Knowledge Transfer from High-Skilled Diasporas to the Home Country: The Case of Lebanon and the United States

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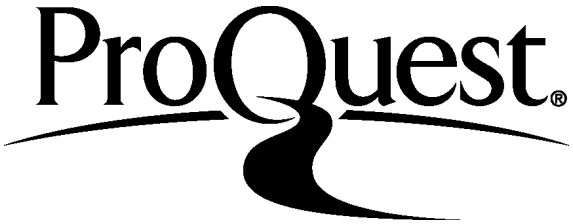

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Dedication

This is dedicated to my family - parents, siblings, and their precious children. I also dedicate this to all the courageous immigrants who set sail in search for better futures but never let their home sail beyond the borders of their global hearts.

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Abstract of Dissertation

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Concepts such as "brain drain," although now outdated, capture the essence of the uneven distribution of costs and benefits of the migration of skilled workers from south to north. There is solid evidence of the positive contributions of skilled immigrants to their host economies. Nevertheless, the sending countries, with few exceptions, have not fully capitalized on the skills and networks of their high-skilled diasporas. This research adopts the diaspora option concept, which capitalizes on these skills and networks as a viable strategy for economic development. Using the migration relationship between Lebanon and the United States, this study contributes to a growing area of research that investigates the *search* role of skilled immigrants and returnees and their impact on knowledge transfer to the countries of origin. The research presented herein attempted to answer the overarching exploratory question: What are the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect (*search*) contributions to the home country and what related policies or facilitative interventions are needed to leverage and enhance these contributions? To address this question, the field research employed interview and survey techniques.

The findings of this research revealed that Lebanese diaspora high achievers and networks, as well as high-skilled returnees, have engaged in different forms of direct and indirect contributions to the home country, but their impact remains less than transformational on Lebanon's innovation system. There is substantial evidence of the

nascent emergence of institutionalized Lebanese transnational search networks attempting to bridge and translate capabilities and opportunities between the home country and the global knowledge markets. These networks hold a growing portfolio of gestating projects and initiatives that have not yet materialized in tangible investments or success stories. Institutional factors at home, such as economic and political instability, weak infrastructure, and outdated regulatory and legal frameworks, in addition to the absence of diaspora engagement public policy, appear to be the main impediments for optimal and transformational engagement. These impeding factors represent areas for possible improvement if diaspora linkages and contributions were to be leveraged. Thus, the case of Lebanon demonstrates a laissez-faire diaspora option that encapsulates the suboptimal incorporation of skilled diasporas into the development process of their home countries without notable diaspora engagement public policy. Consequently, this research advocates for a proactive and fully endorsed diaspora option to better capitalize on countries' skilled diasporas and returnees for transformational impact.

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List of Abbreviations and Acronyms

AFDL	Lebanese Diaspora Angel Fund
BDL	*Banque Du Liban* (Lebanese central bank)
CEO	Chief Executive Officer
CMA	Capital Market Authority
CTO	chief technology officer
GDP	gross domestic product
HSI	high-skilled immigrant
IAB	Industry Advisory Board
IAC	Industry Advisory Committee
ICT	information and communication technology
IRB	Institutional Review Board
iSME	SME Innovation Fund
KBC	knowledge-based capital
KNM	knowledge networks and markets
LFE	Lebanon for Entrepreneurs
LIFE	Lebanese International Finance Executives
MENA	Middle East and North Africa
MIT	Massachusetts Institute of Technology
MNE	multinational enterprise
NGO.	nongovernmental organization
NSF	National Science Foundation
NYC	New York City

OECD	Organisation for Economic Co-operation and Development
PFL	Partnership for Lebanon
R&D	research and development
RDI	research, development, and innovation
S&T	science and technology
SEAL	Social and Economic Action for Lebanon
SME	small- and medium-size enterprise
STEM	science, technology, engineering, and mathematics
STI	science, technology, and innovation
UN	United Nations
UNDP	United Nations Development Programme
US-Leb STI Fund	United States-Lebanon Science, Technology, and Innovation Fund
VC	venture capital
WHO	World Health Organization

Chapter 1. Introduction

I. Background of Research Interest

Migration is a global phenomenon on the rise. It is estimated that about 232 million international migrants are living in the world today. Since 1990, the number of international migrants in the global north has increased by 53 million (65%), while the migrant population in the global south has grown by around 24 million (34%). Consequently, about six of ten international migrants reside in developed regions (UN-DESA, 2013). Migration patterns, their impact on development in both sending and receiving countries, and their intensity have increasingly occupied researchers and policy makers to better understand and address such an important and profound human behavior.

Skilled migration in particular has attracted much attention due to its human capital impact and developmental contributions to both sending and receiving countries. Until recently, most research has focused on gains harvested from skilled immigrants and losses accrued from skilled emigrants. New and emerging literature gears toward illuminating different dynamics of skilled migrants' contributions, especially those that could capitalize on the skills, knowledge, and networks of high-skilled diasporas without repatriating to their home countries. This research adds to this literature and seeks to answer questions that concern skilled migrants and decision makers in both sending and receiving countries, as well as those generally interested in this global and increasingly important phenomenon.

Taking the Lebanon-United States migration relationship as a case study, this dissertation research addresses the problem of the home country's suboptimal capitalization on the skills and networks of high-skilled diasporas by the home country.

The research hereafter attempts to answer the following overarching exploratory question: What are the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect contributions to their home country, and how could policies or facilitative interventions leverage and enhance those contributions? To address this question, this research uses interview and survey techniques targeting both high-skilled diaspora members and returnees.

This research distinguishes between two contributions for skilled diasporas: (a) direct and (b) indirect contributions, referred to as *the search role*. The main hypothesis that guides this dissertation research is that skilled diasporas' search role, represented in their ability to efficiently connect and bridge the needs of the home country institutions and individuals with the global pool of knowledge, expertise, and resources, is essential and preparatory for an impactful direct contribution. Thus, this research implicitly gears toward finding evidence and explanation of the role and impact of transnational search networks, using Lebanon's skilled diaspora as a case study.

II. Statement of the Problem

The migration of skilled workers from developing countries is a persistent and growing trend. Throughout this research, the terms *skilled* or *high-skilled workers* refer to workers with postsecondary degrees. In 2000, 24% of immigrants to Organisation for Economic Co-operation and Development (OECD) countries had a university degree. The total number of tertiary educated immigrants in OECD countries increased by an unprecedented 70% in the last decade to reach 27.3 million in 2010-2011 (UN-DESA/OECD, 2013). Based on this data, about 30% of all migrants in the OECD area were highly educated, and 20% originated from India, China, or the Philippines.

This consistent increase in skilled migration rates puts pressure on policy makers in both sending and receiving countries. In sending countries, policy makers seek to build the country's human resources to supply the needed talent to the public, academic, and private sectors. In receiving countries, policy makers attempt to address skill shortages in certain productive sectors while protecting national workers from competition in the labor market (Clemens, 2013).

Despite their importance and significance in global economic activities, benefits from high-skilled immigrants (HSIs) are not equally utilized among the host and the home countries, typically corresponding to developed and developing countries. Hart (2006a) concluded that the benefits from HSIs outweighed the aggregate costs; nevertheless, "these benefits and costs are unevenly distributed" (p. 53). Concepts such as "brain drain" capture the essence of the uneven distribution of the costs and benefits of the migration of skilled workers from south to north.

The migration of skilled workers from sending countries is considered "draining," whereas as *immigrants*, those same workers are considered "enriching" for receiving countries. Thus, the return of a high-skilled expatriate is a gain for the sending country and a "concerning phenomenon" or a loss for the host country. Attracting more HSIs is an economic priority for developed countries, and retaining a high-skilled and educated workforce is a human capital challenge for sending countries.

Immigration, and high-skilled immigration specifically, is a thorny research topic. Hart (2006a) claimed that the first rule in migration studies is "to visualize large error bars around virtually every statement one reads" (p. 54). Limited data—especially covering long periods, crossing many countries' different econometric approaches, or

mixing low- and high-skilled subcategories—in addition to skewed perceptions toward a very controversial issue, make immigration a very puzzling research area to navigate. These reasons make country case studies a very important analytical tool in migration studies (Gamlen, 2012). Moreover, the data on who gains and who loses from the migration of high-skilled workers are as confusing and contradictory as the data on migration itself.

Apart from the general skilled migration problems articulated above, the main problem this research addresses is *the suboptimal capitalization on the skills and networks of the high-skilled diasporas from developing countries*. Developing countries, especially ones with high rates of skilled diasporas, have the potential to tap into their diasporas' networks and pool of knowledge and expertise. Chapter 2 of this dissertation discusses the different policy frameworks adopted by skilled migrants' sending countries to engage their diasporas. Some countries have had better success than others have, but given the countries' specificities, no one framework is generalizable or exportable. It is apparent that these engagements are suboptimal when compared to the impressive contributions these skilled migrants achieve in their host economies. Therefore, this research is primarily concerned with understanding the dynamics that would allow better incorporation of skilled diasporas in their countries' developmental efforts—a concept defined in the literature as the *diaspora option* (Barré, Hernandez, Meyer, & Vinck, 2003; Bhagwati, 2003; Goethe & Hillmann, 2008; Hart, 2006a; Hart & Davis, 2010; Kuznetsov & Sabel, 2006; Lowell & Gerova, 2004; Seguin, Singer, & Daar, 2006a, 2006b).

The diaspora option concept encapsulates the successful incorporation of diasporas in their home countries' development process. Within the discussion of the diaspora option concept, there are different approaches towards engaging diasporas: some are direct others are indirect (*pragmatic*) approaches (Kuznetsov, 2013). Through direct approaches, the diaspora as a whole is targeted with diaspora-specific initiatives—initiatives designed to appeal to diaspora for their general support. As an example, direct approaches could include extending voting or citizenship rights to diaspora individuals or issuing diaspora bonds to raise funds.

Indirect approaches may still intentionally seek diaspora participants, but are much more selective, based on the specific aims of the initiative of concern. Only those diasporans with specific relevance to the initiative would be invited/targeted to participate. The incorporation of diaspora (and non-diaspora) experts or professional networks in the policy formulation or strategic investment decision-making process of the Ministry of Industry and Trade of a specific country is an illustrative example of *pragmatic* diaspora engagement policies. Engagement with the diaspora becomes part of the everyday management practice of the Ministry. Both the direct and indirect diaspora engagement policies are needed to capitalize on the skills and networks of high-skilled diasporas as they represent complementary approaches. This research adopts this complementary approach and focuses on pragmatic and immediate solutions enabled by the diaspora engagement policies.

III. Defining Characteristics of Migrants' Contributions to the Home Country

Remittances are among the most tangible links between migration and development. The World Bank (2013) estimated that international migrants were expected to remit more

than $550 billion in earnings in 2013, of which $414 billion would go to developing countries. However, despite their importance, remittances are not the primary concern of this research.

Contrary to conventional wisdom, sizable diasporas do not imply sizable impact on the home country. The Chinese and Indian examples of large, highly skilled, and relatively well-organized diasporas—and their enormous contributions to their countries—have propagated the impression that large diasporas are essential for impact. However, evidence from other countries has shown that size does not matter. Examples from countries such as Chile show that even sparsely populated, informal diaspora networks could show positive results when these networks of skilled diasporas are properly linked to their small countries. Therefore, headcount provides an elusive picture about the potential, impact, and types of engagement with the home country (Kuznetsov, 2013).

In addition to their size, another characteristic should be considered when analyzing the impact of diasporas: their age. Talent needs time to mature and advance in professional settings. Diaspora high achievers do not emerge overnight; instead, they climb the career ladder from junior-level positions in a foreign country. When a critical mass of high achievers forms, a *collective credibility* emerges and inspires the younger generation of junior professionals through mentorship. Kuznetsov (2013) argued that examples from Israel, India, China, and Armenia attest to the collective credibility and influence phenomena. Therefore, with time, relatively young, skilled diasporas from the Middle East, Latin America, Africa, and Eastern Europe could eventually mature and advance, building a bigger mass of high achievers.

Most importantly, regardless of the size and age of the high-skilled diaspora, domestic institutions appear to be the main determinant of the success of diaspora—especially in complex and long-term projects (Kuznetsov, 2006, 2013). J. Brinkerhoff (2006) considered institution building, democracy, and economic development as "the backdrop for both brain drain prevention and the realization of migration gains" (p. 142). Nevertheless, policy responses to the brain drain problem have mainly focused on encouraging repatriation, without much attention to building strong and capable home institutions. Thus, Hart (2006a) called for policy steps that achieve two objectives: "Strengthening the capacity of source countries, especially small ones, to absorb knowledge and extract benefits from it, and nurturing knowledge spillovers from receiving countries to source countries" (p. 53).

IV. Impact of Skilled Migration on Development

Skilled migration is often thought to have severe negative effects on sending countries. This negativity was captured early on—50 years ago—by the term "brain drain," which referenced British scientists' emigration to the United States (Maddox, 1964). The principle policy questions, therefore, was how to curtail and reverse this exodus of talent from developing countries. The conventional policy focus on encouraging the return of talent to the home country is "often neither realistic nor necessary," given that high-skilled diaspora individuals—without permanently relocating—could effectively engage in continuous collaborative projects with the home country (Kuznetsov, 2013, p. 14). Although some countries and policy makers continue to consider their skilled emigrants as a loss, more are recognizing that an engaged and connected diaspora can be an asset.

That is, without returning, diasporas can play an important role in the economic development of their home countries (Newland & Plaza, 2013).

The impact of diasporas and diaspora organizations on the sending countries' development is not easy to assess due to the difficulty of disentangling causation from correlation and capturing the impact of elusive goods such as skills and knowledge transfer. Generally, diaspora contributions to home countries include remittances, homeland economic investment, skills transfer, philanthropy, and political influence (J. Brinkerhoff, 2009). However, the impact of diaspora is felt strongly in the areas of trade, investments, and skills and knowledge transfer:

- **Trade.** Diaspora populations consume products of their home countries and introduce such products to their host countries. Plaza (2013) presented evidence of strong correlations between the presence of a diaspora in a country and trade ties to the sending countries. For example, Head and Ries (1998) reported that Canada's trade with 136 partner countries in the 1980-1992 period showed a 10% increase in immigration from a particular country associated with a 1% increase in exports to, and a 3% increase in imports from, that country. Similar results by Yu (2002) in the United Kingdom and Co, Euzent, and Martin (2004) in the United States showed strong correlations between the presence of a diaspora and increased trade.
- **Investments**. Diasporas not only invest directly in their home countries—despite the often unwelcoming investment environment—but also persuade non-diaspora investors to so invest as well. Diaspora members have knowledge and relationship opportunities that other investors lack, and they view investments as altruistic or

partially altruistic endeavors (Gillespie, Riddle, Sayre, & Sturges, 1999).[1] This is of particular importance to countries that have yet to gain foreign investor confidence and may be resource-strapped (Newland & Plaza, 2013; Riddle, Brinkerhoff, & Nielsen, 2008). Diaspora members at corporate executive levels are well positioned to steer foreign investments into the home country, where the diaspora members know the language, culture, and business networks well. As an example, the large number of Indian-born senior executives at Citigroup might explain why the bank became one of the two largest foreign banks operating in India. Moreover, countries such as Ethiopia, India, Israel, and Kenya have issued diaspora bonds designed particularly to raise money from diasporas.

- **Skills and knowledge transfer**. The impact of diasporas in skills and knowledge transfer to the home country is the focus of this research. Countries in the process of building a strong human-capital base benefit from augmenting their efforts by connecting to their skilled diaspora. This augmentation does not rely on physical repatriation of skilled diaspora members; rather, it emphasizes development of diaspora networks. As an example, ChileGlobal, the "Talent Network for Innovation," networks about 400 influential Chilean members abroad to design and finance business projects that introduce innovations in the production and services sectors, boost human capital to increase productivity, and promote technology and knowledge transfer to and from Chile. By 2011, ChileGlobal helped create 76 companies, with more than 50 domestic and international partners retaining partial ownership in 23 of them (Agunias & Newland, 2012).

1. Gillespie, Riddle, Sayre, and Sturges (1999) studied the diasporas of four risky countries—Armenia, Cuba, Iran, and Palestine—and focused on their motivations for investments in the homeland. Specifically, their hypotheses related to altruism, ethnic advantage, and perception of business impediments.

Further, there are enormous examples of particular sectors in developing countries that have benefited from diaspora engagement and contributions. The most famous is the role Indian engineers and entrepreneurs of Silicon Valley (in the San Francisco Bay Area) played in igniting and developing the information technology (IT) sector in Bangalore (Saxenian, 2006a, 2006b).

V. Focus of the Research

This research assumes that high-skilled workers *in particular* have the ability to contribute significantly to their home countries' developmental process, mainly through skills and knowledge transfer. This assumption is based on Kuznetsov's (2006, 2013) hypothesis that the ability of high-skilled diasporas to drive change in their home countries stems from a combination of the following features:

- Knowledge and expertise of both global opportunities and local particularities;
- Substantial professional success and reputation gained abroad, which allows them to create *search networks* capable of facilitating reforms and investment in their home countries;
- Intrinsic motivation to be part of the driving force for change in the country and to advance professionally and economically on the personal level; and
- Financial resources to act on new opportunities.

High-skilled diaspora engagement with the home country could be categorized based on the nature and the mechanism of the contribution. Kuznetsov (2006) distinguished between two roles or contributions for skilled diasporas (he used the term "*talent diaspora"*). The first type is *direct contribution* through the engagement of diaspora members in well-defined roles such as investors, consultants, lawyers,

philanthropists, or business angels. These direct contributions include commercial and noncommercial financial contributions and knowledge transfer.

The second contribution is indirect and involves the *search* role of the diaspora and its function as a "bridge, translator, or midwife" (Kuznetsov, 2006, p. 225). In this second role, the diaspora augments the efforts of the home country institutions—government and private sector—by opening doors and making connections. Examples of these search roles are search networks such as *Globalscot*, a network of about 850 high-powered Scots all over the world who use their expertise and influence as bridges to generate projects in Scotland; and ChileGlobal, a similar network of influential Chileans in North America and Europe.

Despite the importance of high-skilled diaspora direct contributions, this research is mostly interested in the second category of contributions: *the search role*. The main hypothesis of this research, which builds on that of Kuznetsov (2006), is that the search role of skilled diasporas, represented in its ability to efficiently connect and bridge the needs of the home country institutions and individuals to the global pool of knowledge, expertise, and resources, is essential and preparatory for an impactful direct contribution. Thus, this research is implicitly geared toward finding evidence or explanation of the role and impact of transnational search networks, using Lebanon's skilled diaspora as a case study.

The research hereafter attempts to answer the overarching exploratory question: What are the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect contributions to the home country and how could policies or facilitative interventions leverage and enhance those contributions? To address this question, it is

important to probe the experiences of both diaspora immigrants and diaspora returnees. Therefore, a subsequent set of research questions will address the two components, with the implicit intention of addressing the main overarching question. Consequently, the findings of this research will help prospectively identify types of interventions or policies, if any, to enhance the transfer of knowledge from high-skilled diasporas to their countries of origin.

The lack of data, especially internationally comparable data, and conflicting results of existing studies, make country case studies a very important analytical tool in migration studies. Yin (2003) argued that a particular use for single case studies is to examine a "revelatory" instance, one in which "the investigator has the opportunity to observe a phenomenon previously inaccessible to scientific investigation" (cited in Gamlen, 2012, p. 327). Hence, the use of case studies in migration and migration policy research has been "revelatory" on many levels, explaining and describing the phenomenon within the countries' context. This research uses the case-study framework to reveal the skilled migration phenomenon in the context of the Lebanon-United States relationship. The Lebanese skilled migration to the United States and OECD countries is a persistent and arguably rising trend due to the country's circumstances, but no noteworthy research has yet attempted to investigate it. Thus, this case research provides a valuable contribution to the literature by investigating an important and relevant case that could enhance the understanding of the dynamics of developing countries' skilled diaspora contributions to the sending countries.

VI. Lebanon's Skilled Diaspora

Lebanon's plight with high-skilled emigration is far from unique but, given the county's small size, its high-skilled diaspora population is considerably larger than that of other countries of similar size. As shown in Table 1, Lebanon's skilled migrant population in absolute terms (of which 165,000 are in OECD countries) is relatively small when compared to sizable diasporas such as those of India or China, but relative to the country's population rank among high-migration rate countries (i.e., 3.73% of the country's population).

Identifying the reasons behind Lebanon's high-migration rate is beyond the scope of this research. Nevertheless, Lebanon's diaspora embodies many of the features and characteristics of diasporas from around the world. Characteristics of a particular diaspora influence the diasporans' identity. "Types of diaspora can be distinguished based on origin—for example, captivity, conquest, forced exile, elective emigration (Butler, 2001); and purpose—for example, victim, labor, trade, imperial (Cohen, 1997)" (Brinkerhoff, 2008, p. 71). Additionally, Brinkerhoff argued that "diaspora origin may inform diasporans' motivation and sense of potential efficacy; that is, their perceived ability to assimilate in the host country, influence the home country, or both" (p. 71). Cohen (1997) argued that diasporas exhibit several or most of the following nine features (*quoted verbatim*):

1. Dispersal from an original homeland, often traumatically, to more than one foreign region;
2. alternatively, the expansion from a homeland in search of work, in pursuit of trade or to further colonial ambitions;
3. a collective memory and myth about the homeland (including its location, history and achievements);

4. an idealization of the supposed ancestral home;
5. a return movement or at least a continuing connection;
6. a strong ethnic group consciousness sustained over a long time;
7. a troubled relationship with host societies (lack of acceptance);
8. a sense of empathy and solidarity with co-ethnic members in other countries of settlement; and
9. the possibility of a distinctive creative, enriching life in tolerant host countries with a culture of pluralism (Cohen, 1997, table 1.1, pp. 26)

Lebanon's diaspora exhibits several of Cohen's nine common features including features related to the purpose of emigration. The small country's diaspora has been growing globally over the decades driven traumatically by the numerous wars and regional instability, voluntarily in search of work, or sometimes in pursuit of trade and business opportunities. Lebanese diaspora in Latin and North America, Africa, and Australia (*especially those of ancestral origin*) have sustained a collective memory and myth about their homeland through traditions, food, and cultural heritage and many have sustained a continuing connection to the country even after generations. The Lebanese American diaspora specifically have had distinctive favorable features which were shaped by a tolerant, pluralistic, and immigrant-friendly host society compared to other host countries targeted by emigrating Lebanese. These favorable features were manifested in diaspora's active participation and inclusion in the American business, political, and social life for more than a hundred years.

Lebanon is a small and densely populated upper middle-income country, with an average per capita gross domestic product (GDP) of $17,390 in purchasing power parity terms in 2013 (World Bank, 2014a). In spite of its political instability, Lebanon is known for its high level of human development and open economy, as well as a large, educated,

and diversified diaspora. The diaspora has been seen as a "cash cow" for the Lebanese economy; capital inflows and remittances to Lebanon range between $7 billion and $8 billion a year. The country ranked 17th globally on the list of remittance-receiving countries, receiving $7.3 billion in 2012 alone, and 10th in terms of share of GDP (World Bank, 2013). A World Bank (2012) report entitled *Using Lebanon's Large Capital Inflows to Foster Sustainable Long-Term Growth* found that most capital inflows into Lebanon were channeled into banks and real estate projects rather than sectors that are more productive.[2] Lebanese expatriates tend to invest their money in projects that yield a very high return in a short time. Little attention has been given to the nonfinancial knowledge capacity and potential of the Lebanese high-skilled diaspora.

2. The report concluded that highly productive industries and innovative activities were not benefiting from these financial inflows, which took the shape of short-term deposits in banks or real estate acquisitions.

Table 1. *Emigrant Population 15 Years or Older in OECD in 2010-2011, by Country of Birth for Selected Countries*

Country	Highly educated emigrant population	% skilled emigrants relative to the country's population
Super large diasporas > 1,000,000 skilled individuals		
India	2,080,000	0.17
China	1,655,000	0.12
The Philippines	1,417,000	1.47
Great Britain and N. Ireland	1,384,000	2.19
Germany	1,168,000	1.43
Large diasporas 300,000-1,000,000		
Mexico	867,000	0.72
Russia	660,000	0.46
South Korea	637,000	1.27
Viet Nam	524,000	0.59
Iran	424,000	0.55
Morocco	392,000	1.21
Colombia	365,000	0.77
Relatively small diasporas < 300,000		
Turkey	251,000	0.34
Ireland	227,000	4.95
Argentina	223,000	0.54
Egypt	193,000	0.24
Lebanon	*165,000*	*3.73*
Tunisia	94,000	0.87

Source: Compiled by the author from OECD (2010-2011) and World Bank (2010-2014) data.

Lebanon's economic growth and investment climate have been hampered by several constrains. The World Bank (2012) study of Lebanon's long-term sustainable growth drivers identified three key constrains: macroeconomic volatility (the risk of

continued fiscal imbalances and severe macroeconomic shocks); infrastructure gaps (especially in electricity, water, transport, sanitation, and telecommunications); and deficiency in banking sector intermediation due to fiscal dominance (productive industries and innovative activities do not benefit from financial inflows, which usually end up as short-term deposits in banks or real estate acquisitions). According to the World Economic Forum (WEF) Competitiveness Index, infrastructure is Lebanon's second weakest comparative constraint (WEF, 2014-2015).[3] Other institutional constraints include risks of expropriation, pervasive corruption, lack of competition, and poor enforcement of contracts. The WEF also identified scarcity of skilled human capital, aggravated by skills migration, as a constraint.

In recent years, several Lebanese professional diaspora networks have been established in the United States. The networks generally have a dual purpose: build a professional diaspora community and connect to the home country through matching and linking knowledge-seeking entrepreneurs and start-ups in Lebanon with highly networked, experienced, and influential Lebanese diaspora members abroad. For example, LebNet (2014) is a network of technologists and entrepreneurs based mainly in Silicon Valley. LebNet tries to connect and nurture a healthy technology sector in Lebanon.[4] Another global network of finance executives, LIFE (2014), is active mainly in the New York City (NYC) area.[5]

3. Lebanon ranks as the second worst country in the world for the quality of electricity supply (WEF, 2014-2015).
4. The network includes about 200 high-skilled Lebanese technologists and entrepreneurs interested in helping young entrepreneurs and start-ups in the home country.
5. Lebanese International Finance Executives (LIFE, 2014) provides a "platform to channel the influence of Lebanese finance executives worldwide in order to establish stronger bonds, nurture the next generation and promote Lebanon."

Given the small size of Lebanon's skilled diaspora, its young age, and the country's stale home institutions, is it possible for the country to succeed in incorporating its skilled- and knowledge-rich diaspora in its development process, much like the Indian, Chinese, or Chilean examples discussed earlier? What are the current impacts and contributions of these skilled immigrants and individual returnees on the home country institutions? What are the facilitative conditions or interventions for their re-integration and contribution to economic growth? These essential questions guide this research.

The initial assumption for this research is that Lebanon is an odd case. Given the country's conditions, high uncertainties, and unwelcoming investment climate, one would expect no or minimal meaningful diaspora participation or philanthropic participation at most. The current absence of any functioning government-initiated diaspora program or institutional channel also supports this pessimistic assumption. So far, no noteworthy policy or initiative by government institutions has targeted Lebanon's skilled diaspora. In general, the Lebanese government, defined as a weak state, has not played an active role in organizing outmigration, channeling remittances, or adopting a diaspora engagement policy (Pearlman, 2013, 2014).

Research has found that when it comes to investments, diaspora members do not underestimate the risk of business impediments in their homeland; instead, they view these investments as altruistic or partially altruistic endeavors (Gillespie et al., 1999). Existing literature did not provide much evidence as to whether the same applies for the knowledge contributions of skilled diasporas. The detection of substantial engagement on behalf of Lebanon's skilled diaspora, with an impactful contribution of the returnees despite the absence of welcoming economic factors and facilitative mechanisms, could be

an anomaly of important policy implications. The public policy consequences could include a laissez-faire diaspora policy as a functioning policy in this specific case. The findings of this research, based on the interviews and the survey, were analyzed with the purpose of supporting or rebutting these assumptions.

Despite the country's small population and troubled history, its highly dispersed diaspora around the globe has brought much attention and debate about its role and reach, and has been a source of pride for many Lebanese. After all, the richest man in the world, Carlos Slim Helu, is of Lebanese descent. Another Carlos, Carlos Ghosn, the Chairman and Chief Executive Officer (CEO) of Renault and Nissan, is Lebanese-Brazilian. The latest multi-billion dollar Google buyout was of Nest Thermostat, a successful firm founded by Tony Fadell, a Lebanese-American inventor and entrepreneur. The landing of NASA's Mars Exploration Rover Spirit was under the supervision of Charles Elachi, Director of the Jet Propulsion Laboratory and Vice President of the California Institute of Technology, who is also of Lebanese descent. The list of successful entrepreneurs, technologists, and scientists of Lebanese descent is long. However, research on its impact and contribution to the home country is anecdotal and unreliable. This dissertation research, although limited, attempts to fill this gap and shed light on the Lebanese skilled diaspora in the United States and on the individual returnees.

Although the Lebanese diaspora is widely dispersed globally, this research focuses on the Lebanese skilled diaspora in the United States only. The United States is the world's most innovative economy and the destination for "the best and the brightest" of the globe's immigrant population. Therefore, the impact of U.S.-based high-skilled diasporas has interested researchers for reasons such as exposure and access to advanced

technologies, scientific knowledge, and local know-how and practices, as well as the conducive entrepreneurial culture in clusters such as Silicon Valley. Moreover, the latest American Community Survey (ACS) of 2008-2012 showed the Lebanese as the largest Arab group (first ancestry reported) in the United States, at about 362,582 (ACS, 2008-2012). Thus, exploring the Lebanon-United States migration relationship, especially the high-skilled portion, would add value to the academic literature and inform practitioners and policy makers in both countries.

VII. Research Components

This research attempts to understand the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect contributions to the home country and the related policies or facilitative interventions needed to leverage and enhance these contributions. Taking the migration relationship between Lebanon and the United States as a case study, this research targets both (a) the high-skilled Lebanese diaspora in the United States and (b) individual high-skilled returnees. These two research components allow a comparative analysis of the findings regarding experiences, impact, and perceptions of those who stayed abroad and those who returned to Lebanon.

The first research component investigated (a) the patterns of high-skilled diaspora engagement with and contribution to the home country in light of the country conditions, (b) the dynamics of participation in search functions and navigating the home country collaboration challenge, and (c) the policy interventions that could leverage their contributions. The adjacent box lists the diaspora-focused subresearch questions.

Diaspora subresearch questions:

a. What are the patterns of high-skilled diaspora engagement with and contribution to the home country? Did country conditions matter to the engagement and contribution?
b. What are the dynamics of diaspora individuals' participation in search functions? How did they navigate the home country collaboration challenge?
c. How might their contributions be leveraged?

The researcher used semi-structured elite interviews with open-ended questions to collect data from a sample of prominent diaspora members, "high achievers" in the areas of technology, entrepreneurship, and high-skilled professions. *Prominent diaspora members* are defined here as individuals who (a) have impact on the decision-making process in their organizations (e.g., majority shareholders, executives, and senior managers); (b) are successful entrepreneurs; or (c) are investors (angel or venture capital investors). Prominent members usually have more impact, resources, and clout when engaged in collaborations and possess relevant functional skills that enable them to deliver results. Moreover, high achievers have three distinct characteristics that position them to make a unique contribution to their home country's development: a strong motivation to "make their mark" despite and against many odds; knowledge and expertise of both global opportunities and local particulars; and resources to act on new opportunities. These combined resources have a solid impact on the home country development (Kuznetsov, 2013).

The second research component investigated high-skilled returnees' motivations to return, their professional roles and projects upon return, their perceptions of the home country environment, the characteristics of their transnational ties, their impact and contributions, and their opinions about policy interventions that could enhance or

facilitate their contributions. The adjacent box lists the returnee-focused subresearch questions.

Returnees' subresearch questions:

a. What were their motivations to return? Did country conditions matter? What were their professional roles and projects upon return?
b. What are the characteristics of their transnational ties? How prevalent is returnees' participation in search functions?
c. How do returnees perceive their impact on and contributions to the country's institutions?
d. How might returnees' re-integration and contributions be facilitated and enhanced?

The data collected from both research components were analyzed to identify possible facilitative conditions or interventions to enhance high-skilled diaspora and returnees' re-integration into the entrepreneurial and innovation ecosystem of their country. Re-integration of these knowledge-rich, highly networked individuals into the country's emerging entrepreneurial scene could be an essential conduit for the much-needed human capital and international knowledge.

The research goal was to uncover issues that could guide policy makers and governmental practices in the international development arena. Understanding impediments to knowledge transfer from diasporas to the home countries has important policy implications for economic development. Skilled immigrants could better contribute to their countries of origin if their needs were better understood and appropriate facilitative conditions put in place to enhance diasporas' systematic and institutional efforts. The research can contribute to this literature by investigating the role of high-skilled Lebanese diaspora members and returnees in building and maintaining transnational search networks to bridge capabilities and opportunities between home and abroad. The research findings illuminate the experience of a relatively small but

successful skilled diaspora and contribute to the growing literature on transnational search networks.

The findings from the Lebanon case may not be generalizable to other high-skilled diasporas—even ones with similar size skilled diasporas. Given the specifics of the Lebanese experience at home and abroad, and the size and age of its diaspora, one cannot help but be conservative in drawing lessons and generalizing conclusions. Nevertheless, the case serves as a useful example of a relatively small high-skilled diaspora and illuminates some dynamics that could feed into the growing literature on the contributions of high-skilled diasporas to their home countries.

Using the Lebanon-United States case study, and based on the hypothesis stated earlier, this research intends to demonstrate that the search role of high-skilled Lebanese migrants and their networks is essential and preparatory for impactful direct contributions, and that the effectiveness of this role spans beyond specific government policies. Derived from this hypothesis is a conservative expectation of government policies, programs, and interventions. The research presumes that the connections, bridges, and networks established are organic by nature, driven by high achievers rather than government initiatives, and respond to a growing demand in the home country. Moreover, it presumes an important role of high achievers or individuals who help relax knowledge constraints on both the diaspora network and the home institutions sides.

Dissertation Organization

This dissertation is organized into six chapters. The first part of this dissertation stated the problem, introduced the research topic, and posed the research question and subquestions. Chapters 2 and 3 review the relevant literature and describe the research

method. The second of part the dissertation, Chapters 4 and 5, presents an analysis of the data collected through the elite interviews and the survey. The last chapter discusses the main research findings, limitations, and associated policy implications. The specific chapters are listed below.

Chapter 2: High-skilled migration: A literature review.

Chapter 2 reviews the literature on high-skilled migration, its impact on both sending and receiving countries, and its value and role in knowledge networks and markets (KNM). The chapter also generates a conceptual model that grounds and guides the research design.

Chapter 3: Epistemology and methodology.

Chapter 3 discusses the underlying epistemology and research design. It explains the rationale for the selected sample, the research site, and the data collection method, sample size, and validity issues. It explains the choice of the interview and survey questions, and how the questions relate to the literature and the main research questions.

Chapter 4: Interview results and analysis.

Chapter 4 presents the data collected through the interviews with diaspora high achievers in the United States. It also presents the data analysis with its subsequent limitations and validity issues. The chapter summarizes the major findings from the interviews as they relate to the research question and subquestions.

Chapter 5: Survey results and analysis.

Chapter 5 presents the data collected through the survey administered in Lebanon targeting high-skilled returnees. It also presents the data analysis with its subsequent limitations and validity issues. The chapter summarizes the major findings from the surveys as they relate to the research question and subquestions.

Chapter 6: Findings and policy implications.

Chapter 6 presents the main research findings as well as the limitations. The chapter concludes with a discussion of the findings' policy implications, recommends policy initiatives, and suggests directions for future research.

Chapter 2. High-Skilled Migration: A Literature Review

I. Introduction

Immigration and migration have always been controversial and deeply debated topics in advanced industrialized countries, as well as in less-developed and poorer countries. It is a pervasive phenomenon on the rise due to fierce competition for talent, a wide range of perceived positive and adverse impacts, and inconclusive results due to lacking or inconsistent data. As such, the body of literature on talent migration is a research area in the making. Although immigration is considered a pervasive facet of globalization, it is globally characterized by faulty perceptions. In his book, *World 3.0*, economist Pankaj Ghemawat (2011) argued there is a delta between perception and reality in a world that may be not as hyperconnected and flat as Thomas Friedman (2005) imagined it. Even though the absolute number of international migrants is impressive, international migration is far more constrained than other forms of globalization (Ghemawat, 2011). Despite the hype around globalization, the share of international migrants in the world's population has remained remarkably stable at around 3% over the past 50 years (UNDP, 2010).

This literature review draws a representative picture of the main concepts and schools of thoughts related to skilled migration. This chapter covers research on high-skilled immigration, its different concepts, its impacts on both sending and receiving countries, and associated diaspora engagement policies specifically in the sending countries. The chapter highlights the value of HSIs as part of the firm's knowledge-based capital (KBC), and their role as transnational search networks that bridge capabilities at home and opportunities abroad. Finally, it proposes a comprehensive conceptual

framework for understanding high-skilled immigration from a global development perspective—an angle poorly addressed in the existing research.

Using this framework, this chapter advocates a collaborative approach that utilizes search networks to nurture brain circulation between receiving and sending countries for mutual benefit. The goal of the proposed framework is to ground the research in theory and uncover issues that could guide policy makers and governmental practices in the international development arena.

High-skilled migration definition.

High-skilled workers are usually defined as workers "possessing a tertiary level education or its equivalent in experience" (Salt, 1997, p. 5). The definition of high-skilled workers has evolved over time according to location and the nature of technology in use. Joseph Ferrie (2011) defined HSIs as "those possessing the skills in demand by the leading industries in each time period" (p. 4). In colonial America, for example, high-skilled workers were the craftsmen and artisans. Colonies subsidized the migration of European artisans, especially when they agreed to move to small towns and rural areas.

Today, high-skilled workers are those in science, technology, engineering, and mathematics (STEM) occupations, in addition to health professionals and healthcare providers (physicians, nurses, dentists, pharmacists, etc.). In the United States, many organizations follow the National Science Foundation (NSF) guidelines on what constitutes a STEM field.[6] Still, an exhaustive list of STEM disciplines does not exist because the definition varies by organization. In the early 2000s, almost 35% of the legal immigrant stock in OECD countries (about 20 million people) fell into the high-skilled

6. A list of the NSF's STEM degree fields can be found at http://www.nsf.gov/pubs/2012/nsf12599/nsf12599.htm#appendix

category, compared with 30% a decade earlier (Docquier & Marfouk, 2005). The most recent data from 2010-2011 showed that this number rose to 27.3 million. About 30% of all migrants in the OECD area were highly educated, and 20% of them originated from India, China, or the Philippines (UN-DESA/OECD, 2013)

Many existing definitions of HSIs failed to capture their entrepreneurial contributions. A substantial body of research briefly covered in the following sections explored immigrant entrepreneurs' contributions, regardless of their technical or academic backgrounds. The literature documents the major impact of these immigrant entrepreneurs on economic growth and job and wealth creation. Throughout this dissertation, *high-skilled migrants* are defined as workers with STEM and entrepreneurial professions who have left the home country or country of origin.

Skilled migration data.

The literature lacked internationally comparable data on the migration of high-skilled workers. Docquier and Rapoport (2012) compiled and analyzed data on international migration to OECD countries from nearly 200 source countries (OECD and non-OECD countries) by educational attainment in 1990 and 2000 (see also Docquier & Marfouk, 2006). They defined high-skilled migrants as foreign-born individuals, aged 25 years and over, with some postsecondary education living in an OECD country. Despite the lack of data, the flow of migration historically has been from developing to developed nations, and the OECD data for the 1990-2000 period confirmed this pattern (National Science Board [NSB], 2014).

The OECD database of tertiary educated migrants residing in OECD countries is one of the most cited sources of data available with quantitative estimates of skilled diasporas worldwide. In this research, the term *diaspora* encompasses emigrants and their

descendants who maintain connections to their countries of origin or ancestry (Newland & Plaza, 2013). This research will use an alteration of Kuznetsov's (2013) categorization to divide skilled diasporas into three groups (see Table 1):

- *Super large diasporas* of more than one million skilled individuals located in OECD countries, which include migrants from India, China, the Philippines, Great Britain, Northern Ireland, and Germany.[7]
- *Large diasporas* of 300,000 to one million skilled individuals from countries such as Mexico, Russia, Viet Nam, Iran, Morocco, and Colombia.
- *Relatively small* skilled diasporas of less than 300,000 from countries such as Turkey, Ireland, Argentina, Egypt, Lebanon, and Tunisia.

II. High-Skilled Migration Policy and Policy Divergence

Attracting the best and the brightest of the world has become an economic priority of many governments of both advanced industrial and newly industrialized countries. Many reasons, such as labor market shortages, aging populations, decreasing human capital stock, international competition for innovation, and the drive for progress and economic growth, contributed to governments placing HSIs high on the policy agenda (Cerna, 2009). Moreover, multinational enterprises (MNEs), new technologies, and new business strategies have catalyzed the emergence of global production and innovation networks. These networks have made it easier for firms to relocate knowledge-oriented activities that engage engineers, managers, researchers, and other highly skilled employees anywhere in the world (Hart & Davis, 2010). Thus, immigration policies had to (and *should* if they had not yet) accommodate these new dynamics and offer solutions that could facilitate the flow of HSIs across borders.

7. The Philippines is the only large country in the world in which the higher education system is explicitly oriented toward skills export.

Removing barriers for high-skilled immigration is a priority for many governments in the developed world. Still, even the United States, which hosts the world's most innovative immigrants, rations the number of HSIs by limiting the annual quota of H-1B visas to 65,000. (H-1B visas are temporary and do not guarantee a permanent-resident green card.)[8] Japan and the European countries' policies are more restrictive. Conversely, Canada and Australia have sought for decades to draw in HSIs. The United Kingdom and France recently instituted policies hoping to compete more effectively for global talent. Even Germany and Japan, which historically were not very welcoming to immigrants, have begun to adjust to the new realities (Hart, 2006b).

Despite their shared concerns and economic agendas, policy approaches toward HSIs are not cohesive across industrialized countries. Cerna (2009) argued, "Divergence between advanced industrial countries' high-skilled immigration…policies continues, even where national governments display converging policy pressures for a more open HSI policy in order to fill labor market shortages at the high-skilled end" (p. 145). In addition, Cerna concluded that there was no consistent HSI position of left and right parties cross-nationally due to different coalitions among groups of high-skilled labor, low-skilled labor, and capital. Kahanec and Zimmermann (2011), who outlined the current high-skilled immigration policies in use in European countries and showed that there was no consistent policy approach, supported Cerna's conclusion. The general pattern in European HSI policy has been a closed-door approach.

8. U.S. businesses use the H-1B program to employ foreign workers in occupations that require theoretical or technical expertise in specialized fields, including but not limited to scientists, engineers, and computer programmers. The fiscal year 2014 cap season began on April 1, 2013 and reached the cap within the first week of the filing period.

Developing countries have also realized the importance of their high-skilled diasporas, but their policy approaches are as divergent as those of developed countries. Taiwan, Ireland, and Israel, although no longer considered developing countries, have been widely cited as successful demonstrations of wooing expatriates home to play important roles in the early stages of economic development. Other still-developing countries, such as China and India, have been trying to repatriate more expatriates, and some positive results are starting to emerge. Skilled diasporas have been claimed to be crucial to forming powerful export-based information and communication technology (ICT) industries and their supporting clusters in Taiwan, China, and India (Kuznetsov, 2013; Saxenian, 2006a, 2006b). Several developing countries have established ministries for diasporas; others launched initiatives for repatriation and online platforms for stock taking and collaboration.[9] In this context, the "diaspora option" concept encapsulates the successful incorporation of diasporas into the development process of their home countries.

Emigration policy frameworks.

Migration and migration policy research has until recently focused almost exclusively on immigration. Yet an immigrant is also an emigrant with ties to the sending country—ties that are often shaped by the types of policies that migrant-sending countries adopt (Gamlen, 2012). In a seminal work, Gamlen (2008) carried out a large cross-country comparison of diaspora policies in 64 countries, aiming to map out the role of the state in transnational processes at a macro level. He distinguished between two types of

9. In an earlier work, Meyer and Brown (1999) counted 41 web-based diaspora networks; the number has been increasing since then.

diaspora engagement policies or "diaspora mechanisms" through which migrant-sending states relate to their diasporas. The two categories are

- "Diaspora building" mechanisms, which cultivate and formally recognize diaspora members and communities; and
- "Diaspora integration" mechanisms, which draw diasporas into reciprocal ties with their home countries through various membership privileges and responsibilities.

Gamlen's (2008) comparative analysis illustrated the policy divergence among sending countries. Table 2, adapted from Gamlen, plots the different policies that sending states have adopted to engage their diasporas across the relevant categories.

