure 17 combines the empirical findings with the theoretical background given to host country involvement in the interaction framework.

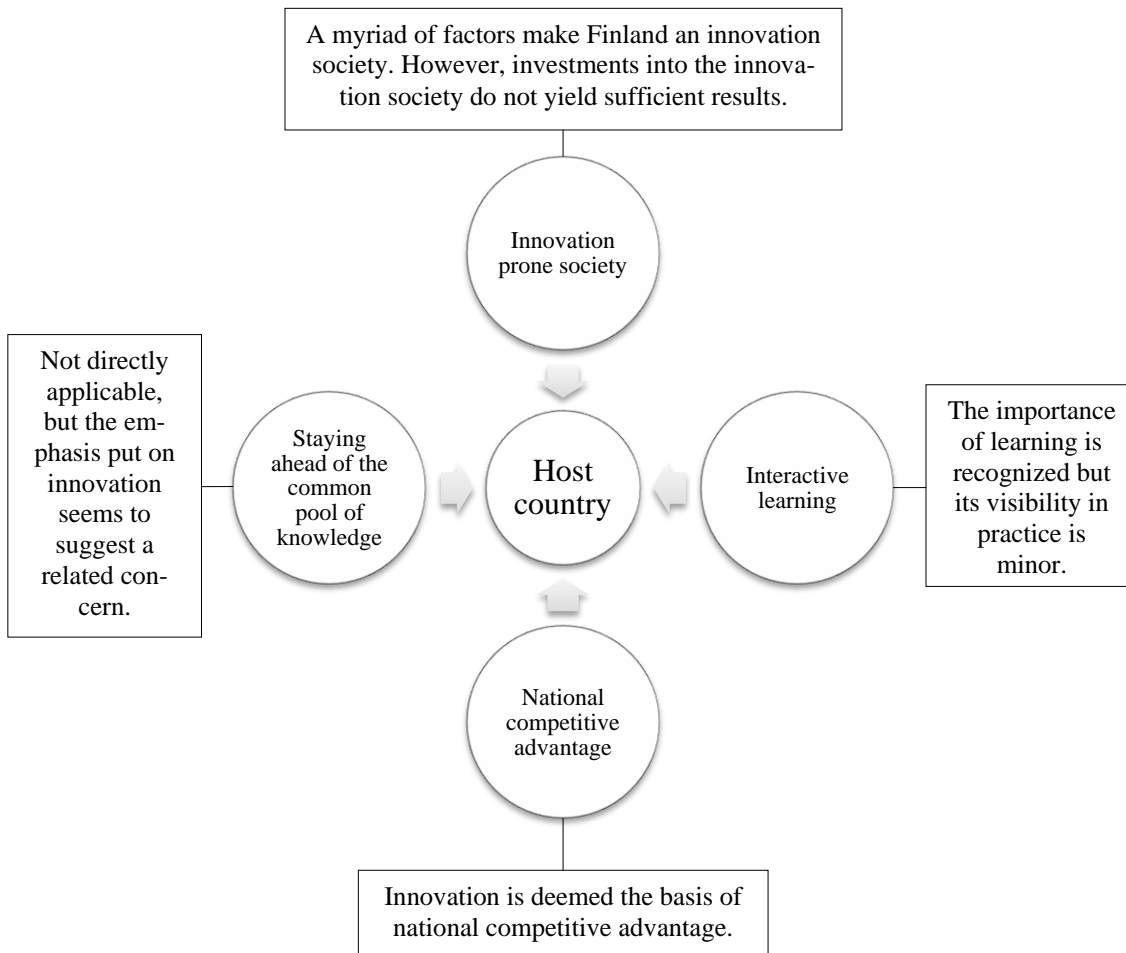


Figure 17 The role of Finland in the final framework

Figure 17 shows that although Finland is a well-functioning innovation society, the effectiveness of investments should be increased. In addition, the importance of learning as well as the importance of intercultural interaction is recognized, but interactive learning is not emphasized. Innovation is, however, recognized as a source of national competitive advantage. Thus, even though staying ahead of the common pool of knowledge is not directly discussed, the emphasis on continued innovation suggests that it is an underlying concern. The impact of the host country, however, is most visible in the policies that regard immigration. Figure 18 combines the theoretical and empirical findings with regard to government policies.

