

Going and Coming: Why U.S.-Educated Turkish PhD Holders Stay in the  
U.S. or Return to Turkey?

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## **Abstract**

This qualitative study explores the underlying reasons of the decisions of U.S. educated Turkish professors to stay in the United States or return to Turkey. To collect data, interviews were conducted with a total of 20 U.S. educated faculty members, as 10 returned to Turkey while 10 remained in the United States. The findings generated different themes for returnees and stayers. The themes for returnees are family and cultural values, negative experiences, having teaching and research experience, the role of economy, and the role of incentives. The themes for returnees included more academic opportunities, academic freedom, and the ease of social adjustment and the role of economy. Recommendations such as developing R &D opportunities, increasing the motivation of professors, and eliminating the influence of ideology to have academic freedom are provided to attract more U.S. educated Turkish professors to Turkey in the last chapter.

*Keywords:* Brain drain, reverse brain drain, family and cultural values, human capital, push and pull model

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## List of Abbreviations

AUUP.....	American Association of University Professors
ASELSAN.....	Askerî Elektronik Sanayii (Military Electronic Industries)
CHA.....	Cihan Haber Ajansi (Cihan News Agency)
GERD.....	Gross Domestic Expenditures on research and development
GPA.....	Graduate Point Average
HSPU.....	Highly Selective Public Universities
HSPRU.....	Highly Selective Private Universities
IIE.....	Institute of International Education
LSPU.....	Less Selective Public universities
MONE.....	Ministry of National Education
OECD.....	The Organization for Economic Co-operation and Development
R & D.....	Research and Development
TAA.....	Turkish Aeronautical Association
TSE.....	Turkish Statistical Institute
TUBITAK.....	Turkiye Bilimsel ve Teknolojik Arastirma Kurumu (The Scientific and Technological Research Council of Turkey)
TURKSAT.....	Türksat Uydu Haberleşme Kablo TV ve İşletme A.Ş (Türksat Satellite Communications and Cable TV Operations Company)
TUSAS.....	Turk Havacilik ve Uzay Sanayii Anonim Sirketi (Turkish Aerospace Industries)
UNESCO.....	The United Nations Educational, Scientific and Cultural Organization
YOK.....	Yuksekk Ogrenim Kurumu Turkish Higher Education Council



## **Chapter I**

### **Introduction**

Turkey has long been one of the top ten countries that send their students to pursue degrees at higher education institutions in the United States. It is also the country that sends the highest number of students to the U.S. among European countries (Institute of International Education, 2013). The number of Turkish students at higher education institutions in the U.S. has been steadily rising although there have been some fluctuations in the last 12 years. Between the academic years 1997/98 and 2010/2011 the number of Turks studying in the U.S. rose from 9,081 to 12,184. It is worthy of mention that the majority of them study at the graduate level (52.8 %). According to 2004 statistics on temporary residents who received science and engineering doctoral degrees in the U.S. and remained there from 2005 to 2009, Turks constituted the largest group of Europeans (Finn, 2012). In particular, Turks constituted nearly 20% (324) of the 1,480 Europeans who received science or engineering doctoral degrees and remained until 2009 (Finn, 2012).

The U.S. has been the most attractive country for international students, hosting 690,923 (IIE, 2013). A great number of these students choose to stay in the U.S. upon graduation. Graduates with PhDs in engineering and the physical sciences tend to stay more often than those in the social sciences (Finn, 2012). In 2009, the U.S. experienced the highest overall stay rate of doctoral graduates in science and engineering with 64 percent remaining for 10 years after their graduation. In this study, stay rate refers to the percentage of graduates who stay in the U.S. for an additional 10 years upon graduation.

To discuss Turkey, the stay rate of Turkish doctoral recipients is 40 %. This is lower than the overall stay rate of international graduates in the U.S., which is 64 % (Finn, 2012), but it is

still relatively high. Nonetheless, it is problematic for a developing country such as Turkey, which needs a great number of U.S.-educated scholars to staff its steadily increasing number of universities (see YOK statistics, 2012). Turkey's response to this need was to encourage the founding of new universities by adopting the motto "At least one university in every city in Turkey." This resulted in a steady rise from eight universities in 1970, to 71 in 1998, roughly 80 in 1998, and 150 by 2012 (YOK, 2012).

To continue to accomplish this goal, Turkey needs faculty with PhDs to teach at these universities. However, the academic brain drain in Turkey seems to be creating a problem since opportunities abroad are attracting highly educated Turkish scholars. A recent survey found that Turkish government-sponsored research assistants chose to stay in the U.S. for two reasons. First, they felt that less value was placed on academia, in general, and science, in particular, in Turkey. Secondly, they were concerned about the lack of productivity in the academic environment that they encountered in university settings there. Some of these government-sponsored research assistants stated that if science and academia were respected and valued, they would not care about the fact that wages are lower in Turkey (Celik, 2012).

In contrast, according to Finn (2012), there has been a consistent decline in the stay rate of Turkish U.S. PhD holders. Between 2001 and 2005, it fell from 52% to 49%, and between 2005 and 2009, from 45 % to 40 %, resulting in a total decrease of 12 % in 9 years. However, there was still a significant percentage of Turks who received their doctorates in the U.S. and decided to stay there. In this regard, this study will shed light on the reasons behind the decisions of U.S.-educated Turkish scholars to stay in the U.S. or return to Turkey and behind the decline in their stay rates.

The literature on the migration of international doctorate holders is scarce (Kim, Bankart, & Isdell, 2010). In what follows, I will attempt to first provide an overview of global migration, followed by a discussion of the migration of Turkish doctorate holders.

The migration of highly educated individuals is referred to in terms of brain drain, brain gain, and brain circulation in the academic literature. When international doctorate holders do not return to their home countries, the latter lose their human capital, which is deemed “brain drain” for the source country. (Kim et al., 2010). However, when these highly educated individuals choose to return to their countries, they bring back knowledge that they may utilize efficiently in their own countries, which is considered “brain gain” (Baruch, Budhwar, & Khatri, 2007). Finally, brain circulation refers to mutual benefit gained from the human capital of trained individuals (Saxenian 2002, 2005). My focus will be on the decisions of Turkish scholars who earn PhD degrees in the U.S. to stay in the U.S. thus contributing to Turkish brain drain or return to Turkey thus providing Turkey with brain gain.

The benefit of the movement of highly skilled individuals to developing countries is that they bring back to their home countries the new skills and experience that they acquire in the host countries. However, they do not always return. Some of the skilled individuals prefer to stay in the host countries, which causes brain drain. As Dreher and Poutvaara (2005) claim, when they graduate, a great number of international students choose to stay in the U.S. and become professors at American universities (Dreher & Poutvaara, 2005). Losing skilled individuals implies that the source countries will not benefit from their knowledge and skills directly. In addition, Teson (2008) argues that brain drain is detrimental to developing countries since they send their talented people to economically developed countries and thus lose their human capital, which is important for their development (Tansel & Gungor, 2003; Teson, 2008). Wong and Yip

(1999) argue that countries, whose highly trained individuals remain abroad, may experience the negative effects of brain drain.

The resulting loss of human capital hurts developing countries such as Turkey, while developed countries such as the U.S., Canada, and Australia compete to recruit the most academically talented people in the world. The reasons for brain drain in the case of Turkey include limited job opportunities for the highly educated, insufficient funding allocated to research and development, unsatisfactory work conditions, low living standards, and political and economic instability (Bakirtas & Kandemir, 2010).

From a global mobility perspective, there is a rising flow of students across borders. According to De Wit (2002), higher education institutions around the world are competing to attract international students from different countries. According to push-pull theory, the flow of international students is from less developed to more developed countries. Given the social, economic, and political conditions of contemporary nations, the mobility of students is generally from South to North (OECD, 2010; UNESCO Institute of Statistics, 2009).

According to OECD statistics, international student mobility has greatly increased within the last three decades (King, Findlay, & Ahrens, 2010). The international student flow was about 9 percent between 1960 and 1970 and 6 percent between 1970 and 1980 (Hughes, 1988), and there was a decrease in the 1980s and 1990s. The UNESCO Institute of Statistics report (UIS, 2009) shows that the global student mobility increased from 2.1 million students in 2002 to 3.4 million students in 2009.

The most attractive countries for international students are the United States, the United Kingdom, Germany, France, and Australia (King et al., 2010), all of which offer attractive opportunities, higher wages, and better working conditions (Altbach, 2004; Postiglione, 2005).

Approximately 20 % of all international students choose the U.S. over other countries for studying abroad (Bhandari & Chow, 2007). The U.S. attracts more international students than any other developed countries due to the innovations in the sciences and technology there (Aw, 2011).

Not surprisingly, U.S.-educated Turkish scholars find the U.S. to be an attractive place to establish their careers. The number of U.S.-educated Turkish scholars who remain in the U.S. increased to 2,323 in 2011/2012 from 2,106 the previous year. This 10.3% increase placed Turkey fifth among European countries, after Spain, the UK, France, and Italy, and twelfth among European and non-European countries in terms of stay rates of PhD recipients for the year 2011/2012. In addition, Turkey ranks third among non-European countries, after Iran and Brazil, in terms of the percentage increase in stay rates of US-educated scholars between 2010/2011 and 2011/2012 (Institute of International Education, 2012). Although the number of Turks who receive their PhDs in the U.S. has been steadily rising, their stay rates have been declining since 2012.