Table 2. *Categories of Diaspora Engagement Mechanisms*

Diaspora engagement mechanisms		
	Cultivating diaspora	*Recognizing diaspora*
Diaspora building	• Celebrating national holidays; honoring expatriates with awards; convening diaspora congresses; proclaiming affinity with and responsibility for diaspora; issuing special IDs/visas; educating on national language and history; extending media coverage	• Expanding existing consular units; commissioning studies or reports; improving statistics; maintaining a diaspora program, bureaucratic unit, or dedicated ministry
	Extending rights	*Extracting obligations*
Diaspora integration	• *Political incorporation*: Permitting dual nationality, dual citizenship or external voting rights; special legislative representation; consulting expatriate councils or advisory bodies • *Civil and social rights*: Providing pre-departure services; extensive bilateral agreements; intervening in labor relations; supplementing health; welfare & education services support; upholding property rights	• Taxing expatriates; customs/import incentives; special economic zones; investment services; tax incentives; matching fund programs; diaspora bonds & financial products; facilitating remittances; fellowships; skilled expatriate networks

Source: adapted from Gamlen (2008, table 1, pp. 845-846)

Gamlen's (2008) framework did not distinguish between policies targeting low- and high-skilled diasporas. High-skilled diaspora engagement policies could span the two mechanism categories and four subcategories listed above. As an example, a state could honor achieving diaspora scientists and technologists, maintain a high-skilled diaspora program through one of its ministries or agencies, establish a fellowship program that targets its high-skilled diaspora, or a combination. Ireland's policies that lured its skilled

expatriates and the role of the diaspora in the Celtic Tiger economic boom in the 1990s have been a widely cited examples of such engagement policies. Initiating expatriate-seeded venture capital (VC) funds, establishing special economic zones (e.g., China, Taiwan, and India), wooing angel expatriate investors, and setting up skilled diaspora networks (e.g., Chile and Argentina) are examples of such policies (Biao, 2006; Chander, 2001; Faist, 2004; High Level Commission on the Indian Diaspora, 2001). This research is interested in diaspora integration policies ("extracting obligations" category in Table 2), specifically high-skilled diaspora integration, rather than general diaspora-building mechanisms.

As illustrated above, government policies play an important role in establishing an enabling environment for individual and organization participation in the development of their home countries. D. W. Brinkerhoff (2007) proposed a framework for creating an enabling environment for nongovernmental actor participation in development to achieve the United Nation's (UN) Millennium Development Goals. The framework suggested that governments need to (a) improve policy, legal, and regulatory frameworks; (b) build institutional capacity across sectors and at various levels; (c) seek out and respond to citizens' needs and preferences; (d) establish and maintain a range of oversight, accountability, and feedback mechanisms; and (e) mobilize and allocate public resources and investments.

J. Brinkerhoff (2009) adapted this framework by applying it to diasporas and their potential development contributions. Taking from D. W. Brinkerhoff (2007), she categorized the government actions for fostering an enabling environment as: mandating, facilitating, resourcing, partnering, and endorsing. Applying this framework, she listed

the associated enabling roles and illustrative actions to foster knowledge transfer from skilled diasporas to their home countries. Table 3 categorizes government-related actions as they impact knowledge transfer from diasporas.

Table 3. *Government Enabling Roles and Actions to Enhance Knowledge Transfer from Skilled Diasporas*

	Knowledge transfer: Government enabling role and illustrative action
Mandating	• Recognizing foreign credentials
Facilitating	• Building capacity for public officials to engage with the skilled diaspora • Identifying and disseminating capacity needs • Organizing diaspora delegations & scientific conferences
Resourcing	• Remuneration to support diaspora knowledge transfer • Seed money to support diaspora research and development • Perks such as facilitation and cost reduction of services
Partnering	• Supporting creation of diaspora professional and alumni associations • Involving diasporas in parliamentary committees, sector/technical task forces, etc.
Endorsing	• Publicizing importance of diaspora knowledge transfer • Recognizing contributions at diaspora summits and in diplomatic delegations • Recognition awards/competitions • Encouraging media reporting

Source: adapted from J. Brinkerhoff (2009, table 2, p. 85)

Gamlen's (2008) and J. Brinkerhoff's (2009) frameworks categorize government policies that target different kinds of contributions from diasporas. Nevertheless, the country conditions and the maturity of the diaspora play important roles in determining the associated policies. To illustrate the different skilled diaspora engagement policies, Kuznetsov (2006) drew a connection between country conditions and the size and sophistication of its high-skilled dispora (Table 4). His main concern was to outline

different dynamic trajectories of the interaction between the country conditions and its diaspora networks. According to this model, a virtuous interaction occurs between a sending country with favorable growth conditions and its large, mature, and well-organized skilled diaspora.

Table 4. *Level of Diaspora Engagement based on Country Conditions and Characteristics of the Diaspora*

	Country conditions		
Characteristics of the diaspora	Unfavorable	Moderately favorable	Favorable
Sophisticated networks: Relatively large, mature, and well organized			
Role of expatriates	Antennae and role models	Launching pad to move to knowledge intensive value chains	Key resource in transition to knowledge-based economies
Activities	Engage diaspora in reform dialogue and launch visible demonstration projects	Form brain circulation networks; encourage return migration	Encourage return migration; form sophisticated brain circulation networks
Examples*	Armenia, Bangladesh, Sri Lanka	El Salvador, India, Vietnam	China, Korea, Taiwan
Emerging networks: Relatively disengaged			
Role of expatriates	Antennae and role models	Gradual engagement	Entry point to knowledge-intensive growth
Activities	Engage diaspora in reform dialogue and launch visible demonstration projects	Create expatriate networks; initiate activities to encourage return of skills	Establish brain circulation networks; encourage return migration
Examples*	Colombia, Nigeria, Russian Federation, Ukraine	Brazil, Mexico, other Latin American countries, Pakistan, South Africa	Croatia, Chile, Hungary, Slovenia, Malaysia, Thailand

Note. *The country examples might be outdated but are listed as they appeared in Kuznetsov (2006); table adapted from Kuznetsov (2006, table 11.4, p. 234)

In his discussion of the "new generation" of diaspora engagement initiatives, Kuznetsov (2013) differentiated between two approaches: the direct and indirect (*pragmatic*) approach. In the indirect approach "skilled diasporas are viewed and relied upon pragmatically, for specific tools and purposes, as an extension and continuation of sector-specific reform and development agenda. Engagement with diasporas becomes a part of everyday management practice" (p. 301). In this approach, the main focus is on finding solutions and engaging search networks to help find and operationalize such solutions. Over time, government agencies accumulate experience in incorporating collaboration with diaspora individuals and networks into everyday management practice "by promoting search networks, which are not diaspora networks per se but include diaspora members" (p. 302). Kuznetsov (2013) argued that both direct and indirect diaspora policies are needed as they represent complementary approaches.

The three frameworks discussed above (J. Brinkerhoff, 2009; Gamlen, 2008; and Kuznetsov, 2006, 2013) shed light on the multiple possible dimensions and analysis levels for sending countries' policies toward their diasporas. These frameworks, in addition to illustrating the policy divergence among sending countries, informed the policy recommendations in this research based on the findings from the Lebanon-United States case (see Chapter 6).

Absence of a multilateral framework.

The policy divergence among receiving and sending countries and within both camps could explain the absence of a world migration organization. Despite increasing recognition of migration as one of the most "visible and controversial forms of contemporary globalization," it still lacks a multilateral framework for regulating migration at the international level—let alone a framework for high-skill migration

(Gamlen, 2010, p. 419). Other forms of globalization, such as the global flow of money, goods, and services, are governed by institutions such as the International Monetary Fund and World Trade Organization. Instead of a unified framework, a set of parallel and nested institutions responsible for migration has emerged: the UN High Commissioner for Refugees, which deals with refugees; the International Labour Organization, which focuses on migrant workers; and the World Bank and the International Monetary Fund, which monitor migrant remittances. Outside the UN system lies the International Organization for Migration, which claims responsibility for some of these areas (Gamlen, 2010).

The absence of a global framework could be attributed to many historical reasons. Gamlen (2010) argued that migration is where state interests conflict rather than converge, and that interstate cooperation on migration is not desirable: "For economic reasons, everybody wants the high-skilled workers; for political and security reasons, nobody wants the low-skilled ones" (p. 420). The UN Development Programme (UNDP) Human Development Report titled, *Overcoming Barriers: Human Mobility and Development,* acknowledged the "non-regime" status of the governance of mobility and considered the report itself as "part of ongoing efforts to redress this imbalance" (UNDP, 2010, p. 11).

In summary, high-skilled immigration, emigration, and diaspora engagement policies lack cohesiveness even among countries in the same development camp. Policy approaches are not consistent among developed countries concerned with attracting the best and the brightest. Similarly, sending countries have experimented with different approaches, achieving varying degrees of success. Knowing how valuable high-skilled migrants are to both sending and receiving countries, one would assume that developing

countries' migration policies would converge opposite to that of developed countries; but, in fact, the policies diverge even in the same development camp. The reasons for the divergence are unclear and require further research. This research argues that the lack of a comprehensive understanding of the impacts and contributions of high-skilled migrants to both sending and receiving countries further exacerbates this policy divergence. This issue will be address in the proposed model in later sections. First, how do we capture the value and contribution of high-skilled migrants?

The value of high-skilled migration

Almost all seminal reports about global business strategies and trends highlight high-skilled migrants as a major pillar in global economic development and activity (if not "the" major pillar). A 2008 McKinsey global survey indicated that "intensifying competition for talent [will] have a major effect on...companies over the next five years. No other global trend was considered nearly as significant" (Guthridge, Komm, & Lawson, 2008). A 2005 Booz Allen Hamilton survey of 1,000 publicly held companies similarly found that the need for talent and proximity to markets was cited by 80% of the respondents for locating research and development (R&D) sites (Jaruzelski, Dehoff, & Bordia, 2005). A 2007 study, also by Booz Allen Hamilton, found that three quarters of companies that expanded offshore indicated access to qualified personnel was the most important driver of their location decision (Couto, Mani, Lewin, & Peeters, 2006).

Despite their importance and significance in global economic activities, the host and the home countries (developed and developing countries) did not equally utilize the benefits from HSIs. Hart (2006a) concluded that the benefits from HSI outweighed the aggregate costs but nevertheless, "these benefits and costs are unevenly distributed" (p. 53). This uneven distribution of costs and benefits, in the long run, might have

negative implications for sustainability of global economic development, especially in sending countries. The following sections shed light on the benefits and costs of high-skill migration to both developed and developing countries. Table 5 summarizes the costs and benefits discussed in detail in the following sections. The research goal is to contribute to the body of knowledge focused on enhancing the contributions of high-skilled diasporas to the sending countries; specifically, indirect contributions through the ability of high-skilled diaspora networks to act as search networks.

The list of costs and benefits covered in this section is by no means exhaustive, but was selected based on relevance to this research. As an example, the literature covered here might have exaggerated the potential gains to receiving countries and losses to sending countries by not recognizing the costs and benefits incurred and reaped by the HSIs themselves. The HSIs usually benefit from major investments such as educational scholarships and subsidies, while in the developed host countries, which consequently make them globally competitive. In addition, HSIs sometimes do not find professional opportunities that match their skill sets when they first immigrate—a situation referred to as "brain waste."[10] Nevertheless, the literature covered here offers a helicopter view that situates this research in the bigger context.

10. For more information on brain waste in the U.S. workforce, check the Migration Policy Institute's recently released research series available at http://www.migrationpolicy.org/topics/brain-waste-credential-recognition

Table 5. *Costs and Benefits to Receiving and Sending Countries from High-Skilled Migrants*

	Costs	Benefits
Receiving countries	▪ Adverse effect on earnings of native workers: "crowding-out" effect	▪ Increased productivity ▪ Entrepreneurial activities: business & job creation ▪ Added stock of high-knowledge workers: foreign students and skilled workers ▪ Knowledge creation activities: patenting and invention
Sending countries	▪ Brain drain: loss of skills, talent, institution builders, healthcare professionals	▪ *Optimal brain drain*: Prospects of migration incentivize human capital accumulation ▪ *Brain gain and brain circulation*: diaspora provides access to global knowledge without repatriation ▪ *Diaspora option*: diaspora involvement in development cooperation with their home countries

Source: Author

III. Costs and Benefits to Host Countries

This section briefly and selectively highlights literature on HSI contributions to developed countries in several forms. These contributions include increased productivity, entrepreneurial activities (business and job creation), added stock of highly skilled and educated workers (foreign students), and knowledge-creation activities (patenting and invention). It also briefly discusses the costs of hosting HSIs in developed countries.

Impact on productivity

Chiswick (2011) argued that, in contrast to low-skilled workers, the effects of high-skilled workers on host economies are tremendous in

- expanding the productive capacity and potential of the economy in which they reside, enhancing its international competitiveness, and attracting foreign capital; and
- adding workers to the labor force, which results in additional taxes. High-skilled workers had positive net fiscal balance, in contrast to the negative net fiscal balance of low-skilled immigrants.

Evidence collected from OECD countries supported Chiswick's assumptions. Grossman and Stadelmann (2011) found that high-skilled immigration increased productivity in OECD receiving economies by causing an increase in capital. They argued that high-skilled immigration increased the marginal product of capital-creating incentives for investment in both publicly financed infrastructure and private capital. Applying their analysis to OECD countries, they found a positive association between net immigration and the level of investment in public infrastructure and in the stock of private physical capital.

High-skilled immigration will continue to play an important role in host countries' productivity and development in the foreseeable future. Many countries are planning to increase their intake of HSIs based on these forecasts. A Productivity Commission of Australia (2006) report studied the likely effects of the government increasing the current intake of skilled migrants by 50% over 20 years and found that the economy would grow by 3.5% by 2024-2025 and the average income would be $335 higher.

Immigrants' entrepreneurial activities

In addition to increasing productivity, HSIs are major contributors to business creation, especially in the high-tech sector. This impact was highlighted in Saxenian's

(1999) groundbreaking research; in Wadhwa, Saxenian, Rissing, and Gereffi's (2007) more recent research that expanded on Saxenian's earlier findings; and in Hart, Ács, and Tracy's (2009) newly conducted survey.

In 1999, Saxenian published a report on the economic contributions of skilled immigrants to California's economy. Her study focused on the role of immigrants in the development of Silicon Valley's regional economy. Saxenian's study went beyond a quantitative analysis, focusing on the social, ethnic, and economic networks of new U.S. immigrants. She observed that Indians and Chinese were an increasingly visible presence within Silicon Valley and that many had founded start-ups there, in part because of the "glass ceiling" that blocked their promotion within existing high-tech companies. She discovered that, between 1980 and 1998, 24% of Silicon Valley start-ups had CEOs with Chinese or Indian surnames, although she was unable to distinguish their location of birth.

The qualitative research Saxenian (1999) conducted revealed that the Indian and Chinese high-tech communities, like ethnic enclaves in the rest of the economy, were sustained by a rich network of associations and maintained linkages to their countries of origin. Saxenian's work demonstrated that high-tech immigrant entrepreneurship is very important for Silicon Valley (and for the home countries of the immigrants), but because they were concentrated in the U.S. region in which high-tech immigrant entrepreneurs were most likely to be found, one could not generalize from it to the national level, raising threats to external validity.

Wadhwa et al. (2007), a team of researchers at Duke University, attempted to generalize Saxenian's research to the national level and update it with data that were

more recent, to better understand the contributions of skilled immigrants to the competitiveness of the U.S. economy. The team looked at a large sample of engineering and technology companies founded between 1995 and 2005 to determine whether any key founder was an immigrant. They found that 25% of high-tech companies founded between 1995 and 2005 and that had achieved more than $1 million in sales or employed more than 20 people had CEOs or CTOs who were born abroad. To understand immigrants' intellectual contributions, they analyzed international patent applications filed in the United States and found that 14.7% of patent applications filed between 1998 and 2008 had foreign nationals as inventors or co-inventors.

Hart et al. (2009) found that about 16% of the companies in their nationally representative sample of high-impact, high-tech companies counted at least one immigrant among their founders. In addition, they found that high-tech companies founded by immigrants displayed better performance in some respects than companies whose founders were all native-born. Despite their findings, they were not confident enough about the relationship between immigration and opportunity creation to make policy recommendations that presumed such a relationship, although they suspected that such a relationship did in fact exist. Hart et al. (2009) and Wadhwa et al. (2007) used a more reliable and valid (and more costly, of course) research design did than Saxenian (1999), surveying samples of firms on a national level to identify the origins of key founders.

HSI contributions to knowledge creation.

The HSIs are major contributors to knowledge creation activities in the United States as well as in other developed countries. Stephan (2010) and Chellaraj, Maskus, and Mattoo (2008) demonstrated that international graduate students contributed positively to

patenting activities. Kerr and Lincoln (2008) assessed H-1B visa holders' contributions to patenting and suggested a positive correlation. George Borjas (2005), the Harvard economist known for his advocacy of reducing the rates of low-skilled immigration to the United States, concluded that the increase in skills through HSIs would accelerate the rate of scientific discovery, which in turn could benefit particular groups of the population.

Foreign students, defined as "natives of other countries who come to the US on a temporary basis to attend institutions of higher education," are an important source of HSIs (Chiswick, 2011, p. 5). The number of foreign students in the United States and in other developed countries has increased steadily in the last decade. About 2.5 million men and women were studying abroad at the undergraduate or graduate school levels in 2004, a number that had risen by 50% in just the previous five years (Kapur & Crowley, 2008). In 2007-2008, foreign students and their families contributed a net of $15 billion to the U.S. economy through tuition and living expenses. About 59% of the total international student enrollment in the United States was from the Asian region. Between 1990 and 2004, almost half of the U.S. Nobel Laureates in science fields were immigrants, and 37% received their graduate education at a foreign institution (Anand, Hofman, & Glass, 2009).

Many factors impact foreign students' decisions of where to pursue their studies. Lowell and Khadka (2011) employed an econometric analysis of the flow of foreign students to the United States to find that the primary determinants were tuition charges; per capita income in country of origin (positively correlated with an increase in the number of students who study abroad); and alternatives to studying in the United States;

which include opportunities to study in the student's own country or others countries outside the United States.

Stephan (2010) demonstrated that the foreign born are a large and growing component of the U.S. university community, comprising 25% of the tenure-track faculty, approximately 60% of the postdoctoral population, and more than 43% of the doctoral degrees awarded in science and engineering (50% of whom come from China, India, and South Korea). In addition, Stephan showed that the foreign born contributed heavily to the productivity of the academic sector through publishing. She found that 44% of the first authors of U.S. papers in science were foreign. She also assessed transfer of tacit knowledge to industry through placement of PhDs with U.S. firms; approximately one third of placements of new PhDs with U.S. firms were foreign born.

Chellaraj et al. (2008) provided statistical evidence that the presence of foreign graduate students had a positive and significant effect on U.S. innovation measured by patent applications and grants. They found that larger enrollments of foreign graduate students resulted in a significant increase in patents awarded to both university and nonuniversity institutions, as well as an increase in total patent applications. They claimed that a 10% increase in the number of foreign graduate students would raise patent applications by 4.5%, university patent grants by 6.8%, and non-university patent grants by 5%. They found that increases in skilled immigration also had a positive but smaller impact on patenting. They attempted to determine the degree to which enrollment of additional students had contributed to economic value through patents granted in the United States, and suggested an additional patent value of $2.31 billion from 1965 to 2001.

Kerr and Lincoln's (2008) analysis tried to quantify the impact of changes in H1-B visa admission levels on the pace and character of U.S. invention over the period 1995 to 2008. Specifically, the authors tried to quantify the impact of these fluctuations on science and engineering employment and on innovation. They found that the fluctuations significantly influenced the rate of Indian and Chinese patenting in cities and firms dependent upon the program, relative to their peers. They singled out these two nationalities because approximately 40% and 10% of H1-B recipients between 2000 and 2005 came from India and China, respectively. They concluded that total invention increased with higher admissions, primarily through the direct contribution of immigrant inventors. They did not find substantial effects on native scientists and engineers across a range of labor market outcomes such as employment levels, mean wages, and unemployment rates. They did detect a "crowding-in" effect, though, in which the presence of foreign-born inventors stimulated more native-born invention.

Despite the positive impacts discussed above, Borjas (2005) found that the foreign student influx could have a significantly adverse effect on the labor market of high-skilled workers. His analysis of data drawn from the *Survey of Earned Doctorates* and the *Survey of Doctoral Recipients*[11] showed that increases in the number of foreign-born doctorates, primarily through the foreign student program, had a significant adverse effect on the earnings of competing workers. He quantified this effect, stating, "An immigration-induced 10% increase in the supply of doctorates in a particular field at a

11. The Survey for Earned Doctorates is an annual census, conducted since 1957, of all individuals receiving a research doctorate from an accredited U.S. institution in a given academic year. The Survey of Doctorate Recipients is a longitudinal biennial survey, conducted since 1973, that provides demographic and career history information about individuals with a research doctoral degree in a science, engineering, or health field from a U.S. academic institution. Both surveys are conducted for the NSF and available at http://www.nsf.gov/statistics/

particular time reduces the earnings of that cohort of doctorates by 3%" (p. 8). Nevertheless, Borjas did not consider the cumulative value of increasing the stock of workers with PhDs to the economy overall, which, some might argue, could contribute toward offsetting the costs represented in earnings suppression.

The limited and selective number of studies covered here makes it impossible to assess the magnitude and breadth of HSI contributions to the developed countries. Nevertheless, the research covered showed that immigrants have become a significant driving force in advanced countries' innovation systems through knowledge creation and entrepreneurship and that their contributions have increased over the past decade.

IV. Costs and Benefits to Sending Countries

This section briefly and selectively highlights literature on the impacts of high-skilled emigration on sending countries through concepts such as brain drain, optimal brain drain, and brain gain/circulation. It also discusses the diaspora option as a mechanism that enables skilled migrants to mobilize as development actors and facilitate a collective impact in the country of origin. This research does not delve into the reason behind emigrants leaving their countries of origin which is thoroughly covered by Cohen (1997).

Brain drain.

"Brain drain" is a phrase thought to have been coined by the British Royal Society in the 1950s to describe the flow of scientists and technologists from Europe to North America. Since then, the term has evolved to refer to the increasing migration of high-skilled workers from the developing world (south) to the developed world (north). One in ten tertiary educated adults born in the developing world now reside in the developed world. An estimated 30% to 50% of the developing world's scientists and technologists

live in the developed world. International mobility of workers from south to north is driven by strong forces such as higher wages, desire for a challenging work setting, and political stability (Lowell & Gerova, 2004).

The most recent UN-DESA/OECD (2013) report showed that emigration rates to OECD countries were higher than ever before, notably for Latin America and the Caribbean. The data indicated that for virtually all countries of origin, the emigration rate of the highly skilled exceeded the total emigration rate, reflecting the selectivity of migration by educational attainment. As an example, in 2010-2011, Burundi, Lesotho, Malawi, Maldives, Mozambique, Namibia, Niger, Papua New Guinea, Tanzania, and Zambia had high-skilled emigration rates that were more than 20 times their overall emigration rates.

The number of tertiary educated immigrants in the OECD increased by an astounding and unprecedented 70% in the last decade to reach 27.3 million in 2010-2011. About 30% of all migrants in the OECD area were highly educated, and 20% of them originated from India, China, or the Philippines. The map in Figure 1 shows emigration rates of the highly skilled to the OECD area, by country.

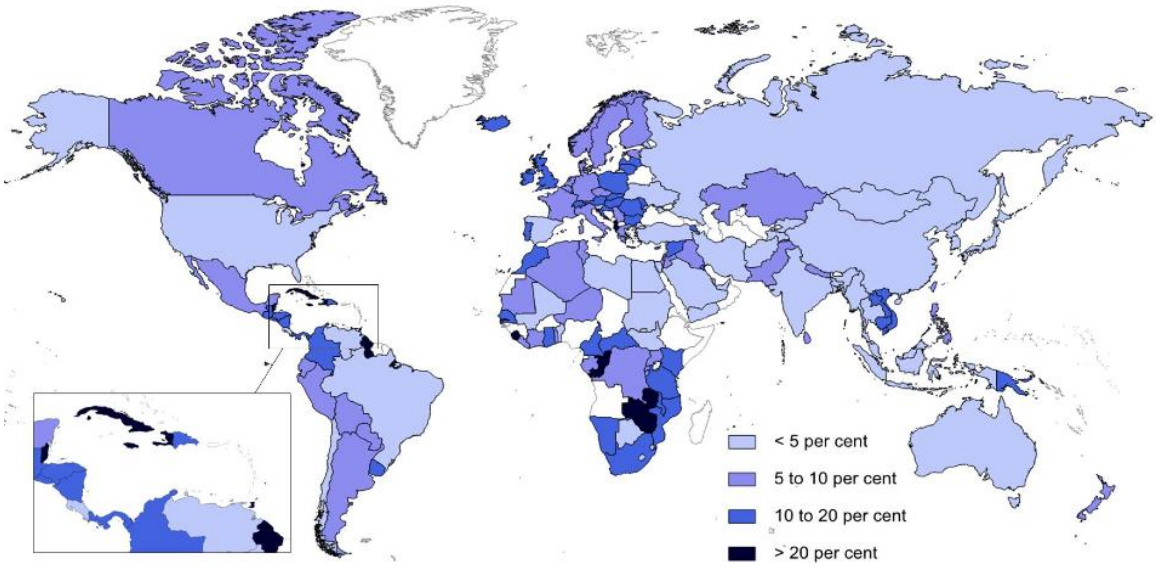

Figure 1. Emigration rates of the highly skilled to the OECD, 2010-2011 (percentages).
Source: OECD, 2010-2011

Some researchers perceive brain drain as a zero-sum game that harms the sending countries while benefiting the economies of the receiving countries. The zero-sum perspective was supported by a simulation of the world economy by Winters, Walmsley, Wang, and Grynberg (2003), which showed that an increase in international migration benefited only the migrants themselves and the economies that received them. Migrants themselves were the most significant direct beneficiaries of migration; those left behind in the source countries were worse off. Migrants achieve higher returns on their own human capital by matching it to complementary resources, such as other talented people, modern equipment and technology, and organizational setup, which are more abundant in receiving countries. Moreover, Kapur and McHale (2005) argued qualitatively that high-skilled migration stripped sending countries of institution-builders and drained their reform energy, as represented in its educated youth. In summary, brain drain literature

can be summarized by the daunting statement: *Brain drain makes the rich richer and the poor poorer*.

Given brain drain's importance and impact on populations' health and well-being, a significant body of literature portrayed brain drain of healthcare professionals from developing countries to developed ones. For instance, the World Health Organization (WHO) raised the alarm over the shortage of health workers in developing countries (WHO, 2006). The report estimated a deficit of 2.4 million doctors, nurses, and midwives in meeting the UN's Millennium Development Goals for improving health, reducing mortality, and reversing the spread of major diseases. Most importantly, the report highlighted the disparity in distribution of these critically needed personnel, whereby those countries with the greatest need had the least supply. This situation was exacerbated by the migration of health professionals from the countries that were most in need. The report noted that the Africa region had 24% of the disease burden but only 3% of the medical workforce. Nevertheless, the WHO recognized that emigration of health professionals did not cause the shortage and that halting emigration would not be a sufficient solution.

Acknowledging the lack of systemic data on the extent of African health workers' international movement, Clemens and Pettersson (2007) obtained, from census bureaus of the nine most important destination countries for African health profession emigrants, estimates of the number of African-born doctors and nurses. They found that in 2000 approximately 65,000 African-born physicians and 70,000 nurses were working in a developed country overseas.

In an attempt to address the international recruitment of health professionals, the WHO produced the *Global Code of Practice on the International Recruitment of Health Personnel* (WHO, 2010). This code of practice is a voluntary guideline that could be used as a framework for bilateral agreements among countries to promote ethical principles on international recruitment in a manner that strengthens the health systems of developing countries. The OECD countries also face shortages of health professionals and rely on immigration to help meet the demand (OECD, 2008). To help mitigate the effects of the flow of health professionals from developing countries, the OECD recommended that member countries consider: (a) training more staff at home; (b) increasing retention and delay retirement of existing workers; (c) raising the productivity of existing health workers; and (c) recruiting health workers internationally from other OECD countries or from outside the OECD area.

Optimal brain drain.

Recently, new concepts have surfaced that challenge the conventional brain drain school of thought. Stark (2004) offered a reciprocal approach to the brain drain concept and tried to establish a positive causal relationship between the prospect of migration and human capital formation within the country. He argued that a "strictly positive probability of migration to a richer country, by raising both the level of human capital formed by optimizing individuals in the home country and the average level of human capital of nonmigrants in the country, can enhance welfare and nudge the economy toward the social optimum" (p. 15). Thereafter, the prospect of migration can be exploited to incentivize individuals to attain a certain level of human capital, knowing that their skills will be highly rewarded—a concept Stark named "optimal brain drain."

Another multi-country cross-section analysis supported Stark's optimal brain drain concept. Beine, Docquier, and Rapoport (2008) found a similar positive effect of skilled migration prospects on gross (pre-migration) human capital levels in a cross-section of 127 developing countries. The authors concluded, "Brain drain migration contributes to an increase in the number of skilled workers living in the developing countries. This suggests that the traditionally pessimistic view of the brain drain has no empirical justification at an aggregate level" (p. 648). The optimal brain drain concept is controversial because it does not consider the alternative healthy scenario of "no-drain" (i.e., skilled immigrants not immigrating but productively residing in their countries) to assess the real costs to the sending countries' labor markets.

Brain gain.

The brain gain concept is basically brain drain in reverse. The concept emphasizes the value of knowledge spillovers from the receiving countries to the source countries through international knowledge collaboration. The concept underscores the benefits sending countries receive from their expatriates without complete repatriation. Inexpensive transportation, massive bandwidth, and telecommunication technologies made it easier for knowledge to be transferred across borders. The HSIs are more likely to generate international knowledge spillovers, and source countries are more likely to capture the benefits.

The concept of brain gain took ground in the 1990s with the early detection of skilled migrants' return to their emerging economies. Cao (1996) found that high-skilled individuals were staying in host countries for shorter periods because they recognized other international job opportunities. Johnson and Regets (1998) found that about half of foreign doctorate recipients left the United States immediately after graduation. Saxenian

(2002) showed that a significant number of Taiwanese high-skilled nationals returned to Taiwan beginning in the late 1980s and continuing through the 1990s. By 1989, 2,840 Taiwanese foreign nationals returned to Taiwan and by 1999, U.S.-educated Taiwanese started 110 companies in the Hsinchu Science Park. In the same research, Saxenian reported that the majority of Indian immigrants considered India's unreliable infrastructure, government bureaucracy, and regulations as deterrents to starting a business there. The Chinese immigrants cited the government bureaucracy, regulations, legal system, and political uncertainty as deterrents.

The brain gain concept is bolstered by trends and initiatives spearheaded by the scientific diasporas. Scientific diasporas had a major positive impact on growing international research collaboration. Scientific research has become increasingly global; the percentage of scientific publications with authors from foreign countries grew from 8% in 1998 to 20% in 2005. Anand, Hofman, and Glass (2009) detailed the contributions of scientific diasporas to international research collaboration within U.S. universities. In 2007, about half of the 2,800 foreign scientists conducting research on the campus of the U.S. National Institutes of Health were from Asia. Almost a quarter of the international patent applications filed in the United States are from foreign nationals.

Knowing that 38% of U.S. graduate schools have established at least one type of collaborative graduate degree program with a graduate program abroad, diaspora scientists heavily contributed to the establishment and success of those programs. Specifically in the global health arena, diaspora scientists helped facilitate needed collaborative research with developing countries. Highly educated immigrants actively maintain ties with their home countries' academic and research institutes. Thus, they act

as gatekeepers to new international partnerships between their host countries and countries of origin. Diaspora researchers were uniquely positioned to overcome complexities in international organizations because they have authentic understanding of the cultural, linguistic, and logistical issues that might arise (Anand et al., 2009).

Seguin, Singer, and Daar (2006a) conducted a study covering life science researchers and entrepreneurs in three Canadian cities in 2005. The authors' survey questions focused on three main areas: linkages to the home country, hurdles or barriers experienced or expected while initiating linkages, and interest in participating in science and technology (S&T) capacity building through an organized mechanism. The authors summarized their findings by showing that S&T diaspora members surveyed were driven by their moral responsibility of "giving back" to their home countries and felt positively about working with the scientific community, and their potential or actual initiatives were often obstructed by the lack of time, finances, or appropriate infrastructure or interest in their potential at home. Some surveyed S&T diaspora members were actively engaged in projects with their home countries. Their engagement in S&T capacity building varied among scientific advisory roles in academic institutions, organizing joint research and projects, organizing traveling expert panels, and forming transnational life science companies.

Seguin et al. (2006a) were interested in the optimal arrangement to facilitate brain gain or brain circulation of S&T diasporas between the host and sending countries. Surveyed S&T diaspora members envisioned an effective program for brain circulation as one that could offer: (a) a short-term visit platform to provide hands-on science or entrepreneurship training, (b) access to virtual learning educational technology, (c) grant-

writing advice and training, (d) a mechanism to facilitate business partnerships between diasporas and home countries, (e) funding mechanisms for collaborative scientific research, and (f) policies or programs that allow post-doctorates to spend time in their home countries without jeopardizing their careers.

Seguin et al. (2006b) concluded that skilled immigrants "could contribute to their countries of origin if their needs were better understood and governments implemented appropriate policies to encourage diasporas' efforts systematically" (p. 79). They recommended creating a Diaspora Business Initiative and a National Science Corps in developed countries. The Diaspora Business Initiative would provide institutional support to enable partnerships in investment, trade, and entrepreneurship. The National Science Corps (modeled after the U.S. Global Science Corps and the UNDP Transfer of Knowledge through Expatriate Nationals or TOKTEN) would provide funding for diaspora members to travel to home countries' S&T institutions.

The diaspora option.

Debating the brain drain-brain gain dichotomy in the 1960s was the traditional paradigm for interpreting the process of skilled migration. On the sending countries' side, the debate considered migration from a nationalistic perspective as an obstacle to development due to the significant loss of human capital. During the 1990s, new perspectives started to emerge that regarded skilled migrants "not so much as a loss but as a potential beneficial resource for the countries of origin" (Tejada, 2013, p. 101). This perspective was based on the assumption that skilled migrants, internationalists by nature, tend to establish transnational ties with the home countries and could use these links to contribute through different direct and indirect channels. These concepts and perspectives gained momentum and evolved within the academic communities under the notion of the

"diaspora option." The diaspora option was considered a third necessary option, given the high costs of brain drain and the difficulty triggering repatriation.

The diaspora option is a development strategy that "stresses the positive impact of emigration, especially the involvement of migrant communities in development cooperation with their home country" (Goethe & Hillmann, 2008, p. 195). Lowell and Martin (2005) explained that the diaspora option "draws upon a nation's expatriates, their knowledge and their financial resources to stimulate the transfer of resources to sending countries in a relatively low-cost way" (p. 4). The diaspora option focuses not on the physical repatriation of the emigrants, but on mobilizing emigrants and their resources. Such an option is facilitated and enabled through globalization, MNEs, less expensive travel, and ICT. At a policy level in the diaspora option, establishing linkages with the skilled diaspora is considered an alternative to physical return.

The diaspora option redefines the brain drain concept and the migration of skilled personnel. It considers skills migration less of a permanent exodus or loss to the home country, and more as a form of brain circulation where talent goes abroad but knowledge circulates back to the country of origin (Gaillard & Gaillard, 1997). In this context, skilled diasporas are finding means to participate in the home countries' economic, social, scientific, and technical development without having to permanently repatriate. Scientific collaboration is a particularly important venue for such engagements within the diaspora option discussion.

The S&T diasporas possess great potential to assist their home countries' development process. *Scientific diasporas,* or *knowledge diasporas,* are defined as "self-organized communities of expatriate scientists and engineers working to develop their

home country or region, mainly in science, technology, and education" (Barré et al., 2003). Knowledge and scientific diasporas roles are not limited to investing and sending remittances, but extend to knowledge transfer (Barre et al., 2003; Bhagwati, 2003), mentorship (Kuznetsov & Sabel, 2006), reputation intermediaries, and capacity building. The S&T diasporas can feed back knowledge and technology that can benefit developing countries through the diaspora option.

Meyer (2001) introduced the concept of *diaspora knowledge networks* within the diaspora option to capture the potential benefit of skilled diaspora networks to capitalize on the resources and networks of skilled migrants for the benefit of the country of origin. The discussion of diaspora knowledge networks was bolstered by the proliferation of diaspora network platforms online and the promise of ICT as tools for transmitting knowledge and crossing geographical barriers.

Kuznetsov (2006) examined emerging networks of relatively small diasporas of high-skilled expatriates. He identified features of successful programs and interventions to organize effective diaspora networks and concluded that despite the importance of home country institutions to the success of diaspora collaborations, key individuals in positions of influence, defined as high achievers, can sometimes remedy institutional weaknesses. Kuznetsov emphasized the heterogeneity within skilled diasporas, differentiating between *high achievers*, who have high status and credibility; *successful mid-career professionals*, who usually look for new career opportunities in the home country; *young and aspiring talented individuals*, entrepreneurs with diverse motivations and higher appetites for risk taking; and *frustrated professionals*, who pursue opportunities at home because of failure or stalled career development abroad.

The motivations and resources of each category reflect the heterogeneity of diaspora skills, which subsequently defines the different roles these individuals take on when engaging with the home country. Kuznetsov (2006) categorized these roles as:

- *First-movers*, who initiate new projects, ideas, companies, and institutions;
- *Development partners*, who engage in day-to-day support and transformation of home institutions;
- *Mentors*, who provide advice and support for individuals and institutions at home;
- *Deal makers*, who facilitate deals between local and foreign partners;
- *Investors*, who risk their own funds investing at home;
- *Donors*, who provide grants, funds, and scholarships at home; and
- *Diaspora community organizers*, who are well connected within the community and have ambitions to lead high-profile diaspora initiatives.

The emergence of the diaspora option as an established concept in migration studies is supported by a growing body of literature that investigates the linkages, impacts, and engagements of skilled diasporas in their home countries' developmental efforts. Authors such as Saxanian, Kuznetsov, Wadhwa, Seguin, and others have grown this literature by investigating different diasporas and their engagements with their home countries. Saxenian (2002) showed that many Taiwanese and Indian firms in Silicon Valley actively promoted global networks that link the United States (specifically, Silicon Valley) and the home country of the immigrant professionals.

The methods that researchers employed to investigate the diaspora option generally relied on case studies using both survey and interview methods. These methods collected data on the characteristics of the skilled diaspora members and individual returnees (e.g., their skill sets and roles) and their linkages to the home country, experiences, perceptions, impacts, and motivation for return (in the case of returnees). As

an example, Kuznetsov's (2006) interview and survey of Argentinean diasporans focused on several topics of interest to this research. Both the interviews and the survey focused on the impact of the diaspora; linkages to the home country, specifically the experience of the diaspora's collaboration with the home county; and the general sentiment, attitudes, and opinions of diaspora members regarding the home country's strengths and weaknesses. Kuznetsov concluded that despite its small size, the Argentinean diaspora is highly entrepreneurial and motivated to help Argentina, but that this motivation has not translated into tangible projects because of the weakness of the home country institutions. Diaspora members blamed politicians' individual ambitions and turf battles among government agencies for the consistent exclusion of diaspora involvement in projects.

Kuznetsov (2013) used a similar approach in his survey of Argentinean and Mexican technological diasporas. He evaluated the diasporas' main characteristics, involvement in knowledge networks, possible areas of collaboration with institutions and colleagues in their home country, engagement with private and public organizations in the home country, and incentives sought by the diaspora individuals to engage in joint projects. The author argued that to leverage the potentials of professional diasporas, two prerequisites must be met. Specifically, home countries must have (1) an adequate absorptive capacity in their public and private enterprises in the relevant areas, and (2) the capacity to leverage global connectivity to develop and sustain specific projects aimed at the creation of high-potential businesses with presence at the home country.

In the same edited volume, Kuznetsov (2013) interviewed a sample of 20 Russian diaspora "overachievers" to identify a number of success stories and the key people behind them. The main objective of the interviews was to understand the motivation that

drives Russian diaspora activists, their views on the government counterparts, the main constraints they face when attempting to expand their professional and business links with home country organizations, and their recommendations on policy reform priorities. The authors also administered a survey (120 respondents) that targeted professionals of Russian origin to document their emerging networking arrangements with home country institutions and individuals. The authors concluded that, in terms of business linkages and entrepreneurship, Russian emigrants were less engaged in their home country's development compared with their Argentinean and Mexican counterparts. In addition, the authors believed that Russian institutions, especially governmental institutions, "are inefficient, resistant to change, and slow to accumulate the capacities needed to interact with networks" (p. 261).

In an effort to investigate the phenomenon of skilled workers' return to their home countries, Wadhwa, Jain, Saxenian, Gereffi, and Wang (2011) surveyed a sample of Indian and Chinese immigrants who had worked or been educated in the United States and then returned to their home countries and started businesses there. The survey focused on four main questions:

- Why did the entrepreneurs return from the United States to India and China?
- What are their perceptions of the entrepreneurial climate in their home countries?
- According to them, what are the advantages and disadvantages of working in India and China over working in the United States?
- Did they maintain transnational ties to the United States upon return to their home country?

The survey found that the most significant factors drawing both Indian and Chinese home were economic opportunities, access to local markets, and family ties. Among Indians, lower operating cost was the strongest common advantage to

entrepreneurs who had moved home; among Chinese, it was access to local markets. Both Indians and Chinese returnees considered business networks very important and maintained strong contacts with former colleagues, family, and friends in the United States. The authors concluded that the phenomenon of return of skilled Indians and Chinese is not a zero-sum story where the United States loses entrepreneurs. Rather, it is characterized by a two-way brain circulation with potential benefits to both the United States and those emerging economies.

In summary, the limited and selective literature covered in this section suggested that the costs inflected by high-skilled migration can be high and the benefits to sending countries suboptimal or at least not fully realized. However, the potential to harvest intangible benefits of knowledge spillovers from diasporas does exist. Realizing the potential benefits by adopting the diaspora option is still a work in progress while the flow of skills continues from south to north.

Dimensions of Knowledge Transfer from Skilled Diasporas

The diaspora option literature covered here guided this dissertation research and its methodological approach. Specifically, this dissertation built upon the diaspora option literature and its knowledge transfer definitions, dimensions, and factors as adopted by Seguin et al. (2006a), Kuznetsov (2006, 2013), Wadhwa et al. (2011), and Saxenian (2002, 2006a, 2006b). Additionally, it explored the less-established search function concept. This section summarizes the knowledge transfer theoretical components, concepts, and definitions with illustrative case examples as they relate to this dissertation's research question. Chapter 3 will elaborate on these components as they relate to the interview and survey methods employed.

Diaspora individuals' involvement in international knowledge networks.

Involvement in knowledge networks builds higher social capital, which may potentially reduce the cost of access to resources (money, talent, contacts, and knowledge) and help build trust among diaspora members and with the home country (Kuznetsov, 2013). Kuznetsov reported that 62% of Russian diaspora survey respondents reported membership in international professional organizations.

Diaspora linkages to domestic institutions and individuals.

Linkages to home countries are sensitive to diaspora individuals' membership in international professional associations as well as to the business climate and quality of institutions in the home country. Kuznetsov (2013) provided evidence of that in the cases of Russia, Mexico, and Argentina. Professional linkages often start through informal contacts and then become institutionalized. Growth in informal contacts could indicate that the nature of cooperation has the potential to become more intensive and formal in the future. For example, Kuznetsov reported that 71% of Russian diaspora survey respondents had some formal or informal activity in Russia (research grants, commercial contracts, etc.).

Perception or attitude towards home government/institutions.

Perception toward the home government as a potential partner for international business is an important indicator for home country collaboration. Kuznetsov (2013) reported that only 8.7% of Russian diaspora survey respondents believed that the government is receptive to change and open for collaboration, compared with half who believed in changeability of universities, academic institutions, and private firms. Similarly, Kuznetsov (2006) concluded that despite its small size, the Argentinean diaspora is highly entrepreneurial and motivated to help Argentina, but that this

motivation has not translated into tangible projects because of the weakness of the home country institutions.

Transnational ties.

Close economic ties between skilled diasporas and their home countries enable the transfer of organizational and technical expertise. Saxenian (2002, 2006a, 2006b) provided evidence of such knowledge transfer from Indian and Chinese entrepreneurs in Silicon Valley to their respective countries. Saxenian (2006a, 2006b) also found that the factors or conditions that influence the formation of transnational communities include the degree of participation in host communities, access to home-country resources and institutions, and infrastructure and bureaucracy at home. Wadhwa et al.'s (2011) survey reported that when Chinese and Indian skilled workers return home, they maintain close and continuing contact with friends and family, colleagues, customers, partners, and sources of business information in the United States. To understand the transnational behavior of returnees, they were usually asked about their frequency and type of contact with former colleagues; family and friends; and educational, professional, and other organizations.

Circulation or exchange of information.

Diaspora links to colleagues at home support information exchanges and promote practical joint projects. Kuznetsov (2013) reported that Russian diaspora survey respondents mainly exchanged information informally (through personal contacts rather than official or organized flow). Colleagues who remained in Russia were the main counterparts for information exchanges. Russian-born emigrant workers are increasingly involved in the circulation of information, people, and business activities between their native and new host countries. Wadhwa et al. (2011) reported that the information

exchanged between Indian and Chinese returnees and their U.S. counterparts related to customers and collaborators, markets and technology, or organizations.

Motivations for return to the home country.

Understanding the motivations behind skilled diasporas' return to the home country has important implications for facilitating knowledge transfer. Wadhwa et al.'s (2011) examination showed Indian and Chinese returnees echoed those of prior generations of U.S.-educated professionals who returned to Israel and Taiwan in the late 1980s and 1990s. In both generations, the economic growth at home was a major pull factor—significantly stronger than policy measures in either the United States or the home countries. In addition, the timing of the return also corresponded to periods of U.S. economic downturn that diminished professional opportunities for immigrants. When investigating motivations for return, both Kuznetsov (2013) and Wadhwa et al. (2011) considered economic opportunities, access to markets, government incentives, family ties, visa conditions, recognition and status at home, and other factors.

Perceived contributions and impact.

Kuznetsov (2013) distinguished between two kinds of diaspora (and consequently, returnees) impacts or contributions: direct and indirect impacts. The direct economic impact of skilled returnees include their donations, investments, and knowledge. Diaspora and returnees' indirect impact is represented in their role as agents of change in the area of institutional development in the home countries. Skilled diasporas and returnees take pride in contributing to their home country's economic development. Wadhwa et al. (2011) reported that skilled returnees "are uniquely positioned to exploit the economic differences between their home countries and the U.S. because of their linguistic and cultural knowhow and connections with domestic

institutions and businesses" (p. 7). When it comes to impact and contributions, returning Chinese and Indian entrepreneurs were building businesses that benefitted from access to lower costs, growing markets, and business networks in their home countries while maintaining close ties with U.S. customers, collaborators, and sources of information.