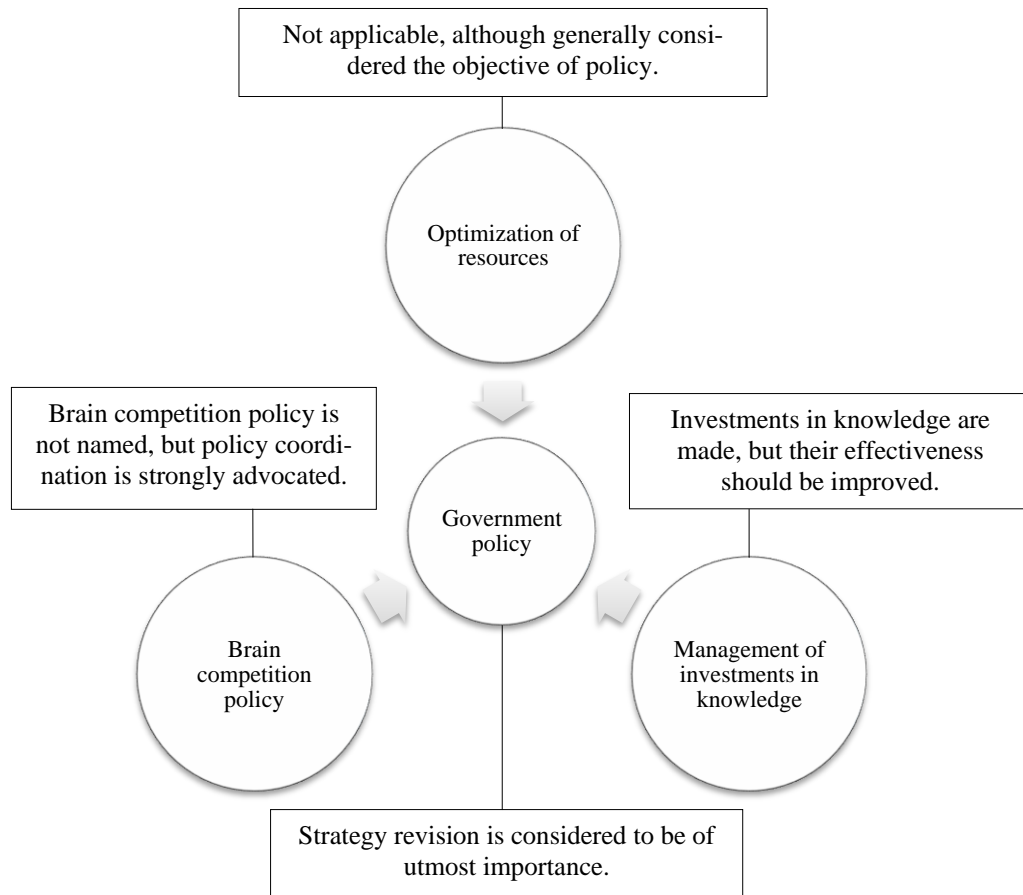


Figure 18 The role of Finnish policy in the final framework

It is, theoretically, the purpose of government policy to optimize national resources. The objective is to enable economic growth. In an innovation society, investments in knowledge are a key consideration with regard to economic growth. The promotion of knowledge creation is crucial. Figure 18 shows that currently in Finland investments in knowledge are made, but might not be effective. The necessity of policy coordination, although not discussed as brain competition policy, is recognized. The necessity of attracting foreign talent is considered of utmost importance, and as such means of attraction are given much attention. The importance of immigrant–host country interaction is discussed and acknowledged, but currently non-existent. In addition to the theoretical basis, an additional key theme is evident in the empirical findings. Strategy revision is deemed a crucial determinant of future competitiveness.

The above figures present the complete groundwork upon which a final interaction framework can be built. As in the theoretical framework, there are two actors between whom two actions take place. The final framework is presented in figure 19.