### **Purpose of This Study**

The purpose of this study is to explore the main reasons why some U.S.-educated Turkish scholars stay in the U.S. while others return to Turkey. More specifically, according to a study conducted in 2003 (Tansel & Gungor), showing the most important reasons for brain drain in Turkey are: the pressure of unemployment on educated people, lack of appropriate work conditions for researchers due to inadequate resources assigned to R & D, low living standards caused by low human development, and political and economic instability.

There have been positive changes in Turkey since 2003 in a variety of areas, including economic growth, improvement in social conditions, and political stability. Thus, this study will

specifically explore how economic and political conditions in Turkey affects educational mobility, specifically with regard to returning to an economically rapidly developing country, Turkey, or staying in the host country, the U.S. The economic crisis experienced in the U.S. and Turkey's growing economy might also impact the decisions of U.S.-educated Turkish scholars to stay in the U.S. or to return to Turkey. Thus, it is worth exploring the pushes and the pulls on U.S.-educated Turkish scholars to stay in the U.S. or to return to Turkey are related to political economy.

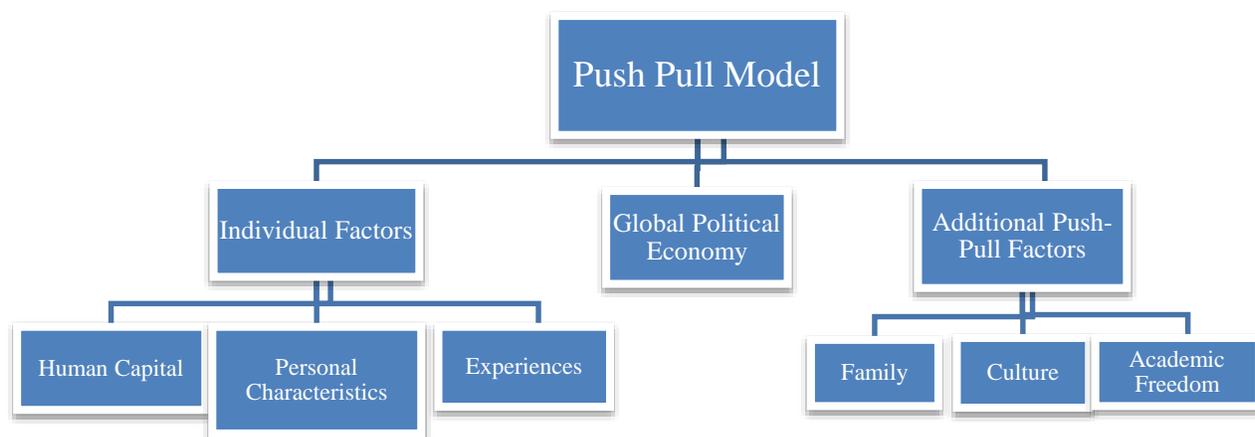
In addition, the ways individual capacity, such as publications and teaching experience, influences U.S.-educated Turkish scholars' decisions to stay in the U.S. or return to Turkey will be investigated. That is, this study seeks to understand whether U.S.-educated Turkish PhDs actually have the option to stay in the U.S. or whether they return because they do not find employment.

Finally, this study seeks to understand the perceptions of U.S.-educated Turkish scholars, both those who have returned to Turkey and those who have stayed in the U.S., with regard to the initiatives/Attempts by Turkish private and government-affiliated institutions, as well as European Union funding entities to draw them back from the U.S. to Turkey.

### **Theories Applied in This Study**

The push and pull, global political economy, and human capital model will be applied to understand the reasons behind U.S. -educated Turkish scholars' decisions to stay in the U.S. or return to Turkey. The following diagram shows the conceptual framework that will guide this study. In this study, the push-pull model will be the overarching framework. More information about the conceptual framework and its relationship to global political economy and human

capital theory will be provided in the literature review (Chapter II).



**Figure 1: Conceptual Framework**

**Push and pull model.** Individuals decide to migrate to another country for a variety of reasons related to pull and push factors. Pull factors refer to benefits in destination countries such as better wages and working conditions and higher quality living conditions, whereas push factors are inadequacies in the home countries, which are related to political and economic instability, deteriorating economic conditions, and limited job opportunities (Gungor & Tansel, 2010).

One of the earliest studies on push and pull factors influencing international students' decisions were conducted by McMahon (1992). To explain the migration of international students from 18 different countries to the U.S. during the 1960s and 1970s, she proposed two models. The first model was “push” factors, which are related to the scarcity of universities and economic welfare in the source country, while the second model focused on the economic, political, and social “pull” factors in the U.S. as a potential home country. In this study, Matier’s

(1990) framework, which develops push-pull model in relation to faculty mobility, will be employed (See Chapter II for more information).

***Human capital.*** This study will apply human capital from Matier's (1990) perspective which refers to publishing, presenting at conferences and involvement in academic organizations. Accordingly, having more capital will contribute to the ease of movement of U.S.-educated Turkish scholars.

***Global political economy.*** Economic, social, and political conditions in the countries are considered part of the global political economy. According to Chen and Barnett (2000), international students choose to attend colleges in other countries where they will have more educational and economic opportunities in relation to the global economy. Thus, this study will help us understand the role of educational and economic opportunities in the stay or return decisions of U.S.-educated Turkish scholars. In this study, I will apply Matier's (1990) framework to explain global political economy. He claims that facilities, work conditions and financial considerations might influence the decisions of individuals to move around.

***Additional push-pull factors.*** Family-related, cultural factors and academic freedom are deemed additional push-pull factors. Matier's (1990, 1991) framework will help me to explain the cultural values and family factors which Matier (1990) considers external environmental factors, as well as academic freedom to be an intangible factor (internal benefit). Matier's (1990) framework will help us to understand the role of additional push-pull factors in stay versus return decisions of U.S.-educated Turkish scholars.

**Main Research Question:**

- What influences the decisions of U.S. -educated Turkish scholars to return to Turkey or to stay in the U.S.?

### **Sub-questions:**

- What are the reasons why U.S. -educated Turkish scholars return to Turkey?
- What are the reasons why U.S. -educated Turkish scholars stay in the U.S.?
- How does political economy affect the decisions of U.S. -educated Turkish scholars to return to Turkey or stay in the U.S.? (Global political economy/ push/pull factors)?
- How does the level of human capital contribute to the ability of U.S.-educated Turkish scholars to stay in the U.S. or return to Turkey?
- What is the role of scholarships offered by private institutions, government-affiliated institutions, and European Union Funding from Turkey in the decisions of U.S. -educated Turkish scholars to return to Turkey or to stay in the U.S.?
- How do factors, such as cultural background and family obligations exert their influences on U.S.-educated Turkish scholars to return to Turkey or to stay in the U.S.?

### **Significance of This Study**

Studies conducted on the brain drain of Turkish people mostly focus either on the intentions of students who study abroad to return to Turkey or on the experiences of U.S. -educated Turkish scholars in Turkish university settings. These studies are narrow in scope, and non-academic, as one of the studies is solely based on interviews with only two scholars. By contrast, this study will be the first to focus on both U.S.-educated Turkish scholars who return and those who stay in the U.S.

In addition, the study will also help me understand whether economic growth, improving social conditions and increasing political stability (political economy) in Turkey influence the decisions of U.S. -educated Turkish scholars to return to Turkey or stay in the U.S. In this regard,

this study will be the first to conduct research on the brain drain and reverse brain drain of U.S. - educated Turkish scholars at a time when Turkey is growing economically.

Last, determining the reasons why some U.S. -educated Turkish scholars stay in the U.S. while others return to Turkey might help both Turkey and the U.S. to develop policies to attract highly educated individuals.

In sum, this chapter explores the underlying reasons behind the mobility of U.S.-educated Turkish scholars. It included a discussion of global mobility and mobility of Turkish PhD faculty and students. In addition, I explained the conceptual framework employed in this study and purpose. The chapter ends with an explanation of significance of the study, and research questions. The next chapter will include a more detailed analysis of the conceptual framework and models.

### **Organization of the Dissertation**

Chapter I focused on the importance of exploring the reasons why U.S.-educated Turkish faculty stay in the U.S. or return to Turkey. Chapter II provides a review of the related literature and offers a more elaborate explanation the conceptual framework. Chapter III introduces the research methodology, including information on the study participants, data collection, management and analysis procedures, the role of researcher, and trustworthiness. Chapter IV presents the findings of the study and Chapter V discusses the findings, recommendations, study limitations, and potential future research questions.

## **Chapter II**

### **Literature Review**

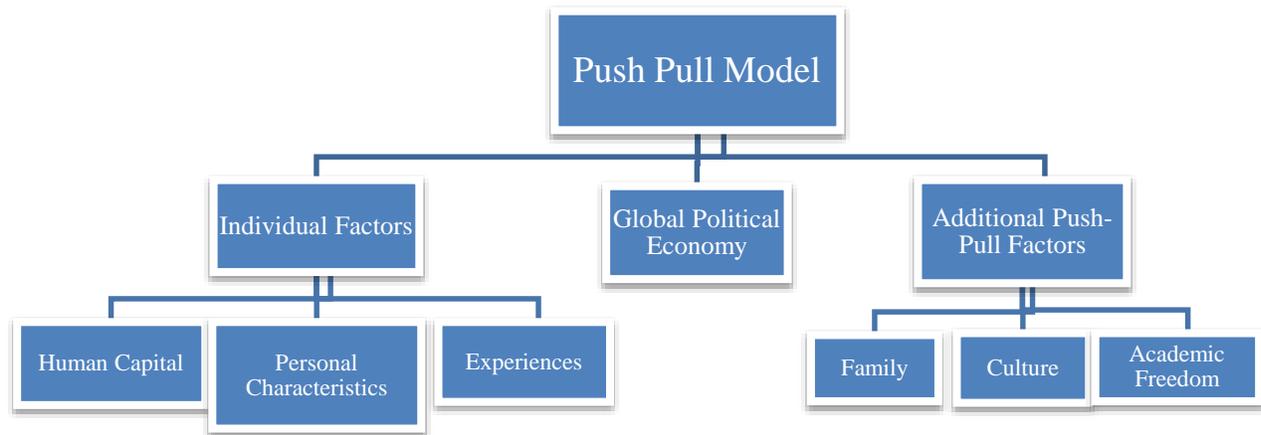
In Chapter I, the issue of the brain drain of U.S.-educated Turkish scholars was discussed. The issue of global mobility, global economy, human capital, and the push-pull model, as they relate to the conceptual framework of this study, were introduced.. Chapter I ended by presenting the purpose and significance of the study and the research questions that guide it.