Facilitative conditions and policies.

Policies and interventions are perceived to play an important role in facilitating and accelerating knowledge transfer from skilled diasporas to the home country. Seguin et al. (2006a) reported that more than the half of their survey participants expressed a desire for some form of external support and guidance (e.g., financial or organizational). In addition, government support for returnees was also perceived to play a role in accelerating return migration. Wadhwa et al. (2011) reported that Chinese returnees, far more than Indian, considered government support as very important for their decision to return.

V. Diaspora Networks as Transnational Search Networks

Incorporation of knowledge diaspora into the home country's development process serves as a link to the global pool of knowledge. Skilled emigrants are a major component of the global repository of knowledge, as encapsulated in the workers' tacit knowledge and their firms' knowledge capital. This section discusses the value of skilled workers as part of the knowledge capital of the firm and their role as disseminators and transmitters of tacit knowledge and expertise in the global KNM. Migrant skilled workers and diaspora networks are an active subset of these workers and global networks, and their role as search networks is of particular interest to this research.

Skilled workers and the firm's KBC.

Aside from national macro perspectives, also firms value their high-skilled workers. Human capital, and the embedded tacit knowledge that comes with it, can be the firm's most important type of capital. Generally, KBC comprises a variety of intangible assets (unlike the tangible machinery, equipment, vehicles, or buildings) that can provide the firms with intangible benefits. This intangible capital has increasingly become the largest investment for businesses and contributed significantly to the growth in advanced economies (OECD, 2013). The OECD adopted a widely accepted classification system that categorizes KBC into three groups: (1) computerized information, such as data and software; (2) innovative property, including patents, copyrights, designs, and trademarks; and (3) economic competencies, such as brand equity, human capital within each firm, people and institutional networks, and organizational know-how that increases the firm's efficiency (Corrado, Hulten, & Sichel, 2005). Further, the OECD (2013) documented increased investment by firms in KBC, as well as its importance for firm development.

Both knowledge flows and mobile knowledge workers are integral to KBC. The literature showed consensus on the importance of knowledge diffusion to stimulate innovation and of networked, mobile high-skilled workers to facilitate such flows. Importantly, worker mobility enhances labor market efficiency and productivity by flowing human resources to the firms where these resources are most valued. More significantly, worker mobility channels knowledge flows within and among organizations (OECD, 2013).

Human capital, with its embodiment of tacit knowledge, is crucial to facilitating the knowledge flows that allow others to absorb and utilize the knowledge. For example, Levin, Klevorick, Nelson, and Winter (1987), in their influential study of technological

knowledge flows, highlighted the key role that personnel movement (such as hiring R&D employees away from innovative firms) plays as a potential information channel in areas such as licensing, patent disclosure, and reverse engineering.

Levin et al. (1987) also reported that movement of skilled workers is closely linked with information flows involving interpersonal communication (e.g., technical meetings and informal conversations). Later, Hyde (2011) argued that mobile workers could spread lawful, public domain information faster and easier than other transmission means. In particular, he argued that rather than trying to learn from scientific and trade journals, conferences, and the like, firms could hire someone with the necessary expertise. Thus, the labor market high-skilled individuals and knowledge workers could also be the most important knowledge market.

Understanding the knowledge market requires an understanding of the types of knowledge interactions within the KNM. Phelps, Heidl, and Wadhwa (2012) defined *knowledge network* as "a set of nodes—individuals or higher level collectives that serve as heterogeneously distributed repositories of knowledge and agents that search for, transmit, and create knowledge—interconnected by social relationships that enable and constrain nodes' efforts to acquire, transfer and create knowledge" (p. 1117). These networks encompass two main types of nodes: knowledge objects and network subjects or actors, which respectively correspond to "What is exchanged?" and "Who exchanges it?" Actors exchange knowledge objects, as well as other goods, services, financial compensation, and risk. Thus, to understand possible motivations and constraints, it is crucial to identify and classify the subjects, parties, and actors in the exchange.

The KNM encompass the networks, systems, social relationships, institutions, and infrastructures that facilitate knowledge exchange. They facilitate relevant searching and matching of counterparties and evaluating, implementing, and enforcing contracts and agreements. The search function is of particular importance to this research.

The KNM and the search network concepts intertwine deeply. Kuznetsov and Sabel (2006) discussed internal transformations in firms and value chains over the last century "from centralized and closed to decentralized or networked and open" (p. 85). They saw *search networks* as networks that "allow us to find and collaborate with those who are already learning what we need to know" (p. 85). Further, they argued that these search networks have replaced the hierarchies that previously deconstructed tasks and assembled output.

Kuznetsov and Sabel (2006) also discussed the transition away from "job ladders"—wherein high-skilled employees accumulate tacit knowledge by moving from one task to another—to "open migration chains," which are formally established, open, interfirm skilled labor markets in which even weak ties among migrants can transmit information about learning opportunities. That professional diaspora associations such as The Indus Entrepreneurs—an institutional search network helping members move up migration chains—have proliferated supports this transition toward search networks.

Moreover, Kuznetson and Sabel (2006) addressed the diaspora's new role as a search network bridging capabilities at home with opportunities abroad. They highlighted the shift from hierarchy to search networks, underscoring its profound effects on global supply chains and economic development strategies, and discussed the roles of both low- and high-skill diaspora networks. Consequently, they argued for public policy

interventions that promote open migration chains and diaspora networks as a new industrial policy.

In summary, this emerging literature on diaspora networks as transnational search networks built on the underlying assumption that the country's talent abroad would be key to restructuring and reform efforts, both at home and in receiving countries. Analytical case studies from authors such as Saxenian (2006b), Iskander (2006), and Kuznetsov (2006) illuminated this literature. Recently, empirical research designed to test these assumptions about transnational search networks has begun, but is not yet substantial. Therefore, this current research hopes to contribute to this literature by investigating the role of Lebanese high-skilled diaspora and returnees in building and maintaining transnational search networks to bridge capabilities and opportunities between home and abroad. Do these transnational networks exist? How active and effective are they in channeling knowledge and expertise to and from the home country? What are the related policy implications? These are some questions that guided the inquiry throughout this research.

VI. Comprehensive Model

The evidence that highlighted the positive economic impacts of HSIs on developed economies is overwhelming. Moreover, international competition for the "best and brightest" will continue to be fierce due to increasing labor market shortages and international competition (Mahroum, 2001). Thus, many developed countries are left with no choice but to join the global war for talent and to revamp their immigration systems to achieve optimal intake of skilled workers. Chiswick (2011) argued that the United States cannot afford to ignore the effects of immigration policy on the skills of the

U.S. labor force. He explained that in today's global economy "international competition exists not only for the manufacture of goods and services, primary products, and capital, but also for high-skilled workers" (p. 3).

Several OECD countries have already recognized this fact, and some countries such as Canada, New Zealand, and Australia have implemented policies that favor HSIs in particular. These policies generally do not take into consideration the impact on sending countries and in some way impede their development by stripping them of their most valuable asset: their human capital. Adopting this unilateral approach by attracting more HSIs, the rich countries will continue to get richer, and the poor countries poorer.

On the other hand, sending countries—especially developing ones—have improvised their policies to attract back their expatriates. Several developing countries realized the potential of their diasporas early on, tailored policies to engage them in the development efforts, and gave them preferential treatment. Taiwan, South Korea, India, and China were early in this process (Kuznetsov & Sabel, 2006). Other countries may soon follow suit and start luring back their high-skilled diasporas. Thus, both developed and developing countries are pulling on the same high-skilled migrants' rope, but conceivably the winner of the tug of war resides in the north.

Most of the existing literature has generally adopted a unilateral approach in defining the concepts associated with skilled migration, reflecting the divergent interests between sending and receiving countries: What is draining for sending countries is enriching for receiving ones. A return of a high-skilled expatriate is a gain for the sending source country and a "concerning phenomenon" or a loss for the host country. Attracting more HSIs is an economic priority for developed countries, whereas retaining a high-

skilled and educated workforce is a human capital challenge for sending countries. Therefore, a comprehensive model for understanding skilled migration in a global development context, where both sending and receiving countries' interests are considered, might prove valuable in inspiring policies that guarantee mutual gain. Moreover, such a model could inspire researchers to adopt an inclusive view of the interests of both sending and receiving countries when investigating this topic.

This research proposes a comprehensive conceptual model for understanding skilled migration in a global development context. Figure 2 illustrates existing literature findings and concepts regarding the impacts of skilled migrants on development. In a way, it plots the brain migration taxonomy on the development scale. Navigating these concepts provides a comprehensive understanding of the distribution of costs and benefits of skilled migrants versus the country's level of development. The following sections discuss these concepts briefly as they relate to developmental paths.

The lower right quadrant:

This quadrant represents the literature focused on the adverse effects of skilled migration on developed economies that result from suppressing the earnings of high-skilled natives, as discussed by Borjas (2005). From a developing country perspective, it is apparent that countries cannot develop without harnessing the benefits of skilled workers and building an adequate human capital endowment. Hence, the lower right quadrant of Figure 2 is an unlikely path toward development.

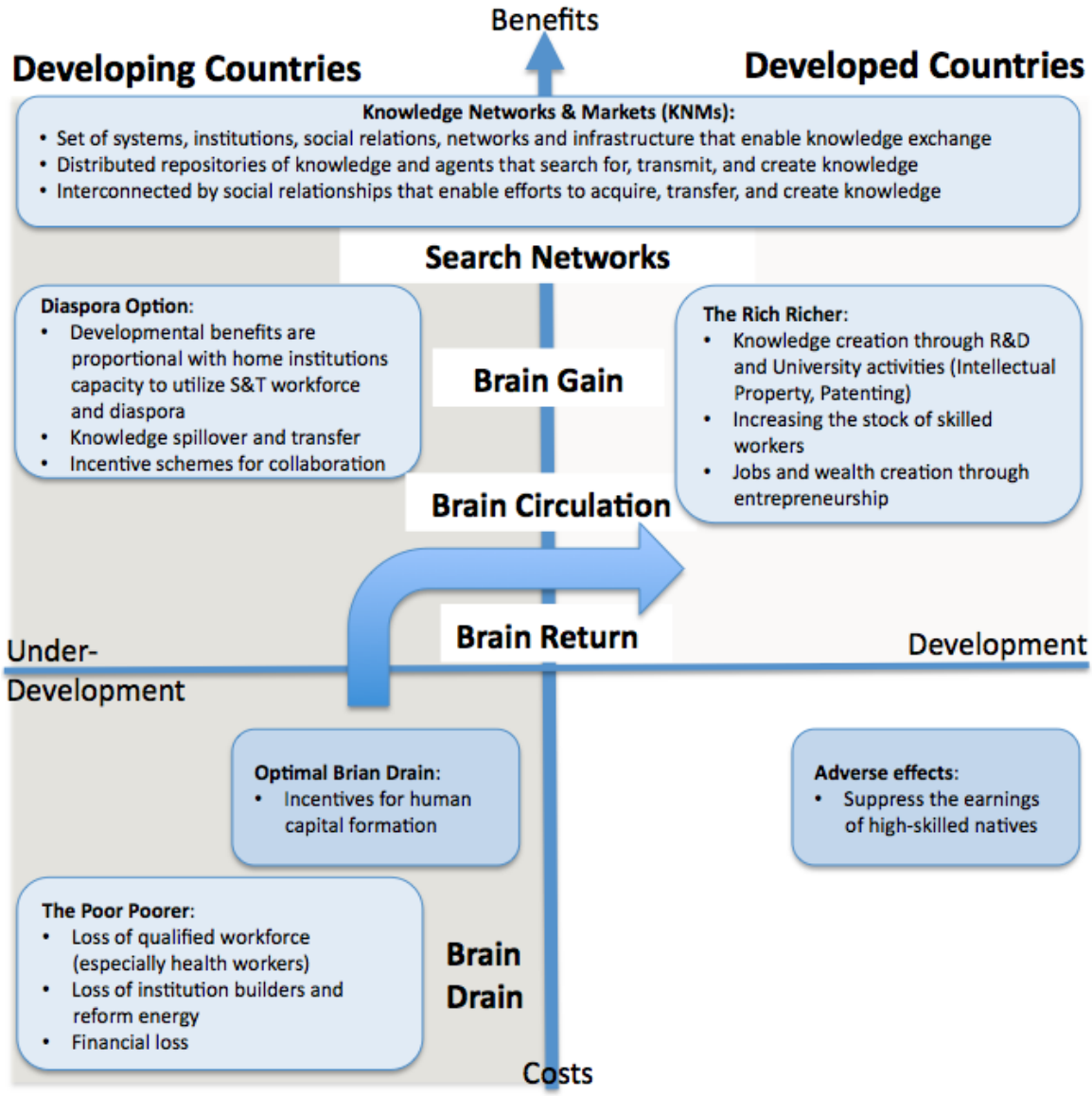

Figure 2. Illustration of brain migration taxonomy on the development scale.
Source: Author

The lower left quadrant:

Brain drain strips developing countries of their much-needed qualified work force, especially in critical areas such as health care. Such countries are most likely to lose their reform-oriented institution builders. These countries also incur financial losses by

subsidizing the education of those who end up migrating. Although financial remittances to sending countries are significant, they fail to offset the negative impact of losses in qualified human stock. Bhagwati and Wilson (1989) went further, proposing a "Brain Drain Tax" or tax on the foreign earnings of the citizens of developing countries who emigrated to the richer world. They based their proposal on the assertion that sending countries' governments bear an unfair cost when, after investing in and subsidizing the education system, the most capable and educated members of the society leave to earn higher incomes in developed countries.

Policy responses to the brain drain problem have focused mainly on encouraging repatriation. This conventional focus on encouraging the return of talent to the home country is "often neither realistic nor necessary," given that without permanently relocating, high-skilled diaspora individuals can effectively engage in continuous collaborative projects with the home country (Kuznetsov, 2006, p.14). Some evidence supports the "Optimal Brain Drain" concept, but more research is needed to identify the *stage of optimality*—the rate of those who leave compared with the rate of those who stay. Thus, the proposed model suggests the only way out of the lower left quadrant of Figure 2 would be through adopting the "diaspora option."

The upper left quadrant:

Realizing that the diaspora option depends on building home institutions and a local absorptive capacity capable of exploiting and utilizing the knowledge and the prowess of S&T diasporas (Kuznetsov, 2006; Kuznetsov & Sabel, 2006), J. Brinkerhoff (2006) considered institution building, democracy, and economic development as "the backdrop for both brain drain prevention and the realization of migration gains" (p. 142).

Incentive schemes for collaboration and repatriation, as well as support for S&T diaspora networks, are also common approaches to realizing the diaspora option.

Developed countries also have a responsibility to remove barriers to brain circulation and to foster S&T diaspora networks. Seguin et al. (2006b) suggested that developed countries "have a responsibility to foster international partnerships between developing countries and their skilled diasporas and that [they] should make the diaspora option an integral part of their international development policy" (p. 79). The authors suggested several initiatives that fall within the realm of integrating the diaspora option into the international development policy. Several European aid agencies and USAID have already started paying attention to the potentials of skilled diasporas. Nevertheless, it is still early to evaluate the impacts of these infant efforts. Thus, from a human capital perspective, the path toward development—the convergence of the upper left quadrant of Figure 2 and the upper right quadrant—is a mutual responsibility and can be conceived as a "win-win" scenario.

The convergence of the two upper quadrants benefits both developing and developed countries. Hart and Davis (2010) argued that the cost-benefit distribution that results from high-skilled migration is not necessarily zero-sum or fixed as perceived by concepts such as "brain drain" or "war for talent." Instead, a "win-win" scenario for sending and receiving countries could be produced through international cooperation, specifically bilateral cooperation focused on specific sectors affected by migration. Hart and Davis applied their model to the relationship between India and the United States that comprised what they consider "the world's largest high-skill mobility relationship." They explored prospects for mutually beneficial cooperation in three sectors of high-skilled

migration: IT services, medicine and nursing, and graduate education. The India-United States example could be extrapolated to other bilateral relations, especially between developed and hard-hit developing countries (such as Ethiopia-United States in the health professions).

The upper right quadrant:

The upper right quadrant represents the business-as-usual scenario. Incentives for migration will continue to be valid due to increasing labor market shortages and international competition. Favorable HSI policies will attract the best and the brightest, and HSIs will continue to positively contribute to their host economies. Despite the evidence that HSIs suppress native earnings, the overall impact of these workers outgrows the costs incurred on native earnings. The business-as-usual scenario, although beneficial to the immigrants and their host economies, still implicates heavy one-time costs on the development of the sending county and, therefore, might harm global economic sustainability.

Implications of the comprehensive model

It is apparent from the model representation that the "sweet spot" for migration policy intervention is the transitional area between the two upper-level quadrants: a two-way interchange catalyzed by brain gain, circulation, and search networks. Aside from the established literature on brain gain and circulation, the emerging concept of search networks captures the value of skilled migration not only to sending and receiving countries, but also to global knowledge and knowledge-capital markets. Mutually exclusive policies that capitalize on the benefits received from skilled migrants (the upper right quadrant) will only make the rich richer and the poor poorer. Policies that promote *mutual gain* from high-skilled migrants are the most suitable for sustainability and

growth. Thus, immigration policies that aim to attract HSIs, once coupled with provisions that ensure gains for sending countries, could potentially lead to mutual gain.

These gains can be realized by strengthening home institutions, removing barriers for brain circulation, and supporting knowledge diaspora networks and collaboration with home countries. Hart (2006a) summarized his preferred approach nicely. He advocated policy steps that achieve two objectives: "Strengthening the capacity of source countries, especially small ones, to absorb knowledge and extract benefits from it, and nurturing knowledge spillovers from receiving countries to source countries" (p. 53).

VII. Conclusion

Utilizing high-skilled diasporas benefits both sending developing countries and hosting developed countries. This chapter covered research that demonstrated skilled migrants' major contributions to the entrepreneurial, scientific, and technological advancement of developed countries, as well as the cost to developing countries, of their migration. The HSIs have been a major force in developed countries' innovation systems that are active in creating knowledge, diffusion, jobs, and wealth, as well as in adding diversity and creativity. In addition to contributing to their host countries' advancement, skilled migrants possess great potential to assist their home countries' development processes. Research has shown that their roles were not limited to investing and sending remittances but extended to knowledge transfer, mentorship, reputation intermediation, and capacity building. The literature review covered the different angles of assessing brain-power migration and its impact on sending and receiving countries.

The main contribution of this literature review was in proposing a comprehensive conceptual model for understanding skilled migrants in a global development context. A

global phenomenon of that impact and magnitude requires a comprehensive multilateral approach to disentangle its components and assess its impact. The framework advocated mutually beneficial policies toward skilled migration, which ensures fair distribution of cost and benefits between sending and receiving countries. Through this framework, this research advocates a collaborative approach that utilizes search networks to nurture brain circulation between receiving and sending countries for mutual benefit.

The goal of this framework is to ground the proposed research in theory and uncover issues that will guide policy makers and governmental practices in the international development arena. This research, in the specific case of Lebanon's skilled migration to the United States, hopes to document high-skilled diaspora and returnees' direct and indirect contributions to the home country and explore policies and practical means that could facilitate brain circulation and knowledge transfer. Moreover, this research contributes to the literature by investigating the role of Lebanese high-skilled diaspora and returnees in building and maintaining transnational search networks to bridge capabilities and opportunities between home and abroad. The expectation is that the search role of the high-skilled Lebanese migrants and their networks is essential and preparatory for impactful direct contributions, and that the effectiveness of this role spans beyond specific government policies.

Chapter 3. Epistemology and Methodology

This research draws on elements of single case study as an overall strategy for research. The *mostly* binary nature of migration which is manifested in bilingual, bicultural, and bi-national aspects makes a case study approach the most relevant and focused when it comes to investigating the relationship between a specific country and its diaspora. However, there are many exceptions in the migration journey, even in the binary cases, many migrate to several intermediary destinations before settling in for the long-term. A case study is defined as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (Robson, 2002, p. 179). Therefore, a case study is a strategy rather than a specific method; it focuses on a phenomenon within a context, using multiple research methods. In this research case, the focus is on the knowledge transfer aspect of the migration phenomenon in the Lebanon-United States context using interviews and survey methods.

I. Epistemology

According to Holloway (1997), Mason (1996) and Creswell (1994), a researcher's epistemology is literally his or her theory of knowledge, which serves the purpose of deciding how the social phenomena will be studied. The epistemological position regarding this research can be summarized as follows: (a) data were contained in the perspectives and experiences of the diaspora members who have been involved in some sort of knowledge transfer to their home countries and, because of that, (b) participants were engaged in collecting the data. The intention of this research, at the outset, was to gather data regarding the experience of Lebanese high-skilled diaspora members and

returnees with the phenomenon of knowledge transfer to their home country. The research epistemology was constructivist in nature, given the type of investigation pursued. Based on Creswell's definition of constructivism, "the goal of the research, then, is to rely as much as possible on the participants' views of the situation" (Creswell, 2013, p. 20).

The research adopted a phenomenological methodology. The constructivist worldview is in general manifested in phenomenological studies, in which individuals describe their experiences (Moustakas, 1994). The phenomenological methodology is best suited for describing the essence of a lived phenomenon; that is, in the case of this research, describing the essence of the Lebanese knowledge diaspora experiences both from abroad and from within the country. The research questions intended to understand the essence of a specific experience: the diaspora's engagement in the developmental process of their home country through the transfer of skills and knowledge. Accordingly, participants in this research were prominent high-skilled diaspora members (as per the criteria described earlier) and involved in linkages with the home country, or high-skilled individuals who returned to the home country to start businesses or professional careers.

The research applied phenomenology because it is concerned with the "lived experience of the people involved, or who were involved, with the issue that is being researched" (Groenewald, 2004, p. 5). The researcher was concerned with the lived experiences of the individuals who were involved in knowledge transfer to the home country. Given that these experiences also had a personal and somewhat emotional dimension of giving back, a phenomenological approach illuminates the hidden aspects of that lived experience.

The exploratory and qualitative nature of this research corresponds well with the research question at hand. Exploring the patterns and dynamics of high skilled diasporas and returnees' contributions to the home country requires a qualitative approach capable of revealing the experiences, perceptions, and interactions of these individuals among their community and with the home country institutions through narrative inquiry. Thus, the emerging data from the employed qualitative techniques is revelatory and the subsequent themes and subthemes could explain and answer the overarching research question and subquestions.

The research built on the conceptual framework set by Seguin et al. (2006a) by attempting to unveil, using interviews and surveys, the experiences of the Lebanese knowledge diaspora members and returnees when engaging with the home country. Seguin et al. used a survey technique to probe diaspora scientists' perceptions and experiences. Saxinian (1999) and the subsequent authors who replicated her research on different populations and times (Hart, Ács, & Tracy, 2009; Wadhwa, Jain, Saxenian, Gereffi, & Wang, 2011; Wadhwa, Saxenian, Rissing, & Gereffi, 2007) used both survey (for immigrant entrepreneurs) and interview (individual returnees) techniques. The researcher in this dissertation interviewed a small sample of prominent diaspora members in the United States and surveyed individual returnees in the home country but the framework essentially guided both techniques. It is a commonly established practice in high-skilled migration research to employ both interview and survey instruments to tackle the overarching research questions.

II. Method: Data Collection and Analysis

The most suitable data collection tool for a phenomenological approach is interviews with individuals which is the tool employed in this study. In phenomenological research, participants are usually asked two broad questions: (1) What have you experienced in terms of the phenomenon? (2) What contexts or situations have typically influenced or affected your experiences of the phenomenon? These questions, in addition to other open-ended questions, focus attention on gathering data that led to a textual and structural description of the experiences, and ultimately provide an understanding of the common experiences of the participants (Moustakas, 1994).

However, in phenomenology, the researcher must allow the data to emerge. "Doing phenomenology" means capturing "rich descriptions of phenomena and their settings" (Kensit, 2000, p. 104). Therefore, the actual interview questions posed to participants may have differed slightly from the central research question to allow the data to emerge. (See interview consent form and interview protocol in Appendices A and B.)

The researcher used the elite interview technique to collect data from Lebanese diaspora high achievers. Dexter (2006) defined an elite interview as one in which the interviewee is given "specialized and nonstandard treatment" in the sense that "the investigator is willing, and often eager to let the interviewee teach him what the problem, the question, the situations [are]" (p. 19; cited in Gamlen, 2012). This technique was appropriate to this research given that the target interviewees were of high stature professionally and financially.

Throughout the conduct of the interviews, the researcher coded the emerging themes and patterns thus reducing the data and making the subsequent fieldwork more focused. First, codes were used to summarize and assign meaning to chunks of narrative data (Miles & Huberman, 1994). These codes were the first level or process of narrative analysis in this part of the research. The emerging codes and the frequency of their emergence across the interviews are presented in the interview data analysis chapter. Second, the researcher coded for emerging patterns, themes, and subthemes. Conceptual themes were developed during the review of the data as per the themes already defined in the interview protocol. A theme "is a phrase or sentence that identifies what a unit of data is about and/or what it means… [it] is an outcome of coding, categorization, and analytical reflection, not something that is, in itself, coded" (Saldana, 2009, p. 139). As a result of this analysis a list of themes and subthemes were developed addressing the research questions and were supported by illustrative direct quotes throughout the interview data analysis chapter[12].

In addition to interviews, the second component used a survey technique to collect data from diaspora returnees. The survey was conducted to reach a broader audience and to gather data directly from the returnees. It specifically probed the experiences, impact, and perceptions of Lebanese technologists, entrepreneurs, and high-skilled returnees. The survey focused on a select group of Lebanese immigrant professionals who had returned home and found jobs or started businesses there.

Research Site

This research focused on Lebanese diaspora high achievers in the United States and high-skilled returnees to Lebanon. Given that there were no reliable data sources to

[12] See Saldana (2009, p.139) for more discussion on "Themeing the Data" technique.

identify concentration of high-skilled Lebanese immigrants in the United States, the research instead targeted the main clusters of HSIs there. Specifically, it focused on high-skilled Lebanese diaspora members in two U.S. technopolis clusters of immigrants' entrepreneurial and technological activities. The areas of focus were NYC and Silicon Valley, due to the existence of active networks of Lebanese technologists and entrepreneurs (LebNet in Silicon Valley, LIFE in NYC), which indicates the presence of a relatively sizable and active population of these immigrants.[13] Moreover, data were gathered from individual diaspora returnees in Lebanon through an online survey.

III. Sample and Sample Selection

Given that "the phenomenon dictates the method (not vice-versa) including the type of participants" (Hycner, 1999, p. 156), purposive sampling was adopted throughout. Welman and Kruger (1999) defined purposive sampling as the most important kind of non-probability sampling to identify primary participants. The sample selection was based on sampling criteria set to address the purpose of the research, looking for participants who "have had experiences relating to the phenomenon to be researched" (Kruger, 1988, p. 150). Therefore, for the diaspora component, *prominent* diaspora members in the areas of technology, entrepreneurship, and high-skilled professions were purposefully selected. *Prominent* diaspora members are defined here as individuals who (a) had impact on the decision-making process in their organizations (e.g., majority shareholders, executives, and senior managers), (b) were successful entrepreneurs (had established viable businesses), or (c) were investors (angel or VC investors). Prominent

13. Given resource and time constraints, the Boston area—where anecdotal evidence identified another concentration of high-skilled Lebanese immigrants—was not included in this research.

members usually had more impact, resources, and clout when engaged in collaborations and possess relevant functional skills that enabled them to deliver results.

Because it was impossible to precisely calculate the entire population of prominent Lebanese diaspora members in the United States or high-skilled returnees in Lebanon in the absence of any accurate list or database, the purposive sampling technique was used to collect data. The researcher used his network, especially within LebNet in the Bay Area (Silicon Valley) and LIFE in the NYC area to identify and interview prominent diaspora members. These interviewees were the primary unit of analysis with their informed consent (Bless & Higson-Smith, 2000).

To trace additional participants, the researcher used snowball sampling. Snowballing is a method of expanding the sample by asking one participant, usually a gatekeeper, to recommend others for interviewing (Babbie, 1995; Crabtree & Miller, 1992). *Gatekeepers* are those persons who grant entry, and *key actors* or *key insiders* are those who volunteer assistance (Holloway, 1997). The researcher identified gatekeepers who were willing to recommend potential interview participants.

For the diaspora returnee component, the research focused on individual returnees who, after studying and working abroad, had returned to Lebanon to start businesses or professional careers. Lebanon is known generally and historically for exporting young skilled graduates, few of whom return. Given the small sample of returnees, the analysis included high-skilled individuals who returned from the United States and other OECD countries, to garner a wider and more representative sample of the Lebanese high-skilled returnee population. The assumption was that the education, work, and living experiences of Lebanese immigrants in the United States would be relatively similar to experiences in

other OECD countries when compared with that of Lebanon. The common values, development levels, and economic activities high-skilled workers share in OECD countries allowed the researcher to group returnees from these countries into one category. Only survey respondents who met the following criteria were included in the analysis:

- Of Lebanese origin with a university degree,
- Entrepreneur who founded or co-founded a current company in Lebanon or has been employed full time in Lebanon;
- Prior to returning to Lebanon, the respondent studied full time as an undergraduate or graduate student or worked full time in the United States or other OECD country.

To reach a representative sample of survey respondents, both formal and informal channels were used to reach the target population and recruit participants. Several platforms and channels were utilized to reach out to individual returnees, such as

- advertising the survey on wamda.com—a popular online platform and media hub for entrepreneurship in the Middle East and North Africa (MENA) region—and through existing networks of associations, incubators, accelerators, universities, and other venues. (See Appendix C for a complete list of survey dissemination channels);
- using social media, such as Facebook, Twitter, and LinkedIn, to advertise and identify possible candidates (virtual snowball); and
- using the snowball effect and the researcher's personal network.

Snowball surveys and interviews as the main sources of data may easily be criticized due to validity issues (Gamlen, 2012). Snowballing cannot be used to draw inferences for the high-skilled Lebanese diaspora and returnees as a whole because the sampling was nonrandom. That is, not all high-skilled Lebanese diaspora members and returnees had the same probability of selection. However, it was not the intent of this

research to make predictions on the immigrant and returnees population. Rather, it tried to answer the relevant research questions and sought evidence of transnational search network formation to test the hypothesis. The constraints on nonrandom sampling draw clear limitations on the research's findings regarding the perception and impact of both diaspora members and returnees. Such limitations could be mitigated somewhat in future studies by more extensive outreach to a larger representative sample. A cognitive pre-test for both the interview and the survey was conducted to verify that the questions were clear and easily understood by respondents.

Regarding sample size, participant interviews stopped when a level of saturation was reached. Saturation was realized when no additional themes or subthemes emerged after a certain number of interviews. Boyd (2001) regarded two to ten research participants as sufficient to reach saturation, and Creswell (1994) recommended "long interviews with up to 10 people" for a phenomenological study (p. 65). However, this research included interviews with a sample of 18 prominent diaspora members in different areas and categories. Nevertheless, the data-collection interviews stopped when the topic was exhausted and saturated; that is, when interviewees introduced no new perspectives on the topic.

For the returnee survey component, a relatively small sample was adequate to provide an ample view of the returnees' experiences, impact, and perspectives. There was no definitive answer to the required sample size for the survey. Large samples are more powerful because they can yield results that are more accurate, but they also are more time consuming and expensive (Kelly, Clark, Brown, & Sitzia, 2003). Given this research's budget and time limitations and the absence of data on the size of the returnee

population, a sample size of about 90 respondents adequately met the purpose of the current descriptive research, which is observing a phenomenon at a single point of time. Nevertheless, this will create an opportunity for expanded future research that could involve a much larger survey sample (and consequently a larger interview sample).

IV. Validity and Limitations

In general, the data needed to track the diaspora contributions and impact were simply not available consistently and did not cover long periods. As shown in the literature review, most statistical evidence was gathered ex-post, and correlations were drawn thereafter. As in any kind of statistical research, correlations are purely suggestive and cannot by any means prove causality. Moreover, case studies, such as the Indian experience or the current example of Lebanese high-skilled diaspora, are also only suggestive with limited ability to support broad generalizations about the impact of diasporas.

Throughout the interviews, the researcher attempted to consciously understand, in terms of the perspectives of the participants interviewed, the phenomenon under study; therefore, the focus was on an insider perspective (Mouton & Marais, 1990, p. 70). Moreover, the researcher made sure not to influence the content of the participants' descriptions, in order that they truly reflected their actual experiences (Creswell, 1994). As much as possible, the researcher provided direct quotes from the participants' interviews to illustrate the experiences in their own words and to support the claims made regarding the emerging themes and subthemes.

Using both targeted interviews and surveying techniques was intentional, to assure diverse representation and mitigation against a selection bias. The purpose of the

interviews was to gain a better understanding of the diaspora members' rationale and motivations for their actions, which was not readily collected in the survey. Such data were valuable when compared or triangulated with survey data to evaluate the validity of the methodology.

Both the interviews and the survey questionnaire, to different extents, sought evidence of circular migration, transnational ties, and formation of search networks as described by Kuznetsov (2013). Repeated and targeted sampling of individuals in the diaspora and among returnees was used to assure diverse representation and mitigation against selection bias. Potential interviewees were identified via informal networking and selected from areas with the highest concentration of high-skilled Lebanese professionals (Silicon Valley and NYC), a condition for forming transnational search networks. Similarly, the survey respondents were also solicited from within informal and formal networks of returnee entrepreneurs and professionals. Although the survey was not based on a random sample, it aimed to be representative of different professions, backgrounds, and age groups and to not focus only on individuals with positive impacts or experiences.

Topics and questions for the interviews and the online survey were designed to collect data relevant to the research questions stated earlier. Specifically, they related to investigating the patterns and dynamics of high-skilled diasporas and returnees regarding direct and indirect contributions to the home country and policies or facilitative interventions to leverage and enhance these contributions. Because there was no direct measure of these variables, multiple questions that indirectly assessed their values were used. In aggregate, the questions were intended to suggest the existence of these variables.

The interview and survey topics, components, and subsequent questions drew upon existing definitions and dimensions of knowledge transfer from skilled diasporas to the home countries, as cited earlier in Chapter 2. Nevertheless, this dissertation research takes a step further by adding research components focused on investigating the *search* function, its prevalence, efficacy, and perceived impact. Specifically, the interview protocol (Appendix B) followed one set forth by Seguin et al. (2006a). Similarly, the survey (Appendix D) built on the questionnaire used in Kuznetsov's (2006, 2013) edited volumes about the Mexican, Argentinean, and Russian diasporas and returnees and in Wadhwa et al. (2011) for Chinese and Indian returnees. Table 6 connects the topics and themes of both the interview protocol and the survey questionnaire employed in this research to the relevant literature.

The interview questions were meant to be facilitative rather than exhaustive. The use of follow-up questions to gain better understanding of the respondents' beliefs depended on the nature of the responses. On the other hand, the survey (online questionnaire) consisted of a list of specific questions and responses. Table 7 and Table 8 list some of the interview and survey questions, respectively, and map them to the subsequent research questions and topics of concern. These topics are included to support evaluation of the internal validity of the research.

In addition to addressing various components of the overarching research question, the interview protocol and the survey questionnaire were geared toward testing the hypothesis (stated earlier) regarding the *search* role of the Lebanese skilled diaspora and the emergence of transnational search networks. Multiple questions in both the interview protocol and the questionnaire investigated the *search* function of diaspora individuals

and networks and functions such as bridging, connecting, and augmenting home country institutions with capabilities and opportunities abroad. Table 9 describes how the search concept was operationalized in the interview protocol and the questionnaire.

Table 6. *Interview and Survey Topics as They Relate to the Literature*

Interview topic / *Survey topic (italics)*	**Anchor in the literature**
Perception: General sentiment *Perceptions of working environment in CO*	▪ Kuznetsov (2006). Argentinean diaspora interviews / surveys: impact of diaspora; linkages to CO: experience of diaspora's collaboration with CO; *general sentiment, attitudes, opinions regarding the CO's strengths and weaknesses* ▪ Kuznetsov (2013). Argentinean / Mexican diaspora survey: (a) main characteristics; (b) involvement in knowledge networks; (c) areas of collaboration with institutions and colleagues in CO; (d) engagement with private and public organizations in CO; (e) incentives sought to engage in joint projects. ▪ Wadhwa et al. (2011). Survey focus: (1) Why did entrepreneurs return from the U.S. to India and China? What are their perceptions of the entrepreneurial climate in their COs? (3) *What are the advantages and disadvantages of working in India and China over working in the U.S.?* (4) Did they maintain transnational ties to the U.S. upon return?
Linkages / contributions to CO	▪ Seguin et al. (2006a, p. 1602). Interviews with scientific diaspora individuals focused on: (1) "*linkages to the CO*," (2) "barriers experienced or expected when forming linkages to the CO," (3) "interest in participating in S&T capacity-building through an organized mechanism" ▪ Kuznetsov (2006, 2013). Edited volumes investigated linkages to home country: experience of diaspora's collaboration with the CO; involvement in knowledge networks; engagement with private and public organizations in CO
Barriers experienced	▪ UNDP (2010) report *Removing Barriers*. The notion of barriers is often used to discuss barriers to movement. This research is not concerned with physical movement but with transmission of knowledge, expertise, skills from diaspora individuals and returnees to the CO institutions. Barriers are institutional and contextual impediments that slow or obstruct the flow of knowledge and reintegration of these individuals. ▪ Seguin et al. (2006a, p. 1602). "Barriers experienced or expected when forming linkages to the CO"
Perceived contributions / impact *Main impacts of high-skilled returnees on respective Lebanese institutions*	▪ Kuznetsov (2006, 2013). Impact of diaspora high achievers ▪ Kuznetsov (2013). Russian returnees survey: "What is the main impact those returnees have on respective Russia institutions?"
Interest in participating in organized mechanism that facilitates knowledge transfer to the CO *Maintaining transnational ties to the U.S. upon return*	▪ Seguin et al. (2006a, p. 1602). "Interest in participating in S&T capacity building through an organized mechanism" ▪ Kuznetsov (2013, p. 186). "Willingness to collaborate in business development and policy formulation in their [COS], and their interest in being part of specific projects in their fields of expertise." ▪ Wadhwa et al. (2011). "Do they maintain transnational ties to the U.S. upon return?
Facilitative interventions or policies for reintegration / contribution to economic growth *Facilitative conditions*	▪ Kuznetsov (2013). Survey of Russian returnees focused on: (1) What do typical success stories of returning brain drain look like? How many are they? What are their main drivers? What is the main impact those returnees have on respective Russia institutions? (2) What degree of "professional comfort" of returnees (self-perceptions)? How sustainable is their return? (3) What barriers are "easy to remove" for re-integration? (4) What differences in perceptions among main professional groups of returnees: private vs. public sector/academia?
Motivations for return	▪ Kuznetsov (2013) and Wadhwa et al (2011). Motivations for return

Note. CO = country of origin or home country

Table 7. *Mapping Interview Topics and Questions to Research Questions*

Interview topic as it relates to research questions	Subsequent interview question & probe
Perception: General sentiment	How do you feel about working directly with someone from your CO who might benefit from your knowledge, experience, or network? What are your perspectives of the effectiveness of existing initiatives? Can you share stories about successful, and not so successful, experiences (failures)? Probe: Are you aware of other initiatives in the making?
Patterns, dynamics, linkages, and perceived contributions to the home country	Are you a member of an organized diaspora network (or a professional association) with linkages to the CO? Probes: What network? How did it happen that you joined? At what level? Describe the network's activities and mission. If you are not a member, why not? Are you, or have you ever been, actively engaged in projects or collaborations in or with the CO? Probes: How would you describe your engagement? What are the reasons for your engagement? How do you describe your contributions, if any, to the CO? Were they mainly direct or indirect contributions? Probe: What do you think is the most important or valuable contribution of someone like you to the CO?
CO conditions	Did the country condition matter for your contributions? Did the country's political and economic situation interfere with or affect your engagements and contributions? Probe: Do you think if things get better at home, more people like you would want to engage and contribute? The contrary? Or, is it not related?
Navigating the collaboration challenge	Please describe your experience building linkages (with other diaspora members and with counterparts) in the CO? Have you identified an institutional partner in the CO to connect with? Probes: Did you encounter problems or barriers when establishing these linkages? If yes, what was your experience dealing with them?
Facilitative interventions or policies	In general, what would you identify as the main impediment to knowledge transfer or connecting to the CO? (Impediments on the diaspora side, the CO-receiving side/home institutions, or due to the absence of an intermediary platform or institution) Probes: Can you identify facilitative interventions or policies? Can you point out potential roles of specific institutions in leading these interventions? In your view, how can a hypothetical diaspora program be most effective? Probe: Can you suggest some models?

Table 8. *Mapping Survey Topics and Questions to Research Questions*

Survey topics as they relate to research questions	Subsequent survey question
Motivations for return	How important were the following factors in your decision to return to Lebanon? How long do you plan to remain in Lebanon?
Conditions and working environment in CO	Before you moved to Lebanon, what were your expectations regarding jobs or business opportunities? After you moved to Lebanon, did your perceptions change with respect to the prospects of building a career or a business in Lebanon? To what degree are these factors favorable or unfavorable for a professional career or starting/running a business in Lebanon? (operating cost, employee wages, tax regimes, access to market, skilled labor, funding, infrastructure, security and political stability, government support, administrative issues, labor market regulations, work environment and professional ethics, salaries, managerial style within the organization, professional recognition)
Characteristics of transnational ties	Before returning, were you part or a member of a professional diaspora network abroad? In a typical year, how often do you maintain contact with individuals and organizations abroad? (Former colleagues, family/friends, educational organization, professional organization, diaspora organization, other kinds of networks) In a typical year, how often do you reach out to individuals/organizations abroad to seek information on job opportunities, business funding opportunities, business partners, technical/scientific information, market information, other kinds of information? When was the last time you exchanged information with individuals/organizations abroad?
Perceived impacts / contributions of high-skilled returnees	Which of the following contributions have you made since you returned to Lebanon? What is the one most important contribution?
Facilitating and leveraging contributions	Have your contributions been assisted or enhanced by programs or initiatives that target citizens of your CO living abroad? Do you perceive any role for the government or international organizations or institutions in enhancing or facilitating these contributions? Explain what kind of role you perceive for the government or international organization/institutions in enhancing or facilitating contributions from diaspora returnees.

Note. CO = country of origin or home country

Table 9. *Operationalizing the Diaspora Search Function in Interview and Survey*

Diaspora *search* function: Bridging, connecting, augmenting home country institutions with capabilities and opportunities abroad at both the individual and the institutionalized diaspora network levels	
Related topic / question: Interview	*Linkages*. Description of linkages among the professional diaspora community and with the home country provided evidence of search activities; description of the activities and engagements also illuminated the search dimension: whether the individual has identified or partnered with an institutional partner in the home country *Contributions*. Description of indirect contributions such as mentorship and advisory, and providing and facilitating access, referrals, and connections to individuals, networks, or finances *Institutionalized search network*. Description of the networks' activities and initiatives as they relate to the search function
Related topic / question: Survey	*Transnational ties* section. Type and frequency of interactions with different individuals and institutions abroad, including diaspora networks *Impact section*. Identifying indirect impacts such as mentoring and advising, providing and facilitating beneficial connections to individuals and business networks abroad, access to foreign finances, access to new markets abroad

V. Ethical Considerations

To ensure that the research was ethical, the researcher used informed consent (Holloway, 1997). Specifically, before each interview and after explaining its content, the participant was asked to sign an informed consent form (Appendix A). Based on Bailey (1996), the participants' informed consent included:

- That they are participating in a research study
- Research purpose, risk, and benefits
- Research procedures
- Voluntary nature of research participation
- Subject's (informant's) right to stop the research at any time

- Procedures used to protect confidentiality

Similarly, a disclaimer paragraph in the first section of the survey summarized the purpose of the study, the voluntary nature of research participation, and the confidentiality of the participants' information:

Disclaimer:

It is important to note that this dissertation research was part of a bigger research project by the World Bank Middle East and North Africa (MENA) Integration team. The project included several research components that focused on both the Lebanese and Tunisian diasporas and their contributions to the economic development of their countries of origin. The researcher was solely responsible for designing and conducting the components focused on the Lebanese diaspora; specifically the elite interviews and the returnees' survey. Nevertheless, for consistency and to allow for cross-country comparative analysis, the same survey was used to collect data from the Tunisian returnees (see Appendix D). The first question of the survey determined the country of origin of the respondent (*Q1. Choose your country of origin*). Therefore, only those who choose Lebanon constituted the sample of survey responses relevant to this dissertation research.

The World Bank team was fully aware that the research data were to constitute the components of this dissertation and the researcher had full permission to use the collected data in this context. Therefore, this dissertation research, its findings, and policy recommendations reflect only the researcher's views and not that of the World Bank Group.

Chapter 4. Interview Results and Analysis

I. Introduction

This chapter reviews the data collected through the qualitative interviews with Lebanese diaspora high achievers in the United States. The chapter also includes supplementary data from the professional diaspora networks' websites, charters, emails, and reports to provide additional evidence that could explain, verify, or exemplify the claims made during the interviews. The focus of this chapter is to present the interview data aligned with the research questions and subquestions discussed in the methodology chapter. That is, it examines the data that describe the patterns and dynamics of Lebanese high-skilled diaspora direct and indirect contributions to the home country, as well as the policies and facilitative interventions that could leverage and enhance those contributions.

The data collected from the interviews revealed several important findings. The interviewees were active in immigrant-specific professional networks and other professional communities. They maintained a high level of interaction with their peers in the diaspora networks, as well as with their peers in the home country. More importantly, the research found that professional diaspora networks were geared toward institutionalizing their search function in bridging, connecting, and augmenting home country institutions and organizations. These growing and institutionalized search activities have not yet materialized in tangible, impactful projects. Interviewees had negative perceptions of most home country public institutions. Few exceptions emerged as "islands of effectiveness" in an otherwise dysfunctional system. In instances where a viable and trusted home county partner was unavailable, the networks collaboratively implanted their own counterpart institution at home. For example, Lebanon for

Entrepreneurs (LFE), a nascent diaspora network-led initiative, was designated to serve as a Lebanon satellite entity with a search and connecting role.