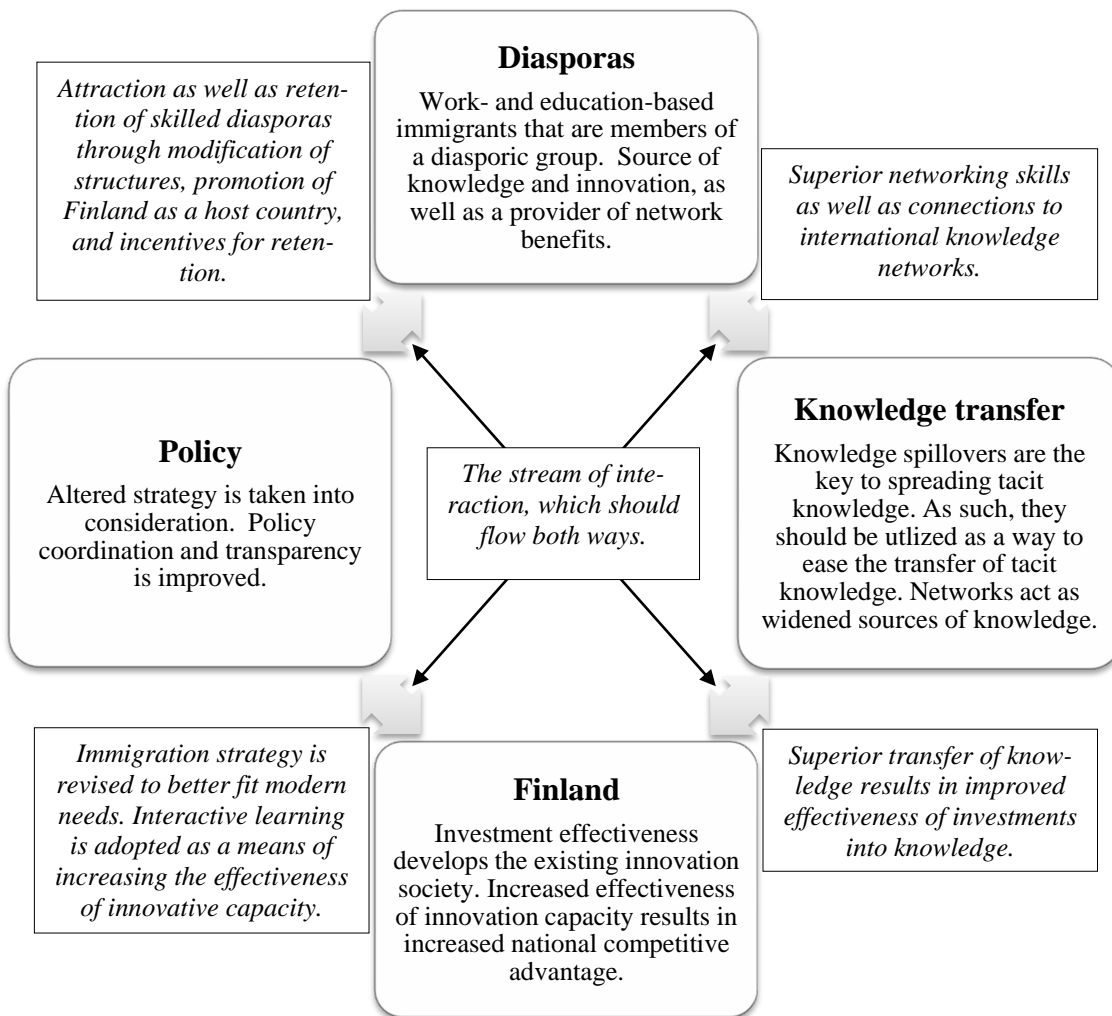


Figure 19 An interaction framework for deploying the knowledge of diasporas in Finland

In figure 19 the theoretical interaction framework (figure 12) is modified to include findings from the empirical research. This final model focuses on work- and education-based immigrants, who are members of a diasporic group¹³. By choosing to focus on these specific groups, the framework is better able to consider interaction in an innovation setting, due to the found superior influence highly educated diasporas have. Diasporas, as suggested by the theory, were found an interesting source of knowledge and innovation. In addition, foreigners were found to possess not only important networks, but superior networking skills. In the final framework, these networking skills, as well as the connections to international networks, act as a means to increase the effectiveness of the flow of knowledge through knowledge transfer.

¹³ The criteria of diaspora used in this study are described in chapter 1.

Although knowledge spillovers were not named as a knowledge transfer medium during the empirical research, the informal exchange of knowledge was acknowledged. Thus this study argues that the basis for elevating the role of knowledge spillovers exists. It is, however, important to raise awareness of knowledge spillover principles in order to be able to utilize them. This is a task for the host country, in this case Finland. In the empirical research, the transfer of tacit knowledge gained much attention. This is another reason to stress the impact of knowledge spillovers; they have been found to aid the flow of tacit knowledge. Although knowledge spillovers, by nature, are a by-product of social interaction and thus may not be entirely planned, the awareness of such spillovers may increase the willingness and amount of interaction between diasporas and Finns. This interaction is the cornerstone of the framework.

In addition to pointing out the importance of knowledge spillovers as means to transfer tacit knowledge, figure 19 suggests that international networks can act as widened sources of knowledge. In order to tap into this reserve, Finland must be able to link to these networks. It seems logical that existing networks are easier to join through an existing member. Thus the importance of diasporas as channels of access to international knowledge networks is heightened. This increases the necessity of interaction, because tacit knowledge cannot flow cross national borders without interaction. If such interaction was planned and carried out in a systematic way, the results would arguably improve. Interaction should, in this point, be twofold; Finns should interact with the members of diaspora in order to be linked to the networks; diasporas should then aid Finns interact with the networks in order to increase the flow of knowledge into Finland. Furthermore, as figure 19 suggests, these superior knowledge transfer means should increase the effectiveness of investments into knowledge. This is due to the increase of innovative capacity brought by intercultural interaction which, according to both theory and empirical findings, should yield in innovations.

However, in order for the effectiveness of investments into knowledge to increase, Finland must learn to market innovations (as suggested by the empirical findings). This is a task in which many other nations outperform Finland on a regular basis. Thus it is increasingly important for Finland to open up and be willing to learn from members of those other nations. Increased effectiveness of investments and innovation capacity, the results of increased effectiveness of knowledge transfer, would help develop the current innovation society and improve national competitive advantage. Nevertheless, Finland must be open to change and accept diasporas as an asset. Currently prejudice and protectiveness prevail in Finland. Thus, as figure 19 states (in accordance with the empirical findings), immigration strategy must be revised.

Currently Finland has a very fragmented system which is difficult to understand. Thus, clarity is needed. In addition, the strategy should be tailored for the needs of different groups of immigrants instead of considering immigration as one block. In the

modern world, protectiveness is no longer a good strategy; Finland should become more proactive. To help proactiveness, and to aid increasing the effectiveness of innovative capacity, interactive learning should be considered. Currently the innovative potential of learning is recognized, but interactive learning was deemed inexistent according to the empirical findings. Similar to the effects of improving awareness of knowledge spillovers, improving the awareness of interactive learning should boost the effectiveness of the innovation process in Finland. By acknowledging the superiority of interactive – and most beneficially intercultural – learning, the creation of new knowledge can be boosted. Thus, innovative capacity is increased as well as made more effective.

The modernized immigration strategy should be used to alter policy. Figure 19 states that coordination and transparency should be improved. This is in accordance with the empirical findings. Currently Finland has too many actors scattered across the field. Services should be made easier to access. By changing strategy and policy, the attraction and retention of skilled diasporans becomes easier. The most significant changes should be made to the structures (for example the one-stop-shop and tailored services suggested by the empirical findings), the promotion of Finland as a host country (for example through informational websites), and incentive plans (as suggested by theory – this, however, is a concern more related to the strategy of private companies and as such only recommendations for the attraction of foreign labor can be made in policy; any incentive plans should, also, not discriminate against Finns).