Chapter II will start with an explanation of push-pull model. Next, the individual factors including human capital and experience will be explained. In addition, global political economy and additional push and pull factors will be analyzed regarding their relation to push-pull model. In this regard, Matier's (1990, 1991) framework which elaborated the push-pull model in relation to faculty mobility will be applied to explain the aforementioned reasons and their relation to the mobility of the U.S.-educated Turkish faculty. Although these models have been mainly employed to explain the mobility of international students, this study will apply these models to understand the mobility of Turkish doctorate holders. This chapter will end with a discussion of the initiatives undertaken by the Turkish government, and public and private institutions to attract U.S.-educated Turkish scholars and the insights of U.S.-educated Turkish faculty on a conference organized by the Scientific and Technological Research Council of Turkey (TUBITAK) in the U.S.

#### **The Push Pull Model**

The push-pull model was originally developed to offer explanations for the movement of people within a country (Lee, 1966). Subsequently, according to Chen (2007), education researchers began to apply this model to international students' decisions to seek another location to pursue their university studies. He asserted that this model enables researchers to

understand the international flows of students and the factors influencing the decisions motivating them to study abroad (Chen, 2007).



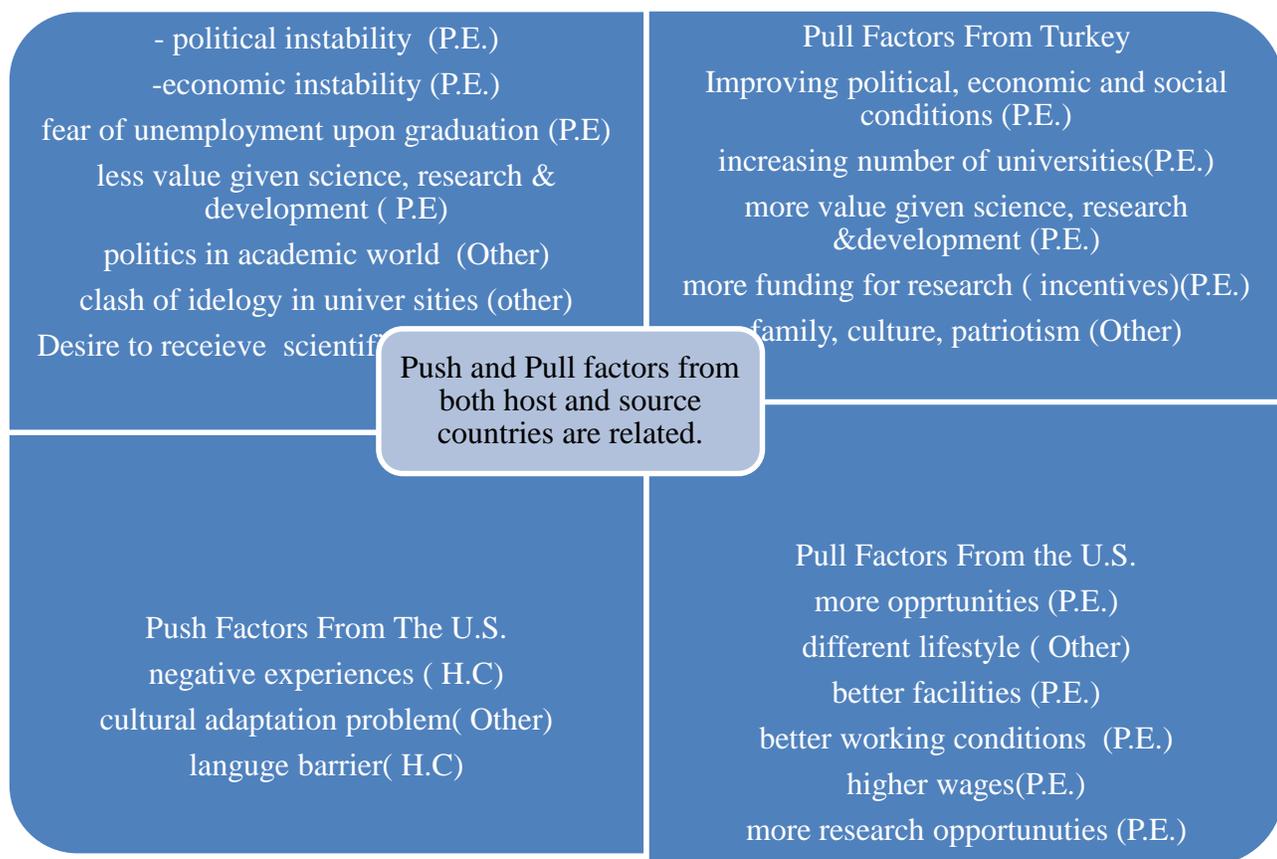
**Figure 1: Conceptual Framework**

Push and pull factors can be categorized as individual (human capital, personal characteristics and experiences), global political economy (characteristics of the country), and additional push pull factors (culture, family, etc.). The diagram above explains the conceptual framework that will be applied in this study. Having high human capital for individuals will make them attractive to different institutions while having low human capital may cause them to leave their current institutions. Personal characteristics such as marital status and spousal employment status and negative and positive experiences in the host country might push or pull individuals from or to the host country. In this study having high human capital gives U.S.-educated Turkish PhD recipients options to stay in the U.S. or return to Turkey whereas lack of capital in the form of things such as publications may reduce their options.

Availability and scarcity of educational and economic opportunities will make source and host countries attractive to individuals who consider moving to different locations. In addition, family and cultural values, as well as academic freedom might also influence the mobility decisions of individuals. Thus, human capital, global political economy, and cultural values and family could be both push and pull factors in individuals' decisions to stay in the U.S. or return to Turkey. These theories and methods will be briefly explained in the following paragraphs.

Although the push- pull model may not fully explain the migration, the global patterns for the flow of international students and highly educated individuals may be in part due to push and pull factors. While the push factors experienced within a country influence students' decisions to study abroad, pull factors operating within the host country serve to attract high quality international students (Mazzarol & Soutar, 2002). To elaborate further, pull factors include better wages and work conditions, as well as higher quality living standards and institutions, and more reasonable living expenses and overall costs, whereas push factors are more related to political and economic instability, deteriorating economic conditions, and fewer available job opportunities (Gungor & Tansel, 2010; Kline, 2003; Mazzarol, 1998).

While the push-pull model is crucial for explaining the mobility of international students, all students may not respond to push and pull factors in the same way. Thus, it may not cover all PhD holders' stay or return decisions. Thus, this study will examine additional push and pull factors, such as culture and family, and it will explore the personal characteristics of U.S. - educated Turkish scholars, as well.



**Figure 2. Push and Pull Factors from Turkey and Push and Pull Factors from the U.S.**

The diagram might explain the pushes and pulls from Turkey as well as pushes and pulls from the U.S. in relation to human capital, global political economy and additional push and pull factors. The push factors from Turkey ten years ago might be pull factors today as a result of changes in the global political economy. Identifying the push and pull factors in the U.S. might also help us understand the underlying reasons why some U.S.-educated Turkish scholars might want to return to Turkey

In this regard, Matier's (1990) framework which mainly focuses on institutional mobility, enables us to further explore this issue. Matier (1990) explains that the reasons behind mobility could be related to four overlapping factors. He argues first that no single factor is sufficient to

explain the impetus for mobility. Secondly, internal work environments cannot be considered the sole reason. Thirdly, some push factors might be considered to cause individuals to leave an institution, while the same factors might be pull factors for individuals to move to another institution. Lastly, he emphasizes that “ease of movement” as a crucial factor that impacts the mobility of individuals. In the following paragraphs, Matier’s (1990) framework will be explained as it relates to human capital, global political economy, and additional push and pull factors.

**Individual Factors.** In this section individual factors such as human capital, personal characteristics and experiences will be explored.

**Human capital.** This study will apply Matier’s (1990) approach to human capital, which he calls visibility. Specifically, Matier (1990) defines and measures the human capital or visibility of academics in terms of the number of articles and books that they publish, the number of conference presentations that they give and the number of professional academic organizations that they are actively involved in. In his study, individuals were offered positions by universities, the private sector, and government employers. The human capital that they possess gave them the flexibility to choose an institution where they wanted to work. Both of Matier’s (1990,1991) studies may potentially elucidate the reasons behind U.S.-educated Turkish scholars’ decisions to stay in the U.S. or to return to Turkey, since, if they have high human capital, they may be offered positions in both countries and they may need to choose according to reputation, prestige, and research opportunities.