Most importantly, the overwhelming evidence from the interviews revealed that the home country government and government policies and initiatives played no significant role in forging or facilitating these connections and collaborations. Finally, the data collected appeared to support the research hypothesis on the predictive value of the diaspora search function as it relates to its direct contributions and its independence from specific government policies. This chapter presents some anecdotal stories and quotations from the interviews and related supplementary resources to support these claims.

II. Interview Sample.

In conducting the qualitative interviews with prominent Lebanese diaspora members, a key objective was to obtain an adequate representation of the prominent Lebanese-American entrepreneurial and executive-level professionals working in the United States. These participants would serve as the main source of data regarding the status of collaboration and activities with the home country. Most of the interviews were administered in June 2014 in two geographical locations: the San Francisco Bay Area and NYC. In the period preceding the interviews, the researcher worked closely with gatekeepers within the two most prominent and active Lebanese-American professional diaspora networks, LebNet and LIFE to (a) identify individuals who fit the criteria set forth for this research, (b) extend invitations for participation, and (c) schedule the interviews. From an initial list of about 35 identified candidates (25 from LebNet and 10 from LIFE) that fit the criteria set forth, 18 (51%) individuals were interviewed. Only

two interviewees were female, despite a concentrated effort to include more Lebanese-American female executives and entrepreneurs in the sample.

The interviewees hailed from a range of sectors and industries such as high-tech, IT, telecom services and infrastructure, and energy, as well as from the financial and VC sectors. The interviewees were all senior level professionals, as per the criteria set forth in the methodology chapter. The interviewees' titles indicated the diversity and the seniority of their responsibilities. Some interviewees' titles were:

- Founder / entrepreneur
- Chief Operating Officer (CEO)
- President
- Vice President (VP) / Executive Vice President (VP)
- VC Partner
- Managing Member
- Senior Advisor

Collectively, and roughly estimated, the 18 individuals interviewed managed and oversaw thousands of high-skilled employees and tens of billions of dollars worth of business globally in the high-tech and finance industries. Thus, the sample generated valuable data from a high-impact, influential group of Lebanese-American executives and entrepreneurs.

Interview Conduct

The interviews started by explaining the purpose and the details of the research project. The researcher then addressed the terms of confidentiality and asked the interviewees to sign the consent form (Appendix A). The interviews then followed the semi-structured interview protocol (Appendix B). Most interviews were conducted over a 40-50 minute period. The majority of the interviews were conducted in person at the participant's office or residence; one was conducted over the phone. Interviews were recorded using a professional interview-recording software called *PearNotes* (except one,

based on the interviewee's request). The interviews were then transcribed and saved on a secure hard drive. As per the consent form, there will be no name attribution throughout this chapter. However, interviews will be quoted verbatim as necessary to support the researcher's arguments.

III. Summary of Method and Interview Data Analysis

Method

To draw valid conclusions in the present study, the research generated themes and subthemes from the codes assigned to the chunks of data transcribed (Saldana, 2009). The researcher followed a process of reading and transcribing notes, listening to audio-recordings, and coding each transcript. Then the researcher reviewed the responses question by question and by the overarching and sub research questions. Finally, the researcher identified the emerging themes and subthemes as the ones which were the most prevalent across the different interviews. Thus to say, the identified themes and subthemes represent the experiences and perceptions common to the majority of the interviews and exclude anomalies.

Table 10 summarizes the first level or process of narrative analysis using codes for chunks of data transcribed. These codes were used to summarize and assign meaning to chunks of narrative data (Miles & Huberman, 1994). The table groups codes of similar meaning or theme and presents the frequency of their emergence throughout the eighteen interview transcripts. Displaying the frequency of the codes' emergence is meant to substantiate the consequent arguments made throughout the analysis[14]. However, low frequencies of emergence do not necessarily indicate low importance of the codes or

[14] The reader could refer back to table 10 for the frequency of the emergence of the codes discussed throughout the analysis.

themes as some of the interviewees are more knowledgeable, engaged, or influential than the others. Thus, the researcher paid extra attention to the analysis of interviews with the networks' founders and active members and throughout the analysis assigned more weight to the emerging codes from their transcripts. These transcripts were also used to extract the descriptive content such as that of the personas of the members, the patterns of their engagements, and the development of the different networks' activities.

Table 10. *Selected Emerging Codes and the Frequency of Emergence*

Interview topic	**Codes** *(codes of relevant meanings are grouped)*	**Frequency of emergence**
Patterns and dynamics of engagements	• "started engaging after achieving professional success", "visibility within community"	12
	• "built trust", "merit-based professional reputation"	11
	• "ad hoc relationships developed into formal activities", "informal engagements at first"	11
Personas, motivations for joining networks	• "different personas of diaspora network members", "heterogeneity of members", "members join for different reasons"	10
	• "seeking connections"	11
	• "recruiting talent"	8
	• "connecting to home"	8
Linkages	• "networking within the diaspora community came before connecting to home country institutions", "empowering the diaspora community as the primary motive/concern"	12
	• "helping the home country as the primary motive"	5
	• "ad hoc connections to home country institutions"	6
	• "visits Lebanon regularly"	14
	• "connected to the political/economic elite at home"	7
Perceived contributions	• "personal/individual philanthropy"	11
	• "corporate philanthropy"	4
	• "network philanthropy"	3
	• "corporate training/immersion"	4
	• "direct investment", "real estate investment", "outsourcing investment", "VC investment"	9
	• "lobbying for Lebanon", "promoting Lebanon"	7
	• "mentorship", "advisory"	11
	• "providing access"	7
	• "referral"	11
Perception of home country institutions	• "ineffective government institutions", "negative perception of government institutions",	18
	• "BDL as model/effective institution"	16
	• "Kafalat as model/effective institution"	15
	• "Private Banks as reliable partners"	9
	• "VCs as reliable partners"	8
	• "Universities not living up to expectations"	8
	• "Berytech as reliable partner"	7

Perceived barriers	• "legal and regulatory framework", "intellectual property rights", "bankruptcy laws", "labor laws", "investment structures"	16
	• "infrastructure", "broadband"	15
	• "academia/universities", "K-12 education", "university-industry collaboration"	12
	• "doing-business environment", "corruption", "uncompetitive behavior"	12
	• "access to finance", "seed-level financing"	8
	• "small/constrained market", "cross-border trade/customs hurdles", "electronic payment gateways"	6

Table 11 represents the second level of analysis and summarizes the emerging themes and subthemes from the interviews based on the first level of narrative analysis. Throughout the interview analysis process, the researcher reviewed the transcripts and highlighted significant statements and sentences to use as quotes that provided an understanding of the participants' experiences. Next, these significant statements were incorporated to support the emerging themes and subthemes, which will be discussed in this chapter as per the different sections of the interview protocol.

Table 11. *Emerging Interview Themes and Subthemes*

Theme	Subtheme
Status of linkages	
	Connections within the professional diaspora community: Networks
	Personas of network members and motivation for joining
	Helping the diaspora community versus helping Lebanon
	Connections with the home country
Perceived contributions	
	Direct contributions
	Indirect contributions: The *search* function
	Networks' activities
	Cooperation among networks
Perception of the home country environment	
	Home country institutions
	Impact of country conditions on diaspora contributions and engagement
	Barriers to contributions
	Interviewees' policy recommendations

A. Status of Linkages

The interviews investigated the status of linkages among the professional diaspora community and with peers and institutions in Lebanon. The interviews showed that there was a natural progression from establishing linkages among the diaspora professional community. Over time, and as trust and bonds were developed and solidified, these linkages extended to the home country to connect, contribute, and drive reforms. This section discusses the linkages established within the diaspora community first because they naturally preceded the linkages reestablished with the home country through different venues.

Connections within the professional diaspora community: Networks.

The interviews investigated the patterns of diaspora individuals' participation in professional networks. The basic assumption was that involvement in knowledge

networks builds higher social capital, which may potentially reduce the cost of access to resources such as money, talent, contacts, and knowledge and help build trust among diaspora members and the home country (Kuznetsov, 2013). The interviews revealed a common pattern that described the interviewees' involvement with their professional diaspora community and the emergence of the professional diaspora networks. The majority of the interviewees started engaging with their peers only after they achieved a *considerable level of professional success*[15]. Early-career professionals had less time and resources to contribute because they were focused on building their careers. As they grew professionally, they began establishing linkages with their peers within their diaspora community and in their home country to reconnect and possibly contribute. As one interviewee explained, "I was invited to LebNet only when I became more visible in the Bay Area" (Interview Participant 11, June 18, 2014).

Interviews also revealed that relationships usually started *informally and ad hoc, then over time developed into formal activities*. One interviewee described the progression of the relationships:

> Part of it is that the way we live here, there is a constant question: Why are we not doing something? We should organize; and what is the impact of it? In the early years, this was exactly what we wanted to do, in addition to having meals with your friends, drinking Arak, and chit-chatting. (Interview Participant 9, June 17, 2014).

Many interviewees emphasized the importance of *trust, merit-based professional reputation, and success* in establishing professional linkages with the diaspora community. For example, "To be able to integrate and tap into diaspora, you want to show aptitude, merit, and trust. You need to know people very well so that they know you are trustworthy. Asking for trust based on merit takes a lot of time," explained one

[15] See table 10 for the frequency of the emergence of the associated codes discussed in this chapter.

participant (Interview Participant 3, June 15, 2014). Box 1 briefly describes the relevant Arab professional diaspora networks covered in this research.

Box 1. Arab Professional Diaspora Networks in the United States

Realizing that collective action is much more impactful than individual initiatives, Arab diaspora entrepreneurs and executives have organized into professional networks to harness their network access and resources. In the United States, networks such as LebNet, LIFE, and TechWadi have been relentlessly active in establishing linkages among Arab and Lebanese diaspora entrepreneurs, executives, and financiers, and with their home countries.

LebNet is a 15-year-old network of about 300 Lebanese-American entrepreneurs and high-tech executives and professionals, mainly in the San Francisco Bay Area. LebNet's main objective is to build a solid network among its members, nurture the younger generation of tech professionals, and support the growing IT sector in Lebanon and the Arab world.
Link: http://www.lebnet.us/

The Lebanese International Finance Executives (LIFE), established in 2009, includes Lebanese finance executives from around the world, concentrated mainly in NYC and London. LIFE is a "platform to channel the influence of Lebanese finance executives worldwide in order to establish stronger bonds, nurture the next generation and promote Lebanon."
Link: http://www.lifelebanon.com/

TechWadi, established in 2004**,** is a leading Pan-Arab nonprofit organization "building bridges between Silicon Valley and the Arab world." TechWadi's members include a wide community of top Arab-American technology professionals in Silicon Valley and North America. TechWadi has evolved into a global platform for collaboration with members and events spanning across the world.
Link: http://techwadi.org/

Personas of network members and motivations for joining.

The interviews revealed different individual diaspora personas, a heterogeneity reflecting the motivations and resources of these individuals. The different personas were described by one interviewee:

> There are those driving the bus, there are people who are less involved but always available—if you ask them for anything they will absolutely do it, there are people who just attend the meeting, more of a networking option, might be looking for something or for jobs, they might be looking for specific skills like they need, like a CFO for a start-up company, and then there are people who have decided that the value is not worth to get out of it and will show up every now and then, and there are some who just don't want to be involved at all. (Interview Participant 9, June 17, 2014)

On the individual level, most interviewees explained their altruistic motivation for engaging with their community through the notion of giving back. Most found real *joy* and satisfaction in giving back; it made them feel good. "Sharing the knowledge at this point of my career is the biggest joy of my life…I love to help people be successful" (Interview Participant 3, June 15, 2014).

Some interviewees expressed *willingness to give more, if proper and more transparent venues were to be instituted*. Participants regarded existing channels and some home country institutions as mistrustful and corrupt. One participant, an active philanthropist, complained,

> We have no confidence in Lebanon because we do not know where contributions will go. I don't know where to start. I would have liked to help The Lebanese University, but don't know who to go to; ready to provide mentoring, but don't know where to go. (Interview Participant 2, June 14, 2014).

Most participants believed that collective and organized efforts would have more impactful results compared with individual and ad hoc activities and, as a result, joined professional networks. Nevertheless, the interviewees argued that members' *motivations*

for joining the networks varied considerably. Throughout the interviews, three levels of motivations for joining the networks emerged. These motivations were not mutually exclusive, and network members joined for a combination of these reasons:

- Some network members joined because they wanted to be connected professionally and saw the value of the network in advancing their careers, businesses, and status;
- Some members used the network to identify and recruit talent to their ventures. As an example, one email sent to network members solicited a "CTO [chief technology officer]/Tech co-founder" to help work with the founder of a *peer-to-peer* mobile application start-up (LebNet, email to listserv, July 24, 2014);
- The remaining members were more motivated by having access to a platform that offered connections to the home country. They joined because they wanted to participate in activities that could help their home country.

The different motivations were reflected in the networks' stated missions and objectives, as well as in their activities. The networks tried to appease the different categories of members. For example, LIFE's stated vision as "a platform to channel the influence of Lebanese finance executives in order to establish stronger bonds, nurture the next generation, and promote Lebanon" (LIFE, 2014), had three pillars, as shown in Figure 3:

- *Connect* Lebanese finance executives worldwide through networking, fundraising, business promotion, and matching expertise

- *Nurture* the younger generation of Lebanese financiers through mentorship, training, scholarships, and job opportunities
- *Promote* Lebanon as a financial marketplace, raise its profile, and act as a sounding board for its government and institutions

The *Connect* function catered to members in the first and second motivation categories. The *Promote* function served those in the third category, and the *Nurture* function appeased almost all categories.

Similarly, LebNet's mission had almost identical pillars: "Network among members; nurture the next generation; connect with Lebanon technology sector" (LebNet, 2014).

Figure 3. LIFE's vision of engagements and activities
Source: LIFE (2014)

Helping the diaspora community versus helping Lebanon.

Most interviewees explained that the *motivation to forge connections within the professional diaspora community preceded the motivation to build a collaboration platform* with the home country. Relations usually started on a personal, social level; then, members became more active and participatory as they built trust. With trust and maturity, their interest in connecting and helping the home country became more feasible and desirable.

At the outset, the original idea behind both LebNet and LIFE was to connect Lebanese executives of similar professional affiliations and to transfer knowledge to the younger generation through mentoring. With time, when members became more active and built trust, the constituents for building a platform to connect and give back to Lebanon emerged. "The biggest polarizing factor, in positive way, for people is not the platform here but helping and giving back to Lebanon," explained one of the networks' founders (Interview Participant 8, June 16, 2014). Nevertheless, there was evidence of implicit polarization between the two missions of the networks: helping the professional diaspora community versus helping Lebanon. "There is that dilemma between helping Lebanon and helping the diaspora community," said one participant (Interview Participant 13, June 20, 2014). Nevertheless, participants who were network members seemed to highly value the collective effort of their organizations, whether helping the diaspora community or supporting the home country. "Everything is a hundred to a thousand times more effective when you do it through a network," one serial entrepreneur explained. "Techwadi and LebNet have helped me help other people. Without them, most of the activities with Silicon Valley and the Middle East would be a few percent of their current value" (Interview Participant 3, June 15, 2014).

Connections with the home country.

Membership in professional networks and the situation in the home country are determining factors in establishing and sustaining linkages with the home county. Using the cases of Russia, Mexico, and Argentina, Kuznetsov (2013) showed that linkages to home countries are sensitive to diaspora individuals' memberships in international professional associations, as well as to the business climate and quality of institutions in the home country. Knowing that most interviewees were members in professional diaspora networks, this research assumed that these individuals maintained some sort of connection or linkage to Lebanese institutions.

The interviews revealed that the majority of participants had strong connections with their home country through family, friends, and social relationships, as well as through professional channels. They visited Lebanon regularly and were well aware of the political and economic environment there. Several were members of Lebanon's university alumni networks and had served on the boards of educational institutions. It is important to note that most interviewees were born in Lebanon and emigrated sometime during Lebanon's civil war.[16] Thus, they constituted a specific cohort of first-generation immigrants as compared with second- or third-generation Lebanese-American immigrants.

Given their stature, several interviewees were highly connected with the political and economic elites of the country and have been occasionally consulted to provide advice or services. As an example, both LebNet and LIFE members were consulted by Lebanon's central bank, *Banque Du Liban* (BDL) regarding the design and implementation of BDL Circular 331 (discussed in later sections). Despite their cynicism

[16.] Lebanon's civil war started in 1975 and ended in 1990.

regarding the political realities in Lebanon, they maintained a sense of identity with, pride in, and belonging to the country in general.

B. Perceived Contributions

It is important to note that interviewees' contributions discussed in this research are presented as perceived by the diaspora individuals. They were not evaluated empirically, but rather anecdotally. In general, it would be almost impossible to evaluate the contributions and impact of diaspora individuals and networks (and returnees) on the home country development due to the difficulty of disentangling this causal relationship from the many other economic agents and factors impacting the country's economy. However, it has been documented that skilled diasporas and their networks are more impactful than other agents. For instance, Kuznetsov (2013) presented evidence that diaspora networks have core competitive advantage over international consultants, international development organizations, and nongovernmental organizations (NGOs). The advantages are not limited to better education levels or access to international knowledge networks, but also extend to stronger motivation, commitment for a longer time horizon, and better understanding of local specificities and constraints and, thus, better coalition-building capabilities.

The interview protocol distinguished between two types of diaspora contributions: direct and indirect, defined as the *search function*. The value of the search function can be captured in its predictive capacity for future tangible projects and activities, whether they be investments or reforms enacted in the home country. The distinction resonated with most interviewees, who gave more prevalence to the former and equivocal value to

the latter. The following sections present the associated data along this distinction and discuss the networks' activities and intracooperation.

Direct contributions.

Most interviewees were engaged in some form of philanthropy in the home country, usually educational scholarships. Several interviewees indicated that they were covering educational expenses for needy families and students. "We are paying scholarships for three students in Lebanon. We do this directly with them. We know their parents on a personal level," one interviewee explained (Interview Participant 2, June 14, 2014). More generally, interviewees also donated to universities, alumni networks, and social NGOs active in Lebanon.

Professional networks also engaged in philanthropy in the home country. As an example, LIFE's Nurture Committee administered a scholarship fund that offered about 30 new educational scholarships a year. In 2015, LIFE was supporting about 50 students. The fund supported Lebanese students (or students of Lebanese descent) who had the financial need and academic excellence to pursue undergraduate or postgraduate degrees related to finance at highly ranked universities and business schools in Lebanon and abroad. Each scholarship amounted to a maximum of $12,000 a year. In total, LIFE spent about $1.15 million on more than 80 Lebanese students between 2009 and 2014 (LIFE, email to author, March 5, 2015).

In addition to personal philanthropic contributions, interviewees leveraged corporate contributions in times of crisis in the home country. Two interviewees leveraged their institutions' funds to donate recovery money for Lebanon after the 2006 war. These executives allocated large sums of money under the umbrella of a U.S. administration initiative—the Partnership for Lebanon (PFL)—to assist the country

rebuild its devastated infrastructure after the war (Box 2). One CEO interviewee explained:

> As CEO, I made a point of donating some funds to Lebanese reconstruction after the 2006 war, although my company was not part of the organizational set up by President Bush for the reconstruction of Lebanon's infrastructure. I contributed in that context; part of what the U.S. was trying to do for Lebanon, as well as my affinity to my country. (Interview Participant 12, June 18, 2014)

Box 2. The PFL Initiative

The PFL was a partnering initiative joining the efforts of five U.S. companies, namely Cisco Systems, Intel Corporation, Ghafari Inc., Occidental Petroleum, and Microsoft. Ghafari and Occidental Petroleum were headed by Lebanese-Americans who were born and raised in Lebanon. After the Israel War in 2006, U.S. President George W. Bush called on leaders of the five U.S. companies—John Chambers (Cisco), Craig Barrett (Intel), Yousif Ghafari (Ghafari), Dr. Ray Irani (Occidental), and Steve Ballmer (Microsoft)—to help the relief and reconstruction efforts in Lebanon. In January 2007, following the Paris III donor conference uniting the PFL leaders, Barrett, along with the vice-presidents of Microsoft and Cisco, met with Lebanese Prime Minister Fuad Seniora to discuss the key objectives of the initiative. The PFL came to include five workstreams: emergency relief/response; job creation/private sector revival; developing ICT infrastructure; workforce training and education; and developing connected communities. Considerable progress was achieved on all five fronts in a span of three years.

More information on PFL achievements available at:
http://www.cisco.com/assets/csr/pdf/PFL_Exec_Brief.pdf

Under the PFL umbrella, one interviewed executive was able to institute a temporary internship program at his technology-hardware corporation in California. The program hosted around 100 Lebanese engineering students as paid interns for six months at a time. The interns were obliged to return to the home country after finishing their assignment. About 90% of the interns were able to find full-time jobs after the internship. Similarly, LIFE administered an internship program that assisted Lebanese students in obtaining internships with international firms in the finance and banking industries.

In another example, in the aftermath of the 2006 war, one interviewee—a senior advisor at an international donor institution—heavily lobbied and convened donors from major international organizations to establish a sizable emergency relief grant. The interview explained:

> I arranged a video conferences with the Lebanese officials and senior management here [at the interviewee's institution] and then I thought the best thing would be to go directly to the president [of the institution], and we went to an emergency meeting at night, I spoke to every member and nobody said no, and we decided to give Lebanon a sizable relief package. It wasn't happening until I intervened. (Interview Participant 18, October 28, 2014)

Several interviewees had been involved in investments in Lebanon and the region overall. In addition to the traditional real estate investments popular among diasporans, the interviewees were involved in other productive forms of investments. As an example, some entrepreneurs interviewed had outsourced their software development work to Lebanon, as well as to Jordan and Tunisia. Despite their confidence in the home country service providers' quality of work, the outsourcing activities were limited to software development. Given the high uncertainties, these entrepreneurs did not invest in hardware or manufacturing activities; instead, they mainly chose Asia for such services. "It's impossible to even consider putting a factory in MENA," explained one serial

entrepreneur, noting that the political, security, and economic situations were major impediments to such investments. "The 2006 bombing [referring to the July 2006 Lebanon-Israel War] is a reminder of how things can turn bad in that part of the world," he explained (Interview Participant 3, June 15, 2014). In addition to high uncertainty, cumbersome customs were also identified as a major barrier when it comes to hardware investments in Lebanon.

Along these lines, there was a belief that Lebanon could be particularly well suited for the development of a software-as-a-service (SaaS) industry.[17] The industry could service the region with specific opportunity in Arabizing applications (such as Salesforce, SuccessFactors, and NetSuite) that had already succeeded in developed markets. The changing nature of the region's entrepreneurship sector may bode well for outside investment. "If developers save work in the cloud, it's fine. If we have a factory that gets destroyed, then we lose everything," said the entrepreneur (Interview Participant 3, June 15, 2014).

The interviewees, especially those who were active investors in U.S. start-ups, were pessimistic about the availability of VC investment opportunities in home country start-ups and ventures. These investors believed that Lebanese start-ups and entrepreneurs were less likely to receive U.S. VC funding due to the relatively small market and U.S. investors' unfamiliarity with the Arab market. As an alternative, they recommended relocating to the United Sates to benefit from its knowledge, financial resources, and market access. As a Lebanese or Middle Eastern start-up, "it's highly unlikely that you'll get money from U.S. VCs. What you can do is move your

[17] Software-as-a-service (SaaS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.

headquarters or senior leadership team to the U.S. and try to come out as a U.S. company," explained one interviewee involved with VC investments (Interview Participant 9, June 17, 2014).

One interviewee had established an early VC fund in Lebanon before returning to the United States. This diaspora entrepreneur ran the $50 million VC fund in Beirut for three years as part of a larger regional fund based in Dubai. However, he had been able to deploy only $10 million, distributed among a small number of investment deals. The unstable economic and security conditions at the time proved detrimental to the fund's operations, which eventually reallocated its operations regionally. The interviewee returned to the United States and is currently a partner in another Lebanon-based VC fund. The unfolding of this diaspora VC endeavor as a returnee hindered by a worsening political and security situation signifies the plight of many diaspora high achievers who attempted to defy the odds and overcome investment hurdles at home.

Indirect contributions: The *search* function.

In addition to the direct contributions discussed above, the interviewed Lebanese diaspora high achievers were engaged in an array of search activities of equivalent significance. The importance of search activities, such as mentorship, advising, access, and referrals, is manifested in the ensuing projects, initiatives, and transactions. In other words, active engagement of diaspora individuals and networks in search activities is expected to result, in the long run, in a series of tangible projects and transactions, such as investments in mentored or advised start-ups, firm growth and expansion, and enhanced firm profitability through a possible exit or buyout. Importantly, failed projects and transactions are also plausible and expected outcomes of these search activities.

Consequently, the focus on investigating search activities is not a purpose in itself, but serves as an indicator of possible future tangible transactions and projects.

Interviewees identified mentorship and access as the two main contributions of diaspora networks and individuals that preceded any talk about venture investment. Most interviewees agreed that although institutional investments might not be readily available, "advice, mentorship, and the connections" were much more accessible and equally valuable (Interview Participant 9, June 17, 2014). Many interviewees were engaged in some form of mentorship or advisory activity with a home country start-up or entrepreneur. Several executives interviewed had served as advisors and mentors to start-ups in their sectors or fields. As an example, a Lebanese hardware start-up currently had four diaspora executives on its advisory board. Moreover, the networks also tried to organize mentorship activities for their members while visiting Lebanon. To illustrate, one email sent to the network members stated:

> The summer is upon us and many of you will be visiting Lebanon and it would be a great opportunity to arrange for meetings with entrepreneurs there around your availability and with the help of our partners in Lebanon. If you're planning to be there and open to spend a couple of hours sharing some of your expertise with Lebanese entrepreneurs or be a panelist let us know by replying to [email address]. (LebNet, email to listserv, June 20, 2014)

LebNet's recent experimentation with a new model of venture adoption called the *LebNet Mentorship Program* presents another relevant example of mentorship activities. The program is based on the premise, "For a company to make it to the next level, it needs different people with different expertise to jump in, to benefit from collective experiences" (Interview Participant 5, June 15, 2014). LebNet's Mentorship Program assigns three or four LebNet executives or entrepreneurs to serve as an advisory committee to a promising Lebanese or global start-up founded by Lebanese entrepreneurs.

The committee coaches and works closely with the start-up to develop its product, market, and team for a successful exit.

LebNet looked for Lebanese firms that had already consumed the resources available through the local support system, to augment with valuable Silicon Valley expertise. The experiment is currently underway with *Instabeat*, an innovative hardware start-up that incorporates technology in swimming goggles to monitor heartbeat rate. The program assigned the company founder an advisory committee that included four high-level diaspora executives, including two CEOs of IT hardware firms. It is too early to determine the impact of these institutionalized coaching activities but, as one interviewee behind the program put it, "The ultimate goal is a success story" (Interview Participant 5, June 15, 2014).

The LebNet Mentorship Program perfectly represents the search function, which ultimately aims to materialize in tangible projects and contribution. The program adopted promising Lebanese firms and provided the needed technical, managerial, market, and Silicon Valley expertise and connections in hopes that these ventures will grow to score an exit or buyout in the long run. Very few of the adopted ventures may eventually achieve the desired outcome; the others will fail or maintain their size or profitability level. On a basic level, the program follows the VC investment model. That is, on average, only one of ten VC-backed firms scores an exit or a buyout. As more Lebanese-American executives adopt Lebanese start-ups, as *Instabeat* currently has, it becomes more likely that one of these start-ups will attract impactful financing and talent to grow into a regional or global success story.

Despite the promises of LebNet's Mentorship Program, the interviewees highlighted the disconnect or mismatch of expectations between what they believe they can offer and what home country entrepreneurs, start-ups, and institutions usually solicit. They argued that they have more to offer to home country start-ups and entrepreneurs on the soft- and intangible-level compared with the financial-investment level. By focusing on the financial aspects, home country start-ups, entrepreneurs, and academic institutions missed out on the more valuable resources available through their diaspora. One interviewee captured this disconnect:

> They perceive the diaspora as rich people that are willing to write checks. But anything softer than that, such as mentoring, access, connections, etc., they don't show interest. Academia and start-ups come here and think they will get money. But, they never did, because there is a complete mismatch of expectations. (Interview Participant 8, June 16, 2014)

The interviewees explained that many of the Lebanese entrepreneurs and start-ups that habitually visit the United States (especially Silicon Valley) expecting to raise funds for their ventures from diaspora venture capitalists leave empty handed. One VC interviewee explained,

> People come to me for two reasons: They want advice on how to get money from U.S. VCs, which I think is extremely hard, or they want introductions to other people who can help them in developing the market or the product, or to people who could become advisors. (Interview Participant 9, June 17, 2014)

Interview Participant 9 (June 17, 2014) explained that raising money from U.S. VCs is difficult for two reasons. First, U.S. VCs focus on conventional U.S. innovation hubs such as the Bay Area and NYC and rarely invest in foreign markets. Second, U.S. VCs are not only unfamiliar with the Arab market, but also "they usually have negative connotations, which are reinforced by what they read in the news every day," the

interviewee added. Thus, contributions such as connections, mentorship, and advising appeared to be more accessible and feasible.

Lebanese diaspora professional networks provided connection and access serves to home country institutions when needed. A perfect representation of the access function was LIFE's services and connection to the BDL and the Lebanese private banking system in general. By providing access and connections to key personnel in major international financial institutions when needed, LIFE provided search services to the Lebanese financial system. Also, BDL and several Lebanese banks were annual financial contributors to the network and they valued the access services in return. One LIFE member explained:

> The only government link we have is to BDL. They are a major donor, they donate $20 to $100K a year to encourage us to grow. In return, they enjoy access. If they needed access to the risk manager or complaint officer at a major international bank, we can help them. (Interview Participant 17, June 21, 2014)

The interviewees highlighted an important caveat related to the sensitivity of referrals in the search function. Several interviewees gave examples of referrals and connections that went wrong and therefore stressed the importance of due diligence and vetting before risking someone's reputation. One Silicon Valley interviewee explained,

> In the Valley, there is a nest of trust and credibility. I would not refer anyone unless I am sure that they are credible; it is a small network and reputation travels very far. Vetting takes a huge time and investment, but it is a must. (Interview Participant 6, June 16, 2014)

Consequently, referrals in the search function appear to be more prevalent among the diaspora community and members of the networks compared with those of home country entrepreneurs soliciting access and connections. The reasons highlighted related to trust and credibility factors. Some interviewees even refused to provide introductions

or referral services because they did not trust the level of competence of the firms at hand. Thus, they stressed the importance of vetting firms first to ensure that the connector is not risking her or his reputation.

Table 12 summarizes the different direct and indirect contributions as perceived by the interviewees with the relevant examples.

Network activities.

Interviewees who were members of networks were usually involved in different kinds of activities that implemented the three-legged visions of their organizations: networking, nurturing the younger generation, and promoting and connecting with the home country. Members participated in the different events organized and held by the networks, such as

- *Speakers events,* where CEOs, firm founders, and executives gave talks about their start-ups, companies, organizations, businesses, industries, or niche areas of expertise;
- *Thematic talks,* where industry individuals discussed trends, such as a talk organized by LebNet on "Online Market Places/Peer-to-Peer Sharing." These events were usually held at restaurants, rented venues, or at the premises of one of the member firms or organizations;

Table 12. *Summary of Interviewees' Contributions to the Home Country and Relevant Examples*

Contribution *(frequency*)*	**Example**
Direct contribution	
Personal philanthropy *(11)*	▪ Educational scholarships and personal donations to universities, alumni networks, and NGOs active in Lebanon
Network philanthropy *(3)*	▪ LIFE's scholarship fund and program
Corporate philanthropy *(4)*	▪ Leveraging corporate funds to donate recovery money after the 2006 war under the PFL umbrella, a U.S. administration initiative
Corporate immersion / training *(4)*	▪ Internship program (under the PFL umbrella) that hosted about 100 Lebanese students at a U.S. technology firm ▪ LIFE's internship program
Direct investment *(9)*	▪ Traditional real estate investments ▪ Outsourcing investments (mainly ICT, software development) ▪ VC investments (as partners in existing funds)
Lobbying and promoting *(7)*	▪ Lobbying board members, decision makers, and stakeholders of institutions and corporations to leverage funding, assistance, and political interventions in the interest of Lebanon
Indirect contributions: Search function	
Mentorship and advisory *(11)*	▪ Diaspora individuals serving as mentors and advisors for start-ups and entrepreneurs at home (on ad hoc basis) ▪ One-on-one mentorship sessions by diaspora individuals while visiting Lebanon (arranged by the networks) ▪ LebNet's mentorship program: Institutionalized venture adoption model where executives serve on advisory boards of Lebanese start-ups
Access *(7)*	▪ LIFE's access and connection services to the BDL and private banking system
Referral *(11)*	▪ Valuable referrals (through talent, financing, market / customer identification) among the diaspora community and members of the networks, as well as with home country start-ups and entrepreneurs (when trust and credibility are secured) ▪ Connecting Lebanese start-ups and entrepreneurs when visiting Silicon Valley

* The frequency of emergence of the relevant codes throughout the interviews

- *Networking and connecting events*, an important part of the networks' activities, is hosting start-ups and entrepreneurs from Lebanon or the Arab world for networking and connecting events. In an email sent to LebNet members inviting them to participate in a mentorship event that brought together entrepreneurs from the Arab world and CEOs and executives from Silicon Valley, the invitation stated,

> Whether you add value within an hour by sharing a contact, opening a door, offering a piece of advice, or over a longer period of time by volunteering as a mentor, you will have made a difference!...Prominent investors from the MENA region, high tech CEOs and executives from Silicon Valley, as well as skillful legal advisers will be speaking about the challenges of business creation as well as mentoring young entrepreneurs visiting the Bay Area. (LebNet, email to listserv, September 9, 2014)

  This event was organized by LebNet and sponsored by a Lebanese VC fund. Additionally, these networks usually hold events that host visiting public officials and help facilitate their meetings.

- *Mentorship activities*, for which members are usually asked to work with younger diaspora or home country entrepreneurs through one-on-one meetings, Skype calls, or even serving as board members and advisors.
- *Fundraising activities*, in which members are usually asked annually for tax-deductable donations that would support the networks' different operations and activities.

Cooperation among networks.

Recently, professional diaspora networks in the United States started cooperating on specific activities in both the United States and the home country. In cooperation with LebNet and Social and Economic Action for Lebanon (SEAL), LIFE launched the

ambitious LFE initiative to accelerate the development of the technology start-up ecosystem in Lebanon. Headquartered in Beirut, LFE was the first attempt of its kind to create an anchor in the home country that could work on behalf of the Lebanese professional expatriate community to nurture an investment-hospitable environment and lobby for reforms.

LebNet, LIFE, and SEAL have committed about half a million dollars to fund LFE operations. To date, LFE has generated a list of focus companies (11 firms as of January 2014) that are eligible for consideration by the LebNet Mentorship Program, established six committees to address specific gaps in the innovation ecosystem, and launched an accelerator called SpEED@BDD.[18] The *focus* companies are ones that have consumed local resources and are well positioned to benefit from the expertise and connections of diaspora individuals.

The six committees established by LFE represent different "pain spots" (areas of needed intervention to spur an IT sector in Lebanon). Over 30 individual local practitioners from both the public and the private sectors were assigned to these committees, working with the Managing Director of LFE to drive the organization's reform agenda. (The Managing Director of LFE is a high-skilled U.S. returnee.) The committees are:

- Legal
- Academia
- Entrepreneurs' assistance
- IT sectors
- Access to capital
- Infrastructure improvement

18. An accelerator takes equity in externally developed ideas in return for small amounts of capital and mentorship (generally truncated into a three- or four-month program at the end of which the start-ups graduate). In comparison, an incubator brings in an external management team to manage an idea that had been developed internally.

Additionally, since 2005 the Massachusetts Institute of Technology (MIT) Enterprise Forum of the Pan Arab Region (one of 28 worldwide chapters of the MIT Enterprise Forum Global) has organized the MIT Enterprise Forum Arab Startup Competition (the Competition), which draws about 5,000 applications a year from 21 Arab countries. The Forum recently established a presence in Silicon Valley and is collaborating closely with TechWadi and LebNet to bridge the long-missing gap between MENA start-ups and entrepreneurs and their compatriots in Silicon Valley.

In June 2014, the Competition brought about 30 Arab entrepreneurs to San Francisco, where they connected with diaspora mentors and investors and participated in site visits to selected IT firms, incubators, and accelerators. Many mentors and presenters at the event were LebNet and TechWadi members. One interviewee who was a presenter at the forum explained that, "as important as networking could be, it needs to be translated more into one-on-one coaching….That's what we at LebNet are currently piloting—an adoption model," referring to the LebNet mentorship program (Interview Participant 4, June 15, 2014).

C. Perception of the Home Country Environment

This section discusses the emerging subthemes related to the interviewees' perceptions of the home country environment and institutions, the impact of the country conditions on their engagement and contributions, the factors constituting barriers to their contributions, and their policy recommendations to ameliorate these barriers.

Home country institutions.

Interviewees were asked about their perception of the home country institutions and their respective working or collaborative relations. Perception toward the home

government and its institutions as a potential partner for international business is an important indicator for home country collaboration (Kuznetsov, 2013). Generally, the participants acknowledged the limitations to their reform efforts in Lebanon. They linked the effectiveness of their efforts to the dedication and professionalism of the counterpart institutions in Lebanon. One participant explained,

> How much good we [as networks] could do in Lebanon is directly proportional to the paralysis of our home institutions. Our strength comes from members outside Lebanon, so it is up to the Lebanese in Lebanon to either help or not get in our way. (Interview Participant 16, June 20, 2014)

As expected, the government and its institutions (except a few) were not perceived as effective partners. On the contrary, they were described with animosity as roadblocks to the country's progress. The participants saw their activities and efforts as a threat to the status quo inflicted by an ineffective government. "The Lebanese government doesn't want to hear from us," explained Interview Participant 13 (June 20, 2014). On the other hand, interviewees mentioned several private home institutions, such as banks, VCs, universities, incubators, and accelerators, as natural partners.

Interviewees regarded BDL and Kafalat, the public-private loan guarantee agency, as reliable and exceptional public sector partners. The interviewees perceived the 2013 BDL Circular 331 as a step in the right direction to free up much-needed investments in start-ups. The Circular allocated about $400 million to guarantee up to 75% of Lebanese commercial banks' equity investments in small- and medium-size enterprises (SMEs), incubators, accelerators, and funds (Banque Du Liban, 2014). Nevertheless, some interviewees believed that the Circular 331 operations should also be open to foreign investors, to access capital in return for opening an office in the country, and were lobbying BDL to do just that—in vain, so far. "They ask us to do things, we do. But when

we do ask them, things stop. We want laws to defend our interests," complained Interview Participant 14 (June 20, 2014). However, participants trusted Kafalat as a viable partner and regarded positively its support programs in the start-up and entrepreneurial space.

Lebanese banks appear to be the natural partners of LIFE in the home country. For instance, LIFE has a "Lebanese Committee" that consists of next-generation finance executives, and the CEOs of most local Lebanese banks are members of the committee. "They are the eyes and ears of LIFE in Lebanon," explained Interview Participant 17 (June 21, 2014).

Interviewees had good relationships with VC funds in Lebanon and regarded them as reliable partners. One interviewee had established a VC fund in Lebanon and ran its investments for three years before moving back to the United States. The interviewee remained an active partner in the Lebanese VC fund. He conducted its investments in the United States and served as its Silicon Valley extension by connecting and guiding Lebanese VC-backed start-ups and entrepreneurs through the Valley's complex, innovation ecosystem. Further, several cooperative activities were conducted in partnership with the home country VC funds that naturally saw value in having close relations with diaspora high achievers.

Lebanese universities have been the main engine for skills development and migration. Several interviewees completed their undergraduate degrees in Lebanon. Although academic institutions were believed to be a natural partner for diaspora collaboration, interviewees blamed them for not living up to that responsibility and, instead, focusing solely on teaching. The main criticism was that Lebanese universities

predominantly perceived the diaspora as a source of financial contribution. Thus, no real partnership with universities has yet emerged—except for academic scholarships provided by diaspora individuals and networks. In addition, interviewees mentioned several other institutions as occasional partners, such as the incubators *Berytech* and *Endeavor*, a nonprofit, high-impact entrepreneurship organization.

Significantly (and as a result of the lack of reliable home partners), LFE, a diaspora-implanted home partner, was expected to fill in the gap. Rather than depending on an existing home country partner, LIFE, in partnership with LebNet and SEAL, opted to create the professional expatriate community's own satellite office in Lebanon. Thus, LFE could be considered the only home partner with a purpose in common with that of the professional diaspora community and trying to make a local-level impact through its policy reform agenda and newly established accelerator.

BDL and Kafalat as local "islands of effectiveness."

It is important to note that despite interviewees' overwhelmingly negative perceptions of government institutions as unreliable partners, BDL and Kafalat emerged as exceptions. Several factors could explain this anomaly. Historically, BDL has been behind the strong Lebanese financial and banking sector that benefited from banking secrecy laws and the Gulf oil revenue boom in the 1950s and 1960s. Further, BDL has been a politically neutral institution compared with other heavily politicized government bodies. Even during Lebanon's 17 years of civil war, warring factions spared BDL—both the institution and its physical building with its immense gold reserves. After the end of the war and during the reconstruction period in the 1990s, BDL was credited with sound monitory policies that stabilized the currency and sustained growth. Moreover, BDL was

credited with weathering the 2008 global financial crisis with minimal loses, as well as avoiding a real estate bubble burst. In short, BDL was generally perceived as a capable and functioning public institution not only by the diaspora community, but also by local and regional stakeholders and the public.

Technically, BDL and Kafalat share several characteristics that could explain their stature as trusted institutions. Both institutions have well-defined missions and functions that require high levels of technical and subject matter expertise and competence, specifically in macroeconomic, monetary, and financial policies. This, consequently, is reflected in capable and qualified staff and personnel. In addition, given their financial functions, both institutions are subject to rigorous audits (usually required by international public and private partners), which mitigate the risk of corruption to some extent. Most importantly, both BDL and Kafalat are headed by visionary and widely respected and trusted leaders regionally, nationally, and within international circles.

The BDL's executive authority and its ability to issue circulars without seeking parliamentarian approval make it an autonomous and agile institution. This autonomy helps insulate it from the risks of the frequent political gridlocks that could easily shut down legislative sessions for long periods. Thus, diaspora networks are more likely to "get things done" working with institutions of a similar bureaucratic nature. The recently establish Capital Market Authority (CMA) is also a good candidate for collaboration, given its governance mandate over the capital markets.

Most recently, BDL Circular 331 established precedence by facilitating and providing guarantees for local private banks to invest in risk capital directly or through

other investment vehicles. The Circular made available much-needed capital for investments in the growing entrepreneurial and technology scene. The freed liquidity could even be invested abroad in start-ups that have a Lebanese CEO, CTO, or co-founder, on the condition of setting up shop back in Lebanon. Specifically, this provision implicitly intends to lure Lebanese diaspora technologists and entrepreneurs to set up offices in Lebanon and hire local talent while raising investment capital from local funds. One Lebanese VC fund already benefited from the Circular's facilitation and invested in three U.S. start-ups, which in turn created six high-value jobs back in Lebanon (VC investor, email to author, March 1, 2015). Other local VC funds are still learning how to invest in U.S.-based start-ups, but the BDL Circular and its manifestation promises high-value job creation and knowledge transfer. Significantly, both LebNet and LIFE were instrumental in providing technical support to BDL in designing and instituting the Circular.

On the other hand, Kafalat recently established a SME Innovation Fund (iSME Fund) providing equity investments to innovative Lebanese start-ups that have already secured funding from approved institutional investors (local angels, VCs, accelerators). The iSME Fund was established with the assistance of the Word Bank's $30 million Supporting Innovation in SMEs Loan Project, in coordination with BDL and the Lebanese Ministry of Finance, and should start operations by mid-2015. The Fund's individual equity investments must be approved by a high-level and independent investment committee, which would include diaspora practitioners and experienced investors.[19]

19. Kafalat was still constructing the Investment Committee at the time this dissertation was prepared in March 2015.

The factors and characteristics discussed above, in addition to the significance of the projects and initiatives undertaken, establish BDL and Kafalat as local "islands of effectiveness" in the Lebanese public sector—local institutions capable of sustaining viable and productive collaborations with the professional diaspora community. The important policy question is how to expand these small, isolated pockets or segments within an otherwise dysfunctional public system. How could these experiences be export to the public Lebanese University, the National Council for Scientific Research (CNRS), the Investment Development Authority of Lebanon (IDAL), the CMA, and other public institutions that could benefit from the expertise and access of the Lebanese knowledge diaspora? This research attempts to address this question in the final chapter. Table 13 summarizes the home country potential partner institutions as perceived by the interviewees.