The above description of the contents of figure 19 shows the flow of interaction as well as the necessity of action to improve interaction. In addition to the described flow, it should be noted that interaction should also be free to circle back; diasporas should be able to participate in policy- and strategy-making, and thus make a difference in Finnish politics. This is in accordance with the empirical findings, which suggest that current political leadership is too far detached from the grass roots to be able to strategize well with regard to immigration. Also, as the description indicates, Finland should ease and emphasize the knowledge transfer process in order to fully benefit from diasporas' knowledge.

8.2 Practical and theoretical implications

The purpose of this study has been to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. The successful implementation of the framework was briefly described above. Some practical implications the results of this study have in Finland have likewise been discussed above. The immigration strategy of Finland is, currently, protective. The interaction framework suggests that opening up and modernization would increase the national

competitive advantage. Thus, strategy revision is necessary. This revision also calls for changes in policy, which should be better coordinated. The failure to revise strategy might mean a loss of national competitive advantage, due to the fact that surrounding nations are even now more open and outperforming Finland.

The framework presented in this study elevates the importance of interaction as a means towards heightened innovation capacity. Thus, Finland should consider the ways in which interaction could be promoted. Interaction, as a means towards effective knowledge spillovers, is the cornerstone of the framework. However, interaction is only possible if both parties are willing to contribute. Thus thought should also be given to the attraction of diasporas. Finland, as a host country, currently lacks the skills to promote itself. This, as well as the difficulty Finns find in marketing inventions, makes it important for Finland to learn marketing skills; something that diasporans may be able to teach. In addition, although Finland has been a world leader in the amount of investments, those investments do not yield sufficient results. The interaction framework presented in this study suggests improved knowledge transfer as a means towards improving the effectiveness of investments. Thus it is important for Finland to consider knowledge transfer as an asset and identify ways in which knowledge transfer can be aided.

This study combines the concepts of diaspora and knowledge in a way previously very little research. In addition, this study presents a way in which this novel combination can be used to build national competitive advantage. Due to the novelty of the field, the theoretical contribution of this study is largely based on propositions arising from the theoretical research. In chapter 2 this study argues that more research is needed on the impact diasporas have on the host country. Currently most research is conducted with regard to the impact diasporas have on the country of origin (figure 2). When the impact is researched also in the host country setting, the scope of the impact most often reaches both countries. However, due to the major economic impact already discovered in the country of origin, and the many ways in which diasporas are argued to aid the host country throughout this study, the following proposition is put forward:

- *Proposition 1: Diasporas have a significant economic impact in the host country.*

To clarify, this study argues that the economic impact of diasporas in the host country takes place primarily through knowledge transactions. Furthermore, the economic impact of new knowledge is deemed important in terms of innovation. Thus:

- *Proposition 2: Diasporas possess knowledge different to that of the host country, which yields in novel combinations that increase the innovative capacity of the host country.*

This study argues that knowledge spillovers are a key medium towards tacit knowledge transfer, which is deemed a crucial aspect of innovation. Knowledge spillovers are found to happen more easily in social contexts and in a localized setting. New know-

ledge is the most beneficial in terms of innovative potential. Thus foreign knowledge can be deemed most beneficial:

- *Proposition 3a: Diasporas enable a global spillover effect in a localized setting.*

Because diasporas possess foreign knowledge yet reside in the host country, they are able to provide the host country with new knowledge that has higher innovative potential. Host countries should be able to harness this potential better through setting a suitable environment.

- *Proposition 3b: Host countries have the ability to impact the attained advantage from knowledge spillovers via strategy.*

It is also important to note that as knowledge spills over most effectively in a social context, interaction may be the key to enhancing the spillover process.

- *Proposition 3c: Constant interaction heightens the tendency of knowledge to spill over.*

In order to utilize the full potential, such interaction should be constant and planned. Interaction, however, requires the consent of both parties. This increases the importance of strategy. Furthermore, in order to implement strategy, suitable policy is needed. A suitable policy seems to be one that addresses all relevant fields and is unified along each field. Such policy enables the utilization of knowledge spillovers as means to increase innovative capacity. Innovative capacity, in turn, has been found a key determinant of competitive advantage. Thus it should be noted that:

- *Proposition 4a: Staying ahead of the common pool of knowledge is crucial for competitive advantage based on innovation.*

Staying ahead of the common pool of knowledge requires the attainment of new knowledge.

- *Proposition 4b: Diasporas, as possessors of different knowledge, can aid staying ahead of the common pool of knowledge.*

If innovative capacity is deemed a key contributor to competitive advantage, it is also of interest to consider the individuals who enable the increase in innovative capacity. Such individuals should have the ability to increase the knowledge pool of the host country in an economically sustainable way. In the modern world, networking seems to be the most effective means towards linking the host country to international knowledge flows. Diasporas, as possessors of knowledge different to that of the host country and as members of international networks with superior knowledge transfer means, could play a role in this.

- *Proposition 5a: Knowledge agents interacting with domestic and global networks improve a host country's innovative capacity.*
- *Proposition 5b: Diasporas are especially suitable knowledge agents due to their superior ability of networking.*

Nevertheless, it should be noted that unless the knowledge of diasporas is effectively absorbed, the increase in innovative capacity may not be attained. Thus knowledge transfer must be made efficient. If knowledge is transferred effectively, an increase in novel combinations should arise. This, in turn, should yield in an increase in innovation. Investments into innovation aim at the same result. Thus it seems that:

- *Proposition 6a: Superior transfer of knowledge results in increased effectiveness of investments into knowledge.*

This makes diasporas even more important in terms of the competitive advantage of their host country:

- *Proposition 6b: Diasporas, as members of networks with superior knowledge transfer means, help in increasing the effectiveness of investments.*

In figure 20 the propositions made above are added to the appropriate fields of the figure presenting the scope of this study (figure 1). This figure shows that the theoretical contribution of this study expands to all fields of research connected to the scope of research of this study. It should be noted that although the scope of this study is limited to Finland as a host country, the theoretical implications should be similar for any host country. The presented propositions, however, should be studied further in order to strengthen or negate them. There is much yet to discover in each field.