Possessing high human capital enables educated individuals to be more attractive to higher education institutions whereas having low human capital will make them less. Particularly, Matier’s (1990) term visibility illuminates the human capital perspective used in

this study. Increasing their knowledge and skills makes US-educated faculty more visible. Thus, having high human capital could be considered a pull factor whereas possessing low human capital could be push factor for U.S.-educated Turkish scholars.

***Personal Characteristics.*** Matier (1990) claims that age, marital status, spousal employment situation, dependent financial support, and length of service may influence the mobility of individuals. In this study, I will particularly try to understand the role of marital status and spousal employment situation, which could be both push and pull factors in the decisions of U.S.-educated Turkish faculty. Although I will not focus on the influence of age, those who received their doctoral degrees in the last five years are most likely younger than those who received them five years before.

***Experiences.*** Different kinds of experiences can impact foreign students' transition and adaption to the host culture. The outcome of the latter can entice them to stay in the host country or impel them to return to their home countries after completion of their university studies. While positive experiences might be seen as a pull factor, negative experiences may push individuals to leave the host country. Matier (1990) calls these experiences "quality of life," which he refers to as external environmental factors.

International students increase the diversity of the student body on college campuses, and increase domestic students' awareness of other countries and cultures (Lee & Rice, 2007). However, while domestic students find a way to enjoy these new cultures, international students might experience challenges in adjusting to the local culture, which may make them feel isolated. The research shows that a great number of international students experience culture shock when they study in another country (Selvadurai, 1992).

According to Olivas and Li (2006), the research suggests that international students' lack of language skills, which lead to language barriers and their lack of knowledge of U.S. academic culture and of the variations that exist within that culture can cause culture shock. In addition, when international students are unable to adequately adjust to the host countries' culture, they may feel isolated and more stressed, which may cause them to become less engaged in activities related to learning and personal development outcomes of college (Zhao, Carini & Bunnage, 2002; Zhao & Carini, 2005).

**Global Political Economy.** This study views political economy as one of the force factors in the push-pull model. According to McManon (1992), the push-pull model suggests that economic wealth, the value placed on education by the government of the home country, and more educational opportunities in the host country attract international students. Economic, social, and political conditions, which can constitute push factors for the source country and pull factors for the home country, are considered part of the global political economy.

This study will apply Matier's (1990) framework to explain global political economy. He asserts that facilities, work conditions, and financial considerations, which are considered tangible benefits (internal factors) beyond salary, might influence individuals' mobility decision. He found that, as a result of sufficient tangible benefits, which constitute both push factors from current places of employment and pull factors from new workplaces, most faculty chose to leave their current jobs, whereas for those who chose to remain in their current places of employment, neither the external pulls nor the internal pushes were sufficient. The findings of Matier's (1990) study suggest that Turkey may need to provide equal or better wages and work conditions (tangible benefits), and other advantages in order to be more attractive to U.S.-educated Turkish scholars.

The prevailing belief about international education is that students choose to study abroad in order to expand their educational options and economic opportunities; thus, student flows follow the structure of the global economy (Chen & Barnett, 2000). According to Altbach and Teichler (2001), cross-border student mobility has greatly increased as a result of globalization. According to OECD (2006) statistics, in 2007, 2.8 million students attended universities outside their home countries, a 53% increase that had taken place since 1999. The U.S. holds a crucial position in the global political economy (Aw, 2011). It has the lion's share of international student mobility (Bhandari & Chow 2010).

It has been assumed that possessing an advantageous position in the global political economy enables the U.S. to pull international students, while their countries' negative conditions impels many students to leave. For more than fifty years, the U.S. has been the top destination for international students. A large number of students from all over the world come to the U.S. to pursue higher education. Upon graduation, some of them choose to return home and to advance U.S. economic, cultural, and political paradigms there, while others decide to stay in the U.S. and advance in the U.S. knowledge economy (Aw, 2011).

In addition, Zheng (2003) identified factors that motivate international students to study abroad, organizing them according to frequency, as follows: economic (29%), educational (27%), students' personal (15%), social (13%), cultural (9%), and political (7%). Lee and Kim (2010) also asserted that a large percentage of international students choose to stay in the U.S. due to such considerations as the possibility of pursuing a more lucrative career, greater availability and variety regarding occupations, and educational opportunities offered, from which the trained individuals wish to benefit. The global political economy (Cantwell, Luca, & Lee,

2009; Chen and Barnett 2000; Lee, Maldonado, Rhoades, 2005) may be applied to explain the aforementioned factors.

The U.S. is not the only country that attracts the human capital of highly educated people. Australia, Germany, the UK, and Canada are also attempting to acquire human capital in the form of skilled individuals from less developed countries. International higher education advocates are concerned that, because of changes in the economic conditions and immigration policies in its competitor countries, the U.S. might experience fluctuations in rates of enrollment of international students (Aw, 2011). Since the aforementioned countries also have advantageous positions in the global political economy, they are also able to attract (pull) international students.

The study by Lee et al. (2006) also suggests that economic factors such as more opportunities and higher living standards pull international students to the U.S., whereas some push factors from the U.S., such as the high cost of studying and living, costly visa procedures, and discriminatory perceptions, particularly against Middle Eastern students, might make the U.S. less attractive to international students. A few studies (Institute of International Education, 2005; National Science Foundation, 2005) suggest that the U.S. might be less attractive for new international students due to changing economic and employment conditions. Thus, it is also crucial for the U.S. to retain educated Turkish scholars to benefit from their expertise and skills.

In discussing Turkish PhD holders, Imeci (2009) also asserts that global political economy theory allows researchers to better understand the decision-making process of educated Turkish scholars regarding whether or not to leave the host country and return to their home country. He found that people chose to leave their countries due to more academic opportunities,

job availability, and freer work atmospheres, as well as alienation from their home country for political reasons.

However, as a result of recent positive changes in the global political economy, Turkey has been striving toward and succeeding in drawing back some U.S.-educated Turkish scholars. This reverse brain drain derives from the diminishing attractiveness of foreign countries due to the global economic crisis and from Turkey's rapidly growing economy.

In Turkey, the reasons that were previously identified as push factors tended to become pull factors as a result of the economic growth, the growing number of universities, and the increase in funding for research and development activities. For example, according to Gungor and Tansel (2010), economic conditions constitute the greatest challenge that prevents graduate students from returning to Turkey. However, this study was based on results from a survey conducted in the early 2000s. Since then, Turkey's economy has greatly improved. Thus, today economic conditions may not be among the factors that cause educated individuals to study or work in the U.S. Furthermore, the growing economic power of such research and development initiatives and technological institutions as TUBITAK, TURKSAT, and ASELSAN is enabling to compete with their foreign counterparts in attracting Turkish scholars with foreign degrees.

The statistics indicate that the 10.3 % growth of the Turkish economy (Turkish Statistical Institute, 2012) might encourage U.S.-educated Turkish scholars to return to Turkey. Thus, this study is interested in exploring how the political economy of home and host countries influences students' perspective regarding staying in the U.S. or returning to Turkey. Furthermore, this study can enable policymakers, governments, and higher education institutions to gain a better understanding of the relationship between the flows of Turkish doctoral graduates and changes in the U.S. and Turkish political economies.

From a global political economy perspective, although international graduates may prefer to stay in the host country, they may have to return to their home country unwillingly since they may not be able to gain access to desired job positions (Lee & Kim, 2010). In this regard, it will be interesting to see which factors affect U.S.-educated Turkish scholars' decisions to return to Turkey or to stay in the U.S.: limited job opportunities, the economic crisis experienced in the host country, the improvement of Turkey's position in the global political economy, culture, or family.

**Additional push-pull factors.** This study will also explore the influence of culture, family, and academic freedom on the stay/return decisions of U.S.-educated Turkish scholars. In Matier's (1990) framework, cultural values and family factors are considered to be external environmental factors whereas academic freedom is deemed an internal benefit (intangible factor)

**Family and cultural values.** A great number of studies have been conducted to explore stay versus return decisions of international students and faculty (Altbach, 1991; De Stefanis, 2007; Lee & Kim, 2010; Tansel & Gungor; Zweig, & Chaggui, 1995). They found that while family-related reasons and culture played a role in their decision to return to home country, these reasons did not impel them to stay in host countries. It was more political economy that made them stay in host countries.

Zweig and Changgui (1995) suggested that parental views on returning, spouse's preference, which is also considered to be among personal characteristics, (Matier, 1990) might influence individuals to return. Das Gupta, Nerad, and Cerny (2003) claimed that doctoral recipients returned to their home countries due to strong ties to cultural values and preferences to be near friends and family.

In discussing the role of culture, it is important to keep in mind that Turkish people come from a collectivistic culture and they may experience some challenges living in the U.S., which is an individualistic culture. In Matier's words (1990), culture could be counted among external environmental factors, which are related to the quality of life. While cultural adaptation will help them to stay in the U.S., cultural challenges will push them to return to Turkey.

Triandis, McCusker and Hui (1990) claimed that individual freedom, self-sufficiency, and autonomy are deemed signs of an individualistic culture. In contrast, the main features of collectivistic cultures are the extended family, integration within the family, loyalty-dependent socialization, a search for intimacy and confidence, social support, and interdependence (Hui & Triandis, 1986; Triandis, McCusker, & Hui, 1990). In addition, people from collectivistic cultures see themselves as similar to members of their in-group (Iyengar, Lepper, & Ross, 1999 as cited in Prentice & Miller) and form strong boundaries between in-groups and out-groups, whereas individualists mostly choose to be separate from other people, including family and friends. Developed countries such as the U.S., England, and Australia are considered individualistic, while developing countries found in regions, such as Africa, Asia, and the Middle East, typically have traditional values, which are considered as collectivistic (Oyserman, Coon, & Kemmelmier, 2002). Based on these definitions of individualistic and collectivistic culture, it would not be wrong to characterize Turkish culture as a collectivistic culture (Melek, 1997). Thus, it will be interesting to see whether or not and to what extent culture plays a role in the stay versus return decisions of U.S.-educated Turkish faculty.