Table 13. *Home Country Potential Partner Institutions, as Perceived by Interviewees*

Home country institution *(frequency*)*	**Perception regarding partnership or collaboration**
Government institutions (the State) *(18)*	• Generally, government institutions were negatively perceived as dysfunctional, corrupt, inefficient, and unreliable collaborators • Diaspora efforts and activities were perceived as a threat to the status quo inflicted by an ineffective government
BDL (Lebanese central bank) *(16)*	• Generally perceived as a reliable and exceptional public sector partner • A close partner to LIFE and active institution in promoting Lebanon as an innovation and entrepreneurial hub (Circular 331 as an example)
Kafalat (Lebanon's loan guarantee agency) *(15)*	• A public-private institution partially owned by private banks is regarded as a competent and trusted partner • Kafalat's collaborative partnerships with the several international and regional institutions (European Commission, World Bank, IFC, and others) attest to its credibility and professionalism
Private banks *(9)*	• Close LIFE partners and collaborators • LIFE's Lebanese Committee, consisting of the Lebanese bank executives, is considered "The eyes and ears of LIFE in Lebanon"
VC funds *(8)*	• Regarded as natural partners and are already engaged in collaborative activities with the networks • Some diaspora high achievers are partners in the VC funds
Universities *(8)*	• Although perceived as a natural partner for collaboration, universities are not living up to the responsibility and no real partnerships with the networks have yet emerged • Universities usually approach the diaspora for fundraising only. • University alumni networks are either nonexistent or dormant (except for a few) ▪ Universities are perceived as teaching universities only, disconnected from industry and local job market needs ▪ The Lebanese public university system is the least connected to the diaspora, given its public nature and scarce resources and is often subjugated to political influences
Incubators, accelerators, entrepreneurship NGOs *(10)*	▪ Berytech, the country's first incubator, is a close partner with the networks ▪ SpEED@BDD, an accelerator spun off recently by LFE, in partnership with local VC funds, is expected to collaborate closely with LebNet's Mentorship Program ▪ Endeavor, a high-impact entrepreneurship NGO, is a trusted partner in the entrepreneurial area
LFE *(4)*	▪ Diaspora-implanted home country institution established by LIFE, SEAL, and LebNet ▪ The only home country institution that has a common purpose with that of the professional diaspora community ▪ Expected to act on behalf of the professional diaspora community and lobby for an agreed-upon policy and reform agenda ▪ The home country partner for LebNet's Mentorship Program, behind the accelerator SpEED@BDD

* The frequency of emergence of the relevant codes throughout the interviews

Impact of country conditions on diaspora contributions and engagement

The usually unhealthy home country conditions appear to have limited impact on the magnitude of diaspora individuals and networks' contributions and activities. In exceptional times of crisis and war, the home country's dire conditions galvanized and motivated individuals and networks to provide assistance and flex their influence in support.

For networks specifically, home country conditions had limited impact, given that the networks focused inward more. The primary reason for their existence was to link the professional community, whereas establishing connections with the home country usually came as a secondary objective. Additionally, the networks realized and implicitly accepted unwelcoming conditions in the home country. When asked about the impact of Lebanon's unstable political and economic conditions on the network's activities, one interviewee explained,

> There are things for us to do [despite that]. We have been living in some state of war for the last 50, 60 years. We have never known an environment when there weren't a lot of problems; it isn't an event that has a beginning and an end. In Lebanon, we don't have this luxury and we are not going to stop our work waiting for a good period. (Interview Participant 16, June 20, 2014)

For the interviewees, Lebanon's unstable conditions matter the most because of their detrimental impact on the local innovation ecosystem. Interviewees saw a business- and innovation-friendly environment as the utopian scenario for optimal diaspora engagement and contribution. Nevertheless, the interviewees believed that a success story would probably come from a defiant company that offers a global—not a local or regional—product or solution. *Mobinet*, a telecom software provider based in Tripoli, a city in North Lebanon with frequent security challenges, was highlighted as an example

of a successful firm that went global despite the odds. Mobinet offers a global solution and has offices and clients in Europe and Africa. "Country conditions don't really matter in this kind of business," explained Interview Participant 7 (June 16, 2014).

Comparing Lebanon to neighboring Jordan was a recurring theme throughout the interviews. The relative political stability and functioning infrastructure in Jordan were compared to the fragile, dysfunctional public institutions and infrastructure (especially public utilities) in Lebanon. The interviewees credited Jordan's functioning public institutions and infrastructure for the faster growing technology and investment scene in Amman compared to Beirut.

There was a realization among the interviewees that government policy, especially as it relates to stability and functioning infrastructure, are fundamental for the emergence of a functioning innovation system. At the same time, they were cynical and pessimistic that the government would take up that role any time soon. This pessimism was best captured by one an interviewee discussing the wish list of reforms in the home country "We prioritized broadband last [on the list of required reforms]. We don't want to waste our lobbying efforts. It is a lost cause, the ministry decided that on themselves" (Interview Participant 7, June 16, 2014).

Barriers to contributions.

The interviewees perceived the barriers to their contributions to the home country as a subset of overall barriers facing the growth of an entrepreneurial, high-tech sector in Lebanon. In other words, the interviewees assumed that a healthy growth environment in Lebanon would organically and naturally incorporate the country's professional diaspora, whereas the opposite would exclude and hinder their contributions.

A 2012 report commissioned by the LIFE Promote Committee detailed barriers to creating a tech hub in Lebanon and recommended solutions to overcome them. The report stated that although no specific formula has worked elsewhere, a series of steps could be taken to create a favorable environment for start-ups. The main barriers identified derived primarily from "the lack of experienced players (entrepreneurs, investors and lawyers, accountants, etc.), the very low risk appetite of the financial community, and the negative role played by the government at this time (poor infrastructure, out-of-touch laws and regulations, corruption)" (Bejjani, 2012, p. 4). The findings and issues identified in the LIFE report echoed across the interviews. The immediate barriers highlighted by the interviewees could be divided into the following categories in order of importance:

Legal and regulatory framework. The regulatory framework was highlighted as the most impeding barrier. "Legal is on top of the list. We want to prioritize legal first because an investor wants to feel safe" (Interview Participant 7, June 16, 2014). This category included burdensome regulations related to:

- Setting up and dissolving companies (bankruptcy laws). Interviewees argued that without bankruptcy law overhaul, investors—including those from the diaspora—will not consider setting up shop in Lebanon
- White-collar worker friendly laws. Labor laws that are more appropriate for white-collar businesses (immigration and work-permit rules friendly to the tech industry)
- VC-friendly investment structures (limited liability, preferred control provisions)
- Intellectual property protection regimes
- Tax relief for R&D and job training

Basic infrastructure services. In addition to unreliable basic infrastructure services such as electric power, water, and roads, the broadband infrastructure was perceived as inadequate in terms of bandwidth, reliability, and ubiquity. One interviewee explained, "Needless to say, the security situation is not helpful. But a smaller problem that could be easily addressed is the internet connection. You can't promote any industry if you don't have reliable and high speed internet" (Interview Participant 15, June 20, 2014).

Role of academic institutions. As discussed earlier, universities were perceived as not well integrated into the innovation ecosystem. "Universities in Lebanon have an important role to play in entrepreneurship, but they don't fully understand what their role is," explained Interview Participant 1 (June 14, 2014). There was a wide realization that academic institutions are a major pillar in a functioning innovation ecosystem. "Our academic institutions are not playing their role. Here, Silicon Valley is built on the shoulders of Stanford and Berkeley" (Interview Participant 5, June 15, 2014). Specifically, Lebanon's weak academia-industry connection was highlighted as a major deficiency. One interviewee explained, "Academia and industry need to have a solid connection. That type of connection is nonexistent in Lebanon" (Interview Participant 5, June 15, 2014).

Doing-business environment. Most interviewees complained about ever-worsening and pervasive government corruption, using terms such as *racketeering, peddling, nepotism, kickbacks,* and *preferential treatment of connected incumbent firms*. Interviewees also complained about unprofessionalism and sometimes-incompetent work ethics among the home country workforce. One interviewee stated, "Quality of work and

work ethics are deteriorating. I can generalize by saying they [home country tech workers] are losing their edge" (Interview Participant 10, June 17, 2014).

Access to finance. Interviewees highlighted a constrained financial environment, especially when it came to seed and early stage start-up financing. Furthermore, they believed the VC and business angel community was still immature and could benefit from external mentorship. "VCs in the country have to be mentored by VCs from outside the country and raised to the level where they can create mentorship plans for the local community," explained an interviewee associated with one of the VCs (Interview Participant 12, June 18, 2014).

Constrained markets. The participants argued that, for growth prospects, the local market is very small and the regional market is far from being a unified market due to cross-border trade and commerce hurdles and incompatible payment gateways. Nevertheless, they acknowledged that this was more of a regional than a local problem, but with implications for growth in the local tech industry.

Interviewees' policy recommendations.

The interviewees came to an almost ubiquitous set of policy recommendations, which were reiterated without much controversy. The recommended policies aligned with the identified barriers to growth in the entrepreneurial and tech sectors in Lebanon and, therefore, attempted to ameliorate the immediate or most pressing barriers to growth. Most of the recommended policies required government action and intervention to improve the business environment and release constraints. As an example, two of the three main constraints identified by the LIFE report required government intervention and policy overhaul: (1) infrastructure and (2) regulatory and legal environments. The report concluded:

> Extensive conversations with entrepreneurs, investors, and other affiliated parties in Lebanon help paint a picture of opportunity that is greatly constrained by a poor infrastructure, an unsupportive regulatory and legal environment, and the lack of experienced players who "have done it before." (Bejjani, 2012, p. 21)

Thus, the subsequent policy recommendations focused mainly on improving the regulatory environment and the business infrastructure. Table 14 articulates some of the policy actions the participants recommended, as they correspond to the identified constraints.

Table 14. *Constraints and Associated Policy Actions, as Recommended by Interviewees*

Constraint ***(frequency*)***	**Recommended policy action**
Legal and regulatory framework *(16)*	Overhaul and institution of laws related to: - Setting up and dissolving companies (bankruptcy laws) - Labor: immigration and work-permit rules friendly to the tech industry - VC-friendly investment structures: limited liability, preferred control provisions - Intellectual property protection regimes - Public and private R&D investments: incentives and tax relief for private R&D and job training
Basic infrastructure services *(15)*	Pubic investments in basic utilities, especially broadband infrastructure; improving bandwidth, reliability, and ubiquity
Role of academic institutions *(12)*	Public investment in K-12 and higher education, with focus on STEM and entrepreneurial education Incentive structures for improving academia-industry collaboration
Doing-business environment *(12)*	Tough regulations to clamp down on corruption in public and private institutions Regulations to ensure firms' competitive behavior
Access to finance *(8)*	Free up public moneys to support entrepreneurial activities, especially at the early stage seed level (mini-grants, proof-of-concept grants)
Constrained markets *(6)*	Address cross-border trade and commerce hurdles (customs on hardware) and laws related to payment gateways

* The frequency of emergence of the relevant codes throughout the interviews

Along these lines, the LIFE report devised a three-track action plan to help create conducive environment over the next "five to ten years." The action plan focuses on three main areas: (1) government policies improving the legal and regulatory environment; (2) start-up formation pipeline, boosting the number of start-ups; and (3) creating a sustainable venture capital (VC) industry (Bejjani, 2012). Despite the pleas for intervention and reform, the interviewees urged the government to do its part and let the private sector take up the rest. In other words, the overwhelming majority of the participants believed that if the government addressed the regulatory and infrastructure constraints, the private sector—on its own—would be capable of addressing its deficiencies. "Government should simply stay out. Make it simple and stay away from the process," stressed Interview Participant 6 (June 16, 2014).

The plea for action was accompanied by implicit blame of the local constituents, who were perceived as complacent—if not actual partners—in the government's inaction. The LIFE report concluded, "The passive attitude of the local population essentially absolves the state from its responsibilities; (since everyone believes there is no need for a government in order for the country to function, the government is happy to oblige)" (Bejjani, 2012, p. 14).

IV. Links to the Literature Analysis

The themes and subthemes that emerged from the interviews generally supported the literature covered in this dissertation. The Lebanese expatriates interviewed reflected the heterogeneity of small diasporas of highly-skilled expatriates as described by Kuznetsov (2006). The interviewees, as well as their peers within the diaspora community, seemed to fall into the different role categories Kuzentsov described, such as first movers,

development partners, mentors, dealmakers, investors, donors, and community organizers. The heterogeneity was also apparent in the role of "high achievers," who have high status and credibility in driving and executing initiatives, compared with the mediocre roles of successful mid-career, young and aspiring talented, or frustrated professionals.

Along these lines, the development of the Lebanese professional community in the United States reflected the "collective credibility" emergence Kuzentsov (2013) described. The high achievers interviewed did not emerge overnight; they climbed the career ladder from junior level positions after finishing their degrees. When a critical mass of Lebanese American high achievers formed in the high-tech and financial sectors in Silicon Valley and NYC consecutively, "a collective credibility" emerged and inspired the younger generation of junior professionals through mentorship.

Membership in international professional associations, as well as the business climate and quality of institutions in the home country, is an important factor in determining diaspora individuals' linkages to the home countries (Kuznetsov, 2013). Kuznetsov argued that involvement in knowledge networks builds higher social capital, which may potentially reduce the cost of access to resources (money, talent, contacts, and knowledge) and help build trust among diaspora members and the home country. These factors and conditions surfaced in the interviewees' discussions and descriptions of their involvement and participation in the Lebanese diaspora professional networks and ensuing activities. Interviewees considered that their participation in the networks' activities enabled their contributions to the home country. At the same time, they criticized the dysfunctional home country institutions and the unwelcoming business environment for the lack of more impactful engagement. Their involvement with the

networks depended on their accumulated professional credibility and trust built within the diaspora community.

The interviewees' motivations for participating in diaspora-organized activities also reflected the findings of Seguin et al. (2006a). The interviewees were driven by their moral responsibility to "give back" to their home countries and they felt positively about working with their community. Similarly, the participants felt their home country counterparts did not fully appreciated their potential, and the lack of appropriate infrastructure at home often obstructed their initiatives.

Perception of the home government as a potential partner for international business is an important indicator for home country collaboration. In addition, positive perceptions regarding home country work and entrepreneurial environment could play an important role in accelerating return migration (Saxenian, 2002, 2006a, 2006b; Wadhwa et al., 2011). The Lebanese diaspora interviewees expressed reservations toward the home country's weak and unreliable institutions. They had low expectations of their government and did not foresee permanent return as an option in the near future. Their reservations echoed the documented sentiments of other diasporas. As an example, Kuznetsov (2006) found that the Argentinean diaspora was highly motivated to help the home country but that this motivation had not translated into tangible projects because the home institutions were weak. Argentinean diaspora members have blamed the individual ambitions of politicians and turf battles among government agencies for consistently blocking efforts to involve the diaspora in developmental projects. Kuznetsov (2013) reported that only 8.7% of Russian diaspora survey respondents believed the government was receptive to change and open for collaboration, compared

with 50% of the respondents who believed in the changeability of universities, academic institutions, and private firms.

Lebanese interviewees perceived home institutions as intrinsically corrupt, deeply politicized, and incompetent to act as a trusted partner on developmental projects. Despite these negative perceptions, key diaspora individuals in positions of influence were able to remedy institutional weaknesses in Lebanon and institute successful collaborative projects (such as with the establishment of LFE). Kuznetsov (2006) highlighted this agility when discussing the heterogeneity within (small) skilled diasporas and specifically the instrumental role of "high achievers" in overcoming the conventional hurdles of weak home institutions.

Lebanese professional diaspora networks appeared to be gearing toward nurturing an investment-attractive ICT sector in Lebanon following the documented examples of several other countries. Scholars have claimed that skilled diasporas were crucial in the formation of powerful export-based ICT industries and their supporting clusters in Taiwan, China, and India (Kuznetsov & Sabel, 2006; Saxenian, 2006a, 2006b). Lebanese-American executives and financiers appeared to be well positioned and capable of steering foreign investments into the country (granted their conditions are met) where they know well the language, culture, and business networks. These investments would be of particular importance in sending confidence signals to other non-diasporan foreign investors. Nevertheless, the case of Lebanon is still a work in progress, and the portfolio of gestating projects holds promise for tangible investments in the future.

The transformation of Lebanese professional diaspora networks into active and institutionalized search networks reflected a documented trend in the literature.

Kuznetsov and Sabel (2006) discussed the diaspora's new role as search networks that bridge capabilities at home and opportunities abroad, and they highlighted its transformation from hierarchy to search networks. Saxenian (2002) showed that many Taiwanese and Indian firms in Silicon Valley actively promoted global networks that linked the United States (Silicon Valley, specifically) and the home country of the immigrant professionals. Lebanese diaspora networks started mainly as platforms for connecting diaspora professionals; then, over time transformed into search networks bridging home country business and talent capabilities with global opportunities. The tangible results of these institutionalized search activities have yet to materialize into significant investments or success stories. Nevertheless, the development of these search activities suggests promising breakthroughs in the near future.

The composition and activities of the Lebanese professional diaspora networks with the home country, as well as with each other, resemble the description of KNM that Phelps, et al. (2012) discussed. The KNM comprise the set of systems, institutions, social relations, networks, and infrastructures that enable the exchange of knowledge. The KNM provide services such as facilitating search, matching relevant counterparties, and evaluating business opportunities. The triangular relationship between LebNet in Silicon Valley, LIFE in NYC and globally, and LFE in Lebanon comprises institutions, social relationships, and virtual infrastructure that exchange knowledge, facilitate search and matching, and evaluate business opportunities. The LFE in Lebanon performs due diligence, while the networks search and match appropriate skills, knowledge, or resources from within their network and reach.

V. Findings and Conclusion

This chapter presented the interview data on Lebanese-American executives and entrepreneurs in line with the research questions and subquestions presented in the methodology section. Based on the data presented in this chapter, the research found the following:

The interviews revealed a natural progression of linkage building, starting from establishing linkages among the diaspora professional community. Over time, and as trust and bonds developed and solidified, the linkages extended to the home country to connect, contribute, and drive reforms. The majority of interviewees started engaging with their peers only after they achieved a considerable level of professional success. Their engagement with networks started informally and ad hoc then, over time, developed into formal and institutionalized activities. Still, the dominant focus of the professional diaspora networks was connecting and helping the professional community in the United States; helping the home country was a secondary objective and still a work in progress.

The interviews revealed the expected heterogeneity among individual members of diaspora networks, reflecting the motivations, capabilities, and resources of these individuals. Although most interviewees were driven by an altruistic motivation to "give back," their motivations for joining the networks varied considerably. This variation was reflected in the inclusive networks' mission statements, which focused on connecting with the diaspora community, nurturing the younger generation, and connecting with the home country. Nevertheless, the motivation to forge connections within the professional diaspora community preceded and overshadowed the motivation

to build a collaboration platform with the home country. These two objectives usually competed for resources and priority on members' agendas.

The interviews revealed that there was usually a disconnect or mismatch in expectations between what the diaspora high achievers believed they could offer and what home country entrepreneurs, start-ups, and institutions were soliciting. Diaspora high achievers believed the best they could offer was knowledge and access. Nevertheless, home country institutions always asked them for money instead.

Interviewees were engaged in different forms of direct contributions to the home country, but their contributions fell short of realizing their optimal potential. Interviewees' contributions were represented in several forms, including philanthropic (personal and corporate), corporate immersion and training, direct investment and outsourcing, and lobbying and promoting. These contributions, despite their significance, still fell short of representing entrapped potentials and withheld opportunities, due to the unwelcoming investment, regulatory, and infrastructure environment at home. The case of Lebanon, when compared with other countries such as Ireland, India, or Taiwan, still failed to exhibit the characteristics of transformational and impactful engagement of the skilled diaspora in the home country development process.

Lebanese diaspora professional networks and individuals were engaged in several forms of indirect contributions to the home country. Their search activities included mentorship, advisory, access, and referral services to home country institutions and individuals, especially in the banking and, more recently, the growing technology sectors. These search activities, which started as ad hoc and personal, have recently been institutionalized through programs and initiatives such as LebNet's Mentorship Program

and various activities by the Lebanon-based and diaspora-backed LFE. This promising institutional development represented an ideal *bridging institution* capable of supporting a more intensive and sustainable Lebanon-diaspora high-value cooperation. Nevertheless, referrals related to the search function appeared to be more prevalent among the diaspora community and network members than among home country start-ups and entrepreneurs soliciting access and connections—mainly due trust and credibility issues.

Although promising, the Lebanese professional diaspora networks and individuals' search activities have not yet materialized in tangible projects. The active engagement of diaspora individuals and networks in search activities is expected to result, in the long run, in a series of tangible projects and transactions such as investments in the mentored or advised start-ups, firm growth and expansion, and enhanced firm profitability (through possible exit or buyout). The LebNet Mentorship Program is a perfect representation of the search function, which ultimately aims to materialize in a successfully mentored Lebanese start-up that scores a regional or global expansion. The networks' portfolio of gestating search projects suggested promising outcomes in the near future; failed projects are also part of the expected outcome.

Recently, **Lebanese-American professional diaspora networks started cooperating on specific activities both in the United States and in the home country**. The cooperation focused on (a) bridging the long-missing gap between Lebanese start-ups and entrepreneurs and their compatriots in Silicon Valley through activities in the United States and Lebanon and (b) establishing an outpost in the home country to lobby for reform on behalf of the professional diaspora community, primarily through the establishment of LFE. The LFE reform agenda, mentorship, and acceleration activities

were developed and implemented in close collaboration with LIFE and LebNet. Thus, LFE was designated to serve as the Lebanon satellite entity with a search and connecting role.

Interviewees acknowledged limitations to their reform efforts and linked the effectiveness of their efforts to the dedication and professionalism of the counterpart institutions in Lebanon. With few exceptions, they perceived most government institutions as ineffective partners. Nevertheless, the interviewees recognized that the Lebanese government is not homogenous and its overall inefficiency and unreliability do not permeate to all its agencies. The BDL and Kafalat, as examples, were singled out as reliable partners and entry points for business contacts within the government more often than other agencies. Due to the weak state apparatus, it was apparent that domestic actors have been even more significant in shaping relations with skilled diaspora than had been state agents or policies. That is, Lebanese banks, venture capitalists, and incubators appeared to be more active and engaged with the skilled diaspora than the government itself.

Despite interviewees' overwhelmingly negative perceptions of Lebanese government institutions as viable partners, BDL and Kafalat emerged as "islands of effectiveness." Several historic, functional, and technical factors could help explain this anomaly. Most importantly, the recent BDL Circular 331 and Kafalat's iSME Fund represented model initiatives that incorporate the skills, access, and networks of the Lebanese knowledge diaspora. The relevant policy challenge would be to leverage and expand these isolated small pockets or segments within an otherwise dysfunctional public system.

There was a realization among the interviewees that **government policies, especially as they relate to stability and functioning infrastructure, are fundamental for the emergence of a functioning innovation system**. At the same time, interviewees were cynical and pessimistic that their government would take up that role any time soon. Lebanon's outdated legal and regulatory framework and inadequate infrastructure were highlighted as the main impediments to growth of the high-tech sector in Lebanon. The interviewees recommended policies that align with identified barriers to growth of the entrepreneurial and tech sectors in Lebanon and attempt to ameliorate the immediate and most pressing barriers.

The usually unhealthy home country conditions appeared to have relatively limited impact on the magnitude and rate of skilled diaspora contributions and activities. Lebanon's unstable conditions mattered the most in terms of their detrimental impact on the local innovation ecosystem. The interviewees assumed that a healthy growth environment in Lebanon would organically and naturally incorporate the professional diaspora skills and resources, while the opposite underutilizes their contributions.

Chapter 5. Survey Results and Analysis

I. Introduction

This chapter reviews the data collected through the online survey targeting Lebanese high-skilled diaspora returnees. The main focus of this chapter is to present the survey data in accordance with the research questions and subquestions discussed in the methodology chapter. That is, this chapter examines the data that described the patterns and dynamics of Lebanese high-skilled diaspora's direct and indirect contribution to the home country, as well as related policies and facilitative interventions that could leverage and enhance those contributions.

Specifically, this chapter examines the data related to the high-skilled Lebanese diaspora's motivation to return to Lebanon, perception of the working and business environment at home, the characteristics of their jobs and businesses, their transnational ties with the United States and the other OECD countries from which they returned, and perceived impact on their country after return. The data collected by the survey indicated that Lebanese returnees shared characteristics common with typical diasporans. Specifically, they were mainly motivated to return by family and country ties; their return was rarely permanent; they negatively perceived the home country's working and business environment; they maintained strong and frequent transnational exchanges; they perceived their contributions positively on both the direct and search levels; and they were skeptical toward the role of their government in enhancing their contributions.

II. Sampling Procedure and Survey Respondent Demographics

In conducting the online survey, a key objective was to obtain a broad representation of high-skilled returnees to Lebanon to serve as the main source of data regarding their status, activities, and perceptions, and the impact of their contributions to the home country.

Similar to the high-achiever population discussed in the previous chapter, Lebanese diaspora returnees constituted a difficult population to identify and contact. No readily available database captured the names or contact details of such diaspora returnees. One approach utilized to reach these individuals was to target a range of host institutions in the home country, such as government bodies, universities and their alumni networks, industry associations, NGOs, incubators, accelerators, and entrepreneurship-related organizations. (An extensive list of the host organizations is included in Appendix C.) Points of contact within these organizations were identified and asked to distribute the survey to their members, constituents, or peers using snowball sampling. In addition, the researcher published articles about the survey on Wamda.com, a popular MENA-focused entrepreneurship media outlet, and invited readers who were diaspora returnees to take the survey.

Social media is a frequently used virtual snowball method to widely distribute online surveys (Baltar & Brunet, 2012; Bhutta, 2012). The researcher used social media sites such as Facebook, LinkedIn, and Twitter to distribute and advertize the survey. However, by definition, this approach is biased toward including only individuals who self-identify as returnees. No measures or provisions could have been enacted to verify the authenticity of the respondents' claims. Thus, the respondents will not be

representative of the broader population of Lebanese high-skilled returnees due to the self-selection bias.

Given that knowledge about the size, structure, and behavioral aspects of the Lebanese community of high-skilled returnees is scarce, it is important to recognize that the sample is not representative of the unknown general population of diaspora returnees and is likely biased toward more active respondents. Although not strictly representative, the sample nevertheless offers specific insights into the active part of the Lebanese high-skilled returnees, in terms of their motivations, perceptions, and engagements within the home country and with the OECD communities in which they resided.

Despite an initially small population of returnees, as well as budget and time limitations, the sample of high-skilled diaspora returnees who answered the survey questions provided adequate data needed for this analysis. Given the small sample of respondents, the analysis in this chapter includes not only returnees from the United States, but also those from other OECD countries. The assumption is that, generally, the education, work, and living experiences of Lebanese immigrants in the United States were relatively similar to experiences in other OECD countries when compared to those in Lebanon. The common values, development levels, and economic activities shared among high-skilled workers in OECD countries allowed the researcher to group returnees from these countries into one category. Inclusion non-United States returnee respondents in the survey analysis could arguably be considered a threat to the internal validity of this case research. Nevertheless, the research adhered to and satisfied the main purpose of the survey—to focus on high-skilled returnees' experiences, perceptions, and contributions to their home country.

The survey was administered for 10 weeks between August and mid-October 2014. Throughout this period, the researcher actively promoted the survey through social media, targeted e-mails, and personal contacts while physically present in Lebanon for about three weeks. The survey was provided as an encrypted link via *SurveyMonkey*. To further improve sample representativeness through the data collection period, the researcher used repeated sampling to target underrepresented groups such as entrepreneurs, academics, and employees. For example, to obtain additional responses from academics, the survey was emailed to most university colleges and departments and directly to professors.

Of the 297 individuals who started the survey, 155 (52%) respondents fully completed it.[20] Of those completing the survey, 93 indicated they had spent the majority of their adult life in an OECD country and had at least a bachelor's degree. Thus, they qualified as "high skilled," as per the criteria set forth in this research. Those 93 responses are henceforth referred to as the *survey sample* and are the only data examined in this chapter.[21]

Demographics.

The following figures describe the survey sample demographics in more detail. Sixty-three percent of survey respondents were males; females represented only 37% (Figure 4). The survey sample was also fairly young, with 89% of the respondents aged between 25 and 44 years (Figure 5).

20. Three additional respondents completed less than 20% of survey questions and were excluded from the sample.
21. Some survey questions allowed multiple responses and some questions were not mandatory. Therefore, the total number of responses per individual question at times differs from 93.

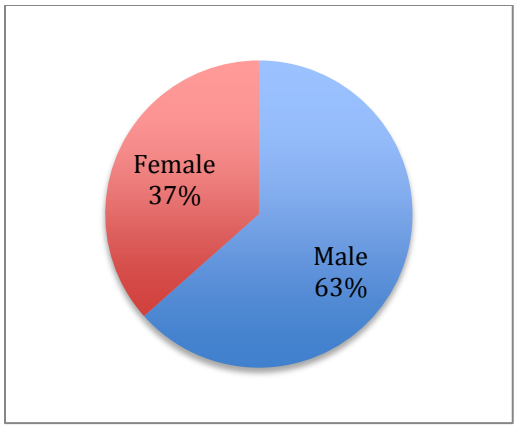

Figure 4. Survey respondent gender

The survey sample was comprised largely of Lebanese migrants who spent the majority of their adult lives abroad in the United States and Canada (66%), followed by the United Kingdom and France at 11% and 9% respectively (Figure 6). The majority of respondents earned their highest degrees in the United States and Canada (47%) and in the European Union (31%), while 18% earned their highest degrees in Lebanon (Figure 7). The majority of the degrees earned in Lebanon were Bachelor's, whereas graduate degrees were the most common degrees earned abroad.

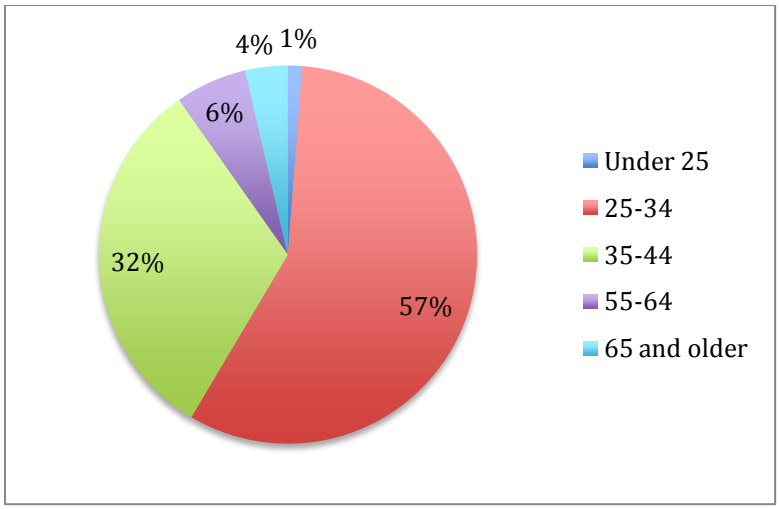

Figure 5. Survey respondent age distribution

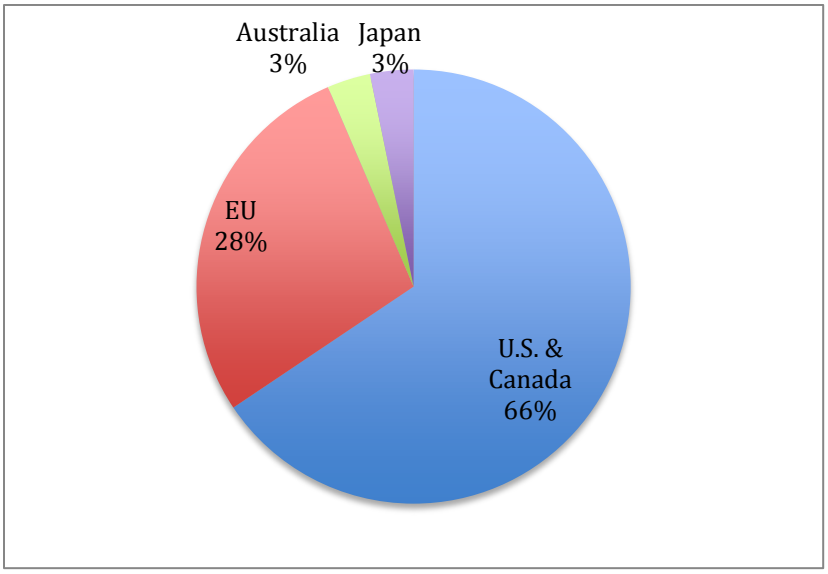

Figure 6. OECD countries where respondents spent the majority of their adult lives abroad

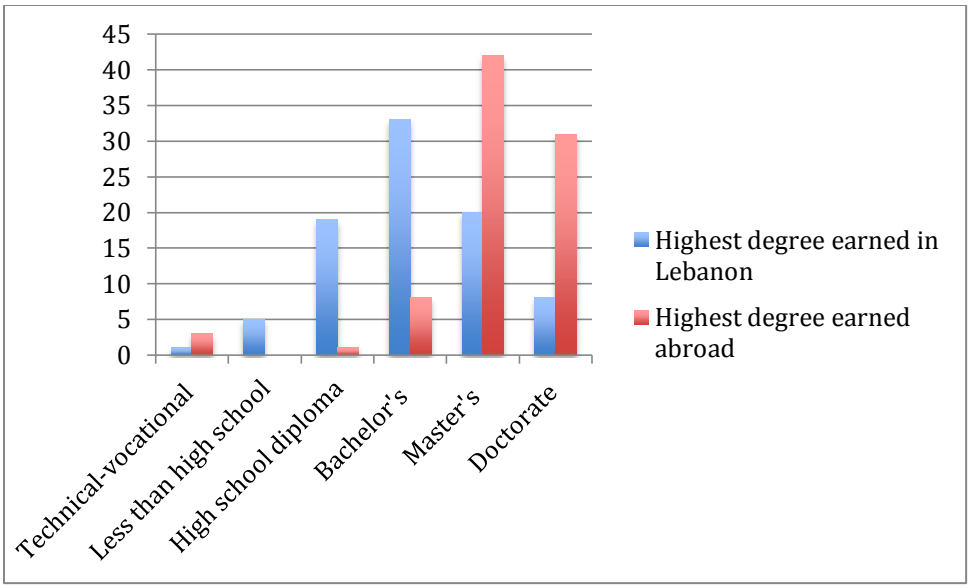

Figure 7. Respondents' highest degree attained

The majority (66%) of returnees spent between one and ten years abroad before returning to Lebanon. About 51% of the respondents worked between one and five years abroad; approximately 13% worked between 6 and 10 years abroad; and 21% did not work while they were abroad. The majority of the returnees had worked in the private (46%) or academic sector (31%) while abroad. As Figure 8 shows, the majority of respondents returned to Lebanon in the last decade.

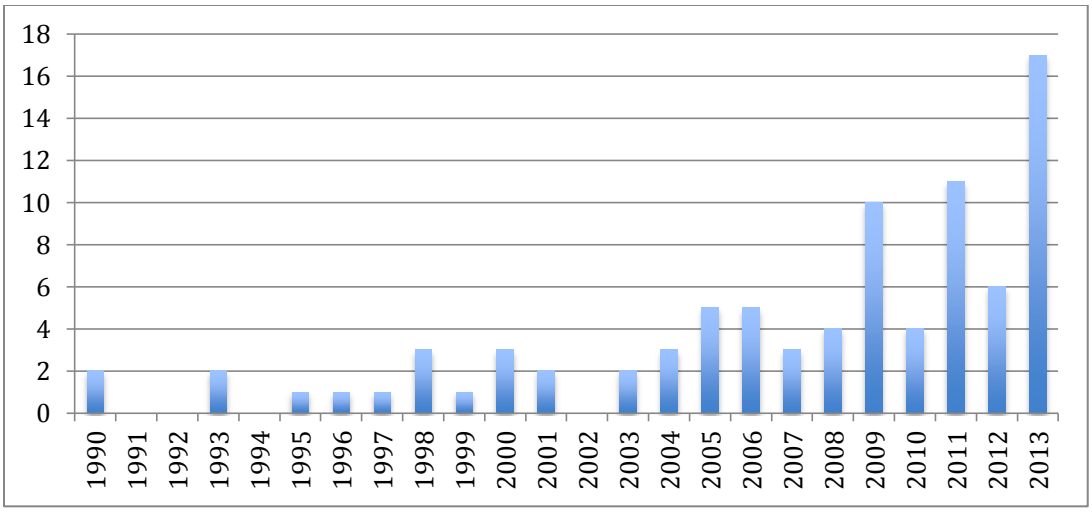

Figure 8. Respondents' year of return to Lebanon

III. Survey Analysis

This section discusses the survey data per the guiding subresearch questions. The data presented provide insight into the returnees' roles and projects upon return, their motivations for returning, the impact of the country conditions on their projects upon return, the characteristics of their transnational ties, their perceived impact on their home country, and the prevalence of their participation in search functions.

A. Returnees' Roles and Projects upon Return

The survey focused on professional activities undertaken after migrants returned to Lebanon. Therefore, the sample was segmented into two groups: those who identified themselves (1) as entrepreneurs or (2) as employees. Those who identified themselves as "both" were required to answer two sets of survey questions related to both employees and entrepreneurs. Sixty-two percent of the respondents indicated that they were

employees, 23% indicated they were entrepreneurs, and 15% indicated they were both entrepreneurs and employees (Figure 9).

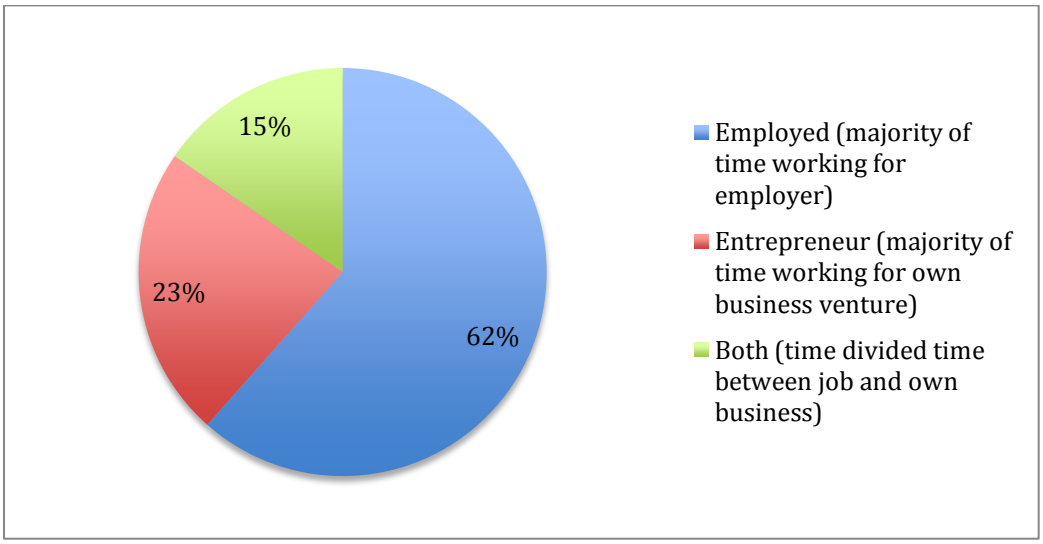

Figure 9. Returnees' professions in Lebanon

Employees.

Figures 10 and 11 display responses of respondents who identified themselves as employees. Of those employed returnees, 47% worked for academic institutions and think tanks, 29% worked in the private sector, 10% in international development institutions, and only 4% in the public sector. Thus, Lebanese universities appear to be a major employer of skilled returnees. This should not come as a surprise, given the advanced education levels of respondents and the attractiveness and safety of academic careers in an unstable Lebanon. However, these results could also be attributed to a sample bias, because universities were an easier target for distributing the survey compared with other employing institutions.

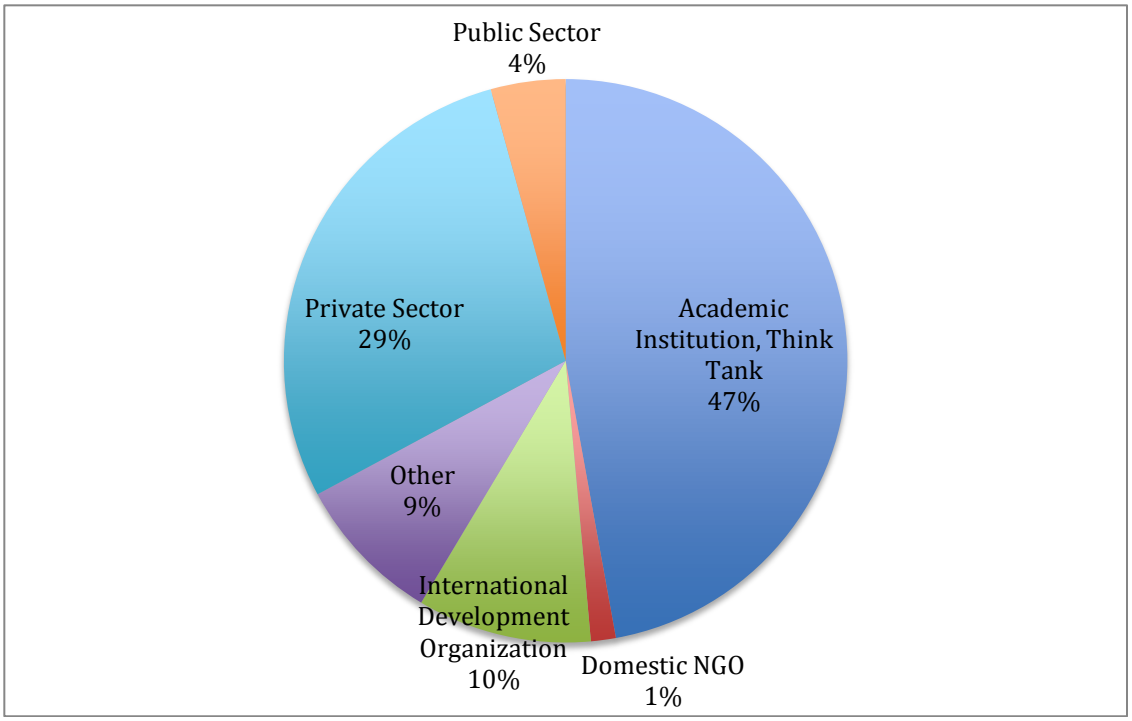

Figure 10. Employees' employment fields

Positive perceptions regarding home country work and entrepreneurial environment could play an important role in accelerating return migration (Saxenian, 2002, 2006b; Wadhwa et al., 2011). The possibility for professional advancement, recognition, access to quality infrastructure, and good salaries are all factors that a typical skilled diasporan would consider when making a return decision. Thus, respondents were asked to rate the favorability of different factors related to a professional career in Lebanon. Employed respondents viewed *professional advancement and recognition* and *managerial style* in Lebanon most favorably (slightly and very favorable), at 47% and 37% respectively. On the other hand, the overwhelming majority viewed *security and political stability* and *access to quality infrastructure* least favorably (slightly and very unfavorable), at 86% and 80% respectively.

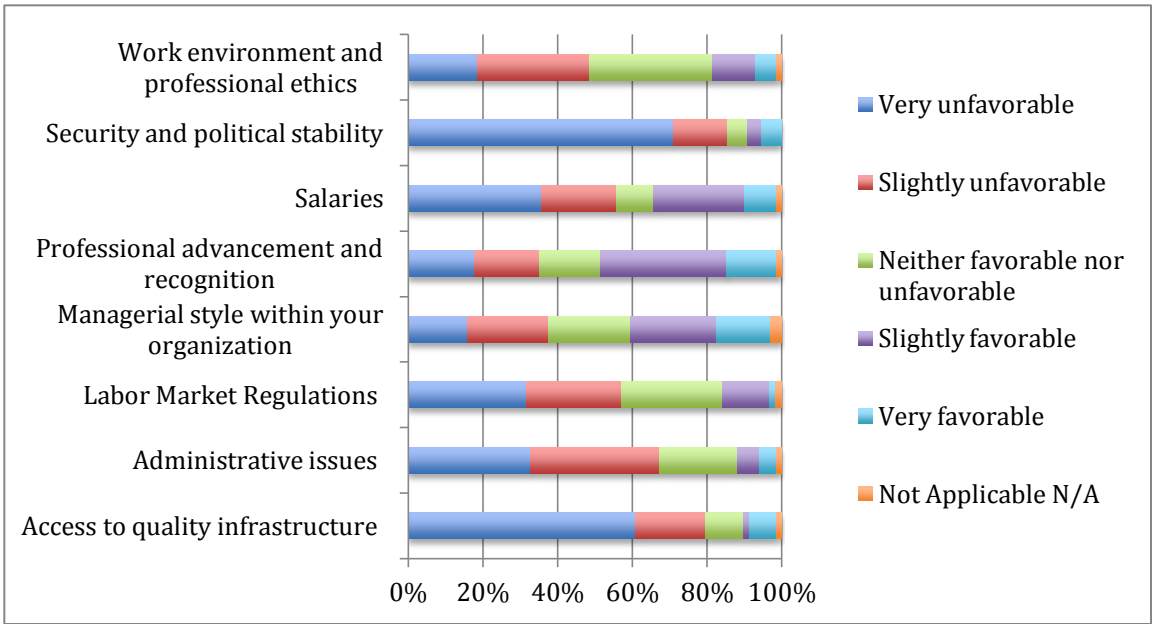

Figure 11. Employees' views on factors related to professional careers in Lebanon: Degree of favorability distribution

Entrepreneurs.

Figures 12 to 15 examine the responses of those who identified themselves as entrepreneurs. Most entrepreneurs either solely owned their firm (31%) or had only one business partner (34%). Whereas the majority of the employed returnees worked in the academic sector, the entrepreneurs' businesses were dispersed among different industries with no significant concentration. That is, no industry garnered more than seven responses.