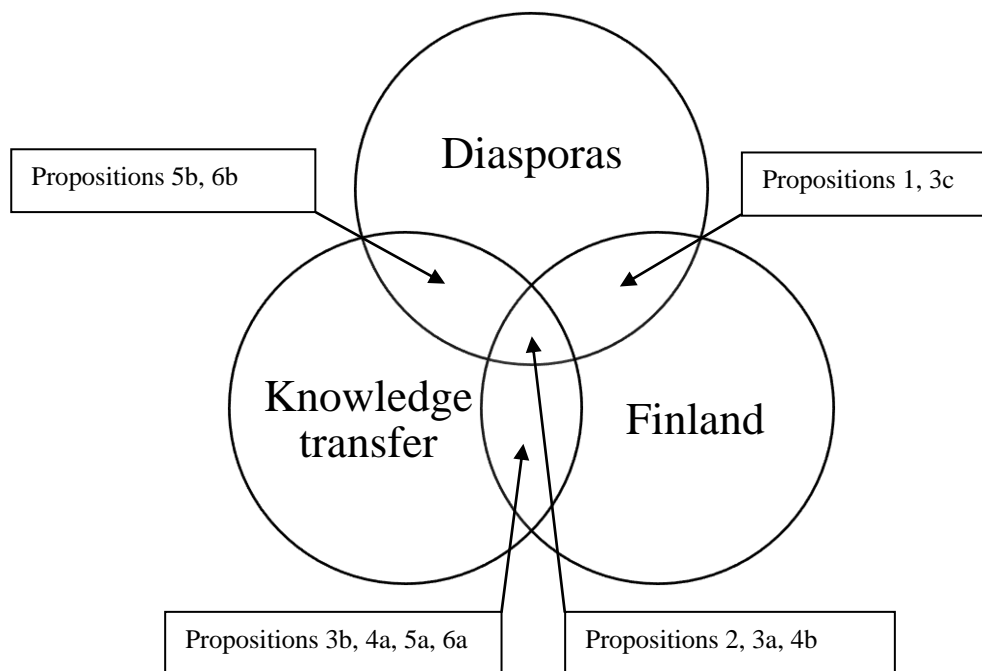


Figure 20 Theoretical contribution

In addition, this study has put forth a theoretical interaction framework (figure 12) which acted as the basis of the empirical research. The theoretical interaction framework presented in this study is by no means complete. Much work is left in examining exactly how knowledge spillovers happen within diasporic groups as well as how know-

ledge spills over between different nations and cultures. Furthermore, the means suggested in this study for planning knowledge transfer are very limited. More attention should be paid on ways in which knowledge transfer can be boosted, particularly between different nations. The theoretical interaction framework presented in this study could also be researched in other nations. Further research would, over time, bring the framework closer to a generalizable result.

Furthermore, the final interaction framework presented in this study is built on considerations of work- and education-based immigration. Thus future research could expand the scope of the study to other types of immigration, especially to refugees. In addition, the theoretical framework could be further studied within Finland. For example, the practical implementation of necessary strategic change is an extensive field of research, which this study leaves virtually untouched. This aspect would also aid in tying the framework to a longitudinal setting. Change, in the globalizing world, is constant, and as such the suggestions presented in this study will, even in a short time-period, become outdated.

9 SUMMARY

This study has analyzed the central importance of diasporas in building the national competitive advantage of Finland. The suggested process through which diasporas can have an impact on the national competitive advantage of Finland was knowledge transfer. The transfer of tacit knowledge was deemed of key importance. Knowledge spillovers, as a highly suitable means to transfer tacit knowledge, were considered the most promising knowledge transfer medium.

This study set out to suggest an interaction framework, which illustrates how diasporas can benefit the host country via intentional knowledge spillovers. The sub-objectives of this study were to seek which features are crucial for productive interaction between a host country and diasporas, and to scrutinize the modes of interaction currently effective in Finland. This study began by building a theoretical basis for an interaction framework. This preliminary interaction framework emphasized the importance of knowledge as an innovative input, and the importance of knowledge spillovers as a means to transfer tacit knowledge. In addition, diasporas were found a good source of new knowledge, and as such to possess a potential to increase national competitive advantage due to the importance of new knowledge in innovative outputs. Furthermore, host country stance and policy were found important mediators in the attraction and retention of skilled diasporans.

The empirical research consisted of interviews based on the theoretical framework. Eight interviews were conducted for this study; five with members of expert organizations and three with immigrants. The interviews were steered with the aid of a themed interview guide. All of the interviews were recorded and later transcribed. Thematic analysis was used to categorize and interpret the results. Thematic networks were built to act as the basis of the analysis process. In the empirical research it was found that Finland has a very fragmented strategy field with regard to immigration. Furthermore, the results indicated that although immigration is recognized as a possible asset, Finland is unable to utilize the potential.