This study will consider additional push and pull factors such as family and cultural values, since Turkish culture is a Euro-Asian culture, which differs from Western culture in that it is more oriented toward collectivism than individualism. The inclusion of these factors,

intermingled with those that emerge from an approach based on global political economy, the push-pull model, and human capital theory, will enable us to arrive at a broader, more in-depth, and more nuanced understanding of U.S.-educated scholars' decisions to stay in the U.S. or to return to Turkey.

*Academic freedom.* This study will attempt to understand the role of academic freedom in the stay versus return decisions of U.S.-educated Turkish faculty. Matier (1990) counts academic freedom among the intangible factors (internal benefits). For academicians to express their ideas is crucial. Thus, there are certain rules that protect them in the U.S. (AUUP statement, 1915), whereas in Turkey freedom of expression is still a problem (Sekercioglu, 2012, p. 1). According to an AAUP statement (1915), academicians can reach the common good as a result of the free search for truth and its free exposition. Academic freedom is essential to fulfilling this purpose and applies to both teaching and research. Freedom in research is fundamental to the advancement of truth, while freedom in teaching aspect is fundamental to protecting the right to freedom of teachers in teaching and of students in learning.

### **Initiatives to Draw Back Turkish Scholars**

Although the U.S. attracts Turkish graduate students, according to Turkish media, the trend toward reversed brain drain has been common recently (Cihan News Agency, 2013). In the following paragraphs, the efforts made by the Turkish government, Turkish universities, and such research institutions as TUBITAK and Turkish Aerospace Industries (TUSAS) to draw U.S.-educated Turkish scholars back to Turkey will be explained. In addition, the importance of U.S.-educated Turkish scholars' decisions to stay or return will be emphasized.

The EU pays special attention to reverse brain drain with regard to European scholars returning to their home countries. For that purpose, they set aside 4.7 billion Euros to support

researchers and institutions between 2007 and 2013. Thus far, 100 researchers have returned to Turkey by using EU funding in the last three years since the EU initiated its Sixth Framework Program (FP6), which was established to improve research and development activities in its member and candidate countries (CHA, 2011). In that regard, Turkey ranks second among the countries that applied for this funding. The other countries include Israel, Greece, England, and Spain. Guler added that “Turkey is becoming more appealing for the reverse brain drain of Turkish scholars educated abroad. We anticipate that this trend will continue and even increase due to the economic crisis experienced globally. We will see what happens. As of now, we have observed that some Turkish scholars are returning” (Guler, 2009, p.1)

Furthermore, TUSAS recently initiated a reverse brain drain project. The purpose of the project is to draw Turkish engineers with foreign degrees back so that Turkey can build its own warplanes, helicopters and satellites. They have received 100 applications from Turkish engineers living in the U.S., Germany, Britain, Canada, and France.

The Representatives of TUSAS (2012) declared that:

We realized how detrimental the brain drain of Turkish engineers is since they left Turkey for better opportunities abroad and now we are trying to draw them back here. We are working hard to reverse the brain drain. Our doors are open to any high quality engineers. Those who want to feel the excitement with us should just apply online (TUSAS, 2012).

The efforts by TUBITAK have resulted in the return of 128 U.S. -educated Turks. Assistant professor Aksoy is one of the U.S. -educated Turkish scholars who returned to Turkey when he found out about the research funding by TUBITAK. Aksoy stated that research and development (R & D) opportunities are becoming more available every day and added that: “I

am extremely glad to be in Turkey. It's been much easier now to find support from TÜBİTAK or similar institutions for interesting ideas. The infrastructure is also improving day by day. It is certain that Turkey is in need of more scholars and students" (Aksoy, 2007, p.1).

The top universities in Turkey, such as Bilkent University, pay special attention to recruiting professors with doctorates from U.S. higher education institutions. For instance, 85% of their professors hold PhDs from American universities (Bilkent University, web-catalog, 2011). Between 2001 and 2009, the stay rates of U.S. -educated Turkish scholars declined from 52% to 40%. Although the statistics seem promising for Turkey, more than 40% of Turks with U.S. PhDs preferred staying in the U.S. to going back to Turkey (Finn, 2012).

Saxenian (2005) suggests that only countries that invest heavily in higher education will benefit from the return of highly educated individuals. Chinese and Indian engineers tend to return more often than Vietnamese and Iranian engineers. This criterion may apply to Turkey, as well. Over the years, the budget allocated to higher education and research development in higher education in Turkey has greatly increased. This has led to a significant increase in the number of higher education institutions.

As Saxenian (2005) suggests, Turkey may be attracting its U.S. -educated Turkish scholars, as it also started investing in higher education. To elaborate, in 2011, the Ministry of National Education (MoNE) was granted the largest amount of funding from the central management budget with approximately 20 billion U.S. dollars since 1923, when Turkey was founded. While the MoNE budget was 5.5 billion U.S. dollars in 2002, it increased to 16 billion dollars in 2010 with an increase of 278% followed by an increase of 354.6 % in 2011 to a total of 20 billion dollars. In addition, the funding allocation to universities increased from 2.54 % in 2002 to 3.36 % in 2010, and 3.68 % in 2011. Moreover, the research and development (R & D)

budget for universities increased to 300 million U.S. dollars in 2010 and 345 million U.S. dollars in 2011 from 60 million U.S. dollar in 2002 with the increase ratio being 531% (Ministry of National Education, 2011). As can be seen from the table below, there has been a consistent increase in the budget allocated to higher education.

**Table 1. Education Budget Allowances by Years in U.S. dollars**

<b>Year</b>	<b>Budget of Universities + Board of Higher Education</b>	<b>GDP Share</b>
<b>1997</b>	<b>196,699.850</b>	<b>2,4</b>
<b>1998</b>	<b>392,426.699</b>	<b>2,3</b>
<b>1999</b>	<b>676,899.815</b>	<b>2,7</b>
<b>2000</b>	<b>1,046,544.700</b>	<b>2,6</b>
<b>2001</b>	<b>1,364,910.550</b>	<b>2,3</b>
<b>2002</b>	<b>2,495,967.700</b>	<b>2,8</b>
<b>2003</b>	<b>3,408,608.000</b>	<b>3,0</b>
<b>2004</b>	<b>3,894,070.670</b>	<b>3,0</b>
<b>2005</b>	<b>5,218,467.000</b>	<b>3,1</b>
<b>2006</b>	<b>5,846,822.761</b>	<b>3,0</b>
<b>2007</b>	<b>6,586,692.000</b>	<b>3,3</b>
<b>2008</b>	<b>7,318,284.650</b>	<b>3,2</b>
<b>2009</b>	<b>8,772,719.225</b>	<b>3,8</b>
<b>2010</b>	<b>9,355,457.600</b>	<b>3,4</b>
<b>2011</b>	<b>11,503,927.500</b>	<b>3,8</b>

Source: MoNE statistics, 2011.

In addition to the increase in allocated budget by Ministry of Education in Turkey, the Gross Domestic Expenditures on research and development (GERD) in Turkey increased by 20.4% compared to the previous year and reached 7.6 billion U.S. dollars in 2011 (TUBİTAK, 2011). This statistic shows the effort made by Turkish research institutions to improve the R & D activities. Increasing the amount of investment in higher education might have an impact on the ability of Turkey bring its highly educated individuals back.

The national coordinator of TUBİTAK, Huseyin Guler stated that the European Union funding supports research and development, prevents brain drain, and makes Europe more attractive for researchers. Drawing back 100 researchers is promising. However, regarding the 248 and 324 PhD recipients in 2000 and 2004 respectively, Turkey still needs to do more to bring back a larger percentage of U.S. -educated Turkish scholars.

Ilham Suheyl Akgul (2012), the head of a Turkish recruitment consultancy firm asserts that the new trend is toward the brain gain of Turks: “We have had significant intellectual capital in foreign countries. The brain drain has lost it meaning. Now, the thing is to gain brains. So, Turkey must establish a Human Resources Ministry in a bid to find talents to carry Turkey a step ahead in the new century" (Akgul, 2012,p.1). These statements indicate Turkey’s anticipation that educated Turks will return to Turkey.

The president of Bursa Technical University Surmen (2012) stated that: “The brain drain did not reverse, however it stopped. We should create incentives to attract Turkish researchers abroad. I do not think we will not have as much brain drain as there used to be” He thinks that U.S. -educated Turkish scholars are not unwilling to return. Rather, they tend to return as long as they have a good academic atmosphere and funding for their research” (Surmen, 2012, p. 1)

Declarations by authorities such as the president of Bursa Technical University Surmen (2012) and Guler (2011) articulate their hopes for the future NOT facts that have happened. The only actual fact that we have about the reversal of brain drain of U.S. -educated Turks is that 128 researchers have applied for the EU funding to return to Turkey.

### **TUBITAK conference and insights of Turkish faculty**

TUBITAK has launched a reverse brain drain campaign by inviting Turkish researchers who are in the U.S. to return to Turkey for more attractive opportunities -- a campaign supported by the European Council. They invited a great number of Turkish academicians to different conferences they organized in Texas, Georgia, and North Carolina. At one such conference organized in the U.S. in 2013 advantages such as positive changes to the work environment, increasing provision of resources and investments, contributions from TUBITAK, EU Programs and funding, and other agencies, and the ability to maintain and improve the relationship with the international community in the U.S., Europe, and the Far East were enumerated. In addition, the Minister of Science, Industry and Technology conveyed the message that Turkey has been steadily growing economically and it was willing to offer research funding.