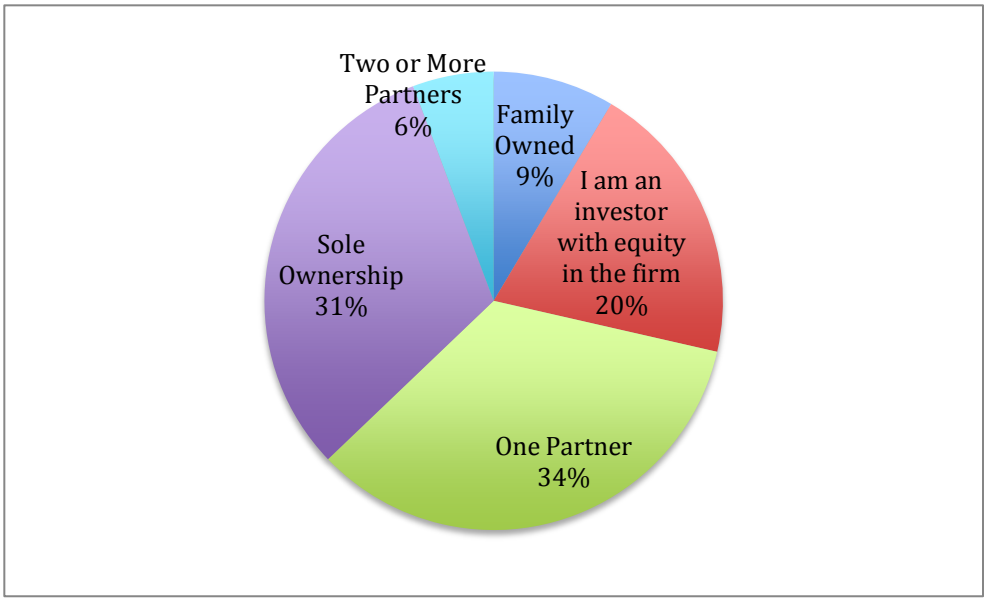

Figure 12. Entrepreneurs' distribution of firm-ownership structures

Most returnees' start-ups were young: 63% of returnees' start-ups were less than five years old. Most were small: in 26%, the entrepreneur was the sole employee; in 46%, the firm employed fewer than 10 people; and 20% employed between 10 and 49 employees. None of the respondents' firms employed between 50 and 99 employees. However, even within this small sample, returnees indicated their start-ups had created more than 500 jobs.

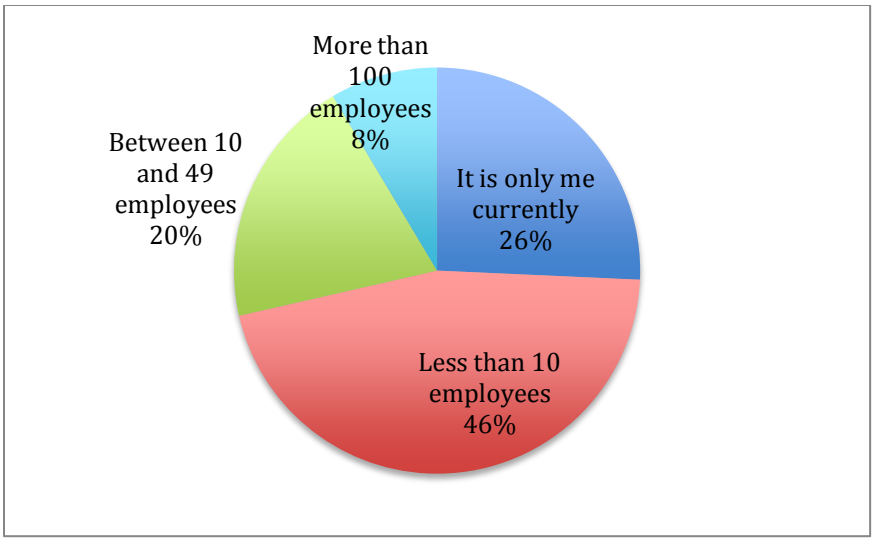

Figure 13. Entrepreneurs' number of employees per firm

Young micro-startups such as the ones created by high-skilled diaspora returnees are a subset of the main engines of job creation in Lebanon. A micro-start-up is defined as a firm with less than four years of activity and fewer than four workers. Recent evidence from the World Bank (2014b) on the firm-level determinants of job creation showed that younger, more productive Lebanese firms create more jobs. Although older firms in Lebanon tended to shed workers, net job creation was positive for firms in their startup period (the first four years). Between 2005 and 2010, Lebanese micro-startups generated about 66,000 jobs, accounting for 177% of aggregate net job creation. Young, large firms with 200-999 employees created the second largest number of jobs (12,000).

Respondents were asked to list the initial and, if applicable, subsequent sources of capital used to start and sustain their businesses. Most entrepreneurs initially financed their start-ups using personal savings (50%) and loans from family and friends (17%). A couple respondents indicated they had received initial financing from partnerships and R&D contract awards. A similar pattern emerged in the subsequent funding rounds, but

entrepreneurs had additional access to formal investment vehicles such as *local* and *foreign angel* and *VC funding*. Only two respondents received funding from angels and VCs based in the OECD countries from which they had returned. These results are consistent with the input collected from the diaspora interviewees explaining that U.S. VCs and investors were still not familiar with or interested in investing in Lebanese or MENA start-ups.

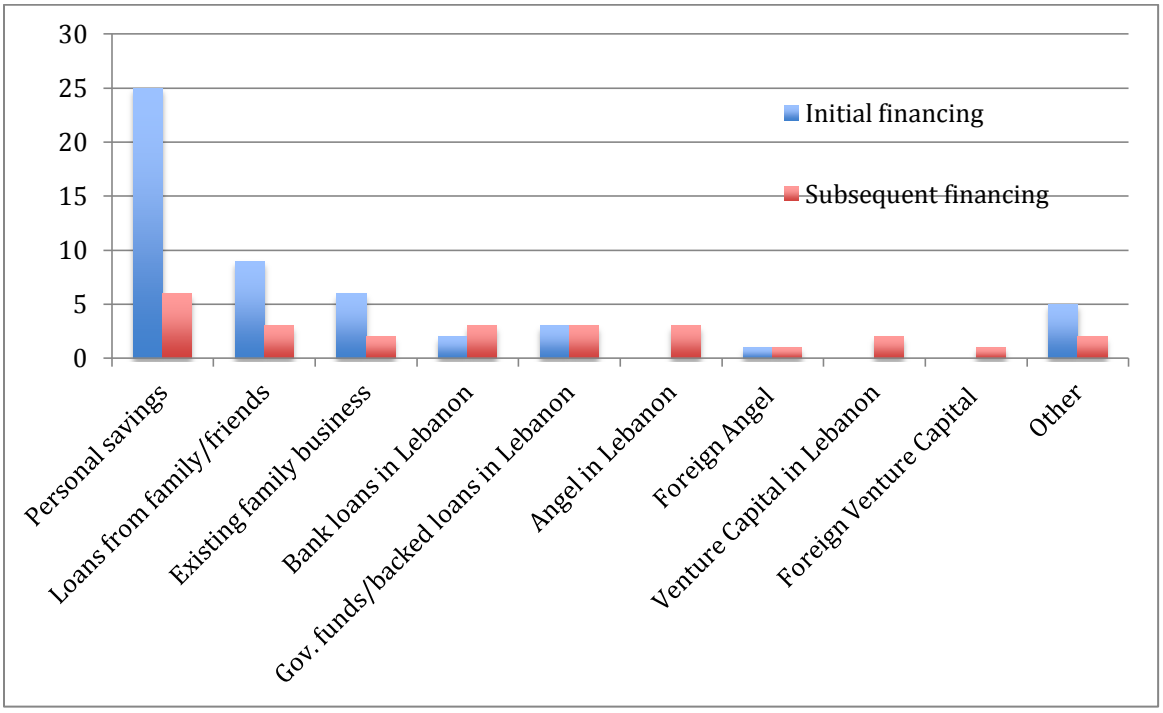

Figure 14. Entrepreneurs' sources of initial and subsequent funding

Respondents were asked to rate the favorability of different factors related to starting and running a business in Lebanon. In addition to general working environment factors, entrepreneurs were asked to rate entrepreneurship-related factors such as

government support to entrepreneurial activities, access to funding resources, access to regional markets, and other factors. Among returnee entrepreneurs, *employee wages* and *access to regional markets* were viewed most favorably (slightly and very favorable aggregated) for starting and running a business in Lebanon: at 72% and 55% respectively. *Security and political stability*, *access to quality infrastructure*, and *administrative issues* were viewed least favorably (slightly and very unfavorable aggregated) by entrepreneur respondents at 80%, 77%, and 69% respectively. In addition, government support to entrepreneurial activities was ranked as unfavorable by 62% of the respondents.

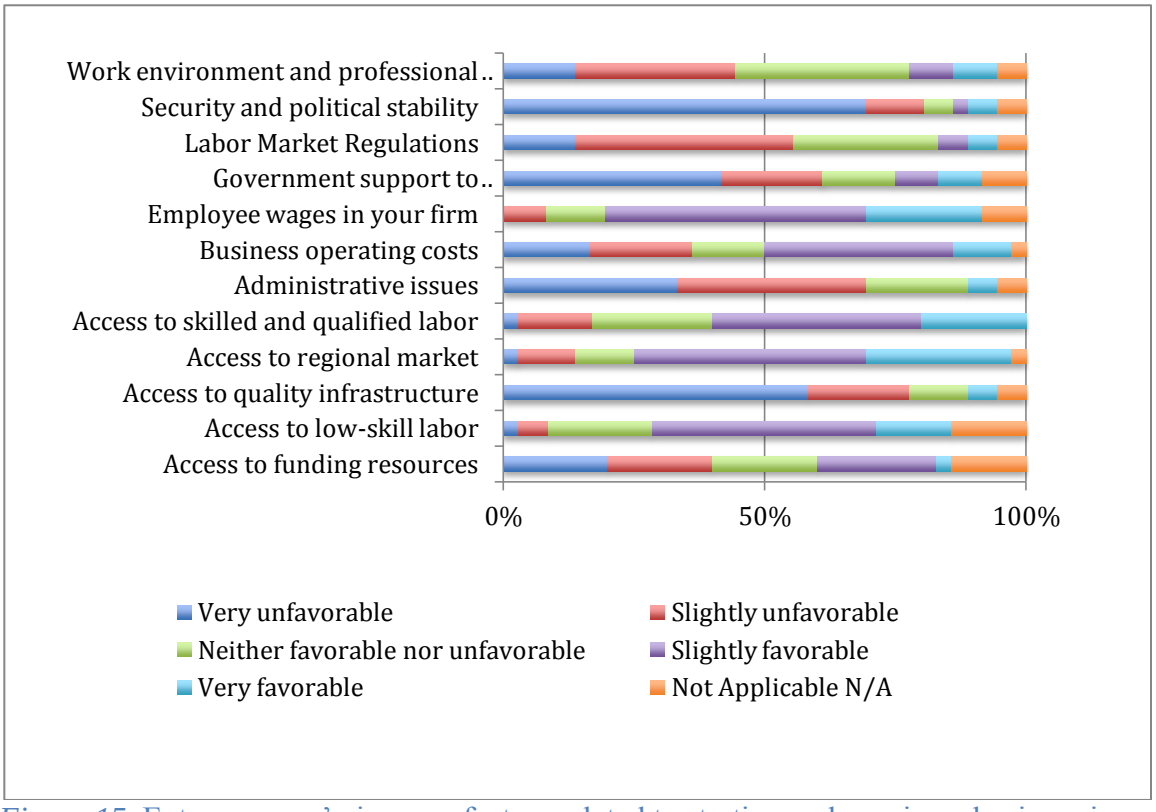

Figure 15. Entrepreneurs' views on factors related to starting and running a business in Lebanon: Degree of favorability distribution

B. Factors Related to Return Migration.

This section explores respondents' motivations for returning, as well information related to the nature of their transnational ties after returning from the OECD country in which they had resided.

Motivation for return.

Understanding the motivations behind skilled diasporas' return to the home country has important implications for facilitating knowledge transfer (Kuznetsov, 2013; Wadhwa et al., 2011). When investigating motivations for high skilled diaspora return, both Kuznetsov and Wadhwa et al. considered economic opportunities, access to markets, government incentives, family ties, visa conditions, and recognition and status at home in addition to other factors. As shown in Figure 16, the most significant factors drawing Lebanese respondents home were *family and country ties*, *the desire to contribute to Lebanon's economic development*, and *recognition or status at home*. More than 70% of the respondents said that family and country ties had been very important to their return decision. Respondents selected *availability of better professional opportunities* as the least important motivation for returning, while *expiration of visas* was a mostly inapplicable motivation. In the "other" section, several respondents referred to other motivations such as the economic crisis in Spain, losing employment in the host country, and seeking opportunity to set up their own business in Lebanon.

The returnees' expectations prior to returning to Lebanon had been mixed (Figure 17). Those with high expectations comprised the largest group (34%) in the survey. The second largest category (23%) said that they knew what they were going

back to, but a significant number (18%) also had low expectations or expected a short stay in Lebanon before moving again (16%).

Respondents' positive pre-return expectations were hampered after returning to Lebanon. After returning home, respondents were more likely to be more pessimistic than optimistic; only 15% indicated that they were more optimistic (Figure 18). Further, Figure 19 shows that when asked about the planned duration of their stay, 24% indicated that their decision depended mainly on *the political and security situation*, whereas 14% would base their decision on the prevailing market conditions. Another 14% of respondents indicated that they had initially planned to stay in Lebanon but were currently reconsidering their decision. Only 12% indicated that their return was permanent. Negative expectations were probably shaped in large part by Lebanon's political and economic situation, characterized by high tension and volatility due to the war in neighboring Syria, at the time the survey was administered.

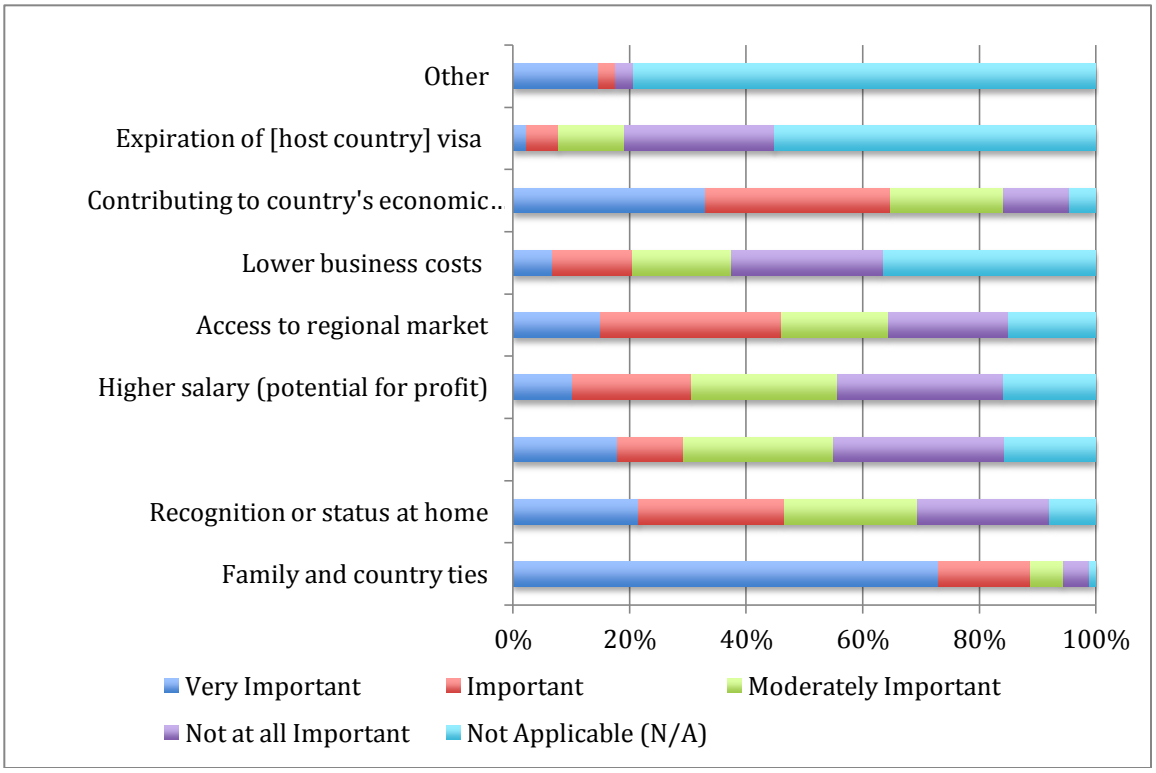

Figure 16. Respondents' reasons for returning to Lebanon: Degree of importance distribution

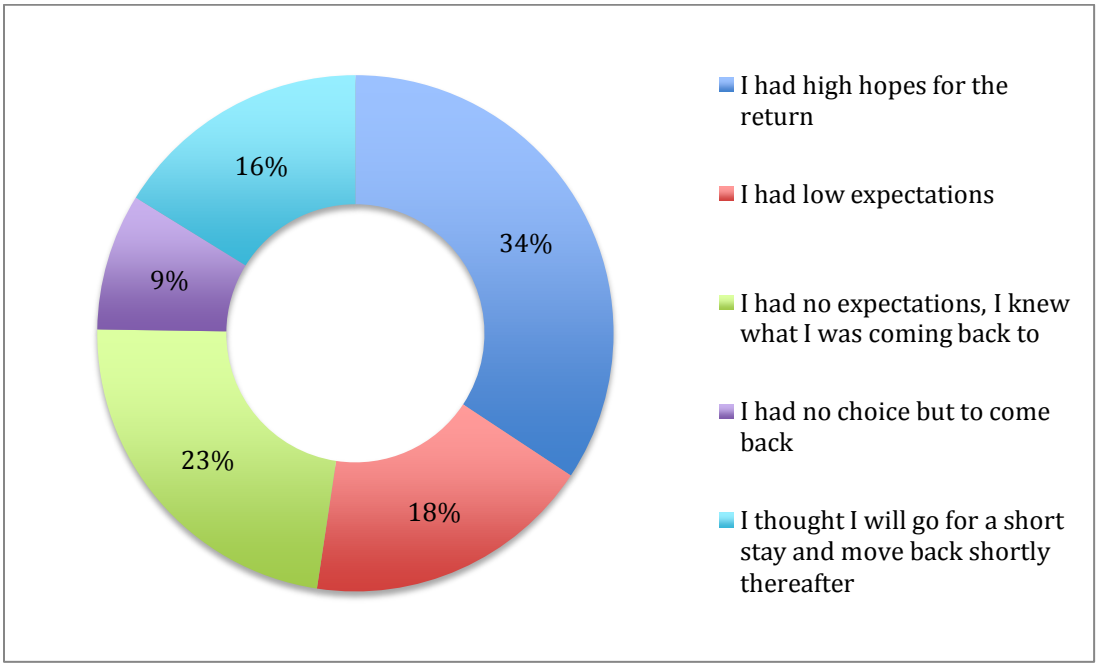

Figure 17. Respondents' expectations before returning to Lebanon

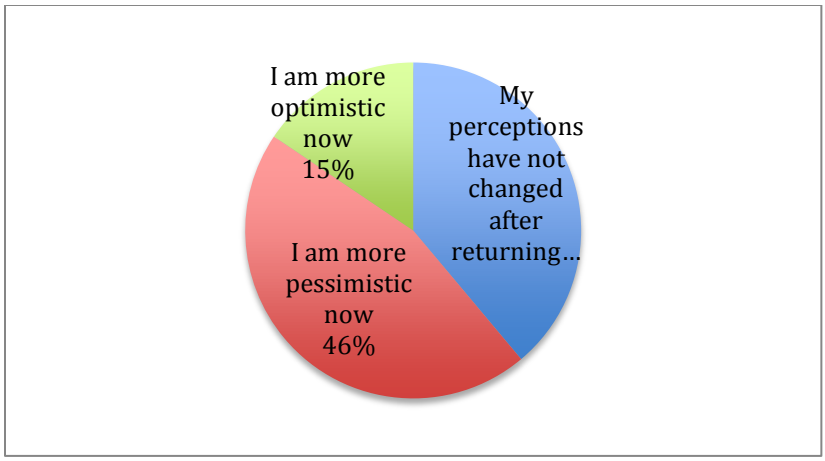

Figure 18. Respondents' post-return perceptions

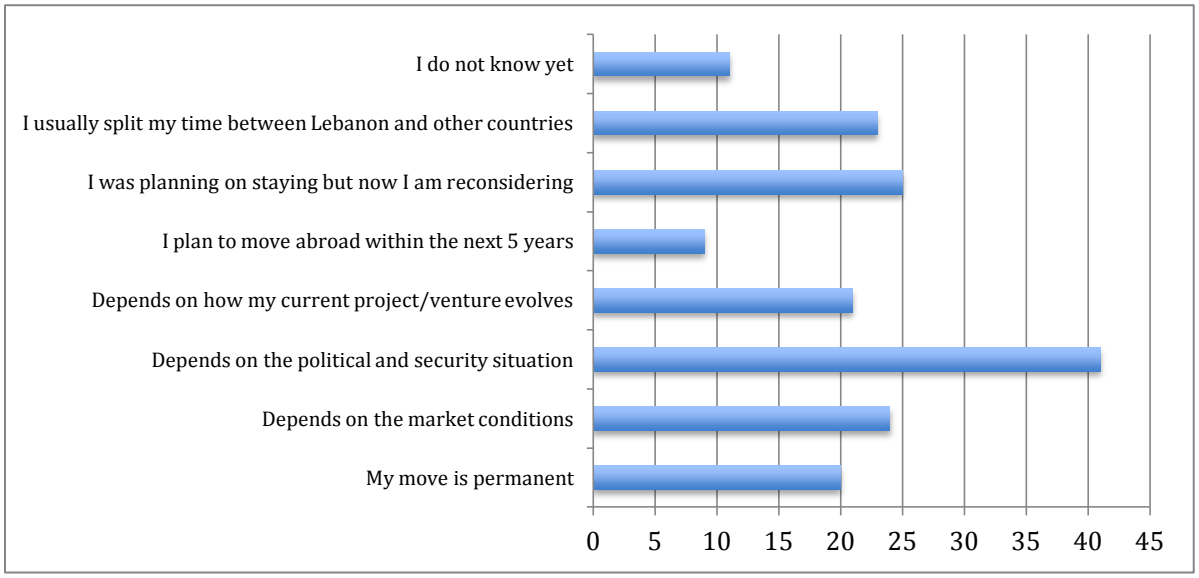

Figure 19. Respondents' expectations for staying in Lebanon

That the majority of the survey respondents were young (89% were between 25 and 44 years) and only 12% indicated their return move was permanent raised serious concerns regarding the sustainability of these returns. One could argue that Lebanon is a "parking space" for its young, skilled diaspora returnees—a temporary relocation as long as the security situation was tolerable or until a better opportunity arose abroad. One

might expect that most of those who returned had already secured the needed legal immigration status (or permanent residency status) that would allow them to return to their OECD countries if they so chose. This speculation appears to be in line with the survey results, which indicated that, for the majority of returnees, visa expiration did not play a role in their return decision. Thus, it could be assumed that most returnees maintained a lawful status at their host country and voluntarily decided to return to Lebanon temporarily, "to give it a try" or "to reconnect with family." Commonly held family-related return motivations could include taking care of aging parents, finding a spouse, or introducing their children to their culture and language. Once the security or political situation became intolerable or a good opportunity arose abroad, these returnees would "return" to their safer, more comfortable lives abroad.

Transnational ties

Close ties between skilled diaspora returnees and their previous host countries enable the transfer of organizational and technical expertise. Saxenian (2006b) found that the factors or conditions that influence the formation of transnational communities include the degree of participation in host communities, access to home-country resources and institutions, and infrastructure and bureaucracy at home. To aid in understanding the transnational behavior of returnees, researcher often ask them about the frequency and type of their contact with former colleagues, family, friends, educational and professional organizations, and other organizations. As an example, Wadhwa et al. (2011) reported that when Chinese and Indian skilled workers returned home, they maintained close and continuing contact with friends and family, colleagues, customers, partners, and sources of business information in the United States.

The survey in this research focused on factors that affect the intensity and scope of transnational interactions between high-skilled Lebanese returnees and their individual and network contacts in OECD countries. The assumption was that high-skilled returnees usually enjoy better search capabilities compared with their local peers. The insider-outsider position of diaspora returnees, their specific capabilities and access to partner institutions in both the home and the previous country of residence, their knowledge of local business customs and social traditions, their understanding of potential customers and suppliers, and their language abilities create opportunities conducive to cross-border entrepreneurship, particularly in the technology area. Specifically, emigrants may see new opportunities in the home country markets because opportunities are being sought within a larger "search space" (Carlsson & Jacobsson, 1997).

To gauge the relative importance of local and transnational networks and individual contacts, respondents were asked to rank their importance (Figure 20). Respondents indicated that personal and family networks, local business networks, and transnational and regional networks were of relative importance (selected as important and very important) to their work in Lebanon, at 64%, 57%, and 51% respectively. Identity networks in Lebanon and abroad were considered the least important. Most importantly, diaspora networks abroad were of relative insignificance: 34% of respondents considered them not at all important, 13% very important, and 20% important.

The relative insignificance to returnees of diaspora networks compared with other networks could be explained by the fact that only 22% of the respondents indicated that they were involved with a professional diaspora network or association while abroad.

Moreover, the surveyed returnees were mainly young mid-career professionals and entrepreneurs, while the professional diaspora networks constituted successful entrepreneurs, executives, and high achievers. Nevertheless, the disconnect between high-skilled returnees and diaspora networks has implications for the sustainability of knowledge transfer to the home country. The recent LFE initiatives through its accelerator and the LebNet Mentorship Program could be steps in the right direction toward bridging this gap between skilled returnees and the professional diaspora networks.

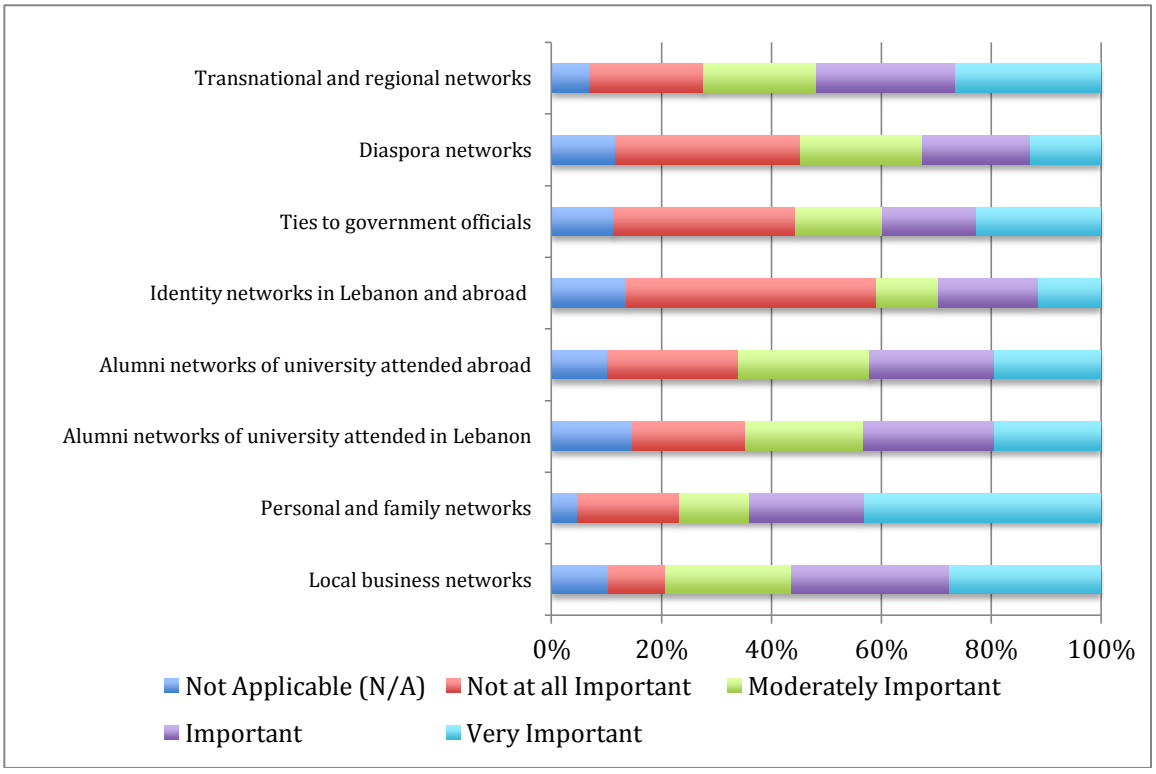

Figure 20. Importance of networks to current work in Lebanon: Degree of importance distribution

Close ties and frequent interactions between high-skilled Lebanese returnees and their respective OECD countries could arguably enable the transfer of organizational and technical expertise. To better understand the transnational behavior of the returnees, the survey asked respondents to specify the frequency of their interactions with networks and individuals abroad and the type of information exchanged. The results found that returnees maintained strong contacts with *family/friends* and *former colleagues* in the OECD countries they had left; *professional organizations* came third (Figure 21). Specifically, 88% of respondents contacted family and friends at least monthly, and 49% contacted former colleagues at the same frequency. Once again, diaspora networks seemed less relevant: 55% of respondents indicated that they never contacted diaspora networks and 23% indicated that the frequency of contact with educational organizations was limited to once a year.

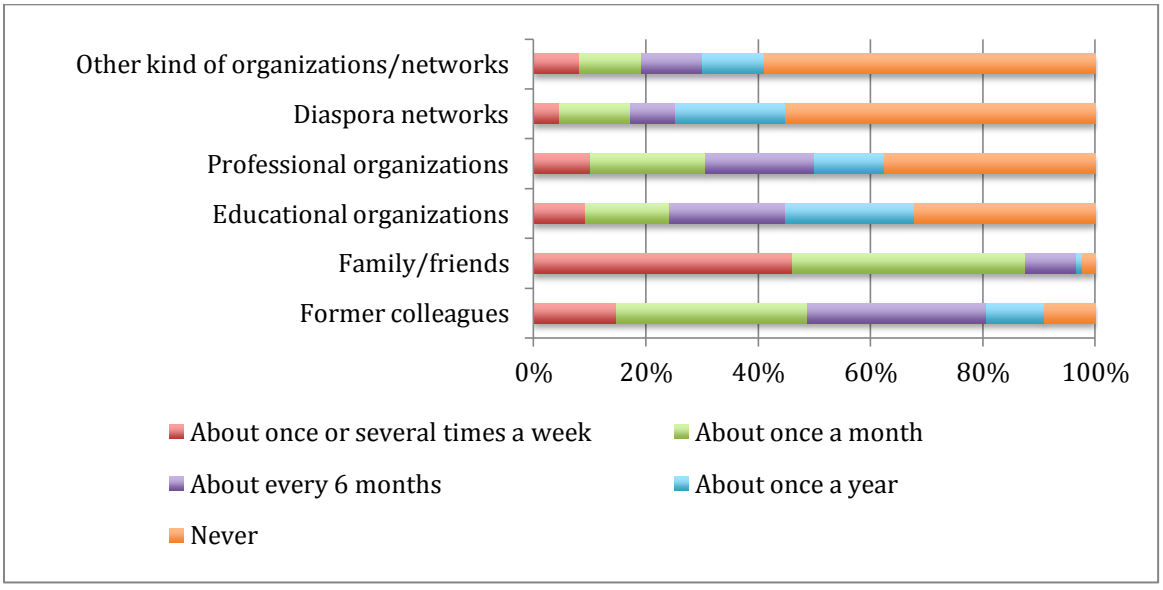

Figure 21. Frequency of contact with individuals and networks in OECD countries

Frequent exchange of information on technology, research, business, and job opportunities not only indicates access to global resources, but also suggests the strength of relationship and information flow across borders. Figure 22 shows the exchange frequency for particular subjects. Respondents were most likely to contact their transnational connections at least once a month regarding technology, technical, or scientific information (41%); potential business partnerships (25%); or job or professional opportunities (25%). Respondents' frequent inquiry about job or professional opportunities in their previous OECD countries could reinforce the speculation stated earlier that Lebanon is a "parking space" for its skilled returnees.

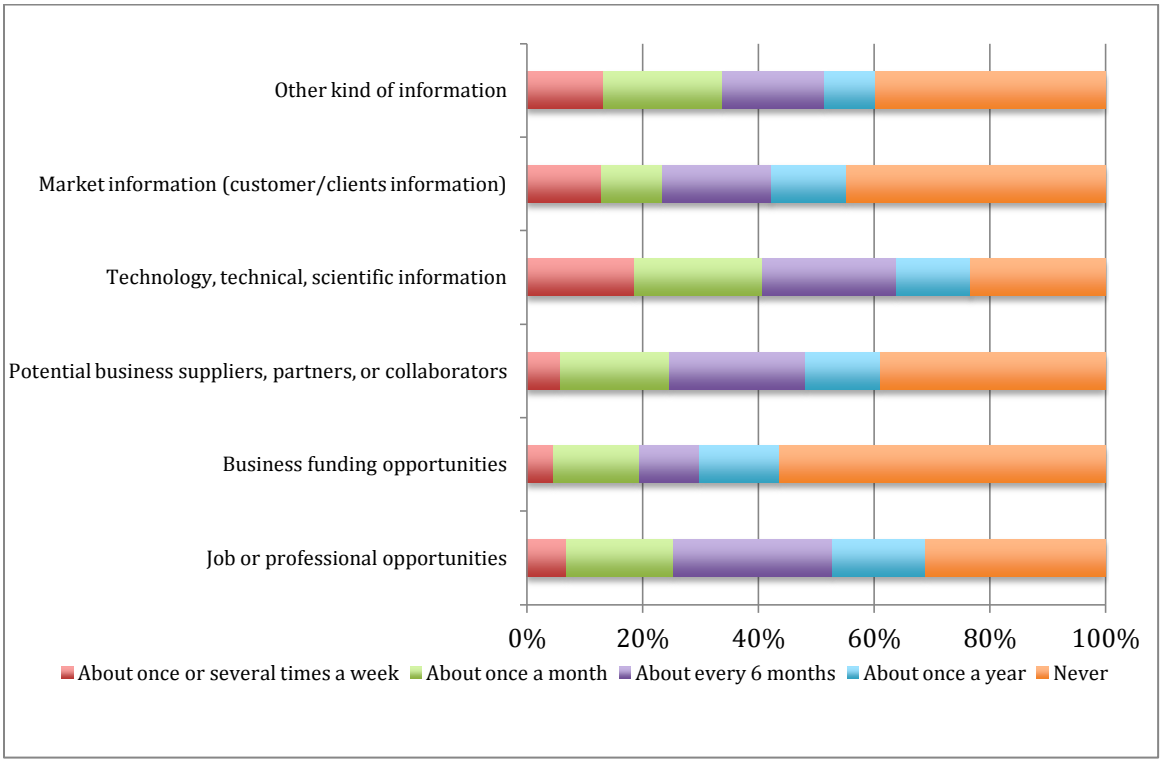

Figure 22. Frequency of network contact by subject: Contact frequency distribution by type

To determine the authenticity of returnees' transnational ties, the survey asked participants about their *most recent* exchange. The majority of respondents indicated that they had recently exchanged information with their transnational counterparts (family/friends, former colleagues, and professional organizations in the OECD countries they had left): 50% had exchanged information with transnational counterparts in the last week, and 31% in the last month (Figure 23). Taken together, these responses characterize a relatively strong information flow between the respondents and their counterparts in OECD countries. Thus, it could be argued that skilled Lebanese returnees were a conduit for strong, frequent information exchanges between OECD countries and Lebanon.

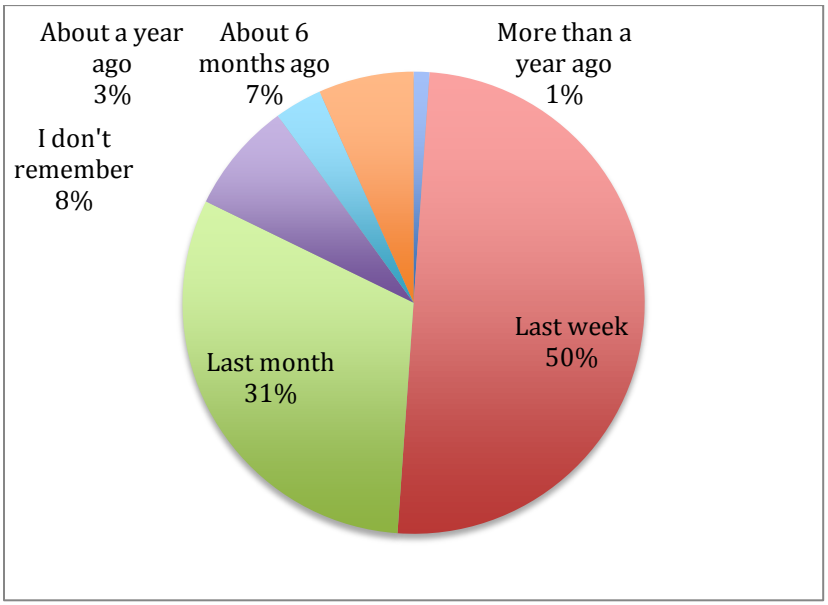

Figure 23. Respondents' most recent transnational information exchange

The overwhelming majority of respondents viewed their emigration journey positively. Specifically, 91% of respondents believed their experience abroad enhanced their professional network and expertise more so than those who had not emigrated. This high confidence in the value of living or working abroad may conceal an implicit sense of entitlement or superiority over local peers who did not emigrate, which in turn could cause resentment among work colleagues. Once they return, some professionals or entrepreneurs display a "know it all" or "I've earned it" attitude. In the specific case of Lebanon, there is a common perception that those who emigrated were capable and qualified, whereas those who stayed did so because they did not possess the needed skills. This vicious cycle—represented by the need to emigrate—propagates a demanding social psyche that drives increasingly more bright, skilled young people to leave Lebanon in order to feel and be perceived as accomplished or successful.

C. Impact and Contributions to the Home Country

This section looks beyond information sharing between returnees and their former contacts in OECD countries. It considers diaspora returnees' perceived impact on their home country after returning, as well as their attitudes toward their government's or international organizations' roles in facilitating their contributions. It is impossible to evaluate the impact of skilled diaspora returnees on the home country development or to disentangle this causal relationship from the many other economic agents and factors impacting the country's economy. Nevertheless, Kuznetsov (2013) distinguished between two kinds of skilled diaspora (and consequently, returnees') impact or contributions: direct and indirect impacts. The direct economic impacts of skilled returnees include their remittances and donations, investments, and knowledge. These impacts, especially the

size and dynamic of migrants' remittances, are well researched and documented but not as much the indirect impacts of returnees on their home economies.

Diasporas and returnees' indirect impact is represented in their role as agents of change in the area of institutional development in the home countries. The four different aspects of diaspora impact (remittances, donations, investments, and knowledge) can be vehicles for development through institutional transformation. "The knowledge and skills of diaspora members are more valuable than remittances" as a vehicle for institutional transformation at the home country (Kuznetsov, 2013, p. 20). Literature so far has paid little attention to the impact of diaspora members on institutional development. Returnees might have the greatest impact on their home countries by joining state public institutions, as in the case of China. Alternatively, joining the private sector or civil society might be the primary routes for the diaspora and returnees to influence the reform processes, as in the case of India (Kuznetsov, 2013). In the case of Lebanon, returnees were asked to choose among a list of perceived impacts that represented both direct and indirect contributions.

Skilled returnees have been engaged in a combination of direct and indirect contributions since they moved to Lebanon. Participants were asked to choose among a list of perceived contributions they have made since moving to Lebanon and were asked to identify the *one* they felt was most important. Since returning to Lebanon, respondents indicated they had made a number of important contributions to their home country. Specifically, nine of the 12 categories of contributions received more than 50% approval. Disseminating and applying *new knowledge and technical expertise* (96%), *global managerial skills* (72%), and providing *mentorship and advising* (70%) received the

highest respondent approval. Knowledge transfer contributions were viewed as *the most* important contribution of returnees. Specifically, 29% of the respondents selected *dissemination and application of new knowledge and technical expertise* as the most important contribution; 17% selected *providing mentorship and advising*; and 14% selected *creating job opportunities* (Figure 24).

Respondents perceived some indirect contribution categories as of lesser importance. Two indirect contribution categories, *facilitating access to new markets* and *foreign funds/capital*, received less than 50% approval by respondents, with 33% and 22% approval respectively. Both categories received zero selections as the most important contribution. The relatively young sample of mid-career professionals and entrepreneurs, who usually are less connected and effective in facilitating access to new markets and foreign funds and capital compared with the senior, successful professionals and entrepreneurs interviewed in the United States could explain the low ratings in these contribution categories. Other types of connections, such as *facilitating beneficial connections to individuals and business networks abroad* received 69% approval, but only 6% of the respondents selected it as the most important one (Figure 25).

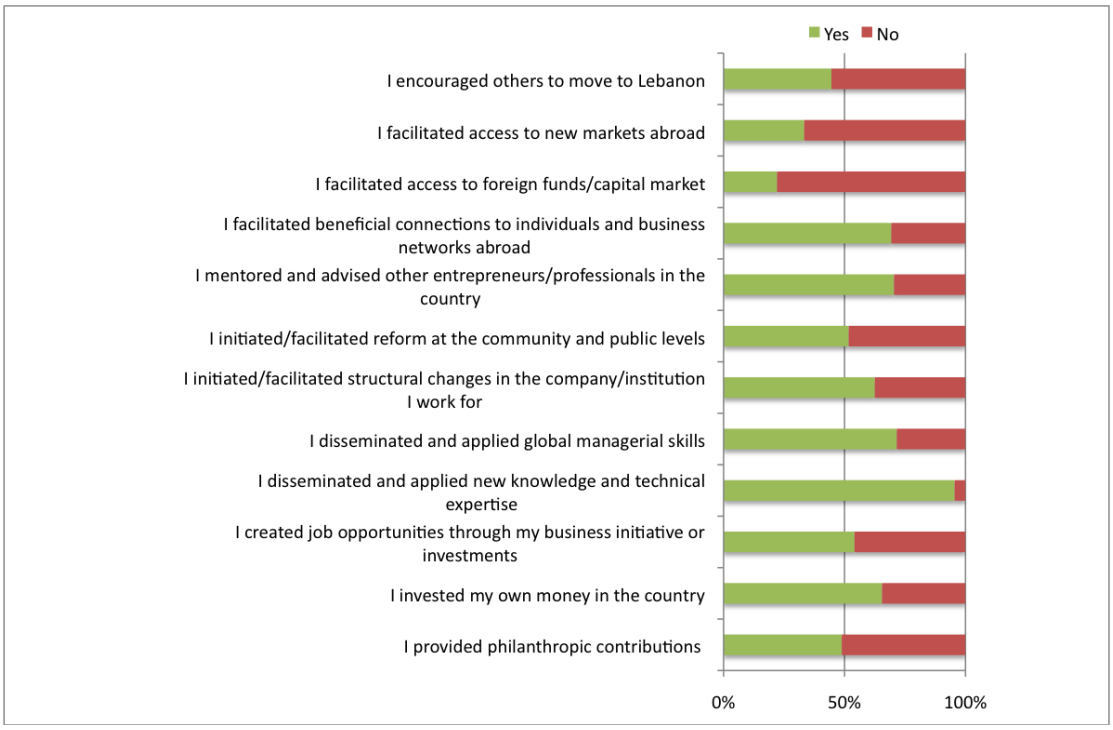

Figure 24. Skilled returnees' contributions to the home country (as perceived by respondents)

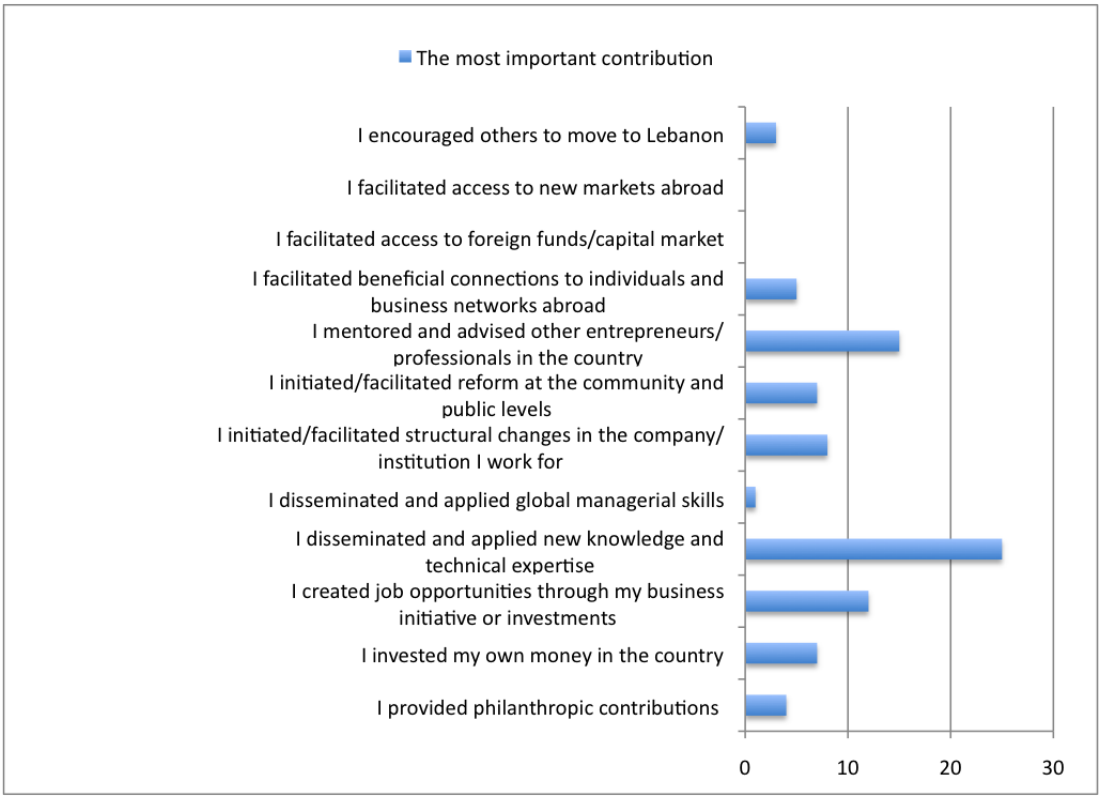

Figure 25. The *one* most important contribution by skilled returnees to the home country (as perceived by respondents)

More than half of the respondents believed that their return was essential for realizing their contributions to Lebanon: 54% believed their contributions would not have been realized if they had not returned; 24% assumed the opposite (Figure 26). The respondents' assertions that their physical return was essential was consistent with the way they perceived their contributions to the home country. Disseminating knowledge and technical expertise, mentorship and advising, and creating job opportunities are contributions delivered more efficiently through physical return, although would still be feasible to deliver such contributions virtually.