Subsequently, the purpose of this study was achieved by building a final interaction framework on the basis of both theoretical and empirical findings. The resulting framework implies ways in which Finland can harness the innovative potential of diasporas. The framework elevates the importance of strategic change as a means towards making Finland a more attractive host country. In addition, the framework points out the necessity of learning in order to fully implement the framework. The results of this study suggest that a lot of talent is currently wasted in Finland. Thus, a strategy revision is needed. Currently immigration as a whole is seen as a challenge instead of an asset. In order to stay competitive, modernization is needed.

This study contributes to the existing knowledge on the concepts of diaspora and knowledge. This study is able to link these concepts together in a novel way. In addition, this study connects the concepts to economic benefit. Although this study is based on an example nation and thus not generalizable, the theoretical findings suggest that future research may yield in more universal results. The study at hand was also unable to examine the full spectrum of immigration, leaving much room for future efforts. Taken together, however, these findings suggest that Finland should adopt a more positive outlook on immigration or risk the loss of competitive advantage.

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APPENDIX 1 INTERVIEW GUIDE

Theme 1 Diasporas

- What kinds of immigrants wish to come to Finland?
 - How many, from which regions, what is the reason for migration?
 - How, if at all, does the government attempt to impact the demographic?
- What kind of know-how do they possess?
 - Are the majority low- or highly-skilled?
 - Do they acquire further skills in Finland?
- What kinds of networks do they uphold?
- What is their role in international knowledge transfer?
- How are their skills utilized in Finland?
 - To what extent are they employed in positions that suit their education?
 - What kind of an asset are they considered?
 - How, if at all, are they encouraged in their employment?
- How does the government keep in touch with the immigrants?
 - In which matters?
 - Does the government attempt to improve the immigrants' well-being?

Theme 2 Knowledge transfer

- How important is the knowledge transfer process in the Finnish economy?
 - How does the importance show?
 - Where does knowledge transfer?
 - What sort of knowledge is transferred?
 - How does knowledge transfer?
 - What are the benefits of knowledge transfer?
 - Does knowledge transfer between nations?
- How important are knowledge spillovers as a knowledge transfer medium?
 - Are knowledge spillovers utilized consciously?
 - How could they be advocated?
- What kinds of knowledge networks exist in Finland?
- What kinds of knowledge agents exist in Finland?
- What does Finland's pool of knowledge look like?

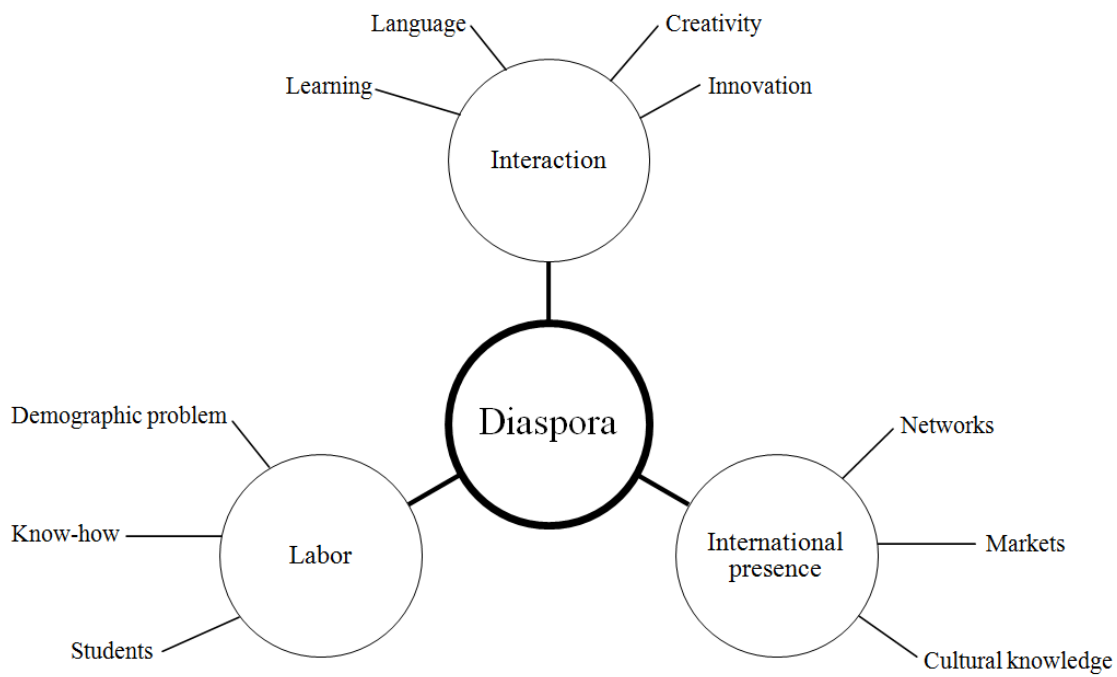
Theme 3 Host government

- What makes Finland an innovation society?
- How does the government uphold innovation centrism?
- How is interactive learning supported in Finland?
- What is the impact of innovation centrism on Finland's competitive advantage?
- What is the impact of Finland's knowledge pool on competitive advantage?
- To what extent does the government consider diasporas an asset?
- What sort of communication channels are in place between the government and innovative organizations or diasporas?
 - Whose initiative are such communication channels?