The president of TUBITAK encouraged the U.S. -educated Turkish scholars to at least come as visiting scholars, do their research and development there and sell their products abroad. He said that TUBITAK would support the applicants' projects. In the following paragraphs, the opinions of U.S.- educated Turkish faculty on the initiatives by are TUBITAK provided.

Dr. Sekercioglu who was chosen as the best explorer of the year in Turkey by National Geographic (2012) stated that:

It is obvious that the way presidents of the universities are selected in Turkey interferes with academia. We do not have strict top-down relations with department chairs as in the U.S. I do not care whether the wages are same or not. Publications might have increased, but citations from them are inadequate. If the aforementioned issues are overcome, I might go back to Turkey. (Sekercioglu, 2012, p.1).

Moreover, an anonymous scholar voiced his unwillingness to return to Turkey as follows:

A student receives his doctorate from Harvard and the Turkish Higher Education Council (YOK) asks him to take his comprehensive exam again in case of return. First of all, YOK should be abolished. To me, the only emphasis in this meeting was that we have money, so return and let's work together. Turkey does not have good research policies.... (Anonymous, 2012, para. 7)

Dr. Mihri Ozkan (2012) who is more positive about the changes said:  
I specialized in nanotechnology. I feel so happy that Turkey remembered us. They should increase the number of these kinds of meetings so that a bridge between Turkey and us can be established. We collaboratively worked with some researchers at Gazi and Bilkent University and we are about to start a project at Sabanci University, but first I want to guarantee my retirement here (the U.S.). (Ozkan, 2012, para.4)

Dr. Cengiz Ozkan (2012) agreed with Mihri stating that:

I see great changes in Turkey. In particular, in the last five years they have opened high quality research centers. They have nanotechnology centers. Now, it is time to encourage the researcher to initiate related projects. Some of the scholars who are encouraged to return are wondering if they will find high quality student researchers whom can work with them on their projects. I liked the first meeting. If I get an offer from a university in Turkey, I will return.

While some Turkish scholars working in the higher education institutions in the U.S. were willing to return to Turkey as a result of the positive changes, other scholars thought TÜBİTAK viewed money as the only incentive and added that it was not enough for them to maintain their research and utilize their expertise efficiently.

### **Summary**

In summary, in Matier's (1990) terms, visibility, which refers to having publications and presenting at conferences and being involved in academic organizations will make U.S.-educated Turkish faculty more visible. We will try to explore how quality of life, family, friendship, and culture (additional push and pull factors), which are called external environmental factors by Matier (1990), influence U.S.-educated doctorate holders' decisions regarding mobility. In addition, we will try to understand how work conditions, availability of facilities (global political economy), which are called tangible factors (internal benefits) and academic freedom, which is counted among intangible factors (internal benefits), play a role in the mobility decisions of U.S.-educated Turkish doctorate holders. This previous research shows that a combination of push and pull factors, global political economy, human capital, and cultural and family-related reasons can also explain the stay or return decisions of U.S.-educated Turkish scholars.

The next chapter (III) will explain the research methods that made it possible to collect the data. The chapter will give information on the participants, data collection and analysis process, the role of the researcher, and trustworthiness of the study.

## Chapter III

### Research Methods

In Chapter II, the theories such as push-pull model, human capital, global political economy that will guide this study were explored. Matier's (1990) framework was also explained in relation to the aforementioned theories. Chapter III will discuss qualitative method and its appropriateness for this study, followed by a discussion of the backgrounds of the study participants, including information on how they are selected. In addition, the section on data collection will explain the types of questions and the lengths of the interviews. Furthermore, the data management and analysis will be discussed. The role of the researcher in maintaining the trustworthiness, dependability, and reliability of the data to ensure the objectivity of the research will be explored.

A qualitative approach is applied in this study in order to enable U.S.-educated Turkish scholars to freely express their opinions regarding their return or stay decisions. Qualitative research "is an effort to understand situations in their uniqueness as part of a particular context and the interactions that occur there. It does not attempt to predict what may happen in the future necessarily, but instead to understand the nature of that setting – what it means for participants to be in that setting, and what their lives are like in that particular setting... The analysis strives for depth of understanding" (Patton, 1985, p.1 as cited in Merriam, 2002). Qualitative research is descriptive and inductive and is interested in understanding meanings from the perspectives of the participants (Bogdan & Biklen, 1998; Merriam, 1998; Patton, 1990). Inductive analysis (Patton, 1990) means that the patterns, themes, and categories of analysis "emerge out of the data rather than being imposed on them prior to data collection and analysis" (p. 390).

Merriam (2002) suggests that basic interpretive qualitative studies are the most common form of qualitative studies found in education. This study employed a basic interpretive approach to collect and analyze the data, in which “the researcher is interested in understanding how participants make meaning of a situation or phenomenon. This meaning is mediated through the researcher as an instrument, the strategy is inductive, and the outcome is descriptive” (Merriam & Associates, 2002, p. 6). I aimed at reaching an in-depth understanding of the situation, the pushes and pulls experienced by U.S.-educated Turkish scholars to stay in the U.S. or to return to Turkey. I am interested in learning how they do things, such as deciding to stay or return or what meaning they give to their lives rather than learning people’s surface opinions as in survey research or in cause and effect approaches in experimental research.

To collect information, face-to-face interviews of approximately forty to sixty minutes in length were conducted. According to Creswell (2003), this method for gathering information enables first-hand experience of the participant where unusual, emergent, or confidential topics may be gathered and explored (Creswell, 2003). Before conducting the interviews, I described the study and explained the informed consent form to the interviewee, and the interviewee signed the informed consent form. The identity of each participant was masked through the use of pseudonyms. Following basic interpretive design, open-ended questions were used. The questions posed to the participants focused on exploring their decisions to stay in the U.S. or to return to Turkey.

The qualitative approach is more appropriate than the quantitative method for this study since the former involves exploring patterns or themes based on reasons for staying in the U.S. or returning to Turkey and determining why they chose to stay in the U.S. or return to their home country. In this qualitative study, the primary concern is with understanding the perspectives of

the participants on the issues addressed. In addition, the qualitative method enables researchers to explore theory development and to expand the understanding of the research problem. U.S.-educated Turkish scholars who teach at universities in the U.S. and in Turkey were chosen to be interviewed, since, as Hancock and Algozzine (2006) noted, “[t]he most important consideration is to identify those persons in the research setting who may have the best information with which to address the study’s research questions” (p. 40).

### **Participants**

The researcher chose the sample from which the most interview data could be extracted. Thus, a purposeful sample of Turkish PhD recipients was interviewed for this study. To begin with purposive sampling, two separate but related populations were chosen. The first group consisted of U.S.-educated Turkish scholars teaching at universities in the U.S. The second group consisted of U.S.-educated Turkish scholars teaching at universities in Turkey. The researcher attempted to include an equal number of men and women in the study. The participant sample was chosen with the intent to understand the way that push and pull factors influence the decisions of these highly educated individuals to return to Turkey or to stay in the U.S.

**Returnees.** Criteria for participant selection were as follows: a) five of them were to have received their doctoral degrees from an American higher education institution five or fewer years before the interview and had returned to Turkey to teach at a university, b) five of them were to have received their doctoral degrees from an American higher education institution more than 5 years before the interview and to have returned to Turkey to teach at a university. I chose five years to see if the betterment of economic and educational opportunities in Turkey might have any influence on experienced and inexperienced academicians

The interview data that were collected in this study on returnees were from faculty members at three universities in Istanbul. Both the male and female participants were selected based on the fact that they had studied and currently teach in a wide range of program types. Their majors varied and included education, math, engineering, chemistry, and so on. They teach at highly selective public universities (HSPU), less selective public universities (LSPU) or highly selective private universities (HSPRU). This study aimed at finding out the opinions of U.S.-educated Turkish faculty working at different quality universities. Thus, these types of universities were chosen.

A web search for names of U.S.-educated Turkish scholars teaching at Turkish universities was carried out. Word of mouth, connections to Turkish cultural centers and Turkish Student Associations, and alumni contact information enabled the researcher to locate and contact scholars to conduct for initial interviews on brain drain and reverse brain drain .

**Stayers.** Criteria for participation selection were as follows: a) receipt of doctoral degree from a U.S. higher education institution five or fewer years before the interview and currently teaching at a university in the U.S. and b) receipt of doctoral degree from a U.S. higher education institution more than 5 years ago before the interview and currently teaching at a university in the U.S.

The data in the segment on stayers were collected from U.S.-educated Turkish scholars teaching at a variety of universities in the U.S. The researcher interviewed a total of ten people of whom five were men and five were women to maximize the variation in the sample. They were from different fields including math, science, education, and engineering.

The e-mail addresses and names of U.S.-educated Turkish scholars were collected from various sources. The names of the professors who attended the workshop organized by The

TUBİTAK were gathered from the news websites that published the names of the participants. This workshop was part of a reverse brain drain campaign to invite Turkish researchers who are in the U.S. to return to Turkey to take advantage of recently improved opportunities -- a campaign supported by the European Council.

This publication helped me to find the e-mail addresses of the professors from the websites of their academic departments. In addition, word of mouth and affiliations with Turkish cultural centers enabled me to contact potential participants.