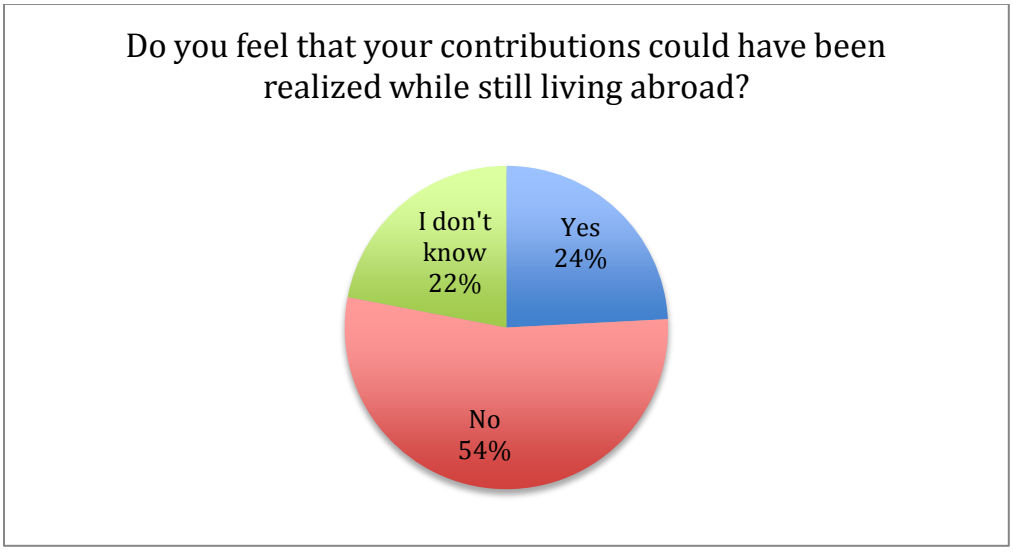

Figure 26. Respondents' attitudes toward contributions without return

Moreover, an overwhelming majority (80%) of respondents indicated their contributions have *not* been assisted or enhanced by programs or initiatives that targeted the Lebanese diaspora. When asked whether they perceived any role for the government or international organizations and institutions in enhancing or facilitating their

contributions, the respondents were split: 32% said yes, 32% said no, and the rest had no opinion. Those who answered positively were asked to provide further explanation of the role they perceived for the government or international organizations in enhancing or facilitating their contributions. Table 15 presents a compilation of some of the respondents' comments, grouped and rephrased to avoid duplicity.

Table 15. *Respondents' Comments on the Perceived Role of Government and International Organizations in Enhancing or Facilitating their Contributions*

Selected Comments
A stable political, economic, and security environment is needed for the contributions and investments in Lebanon to thrive.
The main actor in encouraging return migration is the Lebanese government; the help of international organizations is only complementary. The immediate steps for the government are to support the country's economy, reform the judiciary system, and restore the country's general stability. International organizations should use their clout, network, and influence to lobby for reforms.
Promote an electoral law that facilitates formation of a new political elite and newcomer access to political life; expand voting rights for Lebanese expatriates.
Promote public administration reforms that would allow qualified personnel, in particular returning expatriates, to join the civil service.
The Ministry of Foreign Affairs should be more active in reaching out to diaspora communities through its embassies to encourage them to mentor and grow the start-up community, invest in, and develop opportunities in Lebanon.
Focus on bilateral economic agreements for technology and knowledge sharing, and easing travel restrictions.
Start by recognizing diaspora contributions and work with the diaspora community to create a home-based collaboration platform.
Improve transparency and eliminate corruption.
The existence of establishments such as Kafalat and the availability of subsidized loans are positive assets that enhance a many diaspora returnees' contributions; maintaining such institutions is already a great help.
Improve the doing-business and regulatory environment.
Establish networks/rosters of diaspora and returnees' technocrats who would provide advisory services in a "de-politicized" manner.
Promote alumni networks and help universities establish and maintain active networks.
Government should create jobs that could attract diaspora individuals.
Government should promote and facilitate R&D and reform policies related to R&D funding and support.
Maintain annual conferences, workshops, and training events that involve diaspora and returnee experts and potential investors.

IV. Linking Results to the Literature

The survey results generally support the literature in that many of the characteristics of the returnees, their experiences abroad, motivations for return, and perceptions of the working environment generally resemble, with slight variations, those of other returnee populations covered in the literature review chapter. As an example, Lebanese returnees were mainly motivated to return to the home country by family and country ties, their eagerness to contribute to the country's economic development, and recognition or status at home. In Wadhwa et al. (2011), Indian and Chinese respondents ranked economic opportunities, access to local markets, and family ties as motivations for return. Similar to the results of this survey—where 72% of Lebanese cited family and country ties as critical factors—76% of Indians and 51% of Chinese respondents considered family ties as very important in motivating their return.

When it came to returnees' entrepreneurial activities, the distribution of funding sources for Lebanese returnees' businesses resembled the results in Wadhwa et al. (2011). Personal savings and loans from friends and family were listed as instrumental in having initially launched the businesses of Chinese and Indian returnees. Likewise, the majority of Lebanese returnees relied on personal savings and loans from friends and family. Similarly, the distribution of subsequent funding sources showed more reliance on formal sources such as angels and VCs.

When it came to home country conditions, this survey also resembled the results cited by Saxanian and Wadhwa. Saxenian (2002, 2006b) found that returning immigrants had to overcome weaknesses in their home countries' infrastructure and institutions in order to successfully pursue transnational opportunities. In the case of India, Saxenian

(2002) reported that 30% of respondents identified unreliable infrastructure as a significant problem for doing business in India, and 16% identified government bureaucracy. Chinese immigrants cited the government bureaucracy, regulations, legal system, and political uncertainty as deterrents. In comparison, security and political stability, access to quality infrastructure, and administrative issues were viewed least favorably by returning Lebanese respondents: 80%, 77%, and 69% respectively. In Wadhwa et al. (2011), the strongest advantage for entrepreneurs who had returned to India was lower operation costs (77%); in China, it was access to the local market. Comparatively, 72% of returning Lebanese entrepreneurs considered employee wages (compared with 72% of Indians and 61% of Chinese) and 55% access to regional market as the strongest advantages.

Saxenian's (2002, 2006b) studies of U.S.-based Chinese and Indian immigrants found that they had a wide range of professional ties to their home countries. They exchanged technology and labor-market information with colleagues and friends. Wadhwa et al. (2011) found that 84% of Indian and 81% of Chinese returnees maintained at least monthly contact with family and friends, and 66% of Indians and 55% of Chinese maintained monthly contact with former colleagues. Similarly, 88% of Lebanese returnees respondents maintained at least monthly contact with family and friends, and 49% maintained contact of this frequency with their former colleagues. The monthly exchanges were related to technology, technical, or scientific information (41%), potential business partnerships (25%), or job or professional opportunities (25%).

V. Findings and Conclusion

This chapter presented the survey data on high-skilled Lebanese returnees from OECD countries in line with the subresearch questions presented in the methodology section. Based on the data presented this research found the following:

The respondents shared characteristics common among returning skilled diasporans. The typical high-skilled Lebanese returnee was a first-generation emigrant, relatively young, earned his or her graduate degree while abroad after finishing an undergraduate degree in Lebanon, spent between one and ten years abroad, and worked between one and five years in the private sector or academia. The majority of the returnees found jobs in the academic and private sector in Lebanon or started their own businesses with partners, hiring fewer than ten employees. Additionally, the most significant factors drawing the Lebanese diaspora home were family and country ties, the desire to contribute to Lebanon's economic development, and recognition or status at home.

Lebanon emerged as a "parking space"—a temporary, rather than permanent, stop for skilled returnees as long as the security situation was tolerable or until a better opportunity arose abroad. The slightly optimistic perceptions respondents had prior to returning were hampered post-return mainly due to the unstable political and security situation. This negativity also reflected in their future outlook regarding staying in the country—only 12% of the respondents indicated their return was permanent.

Returnees' perceptions of the working environment in Lebanon were generally negative, especially when it came to factors related to the public sector's role.

The majority of respondents viewed the country's vulnerable political and security conditions, poor infrastructure, and cumbersome regulatory environment as major impediments. On the other hand, participants had positive attitudes regarding private sector-related opportunities such as professional advancement and recognition, access to regional markets, and affordable employee wages.

Transnational ties were characterized by a relatively strong information flow between the returnees and their counterparts in OECD countries. Diaspora returnees maintained strong contact (at least monthly contact) with family, friends, and former colleagues in the OECD countries they had left, and the majority of their interactions were sustainable. The exchanges focused on technology, technical, or scientific information; potential business partnerships; or job and professional opportunities. Personal or family networks, local business networks, and transnational and regional networks, respectively, were of relative importance to returnees' work and projects in Lebanon, whereas diaspora networks abroad were of relative insignificance to their work locally.

There was a relative disconnect between high-skilled Lebanese returnees and their respective professional diaspora networks. Very few returnees considered diaspora networks as important to their local work, and still fewer maintained information exchanges with the networks. This disconnect between high-skilled returnees and professional diaspora networks has implications for the sustainability of knowledge transfer to the home country. A closer relationship between skilled returnees and the professional diaspora networks could help enhance their contributions and leverage their knowledge resources. The hope is that recent initiatives by LFE through its accelerator

and the LebNet Mentorship Program could be steps in the right direction toward bridging the gap between skilled returnees and professional networks.

Skilled returnees were engaged in a combination of direct and indirect contributions since they moved back to Lebanon. Technical and managerial knowledge transfer, mentorship, and job creation emerged as the most important contributions perceived by high-skilled returnees. Returnees created local job opportunities through their young, micro-startups, which were the major job creators in Lebanon (World Bank, 2014b). Even within the small sample, respondents indicated that their start-ups had created more than 500 jobs. As expected, respondents were less engaged in other forms of indirect contributions, such as facilitating access to new markets and foreign funds and capital. Respondents perceived only facilitating connections to individuals and business networks abroad as slightly important. Additionally, the overwhelming majority viewed their emigration journey positively, believing their experiences abroad enhanced their professional network and expertise compared with those who had not emigrated. Nevertheless, they generally believed that their contributions would not have been realized if they had not returned.

Returnees held low expectations of their government and were lukewarm toward suggestions of direct public interventions to assist their contributions. The overwhelming majority of the returnees indicated that their contributions had not been assisted or enhanced by programs or initiatives that targeted the Lebanese diaspora. Even though participants were not strong advocates of public interventions, they suggested a few interventions focused on macro political and economic stability in addition to some micro programmatic initiatives.

Chapter 6. Findings and Policy Implications

I. Conclusion

Concepts such as brain drain, although by now outdated, capture the essence of the uneven distribution of the costs and benefits of the migration of skilled workers from south to north. The migration of skilled workers from developing countries is still a persistent and growing trend. Over 27 million educated immigrants live in OECD countries (UN-DESA/OECD, 2013). The consistent increase in skilled migration rates, along with the increasing demand for skills globally, pressures policy makers in both sending and receiving countries. Especially in sending countries, where policy makers are geared toward building their nation's human resources to supply needed talent to the public, academic, and private sectors, retaining skills, and tapping into global pools of knowledge are often serious developmental challenges. Conventional policy approaches aimed at curtailing and reversing skills migration could be unrealistic and ineffective, given that high-skilled diaspora individuals can, without permanently relocating, effectively engage in continuous collaborative projects with the home country (Kuznetsov, 2013).

Although some countries and policy makers continue to consider their skilled emigrants as a loss, more have started to recognize that *an engaged and connected diaspora can be an asset*. Based on evidence from several country cases, diasporas can, without permanently returning, play an important role in the economic development of their home countries (Newland & Plaza, 2013). Successful country examples such as China, India, Ireland, and Taiwan demonstrated that the *diaspora option,* which capitalizes on the skills and networks of highly-skilled diasporas, is a viable strategy for

economic development (Barré et al., 2003; Bhagwati, 2003; Goethe & Hillmann, 2008; Hart, 2006a; Hart & Davis, 2010; Kuznetsov & Sabel, 2006; Lowell & Gerova, 2004; Seguin et al., 2006a, 2006b). This research approached the Lebanon-United States skills migration case from the diaspora option perspective, posing the question: How can Lebanon's skilled diaspora be engaged and connected, and hence be an asset for the country's development efforts?

The research presented herein attempted to evidence and describe the current role and contribution of the Lebanese high-skilled diaspora and returnees. It specifically explored the role of Lebanese transnational search networks in augmenting the knowledge needs of the home country institutions and individuals and investigated means of enhancing the contributions of high-skilled diaspora and returnees. The initial hypothesis was that the search role of skilled diasporas, represented in its ability to efficiently connect and bridge the needs of the home country institutions and individuals to the global pool of knowledge, expertise, and resources, is essential and preparatory for an impactful direct contribution.

The research adopted a case study approach that compared and contrasted the perceptions and experiences of diaspora high achievers with those of high-skilled diaspora returnees regarding the home country conditions, the dynamics of their linkages and transnational ties, their direct and indirect contributions to the home country, and their subsequent recommendations for reform. The study mainly focused on the migration relationship between Lebanon and the United States. To gain a thorough understanding of this migration relationship, the case research used 18 elite interviews with Lebanese-American diaspora high achievers and 93 survey responses from high-skilled returnees in

Lebanon. This chapter summarizes the findings of the research, reviews its limitations, identifies its policy implications, and suggests directions for future research.

II. Summary of the Findings

The research presented herein sought to understand the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect contributions to the home country and the associated policies or interventions needed to leverage and enhance those contributions. The previous two chapters presented the results of the interviews and survey. The interviews collected data on the patterns of high-skilled diaspora engagement with and contribution to the home country, in light of the country conditions, the dynamics of diaspora individuals' participation in search functions and overcoming the home country collaboration challenge, and the suggested policy interventions to best leverage their contributions. The surveys gathered data on factors related to returnees' motivations for return, impact of the country conditions, professional roles and projects upon return, characteristics of their transnational ties, perceived contributions to the country's institutions, and possible facilitative interventions to enhance their contributions and reintegration.

Based on the results from the interviews and the survey, there is substantial evidence of the nascent formation of institutionalized Lebanese transnational search networks that are attempting to play the roles of bridging, connecting and translating between the home country and the global pool of knowledge. These networks hold a growing portfolio of gestating projects and search activities that has not yet materialized in tangible investments or success stories. Thus, Lebanon's case does not represent a transformational involvement of its skilled diaspora in the country's economic

development yet, but is arguably advancing toward one in the near future. In addition, institutional factors at home, such as economic and political stability, infrastructure, and regulatory and legal frameworks, appear to be the main impediments for high-skilled diaspora and returnees' optimal contribution. At the same time, these impeding factors represent areas for possible improvement if these linkages and contributions were to be leveraged.

The evidence detected in this research echoes the findings of Saxenian (2006b) regarding the conditions or factors that influence the formation of transnational communities. These factors include the degree of participation in host communities, access to home-country resources and institutions, and infrastructure and bureaucracy at home (institutional factors). Lebanese HSIs are active participants in professional associations and networks in the United States. They maintain an active engagement and regular exchange of information with peers in Lebanon as well as access to home-country resources and institutions (especially in the technology and banking sectors). The unwelcoming regulatory and infrastructure environment at home was singled out as impediments to optimal contribution by the Lebanese transnational search networks and community. Saxenian (2006b) argued that the formation of transnational communities fosters immigrant circulation in the pursuit of professional opportunities and investment in the home country. Thus, a more welcoming business and regulatory environment and an improved investment climate at home could result in an increase in Lebanese high-skilled talent circulation.

Most significantly, this case data suggests that government policies and initiatives have a limited, almost negligible, role in forging linkages or facilitating contributions of

high-skilled diaspora and returnees. Rather, private actors and institutions take the lead role in establishing and sustaining diaspora knowledge networks. Thus, Lebanon demonstrates a laissez-faire diaspora option that encapsulates the suboptimal incorporation of diasporas into the development process of their home countries, without much government intervention. Only time will demonstrate if this laissez-faire diaspora option will eventually bear fruit in terms of sustainable and impactful engagement and contribution. Consequently, this research advocates for a proactive and *fully* endorsed diaspora option coupled with concentrated institutional reform efforts targeting the investment climate to better capitalize on the county's skilled diaspora and returnees for a transformational impact. The following section discusses these findings in detail. Specifically, based on the data presented, this research finds:

- **A Laissez-Faire Diaspora Option with Suboptimal Impact.**

Lebanon's case does not yet amount to an impactful engagement of its U.S. skilled diaspora in the transformation of the country's innovation system. The initial assumption of this research was that Lebanon's case would represent a paradox—an odd case of diaspora engagement and contribution as it relates to the absence of facilitative policies and unwelcoming home country conditions. Nevertheless, the findings of this research, based on the interviews and the survey, show that Lebanon's engagement with its skilled diaspora could represent a portfolio of gestating projects and initiatives that promise transformational impact in the future. So far, Lebanon's skilled diaspora transformational contributions have been thwarted by the country's generally uninviting

conditions, high uncertainties, unwelcoming investment climate, and absence of notable diaspora engagement public policy.

These conditions have not discouraged diaspora high achievers and the professional networks from engaging in different forms of direct and indirect contributions to the home country, but their impact remains less than transformational on Lebanon's innovation system. Diaspora contributions were represented in several forms, such as philanthropic (personal and through networks and corporations), corporate immersion and training, direct investments and outsourcing, and lobbying and promoting. Their indirect search activities included mentorship, advisory, access, and referral services to home country institutions and individuals, especially those in the banking sector and, more recently, the growing technology sector. The magnitude of these contributions still falls short of representing the entrapped potentials and withheld opportunities, due to the unwelcoming investment, regulatory, and infrastructure environment at home. The case of Lebanon, when compared with other countries such as Ireland, India, or Taiwan, still fails to exhibit characteristics of transformational and impactful engagement of the skills diaspora in the home country's development process.

From a public policy perspective, Lebanon's case represents a laissez-faire diaspora option as it relates to the absence of any notable public diaspora engagement policy coupled with unwelcoming home country conditions. Lebanon's high-skilled migrants and their networks demonstrated that their search role, as well as their direct contributions, span beyond specific government policies. The connections, bridges, and networks established were organic by nature, driven by diaspora high achievers rather than government initiatives, and responded to a growing demand in the

home country. The research reveals the important role of "high achievers" or individuals who help relax knowledge constraints on both the diaspora network and the home institutions sides. Few highly motivated, successful, and well-respected individuals served as connectors within the community or drove the majority of the initiatives analyzed in this research. Nevertheless, this could be attributed to the selectivity bias of this research sample.

This research finding contributes to the already established diaspora option concept in migration studies. The concept has been supported by a growing body of literature that investigated the linkages, impact, and engagements of skilled diasporas in their home countries' developmental efforts. Authors such as Saxanian, Kuznetsov, Wadhwa, and Seguin have grown this literature by investigating different diasporas and their engagements with their home countries. Saxenian (2002) showed that many Taiwanese and Indian firms in Silicon Valley actively promoted global networks that linked the United States (and Silicon Valley specifically) and the home country of the immigrant professionals. In the same context, this research provides first-time evidence of the engagement and contributions, especially on the search level, of Lebanese HSIs and returnees to their home country.

The research findings suggest that a country with a rich and successful diaspora, such as Lebanon's, may not be able to fully capitalize on the knowledge resources of its skilled diaspora without adopting a diaspora engagement policy. On the one hand, a stable political and economic situation, functioning infrastructure, and welcoming investment climate could bolster and facilitate any perceived diaspora engagement policy. On the other hand, diasporans engage despite these limitations, and as the findings of this

research demonstrate, attempt to create their own microcosm of favorable investment climates through certain interventions. The creation of LFE and its affiliated accelerator as well as its reform lobbying agenda are good examples of such microcosms. Arguably, more could be achieved if such efforts and interventions are duplicated, scaled, and sustained.

Lebanon currently lacks a viable emigration policy framework that could leverage or enhance its skilled diaspora' and returnees' contributions. The literature review chapter discussed three different policy frameworks by Gamlen (2008), J. Brinkerhoff (2009), and Kuznetsov (2006, 2013) that shed light on the multiple possible dimensions and levels of analysis related to sending countries' policies toward their diasporas. Based on these frameworks and the findings from the interviews and the survey, Lebanon's government appears to be relatively disengaged from its skilled diaspora community.

The relative disengagement of Lebanon's skilled diaspora should not come as a surprise. The Lebanese state has not played an active role in organizing or drafting a coherent policy toward its emigrants. Its few and sporadic efforts were usually superficial, uncoordinated, or one-time gestures (Pearlman, 2014). None of the very few policy attempts or legislative undertakings has focused on cultivating or recognizing the knowledge resources of Lebanon's vast skilled diaspora. Most of those few undertakings or legislative attempts by the Lebanese state fall into Gamlen's (2008) category of "diaspora integration policies" but were still limited to the "political incorporation" and "extension of rights" categories (permitting dual nationality, dual citizenship, external

voting rights, and special legislative representation) and did not extend to the "extracting obligation" category (see Table 2).

Findings of this research are compatible with Kuzntesov's (2006) framework regarding the country readiness and maturity of its diaspora in relation to the associated engagement activities. According to Kuzntesov, countries with unfavorable conditions and emerging diaspora networks usually engage in activities focused on reform and visible demonstration projects, while their diasporas serve as role models and antennas (Table 3). The data collected from both the interviews and the survey reveal that Lebanon is perceived as a country with unfavorable conditions and, although active within their professional diaspora communities, the networks were still relatively disengaged from the home country institutions. The activities that both LebNet and LIFE initiated with the home country are still nascent and experimental, but demonstrate some level of commitment and traction. The networks are also active on the reform agenda and recently started garnering support for specific policy reform items through LFE—their outpost organization in country. Naturally, diaspora high achievers are also perceived as role models to the community. Nevertheless, the incorporation of diaspora individuals and networks in the BDL policy formulation (Circular 331) and Kafalat's iSME Fund operations are good examples of *pragmatic* diaspora engagement policies as described by Kuznetsov (2013).

Lebanese professional diaspora networks and high-skilled returnees have not received any meaningful support from their host or home governments or international development organizations. Diaspora search networks and their activities mutually benefit both sending and receiving countries. The emergence and activities of

Lebanese diaspora professional networks is a positive development not only for Lebanon as a sending country but also for the United States as a host country. Thus, host-country government development aid agencies, such as USAID, as well as international development organizations, should be important stakeholders in securing the needed technical and financial support to ensure the professional networks' effectiveness and sustainability. Nevertheless, the interviews reveal that the Lebanese professional diaspora networks are self-sustained through volunteering and member contributions, with no demonstrable support from U.S. institutions or aid agencies. Similarly, the majority of returnee survey respondents indicated that their contributions have not been assisted or enhanced by programs or initiatives that targeted Lebanese diaspora. This response may reflect their lack of knowledge about existing programs and support opportunities, which, in turn, implies the need for a better outreach strategy by the administrators of these programs.

- **Lebanese Transnational Search Networks with a Promising Portfolio of Gestating Projects.**

Lebanese professional diaspora networks have been transforming into institutionalized transnational search networks. The goal of this research was to contribute to the body of knowledge focused on enhancing the contributions of high-skilled diasporas to the sending countries, and specifically on indirect contributions through the ability of high-skilled diaspora networks to act as search networks. The research geared toward investigating the role of Lebanese high-skilled diaspora and returnees in building and maintaining transnational search networks to bridge capabilities

and opportunities between home and abroad. The interviews and survey results provide ample evidence of the emergence of Lebanese transnational search networks, as discussed by Kuznetsov and Sabel (2006), Saxenian (2006b), Iskander (2006), and Kuznetsov (2006). These networks have evolved to serve as collaboration platforms by which members find, match, and connect those seeking knowledge, access, and business opportunities at home and within the professional diaspora community. However, such search activities are more prevalent within the diaspora community compared with activities within the home country, due to trust and credibility issues.

Lebanon's transnational search networks hold a growing portfolio of gestating projects and are gearing toward a success story. Most initiatives examined and highlighted in this research were recent or still under development. No success stories of transformational impact have yet emerged, but evidence collected reveal a number of concentrated efforts aimed at achieving just that: the first single success story resulting from collaboration between Lebanon's high-skilled diaspora and its counterpart institutions at home. One aspect of success could be represented in an adopted Lebanese start-up that grows into a global firm with the help of diaspora mentorship, access, and resources. Lobbying and policy reform efforts exerted by the professional diaspora networks and their partner institutions at home could also demonstrate success. Programs and initiatives such as LebNet's Mentorship Program, LFE's reform efforts on behalf of the networks, and the most recent accelerator launched by LFE represent a set of connected efforts gearing toward tangible impact.

These anticipated successes highly depend on many exogenous factors beyond the control of the diaspora networks and their partner institutions at home. After all,

documented case studies show that not all skilled diasporas succeed in demonstrating the diaspora option. Most relevant is the experience of Argentina's small but highly entrepreneurial diaspora. The Argentinean diaspora was highly motivated to help the home country, but the motivation did not translate into tangible projects because home institutions were weak. Diaspora members have blamed the individual ambitions of politicians and turf battles between government agencies for consistently blocking efforts to involve the diaspora in developmental projects (Kuznetsov, 2006). Domestic institutions appear to be the main determinant of the success of diaspora projects, especially complex and long-term projects (Kuznetsov, 2006, 2013). Whether the Lebanese diaspora experience will avoid such fate can only be speculated, given the unique nature of Lebanon's weak state, the dominance of private domestic actors, and the complex political and confessional system.

The emergence of Lebanese transnational search networks and their search activities are of potential significance to the growing technology and entrepreneurial scenes in Lebanon and the region in general. Establishing knowledge channels to innovation hubs has been fundamental to the development of many of the technology clusters around the globe, such as those in Bangalore, Tel Aviv, or Taiwan's Hsinchu Science Park. This research demonstrates that the pilots of these knowledge channels have been established between Lebanon and its skilled diaspora in the United States. The triangle of channels connecting Lebanon to the knowhow and resources of Silicon Valley and Wall Street, and among the networks themselves, has the potential to not only bring exposure to Lebanon's talents at home and in the diaspora, but also to open new possibilities—one of which could be a global success story that originates in Lebanon.

The Lebanese private sector has always had a strong international orientation, given the geographical location of the country and the nature of its services sector. There is a longstanding culture and recognition of the role of the private sector in driving growth in Lebanon. The relatively large, wealthy, and globally dispersed Lebanese diaspora serves as an international extension that makes local human capital more globally competitive. The institutionalization of this globally competitive diaspora through transnational search networks is a recent development. These resources, when combined with new opportunities for trade and investment throughout the MENA region, will constitute a solid source of potential economic growth once the right political, institutional, and security conditions are secured.

- **Skilled Returnees' (Temporary) Contributions.**

High-skilled Lebanese returnees are active job creators, knowledge contributors, and global connectors. Lebanese high-skilled returnees have created local job opportunities through their young and micro-startups, which are the major job-creating enterprises in Lebanon (World Bank, 2014b). Even within the small sample of respondents, returnees' start-ups created more than 500 jobs. These returnees appear to be major actors in the market for knowledge in Lebanon as both participants and access points to the wider global pool of knowledge. Returnees maintain relatively strong transnational ties that exchange technological and technical information, as well as information related to business partnerships and professional opportunities. The international movement of Lebanese high-skilled workers between OECD countries and Lebanon constitutes a healthy medium for knowledge transfer. The movement of skilled

personnel facilitates technological knowledge flows and contributes to the establishment of a wider range of potential information-flow channels and knowledge markets (Hyde, 2011; Levin, Klevorick, Nelson, & Winter, 1987). It comes as no surprise that the overwhelming majority of the returnee survey respondents perceived technical and managerial knowledge transfer, mentorship, and job creation as their most important contributions to the home country.

It is important to note the relative disconnect between Lebanese skilled returnees and the respective professional diaspora networks. This disconnect has implications for the sustainability of knowledge transfer to the home country. A closer relation between skilled returnees and the professional diaspora networks could enhance their contributions and leverage their knowledge resources. Recent initiatives by the networks such as LebNet's Mentorship Program and LFE's accelerator could help bridge this gap between skilled returnees and the professional networks.

Lebanon emerged as a temporary stop for many of the skilled returnees, staying as long as the security situation is tolerable or until a better opportunity arises abroad. The slightly optimistic perceptions participants had prior to returning are hampered post-return, mainly due to the instable political and security situation. Very few (12%) survey respondents indicated they expected their return to be permanent. Their perception of the working environment in Lebanon is generally negative, especially regarding factors related to the role of the public sector. The majority of the respondents view the country's vulnerable political and security conditions, poor infrastructure, and cumbersome regulatory environment as major impediments. This negative outlook undermines the potential benefits of brain gain and even brain circulation. Lebanon,

especially in its current circumstances, needs its skilled and talented workforce, including those returnees. Therefore, sustaining the returnees' stay and assimilating them into the innovation-ecosystem workforce should be within the scope of the country's innovation strategy. The first step toward this objective is a stable political and security apparatus.

- **Dysfunctional Public Home Institutions with Few "Islands of Effectiveness."**

Lebanese diaspora high achievers in the United States and high-skilled returnees to Lebanon have an ambiguous attitude toward the home country government and its role. On one hand, the overwhelming majority of this research participants believe the government is an inadequate partner, and they had very low, if any, expectations regarding policies and initiative that could facilitate transferring knowledge and integrating returnees into the economy. They also blame the government for the country's unstable political and security situation, as well as its poor and dysfunctional infrastructure—the two main impediments highlighted by both skilled diasporans and returnees. On the other hand, some government bodies or agencies such as the BDL or Kafalat are considered viable public partners and counted on to serve as collaborators and advocates for reform—especially investment and business environment legislative reforms. These public institutions emerged as "islands of effectiveness" within an otherwise dysfunctional public system.

Despite their low expectations, Lebanese diaspora high achievers and high-skilled returnees consider stability, a welcoming regulatory environment, and a functioning infrastructure as fundamental for the emergence of a viable innovation ecosystem in Lebanon, which consequently could leverage their contributions. A healthy growth

environment in Lebanon would organically and naturally incorporate the professional diaspora skills and resources, whereas the opposite environment would underutilize their contributions. In this context, respondents singled out regulatory reforms and relaxing investment constraints as immediate and relatively easy-to-implement reforms that could stimulate investments and collaborations with high-skilled diaspora. Stability would encourage circular as well as return migration, and adequate infrastructure is necessary to grow domestic businesses and attract foreign investments. Nevertheless, the currently unhealthy home conditions do not seem to affect the magnitude of skilled diaspora contributions and engagement—a telling aspect of the resilience and pragmatism of the Lebanese skilled diaspora.

The emergence of the BDL and Kafalat as "islands of effectiveness," despite the overwhelmingly negative perception participants have toward Lebanese government institutions, is an opportunity that could be leveraged to sustain and expand engagement with the professional diaspora community. These institutions, due to several historic, functional, and technical factors, have shown a level of competence that other public institutions lack, and their leaders have gained the trust and respect of the professional diaspora networks. Consequently, their successful indirect engagement policies with the professional diaspora networks and individuals constitute an opportunity to highlight and expand similar initiatives and engagements to other relevant institutions, such as local universities, scientific research institutes, investment promotion agencies, and other relevant bodies. Namely, the BDL Circular 331 and Kafalat's iSME Fund represent model initiatives that incorporate the skills, access, and networks of the Lebanese knowledge diaspora. The relevant policy challenge is to

leverage and expand these small, isolated islands within an otherwise dysfunctional public system.

Lebanese academic institutions' role in skilled diaspora engagement and incorporation has been dismal, given the tremendous potential and opportunities. Academic institutions are a major pillar in a functioning innovation ecosystem through their production, adoption, and dissemination of knowledge and skills. In addition, home country academic intuitions are usually the natural partner for skilled diasporas, serving as trusted collaboration venues. Further, the survey results show that Lebanese universities are a major employer of skilled returnees.

In contrast to BDL, Kafalat, and the local VC funds, Lebanese academic institutions' connection and engagement with the skilled diaspora and its networks appear suboptimal and limited to transactional activities such as fundraising and running scholarship support programs. Generally, Lebanese academic institutions regard and approach the country's vast diaspora as a source of financial contributions, neglecting the equally significant knowledge and access resources at hand. The interviewees especially highlighted this disconnect or mismatch of expectations between what the knowledge diaspora offers and what academic institutions solicit. The few Lebanese universities with active alumni networks in the United States usually focus on fundraising and fall short of achieving a potentially enriching engagement with alumnus and the institutions.

Lebanon's Case Benchmarked

Based on the findings presented in this section, it is insightful to compare the landscape of Lebanon's interactions with its skilled diaspora to other countries' experiences. Table 16 represents an illustrative and limited benchmarking of Lebanon's domestic institutions' diaspora conundrum by comparing it to the economies of Mexico, Argentina, Russia, and South Korea. The benchmark builds on Kuznetsov's (2013) comparison of diasporas' impact on domestic institutions (table 2, p. 13). Given that the interview protocol employed in this dissertation is relatively similar to that employed in Kuzentsov's research, this speculative benchmark is plausible.

Table 16 benchmarks the five very different economies based on the characteristics of their home country institutions, maturity and dynamism levels of their start-ups and skilled diaspora, and impact of the diaspora on transforming the home country innovation system. Although South Korea is already a leading innovation economy, Mexico, Argentina, and Russia are higher middle-income economies with accumulated stocks of knowledge and skills at home and abroad. These countries have ambitious visions for transformation into innovation economies and view their skilled diasporas as crucial assets for their transformations. Table 16 also incorporates the notion of local "islands of effectiveness" in the public sector and academia. These islands are dynamic and relatively efficient institutions capable of establishing viable and productive collaborations with the professional diaspora community, yet remain small, isolated pockets or segments within an otherwise dysfunctional innovation system.

Table 16. *Illustrative Benchmarking of Lebanon's Domestic Institutions-Diaspora Conundrum*

	Mexico	Argentina	Russia	South Korea	Lebanon*
Characteristics of S&T diaspora	Relatively large and well organized	Relatively small and poorly organized	Relatively large and poorly organized	Relatively small and well organized	Relatively large and recently organized and institutionalized
Dynamics of technology start-ups	Relatively weak: The "big neighbor curse"	Visible but fragile diversity of regional dynamics	Diversity of regional innovation proto-clusters	Relatively weak: The "big chaebols curse"**	Weak: Crises and uncertainty preclude long-term planning horizon
Public sector pockets ("islands") of efficiency	Strong in every ministry but suffers from "coordination curse": Ministry's attention span is short	Pockets of efficiency at subnational level	Pockets of efficiency at subnational level	Public sector is relatively uniform and effective	Dysfunctional with few islands of effectiveness: Pockets of dynamisms exist (BDL and Kafalat) but are small, constrained and do not display a tendency to grow into other relevant institutions
Innovation and higher education "islands"	Weak despite significant investment	Binding constraint: Elite/pragmatic sector is weak	Elite segment remains strong but its skill base appears to be eroding	Elite segment is strong	Small islands exist (VCs, incubators) but are small and isolated. Weak role of academic institutions on innovation / entrepreneurial front
Impact of diaspora in transforming national innovation system	Too early to expect impact: Actors are establishing meaningful conversations that may yield future results	Some policy impact through informal interactions with first movers from the government and diaspora	Limited impact: Diverse but isolated success stories that fail to turn into role models	Limited impact: Capable government and private sector do not feel much need for diaspora engagement	Too early to see tangible impact: Portfolio of gestating projects and initiatives; still disappointing given the potential; limited to mentorship of technology start-ups and lobbying efforts

Note. *This column was added to Kuznetsov's (2013, p. 13) benchmark table with his permission. **Chaebol is the South Korean form of business conglomerate composed of large, family-controlled businesses with strong ties to government agencies.

The goal from this benchmark is to draw lessons that could enhance the impact of the skilled diaspora on the transformation of the local innovation ecosystem. As an example, despite the developmental strides achieved by the Korean state, Kuzentsov (2013) found that the Korean S&T diaspora contributes relatively little to innovative and start-up activities at home. A possible and plausible explanation for the limited impact is the strong entrenchment of stakeholders in the *chaebol* system, which has "limited the opportunities for diaspora participation and contribution to economic transformation in Korea" (p. 12). Similarly, Kuzentsov concluded that in terms of business linkages and entrepreneurship, Russian emigrants were still less engaged in their home country's development than were their Argentinean and Mexican counterparts.

In the context of Lebanon, the relatively large, organized skilled diaspora is thwarted by instability and a dysfunctional public sector, despite a few local islands of effectiveness, such as BDL, Kafalat, and some incubators and VCs. The impact of the professional diaspora on transforming the national innovation system is still disappointing and limited, given its potential. Nevertheless, this research detected a portfolio of gestating projects that could eventually create tangible, long-term impact. Therefore, Lebanon's skilled diaspora interactions appear to be the weakest among the five benchmarked economies, and somewhat similar to Mexico's dynamics, especially when it comes to diaspora impact and weak home public institutions.

III. Limitations

This section examines the generalizability of the results and discusses the research limitations.

Generalizability of Results.

This section considers the generalizability of the findings discussed previously, beyond the immediate Lebanon-United States case study. In case studies, analytical *generalizability* is used to logically extend the results of a given case to a broader hypothesis (Yin, 2003). Thus, the Lebanon-United States case under consideration is generalizable to the extent that the patterns and dynamics of the skilled diaspora's contributions to and engagement with the home country match across other cases. Given that Lebanon's relationship with its skilled diaspora is dictated by a laissez-faire market approach without much public intervention, and Lebanon recently institutionalized its interactions, the extent to which the results of this research are generalizable to other countries' relationships with their diasporas is somehow constrained. Nevertheless, Lebanese, like many other nationalities, emigrate to the United States seeking educational opportunities, stay to build careers, and then—after achieving a certain level of success—are able to build community ties and extend contribution channels to the home country. Collectively, the community of professional expatriates represents a knowledge resource eager to engage with home country institutions but still constrained by a set of home country growth obstacles.

The findings from the Lebanon case may not be generalizable to other high-skilled diasporas, even ones with similar-size skilled diasporas. The Lebanese skilled diaspora's engagement and knowledge transfer efforts, although not yet transformational, are gearing toward improving the country's economic conditions and nurturing high-value added industries and clusters. Lebanon's volatile country conditions, weak and divided state apparatus but still-vibrant private sector, deep and *natural* migration, and entrepreneurial history and culture make its relationship with its vast diaspora unique and

its lessons more difficult to generalize. Nevertheless, the case serves as a useful example of a relatively small high-skilled diaspora and illuminates important dynamics that could feed the growing literature on the contributions of high-skilled diasporas to their home countries.

The first limitation of this research is its case study approach. Given the dynamic and global nature of high-skilled migration, a bilateral focus on the Lebanon-United States relationship is a limiting approach. Many interview participants and survey respondents had migration journeys that involved several countries and continents in addition to the United States. The inclusion of high-skilled returnees from other OECD countries in the survey analysis partially addresses this limitation. Nevertheless, the bilateral focus of the case serves a practical purpose, given the time and budget limitations of this research.

The second limitation of this research is its broad sectoral focus. The case under study adopted a broad coverage of activities and contributions of HSIs and returnees, which spanned several sectors, mainly technology, finance, and academic, abroad and in the home country. A narrower, more focused approach at the sector and subsector levels could provide insights that were obscured by the broad focus adopted in this research.

The third limitation of this research is in its observation of the diaspora's contributions, when a large part of the engagement with the home country was through intangible search activities. It was difficult to assess and measure the impact of the Lebanese knowledge diaspora when so many initiatives and projects were in mentorship, advisory, referral, and providing access. Nevertheless, the research was able to highlight several successful engagements and direct contributions by the high skilled diaspora and

returnees. Future research could take a more empirical approach to measuring the impact of diaspora investments within a specific sector.

A final limitation of this research is its sample frame. Given that there were no available directories or databases of high-skilled Lebanese immigrants and returnees, this nonrandom research sample was composed of individuals who were either self-identified or suggested or referred by professional diaspora networks or home country institutions. The constraints on nonrandom sampling draw clear limitations on the research's finding regarding the perception and impact of both diaspora members and returnees and limited the representativeness and generalizability of the results. Such a limitation could be somewhat mitigated in future studies by more extensive outreach to a larger representative sample. However, by purposefully targeting and including students, young professionals, academics, entrepreneurs, and high achievers, this sample reflected the heterogeneity that characterizes high-skilled mobility. Thus, the research design and the sample were adequate for addressing the research questions at hand.

IV. Policy Implications of the Findings

A key policy assumption that underlies the findings presented earlier is that developing countries experiencing brain drain in the high-skilled professions and with an existing knowledge-rich professional diaspora, such as in Lebanon's case, should not expect knowledge transfer through transnational ties to come to fruition on its own accord. Rather, for the greatest effect, such countries need to address the factors that inhibit the growth of their local innovation system, strengthen ties with the diaspora through direct and indirect engagement policies, and encourage the circulation of high-skilled emigrants.

Thus, actions to address these factors, establish sustainable transnational ties, and ameliorate impediments to brain circulation are all viable policy options. This section discusses the policy implications of this research in light of the findings and suggests specific initiatives.

Lebanon-Specific Policy Caveats.

Before delving into the policy implications of this research, it is important to highlight the main caveats related to instituting diaspora engagement policies in the context of Lebanon. The Lebanese government, in general, serves as less of an executive and autonomous body with intervention capabilities but more as a forum of intercommunal bargaining and power sharing. A recent publication by Pearlman (2014) examined Lebanon's transnational outreach to its emigrant community through the lenses of demography, votes, and money. Pearlman argued that in weak states such as Lebanon, a range of domestic actors might be even more significant in shaping linkages with emigrants than are state agents and policies. Homeland domestic actors are more prone to see emigrants as "resources, bargaining chips, and turf to utilize in their struggles with each other for power and standing" (p. 36). Thus, this research implicitly advocates the government—instead of competing domestic political actors—play a more active and progressive role. In this regard, the design and implementation of effective diaspora engagement policies require a certain degree of state capacity and authority, which is currently absent from many—but not all—government bodies. Thus, the few public islands of effectiveness highlighted in the findings crucial to devising and implementing effective diaspora engagement policies.

Generally, any proposed diaspora engagement policy will have to overcome two inherent obstacles. On one hand, there is very little hope that the Lebanese government

could embark on diaspora-related initiatives in isolation from the conventional sectarian and political apparatus. The government will not be fully comfortable with the idea of diaspora cooperation unless the cooperation is "controlled" and channeled for internal political battles, in the same manner it usually approaches internal and domestic agents. On the other hand, the diaspora community will find it very difficult to trust the government, and the political and confessional elite behind it, because it is familiar with the dynamics of power sharing and the political and economic struggles that dictated the outreach.

It is also very important to acknowledge that, historically, the Lebanese government has basically done almost nothing to assemble the resources of its diaspora. On the contrary, labor outmigration for the last century and a half have relieved unemployment and offered financial income for both families and the overall economy. Remittances constituted 16.2% of Lebanon's GDP in 2014 (at $7.67 billion), constituting the 13th highest among developing economies and the second highest in the Arab world (Byblos Bank, 2014). The Lebanese state has not played an active role in organizing outmigration, channeling expatriate remittances, or articulating a strategic stance toward its diaspora community (Pearlman, 2013, 2014). Brand (2007) encapsulated this passivism toward the diaspora by explaining,

> The Lebanese state has largely failed to marshal their [diaspora] energies….The Lebanese government did not produce successive economic or development plans through which one might trace or piece together a coherent state policy towards émigrés….Successive governments did realize the importance of the role of the emigrants, both in Lebanon and abroad….Nevertheless,...efforts...were superficial and uncoordinated. (pp. 6-8)

Both the interviews and the surveys revealed the major limitation for productive engagement with Lebanon's skilled diaspora and returnee community is the inefficiency

of Lebanon's domestic institutions and vested interests at home. Yet neither the domestic government and NGOs nor the high-skilled diaspora community are homogenous. The emergence of the BDL and Kafalat as public islands of effectiveness attest to that. Thus, the immediate priority would be to support already-established channels, initiatives, and platforms on both sides to help scale up and expand their activities to become more visible and impactful.

Given these caveats and the mutual distrust between the Lebanese government and diaspora, engagement policies or initiatives will have better success prospects if both sides abide by a number of provisions. Consequently, both existing and new initiatives should be:

i. Kept national by nature and insulated from turf battles among political groups that usually compete over emigrant resources on their own terms and for their own goals to strengthen their autonomy at the expense of the state;
ii. Spearheaded and instituted by the few effective and trusted agencies, in a depoliticized manner and in cooperation with the diaspora professional networks and local stakeholders; and
iii. Implemented through a private-public partnership arrangement to guarantee transparency, credibility, and sustainability.

Policy Recommendations and Suggested Initiatives

This research concludes with recommending policies and initiatives that address the research findings. The policies and initiatives are intended to be realistic, feasible, and

mostly driven by the main stakeholders in both the host and home countries. Moreover, the recommendations build on the principles of the "new generation" of diaspora engagement initiatives, as suggested by Kuznetsov (2013, p. 305). A combination of direct and indirect diaspora engagement approaches are required to incorporate diaspora individuals and networks in improving the management practices and reach of the home country institutions. Ideally, a successful diaspora engagement policy should occur in the context and as an instrument for global solution not as a purpose by itself. New generation diaspora engagement initiatives include:

- policies that focus on knowledge rather than money transfer,
- joint projects and initiatives that focus on brain circulation rather than permanent return, and
- public sector engagement, driven by sectoral and innovation-related ministries and agencies rather than by the foreign ministry.