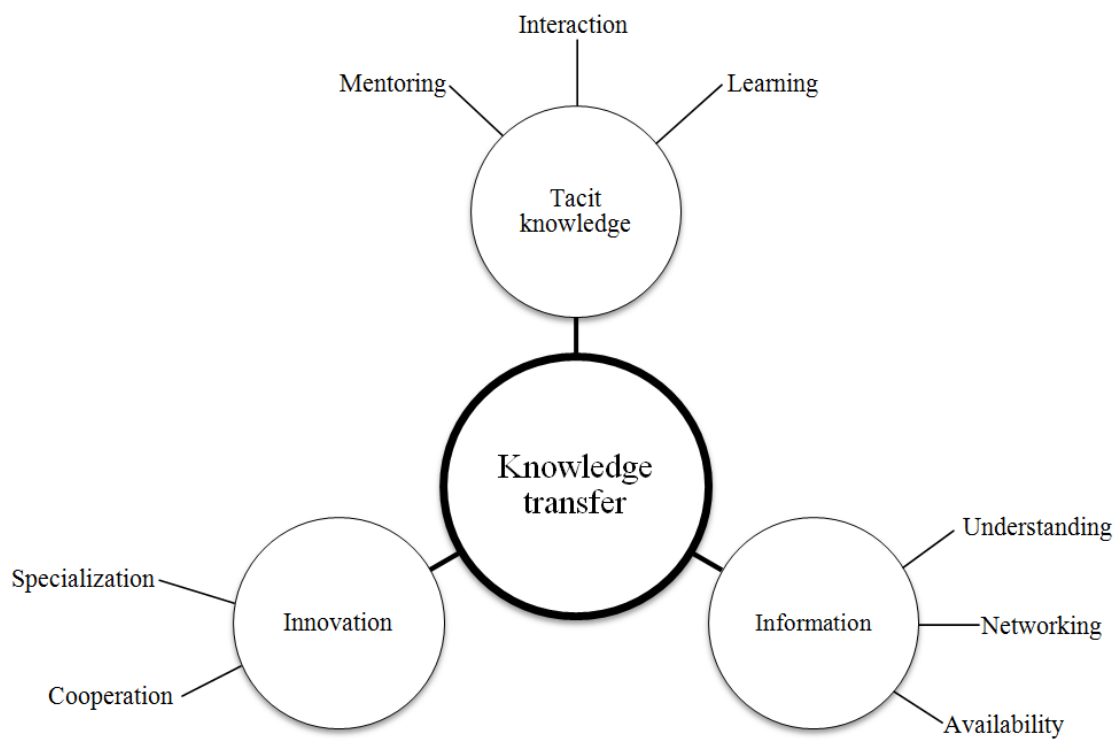
Theme 4 Policy

- How does Finland attempt to optimize innovation resources?
- How are investments in knowledge advocated?
- To what extent does Finland utilize brain competition policy?
- What sort of policies are currently in place with regard to immigration and other related fields?
- What is the impact of policy overlaps?