### **Data Collection**

The interview included questions related to the push and pull factors that motivated U.S.-educated Turkish scholars to stay in the U.S. or to return to Turkey: living standards, culture and family-related issues, financial considerations, political economy, experience in higher education institutions in the U.S., and opinions regarding initiatives or attempts by private or government-affiliated institutions, and European Union funding to draw them back to Turkey. The interviews lasted approximately 40 to 60 minutes. A purposeful and maximal variation sampling strategy as outlined in Creswell (2002) was used to determine which participants to contact. Participants from a variety of fields and genders were included.

I transcribed and translated the tape-recorded interviews. Since the scholars had lived in the U.S. for an extended period of time and had developed English language skills, the interviews were conducted in English. Nonetheless, they could choose between English and Turkish.

Before conducting the interviews, I determined the specific concepts from the literature that would enabled me to focus on crucial issues related to the research questions. To elucidate my interest in this topic, I described my own background before beginning the data collection

process. I explained the purpose of study using verbal as well as written information. They were assured that their identities and all of the information provided in the interviews would be treated with the utmost confidentiality.

After receiving their signed written consent form, I began the semi-structured interview session, typically starting with general questions followed by a list of pre-determined interview questions. All the interviews were conducted face-to-face.

In keeping with the standards for the protection of human subjects, each participant signed a consent form (See Appendix A). The participants were free to withdraw from the study at any time by contacting me. They were given a copy of signed consent form, which explained the confidentiality of the procedure. They could review a copy of the interview transcript.

The information that the interviewees provided in the interview was used to offer suggestions for solving Turkey's brain drain problem and to explore U.S.-educated Turkish scholars' views on the initiatives by the government and other institutions and on the influence of the recent economic growth in Turkey on their decisions to stay in the U.S. or to return to Turkey.

(See the Appendix B for Interview Questions for Returnees and Stayers)

### **Data Management and Analysis**

In qualitative studies, data analysis is simultaneous, thus I began analyzing data with the first interview. Meriam (2002) suggests that simultaneous data collection and analysis enables the researchers to make any necessary adjustments and to test emerging concepts, themes, and categories, since analyzing the collected data after all the interviews have been completed might result in the collection of less reliable and valid data. Being aware of the confusion that a great number of pages of transcripts might cause, and since data analysis is an inductive strategy, I

carried out the data collection and analysis simultaneously. Thus, the analysis process began with a unit of data and continued with looking for common patterns across the data. “These patterns were coded, refined, and adjusted as the analysis proceeds” (Merriam, 2002, 14).

The data were analyzed according to the constant comparative method (Glaser and Strauss, 1967). They were analyzed throughout the study. As Merriam (1998, p. 70) suggests, a preliminary analysis was done after each interview. I coded and recoded data until themes began to emerge, as constant comparative method suggests. As a result of this process, themes were inductively derived and outcomes were descriptive. Interviews were taped and analyzed thematically. The transcripts of the interviews totaled more than one hundred pages. The themes that emerged from the interviews with the U.S.-educated Turkish scholars were compiled together in order to better explore the emerging patterns regarding the pushes and pulls on them to stay in the U.S. or to return to Turkey. The themes for returnees included family and cultural values, discrimination, the challenges of living in a different culture, the role of economy, and incentives. For stayers the themes that emerged were academic opportunities, desire for more experience, and the ease of social adjustment. These patterns enabled me to understand the motivations behind the movement of the scholars. Qualitative method was chosen since it enabled the researcher to capture the reasons for brain drain and reverse brain drain in more depth.

Since the product of qualitative research is richly descriptive, I extracted quotes and excerpts that might contribute to the descriptive quality of this study. The basic interpretative qualitative approach was employed since it enables the researcher to be the instrument of the study in order to understand how participants make meaning of a situation. Notes were taken

during and after each interview to enable the formulation of emergent questions and to facilitate later analysis (Patton, 2002).

I also applied reflexivity during each interview, which Lincoln and Guba (2000) describe as “reflecting critically on the self as researcher” (p. 183). Reflexivity explains the relationship between the researcher and the participants (Rossman & Raliss, 1998). I wrote reflective memos immediately after each interview and during the analytical process to enable me to explore how the participants’s stories related to each other. Passages that stood out due to their significance were underlined and gathered into chunks. This chunking enabled me to create codes.

The coding process were recursive, which means that, as articulated in the decription by Le Compte and Preissle (1994), I examined the relevance of categories and themes by making comparisions within each transcript and among transcripts. According to Goetz and Lecompte (1981), this method enables researchers to carry out inductive category coding and to compare that with the data collected from each interview.

The categorization of the data enables the researcher to reduce the complexity of the environment. “Categorizing is therefore a crucial element in the process of analysis” (Dey, 1993, p.112). According to Patton (1990), analyzing the content of the interviews helps the researcher to identify, code, and categorize primary themes in the data. Dey (1993) suggests that categories must be meaningful both internally and externally in terms of the data understood in context and through comparison.

Related bits of data were identified and assigned to categories for purposes of comparison across the data (Dey, 1993) to identify similarities and differences. Furthermore, during analysis, I determined which bits of data could or could not be assigned to the categories (Dey, 1993).

## **The Role of the Researcher**

The researcher is the primary instrument of data collection and analysis. Having a human instrument is ideal for collecting data since he or she can clarify and summarize the material, communicate with the participants to ensure the accuracy of understanding and interpretation of the issue, which is the goal of qualitative research (Merriam, 2002). However, most humans can have biases that might impact the study. Merriam (2002) suggests that it is crucial to identify any potential biases and to explain how they may influence data collection and interpretation instead of trying to eliminate them. To prevent potential impact of biases, I kept a journal for reflection, and used member checks (see trustworthiness, validity and dependability at the end of Chapter III).

As a researcher employing a qualitative methodology, my role was very complex. Particularly, formulating an appropriate main research question and sub-questions and asking appropriate interview questions, which would encourage the interviewees to provide detailed answers, were challenging tasks for me. Some interviewees were shy about giving long answers, thus I had to ask follow-up and probe questions.

In addition, ultimately, my research was inspired by my interest and background in the field of education. A few years ago, I had a conversation with a Turkish professor teaching at a public university in Istanbul. He told me that TUBITAK had asked him to go to the U.S. to speak at a conference that was organized to attract U.S.-educated Turkish scholars back to Turkey. This conversation raised questions in my mind about why U.S.-educated scholars decide to stay in the U.S. or return to Turkey and specifically whether these incentives are working as intended. This inspired me to conduct this study, as it also relates to my background. The fact that I am a Turk might have had an impact on the participants' responses. In fact, initially some participants

felt shy about explaining their thoughts in detail even though I had promised to the information that they provided confidential. They were concerned about confidentiality, since some of interview questions elicited their critical reflections on the conduct of and actions taken by the government and TUBITAK. However, after they had gotten to know me better and were convinced of my sincerity and trustworthiness, they gave thorough, straightforward, and detailed answers to my questions, which enabled me to gather considerable concrete, valid, and pertinent data and to produce nuanced and valuable conclusions.

As a researcher who is also pursuing a doctoral degree in the U.S., I am also a potential brain drain for Turkey. Thus, I tried not to include my personal opinions in the study, since I bore the responsibility of maintaining objectivity. Some interviewees wanted to know my opinions about the interview questions. I did not share my opinions with them until after I had finished the interviews since I did not want to influence their thoughts and ideas.

### **Trustworthiness**

According to Crosswell (2003), trustworthiness entails verifying the accuracy and veracity of the information provided in the study. To ensure trustworthiness I employed the following: (a) careful triangulation between the interviews, interview transcriptions, and field notes; (b) participant checking of the interview transcriptions, themes, and descriptions; and (c) rich, thick description of the participants' experiences in the final report.

In addition, trustworthiness was established by ensuring the truth value, methodological rigor, and usefulness of the study (Rossman & Raliis (1998, p. 45). Participant scrutiny and careful review by the dissertation committee members contributed to the trustworthiness of the study. To elaborate, the researcher's subjective interpretation and participants' personal experiences ensured the study's uniqueness. In-depth collection, careful interpretation, and

detailed analysis of the data increased the study's trustworthiness. With regard to usefulness, this study will enable the Turkish government and other institutions, such as TUBITAK to revise their initiatives to encourage U.S.-educated Turkish scholars to return to Turkey.

Moreover, to ensure the study's trustworthiness, a variety of strategies were employed. First, a researcher journal for reflection was kept. Secondly, member checks in the form of participant checks on the accuracy of the interpretation of themes that emerged from the data collected during the interview.

Furthermore, I took notes during the interview and reviewed them with the participants after the interviews were completed as a form of member checking which contributed to the study's trustworthiness. (Patton, 2002)

### **Internal Validity and Dependability**

Participants' transcriptions were sent to them by e-mail so that they could verify the accuracy of the data collected. Furthermore, participants received a copy of the final report to check the data and provide corrections or clarifications, if necessary.

Member checks were conducted by some of the participants to ensure the dependability of the findings. As a result of participant input, some of the researcher's interpretations were revised, corrected, or omitted when necessary.

### **Study Limitations**

This study has several limitations. First, the participants in this study are mainly faculty members at universities in Istanbul, which is the social and cultural center of Turkey and where the highest quality schools are located. In addition, the stayers are mostly faculty members at less selective public universities in the U.S.

Furthermore, due to the nature of a qualitative study, I interviewed twenty people, making

the task of formulating generalizations difficult. I did not attempt to find out the influence of the faculty members' majors on their decisions to stay in the U.S. or to return to Turkey, which could constitute an additional focus for future studies.