Moreover, most policy implications included in this chapter span the different categories of government actions for fostering an enabling environment, as described by J. Brinkerhoff (2009), which are mandating, facilitating, resourcing, partnering, and endorsing policies (Table 3). Each policy recommendation and practice discussed in this section falls into one or more of the engagement categories suggested by J. Brinkerhoff's framework and involves different implementing stakeholders.

The section below suggests short- to medium-term policies and initiatives, as per the main stakeholders. This research recommends two main engagement policies (E-Policy) that are meant to target the Lebanese government and international development organizations. It also recommends two engagement practices (E-Practice)

that target the Lebanese academic institutions and the professional diaspora networks. In addition, the research recommends a long-term, overarching, multi-stakeholder initiative to strengthen knowledge-based collaborations between Lebanon and the United States that promote economic growth through innovation. Each policy and practics will be discuss separately, according to the relevant stakeholder.

Lebanese Government

For Lebanon to move from a talent-exporting country to one that thrives economically, serious attention should be dedicated to acknowledging and incorporating its resourceful knowledge diaspora in the transformation process; that is, through adopting the diaspora option. Lebanon's economic transition into a knowledge- and innovation-driven economy could be enabled and accelerated through the diaspora option once the appropriate institutional reforms are enacted. The Lebanese skilled diaspora represents a trilogy of innovation economy enablers: specifically, access to global talent and knowhow, networks and markets, and investment resources. Fully adopting the diaspora option, rather than the current laissez-faire approach, draws upon the country's expatriates and their knowledge and financial resources to stimulate the transfer of knowledge and resources to Lebanon at relatively low cost. Practically, adopting the diaspora option starts with government institutions and policy makers acknowledging the value of the knowledge diaspora and incorporating its resources (not only financial resources) into the developmental efforts.

Acceptance and endorsement of the diaspora option requires the government to regard skilled migration not so much as a loss, but as a potentially beneficial resource for

Lebanon. The Lebanese will not stop migrating; they have been doing so for centuries. "Leaving the country is as Lebanese as apple pie is American" (Pearlman, 2014, p. 37). Thus, the focus of the diaspora option is not on the physical repatriation of emigrants, but rather on mobilizing the emigrants and their resources. Establishing linkages with the skilled diaspora could be considered an alternative to their physical return. This perspective is based on the assumption that skilled migrants, internationalists by nature, tend to establish transnational ties with the home countries and can use these links to contribute through different direct and indirect channels. These transnational ties will act as a conduit for brain circulation, wherein the home country could benefit from its expatriates without complete repatriation.

An ideal diaspora engagement strategy should encompass activities that symbolize acknowledgment, in addition to initiatives and policies that incentivize and facilitate knowledge exchange, investments, and philanthropy. In the specific case of Lebanon, diaspora engagement policies or initiatives may encourage repatriation in the long run, but might be more effective and impactful if oriented toward brain circulation and utilization of the search networks' resources and capabilities. An intuitive, noncontroversial policy suggestion related to optimal skilled diaspora contribution is that the political and security situation, the investment climate, and governance structure in the home country must improve. Nevertheless, the more practical and fruitful policy question should focus on how skilled diaspora participation could accelerate improvement of the home country institutional environment. This pragmatic approach is articulated by Kuznetsov's indirect diaspora engagement policies where diasporas are relied upon as an extension and continuation of sector-specific reform and development

agenda. Designing a successful diaspora program is about identifying flexible and creative segments of domestic institutions, not about the diaspora per se. To achieve this, the research recommends E-Policy 1.

E-Policy 1: The Lebanese government could acknowledge and incorporate professional diaspora networks in relevant public policy debates and efforts.

The Lebanese government could acknowledge professional diaspora networks as legitimate, reliable partners in formulating innovation policies and facilitating linkages to the skilled diaspora. Often, the Lebanese government wants to collect inputs and comments on matters related to legislation, innovation policy and infrastructure, university industry collaborations and connections, industrial policies, or other matters related to the development of local institutions. The professional diaspora networks could play a crucial role in providing valuable public policy advice when needed. The exemplary and pragmatic engagement of the networks with the BDL on designing and instituting BDL Circular 331 could be replicated and expanded into other public institutions. Government ministries, agencies, and universities could follow suit and incorporate professional diaspora networks in their policy and institutional development efforts. As an example, the Russian Ministry of Science and Education consulted professional associations of emigrant researchers on the structure and focus of the 2009 government program of joint research grants, and the researchers also participated in evaluating the applications (Kuznetsov, 2013). To date, no such engagement has taken place in Lebanon.

The Lebanese government could address the diaspora networks' reform concerns to facilitate their engagements and encourage investments and brain circulation. The government could form a Skilled Diaspora Engagement Task Force (*working group*) to work with the diaspora professional networks and individuals on addressing and facilitating their reform efforts. The Task Force, anchored at the Prime Minister's office (or the BDL), could involve high-level officials from key stakeholder public institutions, such as the Ministries of Foreign Affairs and Emigrants, Finance, Economy, Higher Education, Industry, and Telecommunication, and the BDL, CMA, Kafalat, Investment Development Authority of Lebanon (IDAL), relevant parliamentarian committees, and other institutions. The Task Force's mission would be to network and work closely with the diaspora professional networks and individuals through their home country representative, LFE, and address a prioritized reform agenda to ameliorate investment constraints, update relevant regulations, and eventually improve the business environment in Lebanon.

The immediate goal of the Task Force would be to remove or ease the constraints discussed in the findings of this research, which are basically home country institutional constraints rather than diaspora-related. Engaging the diaspora individuals and networks in the context of the Task Force should be a continuation of the sector-specific reform and development agenda. This research found that enacting regulatory reforms and relaxing investment constraints are immediate demands to leverage skilled diaspora contributions. Serious political commitment on the highest levels is required to implement these reforms, especially those related to infrastructure investments and business environment improvement. Nevertheless, some reform items could be enacted at

the individual-institution level without parliamentary approval. As an example, the BDL and CMA have full executive authority over financial and capital market regulations and can work along with diaspora networks to situate Lebanon as an investment-friendly market for outsourcing high value-added financial services administration.

International Development Institutions

Professional diaspora networks are a relatively risk free, low-cost opportunity for development institutions to explore and to experiment with integrating diasporas into development programming. Incorporating these networks in development institutions' programs could potentially lead to more effective and relevant engagements with home country institutions. Kuznetsov (2013) argued that diaspora networks have core competitive advantage over international consultants. These advantages are not limited to better education levels or access to international knowledge networks, but also extend to stronger motivation, commitment for a longer time horizon, and better understanding of local specificities and constraints—and thus, better coalition-building capabilities. In addition, the engagement will provide the networks with a viable platform to channel their knowledge and push for institutional reform at home. Based on the findings of this research, professional networks and skilled returnees did not receive any support from development institutions programs worth mentioning. In this context, the dissertation recommends E-Policy 2:

> ***E-Policy 2: International development institutions could tap into professional diaspora networks to solicit policy and technical advice regarding the overall strategic engagement with the home country and***

provide technical and analytical support to the networks and their counterparts at home.

International development institutions with active engagement in Lebanon and with the Lebanese institutions have a responsibility to acknowledge and incorporate Lebanese professional diaspora networks efforts and policy advice. The diaspora community, including the high-skilled and investor community, has been asked to provide last-minute, limited consultations regarding home country engagement strategy, policy, and economic reforms. Some of these institutions (such as the World Bank) recently started reaching out to diaspora professionals to solicit feedback and input during the preparation of country engagement strategies. Nevertheless, these gestures are still occasional and of limited impact. Lebanese professional networks could be active and sustainable partners for development institutions, especially when shaping strategic engagement and partnership with the country's government.

International development institutions could provide technical and analytical support to the Lebanese professional networks, especially regarding their efforts to nurture an investment-friendly environment and a vibrant innovation system in Lebanon. Simultaneously, international development institutions could provide political, analytical, and technical support to the Lebanese government through the envisioned Skilled Diaspora Engagement Task Force (E-Policy 1) to help guide and facilitate the implementation of regulatory and business environment related reforms.

Implementation of the two engagement policies described above (E-Policies 1 and 2) is a short- to medium-term incremental process that builds on existing engagements and leverages available resources and connections. Both the Lebanese

government and international development institutions should adhere to a set of practical principles when cultivating collaborative relations with the Lebanese professional networks. The practical principles include focusing on high-achieving diaspora individuals, facilitating and leveraging existing partnerships with the local islands of effectiveness, selectively supporting initiatives with defined projects and outcomes, and favoring quality over quantity of projects.

Lebanese Universities

Lebanese universities are a major stakeholder in any diaspora engagement strategy or apparatus. After all, these universities are often the alma maters of many of the skilled diasporans. The findings of this research reveal that Lebanese universities have not been living up to their potential as a natural partner for skilled diaspora and returnees. Although a major employer of skilled returnees, Lebanese universities have not fully tapped into the knowledge of diaspora resources and often approach their alumni mainly for fundraising purposes. Lebanese universities do not make policy, but educate and train thousands of skilled young Lebanese who often emigrate after graduation due to the lack of job opportunities in the home country. Thus, this research proposes a diaspora engagement practice (E-Practice 1) or initiative to address the relevant research finding.

E-Practice 1: Lebanese universities could establish Industry Advisory Boards and Committees that include diaspora members and activate their alumni networks.

Lebanese universities could establish Industry Advisory Boards (IABs) at the institutional level and Industry Advisory Committees (IACs) at the school or college

level and ensure diaspora representation on these boards and committees. Universities, especially research and entrepreneurial universities, are major pillars of a dynamic innovation ecosystem, such as the role of Stanford University in Silicon Valley and MIT in the Boston Area innovation clusters (Pascoe & Vonortas, 2015). Lebanese universities are mainly teaching universities with relatively low research activity and weak linkages to local industry. Thus, Lebanese universities have been graduating qualified and talented students whose skills are unaligned with local market needs. Consequently, the majority of graduates emigrate to Gulf countries, Europe, or the United States. These universities have been powerhouses of talent export.

The IABs and IACs are a low cost and relatively simple mechanism to ensure a sustainable and impactful engagement of industry in universities' strategic planning, curriculum update to align with industry needs, and industry-relevant research activities. Appointing diaspora high achievers on universities' IABs and IACs achieves two objectives. First, it serves as a prestigious recognition to the diaspora individual achievements in the relevant industry or field. Second, it provides a knowledge channel into global industry needs, challenges, and future direction.

Professional diaspora networks in the United States such as LIFE and LebNet are natural partners for Lebanese universities, and their members are perfect candidates for advisory roles. To illustrate, LIFE is already engaged with some Lebanese universities through their scholarship fund, but these engagements could be leveraged and expanded to include wider advisory roles. In addition, Kafalat's recent experimentation with including diaspora individuals on the iSME Fund Investment Committee should be an inspiration for the universities to follow. In practice, establishing an IAC for the business

school of a local university, with board members representing local financial institutions and diaspora members representing international financial institutions, could bring great value to the school and ensure that the curriculum prepares graduates for local and global job markets. Additionally, diaspora board members may be able to provide access to resources, partnership opportunities, and exposure that local industry representative cannot.

In the same context, *alumni of Lebanese universities* constitute a vast untapped knowledge resource spread across the region and the globe. Except for at the few top universities, such as the American University of Beirut and the Lebanese American University, university alumni networks are either nonexistent or dormant. Establishing and activating university alumni networks has been a sustainable approach for other universities to achieve their third mission of community and economic engagement. University alumni networks constitute a trusted, impactful venue for skilled diasporas to engage with and contribute to their alma maters.

Professional Diaspora Networks

The findings of this research reveal that the Lebanese professional diaspora networks hold a portfolio of gestating projects with home country institutions. In addition to sustaining and expanding existing projects, growing the networks' portfolio is a natural progression toward a transformational and impactful engagement. Thus, this research proposes two complementary initiatives to expand on their existing activities (E-Practice 2).

E-Practice 2: Professional diaspora networks could establish a Policy Advisory Practice and a Lebanese Diaspora Angel Fund (AFDL)

*Policy Advisory Practice***.** There are several practical approaches for incorporating the professional diaspora networks into the home country public and economic policy debate and activities. A government-driven approach was articulated earlier, in E-Policy 1. Nevertheless, in light of the findings of this research and the pessimistic view of the Lebanese government's less-than-proactive role toward its skilled diaspora, the networks are better suited to establish their own policy providing practice. In other words, the Lebanese diaspora networks could establish or spin off an affiliated entity, center, or consulting arm dedicated to conducting, commissioning, and disseminating quality research and strategies related to the home-country public and economic policies, especially those related to economic development and high value-added industries. The Practice could draw upon the diverse expertise of diaspora individuals in the fields of management consultancy, public policy and administration, finance and financial markets, high-tech sectors, trade and investment, corporate governance, and other areas.

The resulting knowledge products could represent the credible voice of the Lebanese skilled diaspora and contribute to the reform agenda items that home country entities such as LFE could adopt or add to their reform lobbying efforts. The suggested underlying mission for the Practice is to promote the Lebanese professional diaspora networks as a "new industrial policy" for Lebanon; an industrial policy that relies on the indirect engagement of diaspora individuals and networks in the country's institutional reform and development efforts. The proposed Practice could, in the long run, represent the professional expatriate community and channels its policy voice. Additionally, the

Practice could be the natural counterpart for public, academic, and private institutions at home that are seeking policy advice, as well as for international development institutions that are seeking to consult the professional expatriate community. A suggested immediate activity for the Practice would be to produce the much-needed *Lebanon Innovation Strategy* to disentangle the country's constrained potentials and detail an implementation plan aimed at transforming the economy into a knowledge-based innovation driven economy with the help of its knowledge rich diaspora.

Cotangential to the Policy Advisory Practice is LIFE's recent effort to establish a Lebanese American Caucus in Washington, D.C. LIFE is in discussion with Congressmen and Senators of Lebanese descent to establish some kind of coalition that could promote and advocate for stronger Lebanon-United States ties. The envisioned Practice could leverage these influential ties to U.S. decision makers to lobby for a wider reform-oriented engagement with Lebanon and push for stronger economic ties, a greater aid portfolio, and sustainable exchanges.

AFDL.[22] Many members and founders of the Lebanese professional diaspora networks are active angels, venture capitalists, and investors in the technology sector in United States and globally. These diaspora investors, with the help of the networks, could raise capital and form an angel fund dedicated to investments in the home country start-ups (and global start-ups with founders of Lebanese descent) that have already exhausted local resources and are ripe for regional and international expansion. The investment vehicle could also be a fund-of-funds involving existing home country angel and VC funds and local banks, which already have close ties to the diaspora networks and can

22. AFDL (لضفأ in Arabic) means better.

benefit from investment guarantees provided by BDL's recent Circular 331 and Kafalat's iSME Fund.

Establishing the AFDL comes as a natural step after establishing LFE and its accelerator (SpEED@BDD) in Lebanon. The AFDL will be well situated to provide follow-on investments to LFE's focus companies selected for the LebNet Mentorship Program. In addition to providing investment resources to the growing tech sector, the main value of the diaspora angel fund is the extensive knowledge, access, and global reach of its diaspora investors and partners.

Lebanon-U.S. Overarching Engagement Initiative

In addition to the policies and practices recommended above per the different stakeholders, this research proposes an ambitious but attainable initiative that could sustain and grow the knowledge-based collaborations between Lebanon and the United States and, consequently, its U.S. skilled diaspora. This initiative is a long-term project that requires solid political commitment from the stakeholders at the highest levels in both countries, as well as serious engagement of the professional diaspora community and international development institutions. This research concludes by detailing the initiative below.

- ***Work toward establishing the United States-Lebanon Science, Technology, and Innovation (STI) Fund (US-Leb STI Fund).***

The Lebanese government (at the President's or Prime Minister's level), in partnership and coordination with the professional diaspora networks and high-influence Lebanese-Americans, could work with relevant U.S. institutions and agencies such as the White

House, State Department, Department of Commerce, and USAID to establish the US-Leb STI Fund. The Fund's mission is *strengthening knowledge-based collaborations between Lebanon and the United States to promote economic growth through innovation*. LIFE is already in discussion with a number of U.S. congressmen and senators of Lebanese descent to establish some kind of Lebanese-American caucus that could advocate for close Lebanon-United States relations. These influential policy makers could be instrumental in the process of making this fund a reality.

The United States already has several operating agreements of this kind with India, Israel, Egypt, and other countries wherein an endowment fund was set up with equal contributions from both countries (in the range of $50 million to $100 million).[23] In the case of Lebanon, additional funding could be leveraged from donor agencies such as the World Bank, as well as through corporate contributions. Such collaborative agreements have proved to be of a relatively low cost, sustainable nature, and a preferred venue for high-skilled diaspora scientists and technologists to cooperate with their home country peers.[24]

The US-Leb STI Fund could be structured as an independent nonprofit organization with a governing Board of equal and rotating representation from both countries to gain the trust of stakeholders and ensure transparency and independence. Depending on the size of the endowment and its returns, the Fund could support a range of activities to mutually benefit the two countries, such as:

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23. For more information on the US-India Science and Technology Endowment Fund, see http://www.usistef.org/; for the US-Egypt Joint Science and Technology Fund, see http://egypt.usembassy.gov/usegypt.html; for the US-Israel Science and Technology Foundation, http://www.usistf.org/

24. Based on the author's own experience as a peer review administrator at the US-India Science and Technology Endowment Fund, the majority of US-based applicants were Americans of Indian origin.

- *Collaborative scientific research projects.* Provide funding to collaborative research proposals submitted jointly by principle investigators from the United States and Lebanon. The Fund could also support joint research planning and development activities (proof of concept, demonstration).
- *Technology transfer*. Provide funding to technology licensing, patenting, and commercializing activities.
- *Establishment of Joint Research, Development, and Innovation (RDI) Centers or Centers of Excellence*. Provide seed funding for the establishment of Joint RDI Centers or Centers of Excellence conditional on leveraging funding from academia and private enterprises to support university-based applied research, following the U.S. NSF model of Industry-University Cooperative Research Centers (I-UCRC).[25]
- *Exchanges* of researchers, faculty, and students. Fund exchanges of (especially, young) researchers, faculty, and students between U.S. and Lebanese universities and research centers.
- *Convening and connecting*: Organize and facilitate scientific-, technological-, and investment-related conferences that bring together high-level stakeholders from both countries to keep abreast of the state of research, industry and technology development, and investment opportunities.
- *Capacity building.* Fund capacity-building activities such as workshops and training for university researchers, administrators, and public-sector personnel overseeing STI activities.

25. For more on the NSF I/UCRC program, see http://www.nsf.gov/eng/iip/iucrc/about.jsp

- *Start-up immersion.* Provide partial support for visits by or temporary relocation of start-ups entrepreneurs to Silicon Valley or Beirut for the purpose of refining the business model, product, or service, connecting with mentors and potential financiers, or accessing new markets.

The US-Leb STI Fund could be a practical and realistic venue for addressing brain drain through the temporary return, circulation, or virtual engagement of expatiated Lebanese scientists, technologists, and entrepreneurs located overseas. The independent and transparent nature of the Fund will underline its credibility as the main venue for collaboration and knowledge transfer between Lebanon and innovation clusters in the United States, led naturally by high-skilled Lebanese-Americans.

From an international development perspective, establishing the US-Leb STI Fund represents the ideal mutually beneficial immigration policy as advocated in the comprehensive model in Chapter 2 (Figure 2). That is, this immigration policy promotes mutual gain from high-skilled migrants to sending and receiving countries, as well as to the global knowledge and knowledge capital market. In that context, the Fund, as a practical collaboration-enabling platform, achieves two main objectives: It strengthens the capacity of home country institutions to absorb knowledge and extract benefits from it, and it nurtures knowledge spillover from the United States to Lebanon by removing barriers to brain circulation. Most importantly, these benefits will be made possible without the permanent repatriation of high-skilled Lebanese immigrants. Thus, establishing this fund is a U.S. government responsibility as much as it is a Lebanese one; a responsibility toward a small country whose emigrants contribute generously and

tremendously to the scientific and technological excellence, leadership, and diversity of the U.S. economy, culture, and way of life.

Future Direction of Research.

Generally, each of the findings highlighted in this case study gives rise to propositions that could be tested in other country cases. As an example, future cases could investigate the dynamics of indirect or pragmatic engagements of diaspora individuals and networks with home country "islands of effectiveness" and explore means of replicating the effective and successful ones. Future cases could also explore how other diasporas were able (*or unable*) to navigate home country challenging investment climate and intermittent war and unrest, how these diasporas organized to push back on barriers such as the ones identified in this research, and how they were able to create collective support functions at their home countries. Cases could also focus on the experiences of skilled diaspora returnees in different countries and regions and their economic contributions, assimilation experiences, and reform efforts. In addition, each of the validity limitations discussed in the research limitations section represent an opportunity for improved future research.

In the specific case of Lebanon, future research could examine high-skilled Lebanese immigrants in European counties, which are in closer proximity to the home country and arguably maintain stronger and more frequent interactions with the home country. This will allow for comparative examination of the dynamics of the interactions and contributions of host-country-specific diasporas. Future research could also focus on sector- or industry-specific tangible contributions of the high-skilled Lebanese diaspora. An interesting area would be to focus on the banking and financial sector and its relationship with the Lebanese finance diaspora in the United States and Europe.

Moreover, future research could investigate reasons behind Lebanon's continuous emigration movement and delve into the different economic, social, and political reasons and how these drivers impact the diaspora's connection and engagement with the home country. Finally, with adequate resources and time, future research could include a wider sample of interviewees and survey respondents on both the diaspora side and the returnees' side.

Appendix A: Interview Consent Form

Human Subjects Consent Form

Knowledge Transfer from High-Skilled Diasporas to the Home Country:

The Case of Lebanon and the United States

Description

The purpose of this research is to understand the patterns and dynamics of high-skilled Lebanese diaspora direct and indirect contribution to the home country Lebanon and how policies or facilitative interventions could leverage and enhance these contributions.

The data collection is authorized by the World Bank and the George Washington University (GWU) Institutional Review Board (IRB). Your responses will be kept confidential. Confidentiality protection is provided by the authority of the World Bank and the GWU IRB. Your response is voluntary and failure to provide some of all of the information will not in any way adversely affect you.

To facilitate the note taking, the conversation will be recorded. Everything you say will be treated as confidential, and only researchers on the project will have access to the audio files. Your name will not appear in any published report, and your responses will be used only for the purpose of this research.

Time Involvement: Your participation will take approximately 45 minutes.

Participant's Rights: If you have read this form and have decided to participate in this research project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time. You have the right to refuse to answer particular questions.

Contact Information:

Questions: If you have any questions, concerns, or complaints about this research, its procedures, risks, and benefits, contact the researcher, Anwar Aridi, at aridi.anwar@gmail.com or the Principle Investigator Dr. Nicholas Vonortas, at vonortas@gwu.edu. Additional inquiries may be addressed to the Human Subjects Committee, George Washington University at phone: 202.994.2715 or email: ohrirb@email.gwu.edu

The extra copy of this consent form is for you to keep.

By proceeding with the interview, I give consent to be audio-taped.

Appendix B: Interview Protocol

Interview Protocol

Knowledge Transfer from High-Skilled Diasporas to the Home Country: The Case of Lebanon and the United States

First, let me begin by thanking you for agreeing to participate in this research study. I wanted to interview you today because, as a Lebanese high-skilled worker in the United States, you have been identified as someone who has a great deal to share about your experience connecting with other diaspora member and with your country of origin (CO). To remind you, briefly, the purpose of this research is to understand the patterns and dynamics of high-skilled diasporas and returnees' direct and indirect contributions to the home country and how policies or facilitative interventions could leverage and enhance these contributions. My study does not aim to evaluate your experience. Rather, I am trying to learn more about views, reflections, and challenges faced throughout your experience as an active member of the diaspora. Do you have any questions about the purpose or why I am conducting the study?

[ADDRESS QUESTIONS AS APPROPRIATE, THEN PROCEED TO THE NEXT PARAGRAPH]

To facilitate the note taking, I will be recording our conversations today. For your information, everything we say is completely confidential—*only researchers on the project will be privy to the audio files. In addition, you must sign a form devised to meet our human subject requirements. Essentially, this document states that: (1) all*

information will be held confidential, and (2) your participation is voluntary and you may stop at any time if you feel uncomfortable. Thank you for your agreeing to participate.

I have planned this interview to last no longer than 45 minutes. If something comes up on your side or time begins to run short, please feel free to interrupt me and we can continue the interview at a convenient time.

[START TAPE RECORDER]

A. Interviewee Background

Education level:

1. What is your highest completed degree? Where did you receive your degree/s? In what fields/majors?

Probe: What languages you speak?

Work and entrepreneurial experience:

2. What is your current occupation and professional experience? Where have you worked before and in which countries?

Probe: What was the primary reason you came to the United States?

3. What is your specific specialty or niche expertise?

B. Linkages and Contributions:

General sentiment

4. How do you feel about working directly with someone from your CO who might benefit from your contribution, knowledge, experience, or network?

Professional diaspora linkages: Dynamics

5. Are you a member of an organized diaspora network (or a professional association) with linkages to the CO?

Probes: What network? How did it happen that you joined? At what level? Please describe the network's activities and mission. If you're not a member, why not?

Home country linkages: Dynamics

6. Are you or have you ever been actively engaged in initiatives, projects, or collaborations in or with the CO?

Probes: How would you describe your engagement? What were the motivations for your engagement?

Contributions

7. How do you describe your contributions, if any, to the CO? Was it mainly direct or indirect contribution?

Examples of direct contributions: invested/co-invested in start-ups/businesses, consulted for academic institution/private firms/government/international org, participated in joint research projects, assisted/mentored entrepreneurs/start ups, etc.

Indirect contributions: provided/facilitated access and connection to individuals, networks, markets, or finances.

Probe: What do you think is the most important or valuable contribution of someone like you to the CO?

8. Did the country condition matter for your contributions? How does the country's political and economic situation interfere with or affect your engagements and contributions to the country of origin?

Probes: Do you think if things get better at home, more people like you would want to engage and contribute? The contrary? Or, it's not related?

C. Key Barriers and Challenges:

9. Please describe your experience establishing linkages (with other diaspora members in the United States and with counterparts in the CO)? Have you identified an institutional partner in the CO to connect with?

Probes: Did you encounter problems or barriers when establishing these linkages? If yes, what was your experience dealing with them? How did you navigate these challenges?

10. What are your perspectives of effectiveness of existing initiatives? Can you share stories about successful and not so successful experiences (failures)?

Probe: Are you aware of other diaspora initiatives in the making?

Policy

11. In general, what would you identify as the main impediment to knowledge transfer or reconnecting to the CO? (Impediments on the diaspora side, the CO receiving side/home institutions, or due to the absence of an intermediary platform or institution?)
Probes: Can you identify facilitative interventions or policies that would help you contribute or engage more? Can you point out potential roles of specific institutions in leading these interventions?

12. In your own view, how could a hypothetical diaspora program be most effective?
Probe: Can you suggest some models?

If time permits **Additional question:**
12. Let's assume that a platform was designed and (a) is capable of matching your needed expertise with the suitable beneficiary counterpart in the CO and (b) efficiently manages the collaboration, would you be interested in participating in such an organized mechanism?
Probe: If yes, how much time would you commit a week?

That was the last of my questions. Is there anything that you want to add to our conversation that I haven't asked and you feel is important for me to know?

I appreciate the time you spent for this interview. It is very helpful for my research.

Appendix C: Survey Dissemination Channels

Entrepreneurship Associations
▪ Arabnet
▪ Bader
▪ Endeavor Lebanon
▪ Entrepreneurs Lebanon
▪ Entrepreneurs Middle East
▪ Lebanese Business Angels
▪ LFE
▪ MIT Enterprise Forum
▪ Mowgli
Incubators, Accelerators
▪ AltCity
▪ BAU Entrepreneurship Center
▪ Beirut Creative Cluster
▪ Berytech
Universities
▪ American University of Beirut
▪ American University of Science and Technology
▪ AMIDEAST
▪ Lebanese American University
▪ Lebanese International University (LIU)
▪ Lebanese University
▪ Notre Dame University
▪ University of Saint Joseph (USJ)
VCs and Angels
▪ Cedar Fund
▪ Middle East Venture Partners
Other Venues
▪ Kafalat
▪ Prime Minister's Office National ICT Coordinator
▪ UN Arab Regional Center for Entrepreneurship and Investment Training
▪ Wamda.com

Appendix D: Survey Questionnaire

Goal of this Study

The MENA integration team at the World Bank is reaching out to Lebanese and Tunisian diaspora who moved to Lebanon and Tunisia, respectively, to better identify their contributions to the economic development of their countries of origin. The scale and impact of Lebanese and Tunisian returnees are still not very well known or researched.

Our aim is thus to understand the motivations for return of Lebanese and Tunisian, their perceptions about the entrepreneurial and professional work environment in their home countries, their experiences with maintaining transnational ties as a conduit for knowledge transfer, and their impact on the respective institutions.

The findings from this survey will provide a better understanding of diasporas' contributions to their countries of origin for the purposes of informing the World Bank, development partners, and governments on policies and programs that could enhance the developmental benefits of migration and reverse migration. The study will cover other MENA countries in the future.

Questions in this online survey address a number of issues such as current and past education, employment, as well as perceptions about the home country's entrepreneurial and professional work environment.

Your rights and confidentiality of answers

This survey collects data anonymously. The data in this study will be kept confidential. The information you provide us with be kept confidential and will not be

shared with any commercial or other parties. There will be no individual attribution to any survey response. You are free to participate in this study or withdraw at any time. Completing this survey signals your agreement and informed consent to participate in this study. This survey will take about 10-15 minutes to complete.

Thank you for your participation!

Note. In this online survey, each question included a drop-down response option, a fill-in response box, or both when applicable.

Participant's Country

∗1. Choose your country of origin:

2. In which country were you born?

3. Where did you earn your highest degree?

∗4. In which country did you live for the majority of your adult life while abroad?

Background

5. What is your highest academic degree earned in [Q1]?

- I did not earn any academic degree in [Q1]
- Less than high school
- High school diploma
- Specialist/technical-vocational (any type)
- Bachelor's degree (any type)
- Master's degree (any type)
- Doctorate degree (any type)

6. What is your highest academic degree earned abroad?

- I did not earn any academic degree abroad
- Less than high school
- High school diploma
- Specialist/technical-vocational/associate (any type)
- Bachelor's degree (any type)
- Master's degree (any type)
- Doctorate degree (any type)

***7. In what sector did you MOSTLY work while in [Q4]? (Choose all that apply)**

- I didn't work while in [Q4]
- Academic sector
- Private sector (excluding academic institutions)
- Public sector/government (excluding academic institutions)
- Internal organization
- Domestic NGO
- Other (please specify)

Background

8. Did you live in countries other than [Q4] for more than a year?

- No
- Yes. If yes (please specify the county/countries):

9. In which year did you move to [Q1]?

10. How many years did you SPEND in [Q4] before moving to [Q1]?

11. For how many years did you WORK in [Q4] (full time) before moving to [Q1]?

***12. Are you currently primarily employed or self-employed/entrepreneur?**

- Employed (I spend the majority of my time working for my employer)
- Entrepreneur (I spend the majority of my time working for my business venture)
- I am currently both (I divide my time between my job and my own business)

Note to the reader:

- Selection of Employed will route the participant to "Characteristics of the employers of diaspora returnees" section
- Selection of Entrepreneur will route the participant to "Characteristics of the firms started by diaspora returnees" section
- Selection of 'I am currently both' will route the participant to "Characteristics of diaspora returnees' employers and firms" section

Characteristics of the employers of diaspora returnees

***13. If employed, who is your primary employer in [Q1]?**

- Academic institution, think tank
- Private sector (excluding academic institutions)
- Public sector / government (excluding academic institutions)
- International development agency/organization
- Domestic NGO
- Other (please, indicate):

Characteristics of the employers of diaspora returnees

14. If you are employed by an academic institution, what is your discipline?

- Humanities
- Social sciences
- Natural sciences
- Architecture & engineering
- Computer science & mathematics
- Medicine & pharmacy
- Law
- Business, management, & finance
- Art, design, & media
- Academic administration
- Other (Please specify other)

Characteristics of the employers of diaspora returnees

15. If you are employed by the private sector (excluding academia), what industry do you work in?

- Banking, finance, insurance
- Consulting or law
- Real estate
- Agriculture
- Manufacturing
- Retail
- Wholesale, trade (import/export)
- Art, design, media
- Transport, logistics, utilities
- IT services, software development, e-commerce
- Telecom/mobile & other hi-tech
- Healthcare, pharmaceutical
- Tourism, hospitality
- Other (Please specify other)

16. If you are employed by the private sector, how would you describe your employer's company in [Q1]?

- Micro company (less than 10 employees)
- Small company (between 10 and 49 employees)
- Medium-sized company (between 50 and 99 employees)
- Large company (more than 100 employees)
- Multinational Company with office in [Q1]

17. To what degree are these factors favorable or unfavorable for a professional career in [Q1]?

	Very Favorable	Slightly Favorable	Neither Favorable nor unfavorable	Slightly unfavorable	Very unfavorable	Not Applicable N/A
Salaries	o	o	o	o	o	o
Managerial style with your organization	o	o	o	o	o	o
Professional advancement & recognition						
Security & political stability	o	o	o	o	o	o
Access to quality infrastructure (power, water, transport, broadband, etc.)	o	o	o	o	o	o
Administrative issues (paperwork, permits, taxes, etc.)	o	o	o	o	o	o
Labor market regulations (Labor-management relationship, hiring, foreigners, etc.)	o	o	o	o	o	o
Work environment & professional ethics	o	o	o	o	o	o

Characteristics of firms started by diaspora returnees

18. If an entrepreneur, how old is your firm?

- Less than 1 year old
- 1 to 3 years
- 3 to 5 years
- more than 5 years

19. If entrepreneur, how do you describe your firm?

- Not-for-profit organization
- For profit organization

20. If entrepreneur, how do you describe the ownership structure of your firm?

- I am the sole owner of the firm
- I have one business partner
- I have two or more business partners
- My family owns the business but I have managerial control
- I am an investor with equity in the firm

21. If entrepreneur, what industry does your firm fall into?

- Banking, finance, insurance
- Energy
- Consulting or law
- Real estate
- Agriculture
- Manufacturing
- Retail
- Wholesale & trade (import/export)
- Art, design, & media
- Transport, logistics, & utilities
- IT services, software development, & e-commerce
- Telecom, mobile & other hi-tech
- Healthcare & pharmaceutical
- Tourism & hospitality
- Other (specify)

22. If entrepreneur, how many employees does your firm have?

- It is only me currently
- Less than 10 employees
- Between 10 and 49 employees
- Between 50 and 99 employees
- More than 100 employees

23. What were the sources of your initial and subsequent firm financing? (Select all relevant)

	Initial financing	Subsequent financing
Personal savings	☐	☐
Loans from family/friends	☐	☐
Existing family business	☐	☐
Venture Capital firm in [Q1]	☐	☐
Angel in [Q1]	☐	☐
Venture Capital firm in [Q4]	☐	☐
Angel in [Q4]	☐	☐
Bank loans in [Q1]	☐	☐
Government funds or backed loans in [Q1]	☐	☐
Other	☐	☐

(Please specify other)

24. To what degree are these factors favorable or unfavorable for starting/running a business in [Q1]?

	Very Favorable	Slightly Favorable	Neither Favorable nor Unfavorable	Slightly Unfavorable	Very Unfavorable	Not Applicable N/A
Business operating costs	O	O	O	O	O	O
Employee wages	O	O	O	O	O	O
Access to original market	O	O	O	O	O	O
Access to skilled and qualified labor	O	O	O	O	O	O
Access to low-skill labor						
Access to funding resources	O	O	O	O	O	O
Security & political stability	O	O	O	O	O	O
Access to quality infrastructure (power, water, transport, broadband, etc.)	O	O	O	O	O	O
Government support to entrepreneurial activities	O	O	O	O	O	O
Administrative issues (paperwork, permits, taxes, etc.)	O	O	O	O	O	O
Labor market regulations (labor-management relationship, hiring, etc.)	O	O	O	O	O	O
Work environment & professional ethics	O	O	O	O	O	O

Characteristics of diaspora returnees' employers and firms

25. As an employee, who is your primary employer in [Q1]?

- Academic institution/think tanks
- Private sector (excluding academic institutions)
- Public sector/government (excluding academic institutions)
- International development agency/organization
- Domestic NGO
- If other, please specify

Characteristics of diaspora returnees' employers and firms

26. If you are employed by an academic institution, what is your discipline?

- Humanities
- Social sciences
- Natural sciences
- Architecture & engineering
- Computer science & mathematics
- Medicine & pharmacy
- Law
- Business, management, & finance
- Art, design, & media
- Academic administration
- Other (please specify other)

Characteristics of diaspora returnees' employers and firms

27. If you are employed by the private sector (excluding academia), what industry do you work in?

- Banking, finance, insurance
- Consulting or law
- Real estate
- Agriculture
- Manufacturing
- Retail
- Wholesale, trade (import/export)
- Art, design, media
- Transport, logistics, utilities
- IT services, software development, e-commerce
- Telecom, mobile & other hi-tech
- Healthcare, pharmaceutical
- Tourism, hospitality
- Other

28. If you are employed by the private sector, how would you describe your employer's company in [Q1]?

- Micro company (less than 10 employees)
- Small company (between 10 and 49 employees)
- Medium-sized company (between 50 and 99 employees)
- Large company (more than 100 employees)
- Foreign multinational company with office in [Q1]

29. As an entrepreneur, how old is your firm?

- Less than 1 year old
- to 3 years
- to 5 years
- More than 5 years

30. As an entrepreneur, how do you describe your firm?

- Not-for-profit organization
- For profit organization

31. As an entrepreneur, how do you describe the ownership structure of your firm?

- I am the sole owner of the firm
- I have one business partner
- I have two business partners
- have three or more business partners
- My family owns the business but I have managerial control
- I am an investor with equity in the firm

32. As an entrepreneur, what industry does your firm fall into?

- Banking, finance, insurance
- Consulting or law
- Real estate
- Agriculture
- Manufacturing
- Retail
- Wholesale & trade (import/export)
- Art, design & media
- Transport, logistics, & utilities
- IT services, software development, & e-commerce
- Telecom, mobile & other hi-tech
- Healthcare & pharmaceutical
- Tourism & hospitality
- Other

33. As an entrepreneur, how many employees does your firm have?

It is only me currently

- Less than 10 employees
- Between 10 and 49 employees
- Between 50 and 99 employees
- More than 100 employees

34. As an entrepreneur, what were the sources of your initial and subsequent firm financing? (Select all relevant)

	Initial financing	Subsequent financing
Personal savings	O	O
Loans from family/friends	O	O
Existing family business	O	O
Venture Capital firm in [Q1]	O	O
Angel in [Q1]	O	
Venture Capital firm in [Q4]	O	O
Angel in [Q4]	O	O
Bank loans in [Q1]	O	O
Government funds or backed loans in [Q1]	O	O
Other	O	O

Other (please specify)

35. To what degree do you consider the following factors to be advantages or disadvantages for working and starting/running a business in [Q1]?

	Very Favorable	Slightly Favorable	Neither Favorable nor Unfavorable	Slightly Unfavorable	Very Unfavorable	Not Applicable N/A
Managerial style within your employer's organization	O	O	O	O	O	O
Professional advancement & recognition	O	O	O	O	O	O
Business operating costs	O	O	O	O	O	O
Employee wages in your firm	O	O	O	O	O	O
Access to regional market	O	O	O	O	O	O
Access to skilled & qualified labor	O	O	O	O	O	O
Access to low-skill labor	O	O	O	O	O	O
Access to funding resources for your firm	O	O	O	O	O	O
Government support to entrepreneurial activities	O	O	O	O	O	O
Security & political stability	O	O	O	O	O	O
Access to quality infrastructure (power, water, transport, broadband, etc.)	O	O	O	O	O	O
Administrative issues (paperwork, permits, taxes, etc.)	O	O	O	O	O	O
Labor market regulations (labor-management relationship, hiring foreigners, etc.)	O	O	O	O	O	O
Work environment & professional ethics	O	O	O	O	O	O

Motivation for return

36. How important were the following factors in your decision to move to [Q1]?

	Not at all Important	Moderately Important	Important	Very Important	Not Applicable (N/A)
Family & country ties	O	O	O	O	O
Higher salary (potential for profit)	O	O	O	O	O
Recognition or status at home	O	O	O	O	O
Lower business costs (for running a business)	O	O	O	O	O
Contributing to country's economic development	O	O	O	O	O
Availability of better professional opportunity (good jobs)	O	O	O	O	O
Expiration of [Q4] visa	O	O	O	O	O
Access to regional market	O	O	O	O	O
Other	O	O	O	O	O

Other (please specify)

37. Before you moved to [Q1], what were your expectations regarding jobs or business opportunities? (Select all that apply)

- I had high hopes for the return
- I had low expectations
- I had no expectations, I knew what I was coming back to
- I had no choice but to come back
- I thought I will go for a short stay and move back shortly thereafter

38. After you moved to [Q1], did your perceptions change with respect to the prospects of building a career or a business in [Q1]?

- My perceptions have not changed after returning home
- I am more optimistic now
- I am more pessimistic now

39. How long do you plan to remain in [Q1]? (Choose all that apply)

- My move is permanent
- Depends on the market conditions and the economic situation
- Depends on the political and security situation
- Depends on how my current project/venture evolves
- I plan to move abroad within the next 5 years
- I was planning on staying but now I am reconsidering given the deteriorating country situation
- I usually split my time between [Q1] and other countries
- I do not know yet

Transnational Ties

40. Before moving to [Q1], were you involved with a professional diaspora network or association abroad?

- No
- Yes. If yes, please specify the name of the network/association and the type of involvement

41. How important are the different kinds of networks/ties for your current work in [Q1]?

	Not at all Important	Moderately Important	Important	Very Important	Not Applicable (N/A)
Local business networks	O	O	O	O	O
Personal & family networks	O	O	O	O	O
Alumni networks of universities you attended in [Q1]	O	O	O	O	O
Alumni networks of universities you attended abroad	O	O	O	O	O
Identity networks in [Q1] & abroad (religious, ethnic, linguistic, etc.)	O	O	O	O	O
Ties to government officials	O	O	O	O	O
Diaspora networks	O	O	O	O	O
Transnational & regional networks	O	O	O	O	O

42. In a typical year, how often do you maintain contact with individuals and organizations in [Q4]?

	About one or several times a week	About once a month	About every 6 months	About once a year	Never
Former colleagues	O	O	O	O	O
Family/friends	O	O	O	O	O
Educational organizations	O	O	O	O	O
Professional organizations	O	O	O	O	O
Diaspora network	O	O	O	O	O
Other kind of organizations/networks	O	O	O	O	O

43. In a typical year, how often do you reach out to individuals/organizations in [Q4] to seek information on:

	About one or several times a week	About once a month	About every 6 months	About once a year	Never
Job or professional opportunities	O	O	O	O	O
Business funding opportunities	O	O	O	O	O
Potential business supplies, partners, or collaborators	O	O	O	O	O
Technology, technical scientific information	O	O	O	O	O
Market information (customer/clients information)	O	O	O	O	O
Other kind of information	O	O	O	O	O

44. When was the last time you exchanged information with individuals/organizations in [Q4]?

- Last week
- Last month
- About 6 months ago
- About a year ago
- More than a year ago
- I don't remember

45. In your opinion, has your past experience abroad enhanced your professional network and expertise compared to those who didn't live abroad?

- Yes
- No
- I am not sure

Impact of Diaspora Returnees

46. Which of the following contributions have you made since you moved to [Q1]? Select yes or no as applicable.

	Yes	No
I created job opportunities through my business initiative or investments		
I provided/facilitated access to foreign funds/capital market		
I provided philanthropic contributions (charity)		
I initiated or facilitated reform at the community and public levels		
I invested my own money		
I disseminated and applied new knowledge and technical expertise		
I provided/facilitated access to new markets abroad		
I initiated or facilitated structural changes in the company/institution I work for		
I provided/facilitated beneficial connections to individuals and business networks abroad		
I mentored and advised other entrepreneurs/professionals in the country		
I disseminated and applied global managerial skills		
I encouraged others to move to [Q1]		

Other contributions

47. What is the ONE (1) most important contribution you have made since you moved to [Q1]?

- I provided/facilitated beneficial connections to individuals and business networks abroad
- I provided/facilitated access to new markets abroad
- I invested my own money in the country
- I initiated or facilitated policy reforms at the local or national levels
- I provided/facilitated access to foreign funds/capital market
- I mentored and advised other entrepreneurs/professionals in the country
- I disseminated and applied global managerial skills
- I disseminated and applied new knowledge and technical expertise
- I created job opportunities through my business initiative or investments
- I initiated or facilitated structural changes in the company/institution I work
- I provided philanthropic contributions (charity)

- I encouraged others to move to [Q1]
- Other contributions

48. Do you feel that your contributions could have been realized while still living abroad?

- Yes
- No
- I don't know

49. Have your contributions been assisted or enhanced by programs or initiatives that target citizens of your country of origin living abroad?

- No
- Yes. If yes, specify the program or initiative

50. Do you perceive any role for the government or international organizations/institutionsin enhancing or facilitating these contributions?

- I don't know
- No
- Yes

Impact of Diaspora Returnees

51. **Please explain what kind of role you perceive for the government or international organizations/institutions in enhancing or facilitating contributions from diaspora returnees:**

Personal Information

52. Please specify your gender

- Male
- Female

53. Please specify your age

- Under 25
- 25-34
- 35-44
- 45-54
- 55-64
- 65 and older

54. Are you:

- Single
- Married or have a partner

Comments and Submission

55. You are invited to provide any additional comment about this survey here if you wish so:

56. If you wish to be contacted in the future with updates on this initiative, please enter your name and email below. If not interested, you can go ahead and click the "DONE" button below to submit your answers.
Thank you!

Name:

Email:

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