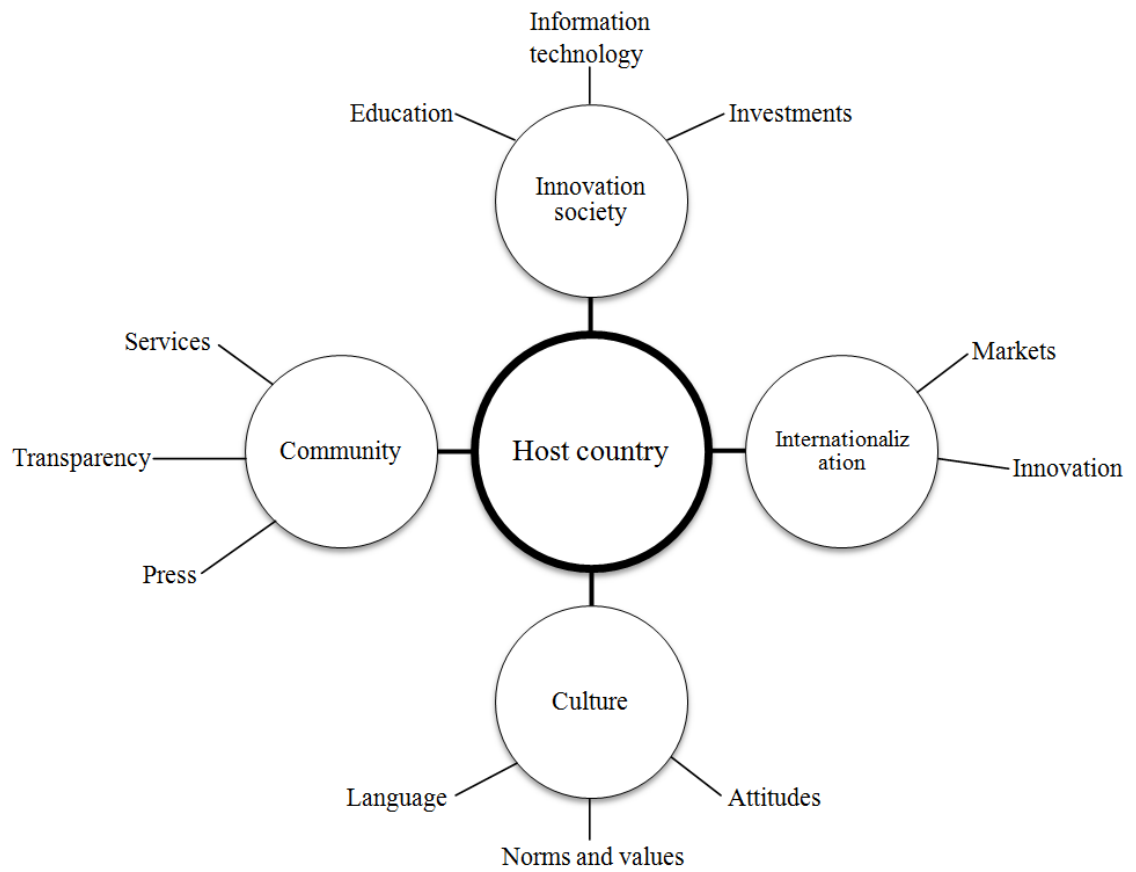
APPENDIX 2 THEMATIC NETWORKS



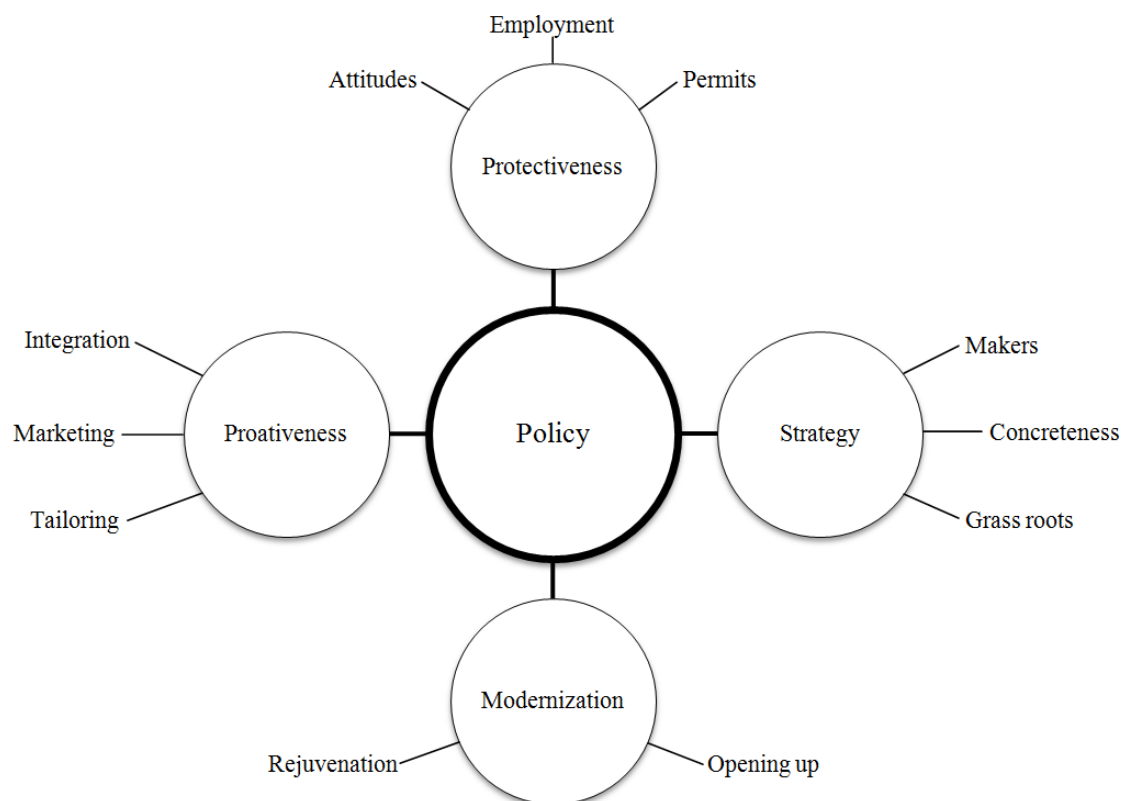
Thematic network 1(4) Diaspora



Thematic network 2(4) Knowledge transfer



Thematic network 3(4) Host country



Thematic network 4(4) Policy

APPENDIX 3 DIVISION OF TASKS IN IMMIGRATION AFFAIRS (Finnish Immigration Service 2013)

Issue	Authorities in charge
Immigration policy, focus points	Immigration policy is directed by the Minister of the Interior in accordance with government policy
Immigration administration and policy	Ministry of the Interior
Development of immigration legislation	Ministry of the Interior
Object program for the Finnish Immigration Service	Ministry of the Interior
Visa	Diplomatic missions
Residence permit for a family member of a Finnish citizen in Finland	Police
Residence permit for a family member of a foreigner living in Finland	Finnish Immigration Service
Residence permit for EU/EEA citizen	Police
Residence permit for an employed person	Consideration of workforce needs: Employment and Economic Development Office Other conditions: Finnish Immigration Service
Residence permit for a self-employed person	Prerequisites for self-employment: Centre for Economic Development, Transport and the Environment Other prerequisites: Finnish Immigration Service
Asylum	Asylum interview and decision: Finnish Immigration Service
Residence permit on the basis of subsidiary protection or humanitarian protection	Management and planning of reception of refugees: Finnish Immigration Service Establishment and closure of reception centers: Ministry of the Interior Placement into municipalities of quota refugees and asylum seekers who have been granted a residence permit: ELY Centers
Extension of residence permit	Police, in special cases Finnish Immigration Service
Refusal of entry	Frontier Guard, Police, Finnish Immigration Service
Deportation	Recommendation: Police, Frontier Guard Decision: Finnish Immigration Service Implementation: Police
Finnish citizenship upon application or by declaration	Finnish Immigration Service
Appeals	Administrative courts (asylum matters: Helsinki Administrative Court) Supreme Administrative Court
Integration into society	The Ministry of Employment and the Economy, Centers for Economic Development, Transport and the Environment, municipalities
Educational and cultural services	Ministry of Education and National Board of Education