Another limitation for this study is that conclusions made about the human capital of both returnees and stayers are based on the review of their curriculum vitae. Thus, it may not offer sufficient information of acquired and developed human capital that the participants might possess.

Also, this study did not explore the influence of the quality of the institution that participants graduated from on their decision to stay in the U.S. or to return to Turkey. The study mainly included LSPU, LSPRU, HSPU in Turkey and LSPUs in Turkey. Lastly, I did not explore whether determination to attain a higher social status in Turkey or aspiration to serve to their nation impacted the decisions of my interviewees.

### **Summary**

In summary, this study employed qualitative method in order to examine the opinions of U.S.-educated Turkish scholars in greater detail. Since this is a comparative study of stayers and returnees, I interviewed both U.S.-educated Turkish PhD holders who teach in Turkey and those who teach in the U.S. All the interviews were tape-recorded and analyzed thematically. The next chapter will include a discussion of findings on both returnees and stayers.

## **Chapter IV**

### **Findings**

Chapter III included a discussion of the research method with a detailed explanation of its appropriateness, and information on participants, data collection and analysis, the role of researcher and information on its trustworthiness.

This chapter consists of two sections. The first section concerns U.S.-educated Turkish scholars who returned to Turkey. The second section focuses on those who stayed in the U.S. Each section is divided into two parts and follows the same format. The first part offers information on reasons to study in the U.S. and background information on the participants. The second part explores the reasons behind their decisions to stay in the U.S. or to return to Turkey.

#### **Returnees**

The returnees majored in a variety of fields, including molecular biology, mathematics, education, economics, and engineering. None of the returnees were sponsored by the government nor any other affiliated institutions. Therefore, they were not required to return. While five of the participants had received their PhDs within the last five years, the rest had completed their degrees more than five years before. The returnees included five male and five female participants. Table 1 provides more detailed information about the returnees.

**Table 2. Background Information about Returnees**

<b>No</b>	<b>University Type</b>	<b>Academic Field</b>	<b>Gender</b>	<b>Years of PhD Completion</b>	<b># of Publications/During PhD</b>	<b>The Length of Working as a TA or RA</b>
<b>1-</b>	LSPU	Molecular Biology	<b>Male</b>	<b>2006</b>	4	TA for 6 years
<b>2-</b>	LSPU	Math Education	<b>Male</b>	<b>2005</b>	2	4 years
<b>3-</b>	HSPRU	Economics	<b>Female</b>	<b>2009</b>	5	4
<b>4-</b>	HSPU	Math Education	<b>Female</b>	<b>2009</b>	2	5
<b>5-</b>	LSPU	Education	<b>Male</b>	<b>2006</b>	3	4
<b>6-</b>	HSPRU	Environmental Engineering	<b>Female</b>	<b>2006</b>	5	4
<b>7-</b>	LSPU	Math Education	<b>Male</b>	<b>1999</b>	2	2
<b>8-</b>	HSPU	Educational Technology	<b>Female</b>	<b>2009</b>	4	3
<b>9-</b>	LSPU	Civil Engineering	<b>Male</b>	<b>2012</b>	2	3
<b>10-</b>	HRPRU	Education	<b>Female</b>	<b>2012</b>	2	6

**Returns' reasons for studying in the U.S.** To understand the reasons behind the Turkish scholars' decisions to study and obtain their doctoral degree in the U.S., the participants were asked to elaborate on the decision-making process. Among the reasons mentioned, a few of them stand out: a) the opportunity to receive a doctoral degree in high quality universities with more academic opportunities and highly trained professors, b) the opportunity to increase their knowledge in their field and conduct high quality research, and c) the prestige of receiving a PhD from a higher education institution in the U.S.

The aforementioned reasons are all academic related. All of the participants went to the U.S. for academic-related purposes: Participant 1 stated that: "When I started my undergraduate degree in molecular biology, it was a popular field, but there were not very many labs in Turkey. So, when I graduated the only option was to go to the U.S. So, maybe the reason was the quality of schools."

The vast majority of participants were influenced by the abundant academic opportunities in the U.S. Participant 3 also supported this argument by stating that she pursued her PhD in the U.S. due to the proliferation of leading higher education institutions and highly trained academicians.

The challenging academic life in the U.S. was viewed as attractive by participant 4, who stated that she wanted to be equipped with the best knowledge and research experience. In her words: "I asked myself why I wanted to do my PhD in the U.S. and the answer was that I wanted to challenge myself until I hit the wall."

The prestige of the universities and the perception that U.S.-educated Turkish scholars know "the best" was a great motivation for the participants. Participant 5 explained that "It might be more difficult to go the U.S., but we think it is a good opportunity to improve our knowledge

and skills and come back.” Participant 2 agreed that, “The main reason is that graduate-level education is the best in the U.S. Instead of doing my graduate-level studies in Turkey or Europe, I went to the U.S. for the quality of the education.” Participant 6 confirmed that she also thought that the U.S. was the best place for her on an academic level due to the highly competitive, cutting-edge programs there. To have a better academic career, participants seemed to choose to study in the U.S., although it might be challenging for them.

None of the participants addressed the effect of pursuing a different lifestyle or better living standards. To find out the opinions of the participants on this issue, follow-up questions were posed. However, none of the participants were influenced by these factors since they were already satisfied with the lifestyle they had had in their home country. Participant 6 explains that: “My lifestyle was better in Turkey, since I drove a better car and lived in a better apartment, and I was not really paying that much, since I was living with my brother and we were sharing costs.”

**Returnees’ reasons for returning to Turkey.** The following paragraphs will discuss the reasons such as family-related, cultural values, negative experience, the role of incentives, and the role of economy that impelled returnees to go back to Turkey.

***Family and cultural values.*** The majority of the returnees had the desire to return to Turkey from the beginning for a variety of reasons. Among them being close to family and having a more interesting social life in their home country, where they are more familiar with the culture and negative experiences in the U.S. because of being an international student stood out.

A male professor of education at a HSPRU, participant 10 explained:

First of all, we had a son and I always wanted my family to love and to see my son. It was too far for them to come to see him. My father and

mother-in-law came, but they did not enjoy their time. They were bored. Family was only one factor. My wife was another factor. We were both teaching before we went to the U.S. My wife was working as a math teacher. We both quit our jobs to go to the U.S. She did not work there because she was pregnant. We had our son there. She just took care of him, so she got bored.

Participant 9, another male returnee, who is now a professor of civil engineering, also returned for family-related reasons. He did not want his children to grow up in a different culture where a language that is different from his native language is spoken. He chose to return immediately upon graduating, explaining that: "I had some friends who stayed in the U.S. for a long time, 20 years. They said they always thought they would go back, but they just stayed there without realizing how many years had passed."

Another important reason that people returned was that they felt that they were more connected not only with their families, but also with relatives in the home country. Coming from a culture of collectivities and living in an individualistic culture might create challenges for some people and may cause them difficulties. A male returnee, participant 6, shared his opinion as follows:

Life is interesting here (Turkey). To be honest, you have your family here and a broad social circle. I had a social circle there, but it consisted mostly of students. You know students, they just come and go, and you lose connection with them. In Turkey, it is different, since your family and your relatives are here.

Another female professor of math at a HSPU (Participant 4) shared her experience by explaining that she believes that a great number of U.S.-educated Turkish professors chose to come back because they want to be close to their families: “While I was there, I got sick, and so did my son and my husband, and we did not get any help from anyone. But if we had been in Turkey my parents would have taken care of us, or at least of our son.” Also her father had a brain hemorrhage and she felt responsible for taking care of him, or at least being closer to him.

In Turkey people choose to live near their parents and relatives, even when they are adults. In doing so, their social circle is not only composed of friends from their workplace, but it also includes their nuclear and extended family, as well as relatives. Participant 1, a male returnee, who is now a professor of molecular biology at a LSPU elaborates on this issue stating that: “After eleven years, I was feeling lonely because of the culture being so different, so I began wishing to come back. I was away from my family. I only visited my family three times in eleven years. I missed them very much while I was there (the U.S).”

Being married also made the decision of staying or returning more complicated. One of the male returnees, participant 3, chose to return because of his wife. He explained that his wife did not want to live in the U.S. She just wanted to return, to speak her native language, and to live in the country where she felt like she “belonged.” One common issue that married couples experience is that they may both work in their home country, but when they move to the U.S., the wife may have to stay home, since she may not have adequate language skills. Participant three elaborated on this issue by explaining that his wife had been working as a teacher in Turkey. When they moved to the U.S., she could not work outside home due to the language barrier, which made her get bored and always long to return to Turkey.

The reasons shared by the participants who returned indicate that family ties play a major role in the decisions of U.S.-educated Turkish faculty to return to their home country.

***Discrimination.*** Some of the returnees addressed the issue of discrimination, which they had experienced in the U.S. Although the discrimination, which they had experienced, was not necessarily overt, they felt the covert discrimination due to their ethnic backgrounds and being foreigners and belonging to a minority in the U.S.

Participant 4, a female professor of math at a HSPU, described the frustration that she experienced whenever she felt discriminated against in the U.S., which was not necessarily because she was a Turk, but because she was a foreigner. She elaborates as follows:

Also, my son was born in the U.S. We sent him to daycare. He stayed in the classroom for six months. There were three teachers. My son's teacher would come early and leave early. One of the other teachers discriminated against the children of parents of other nationalities. She did not care about my son's and other international students' needs. I suspected that this was happening because when I went there to pick up my son, I saw him fighting with a Mexican boy in a corner. I talked to my son's other teacher who was from Ukraine. She told me my son's teacher ignored the international kids, who were fighting with one another because the teacher was ignoring their problems all the time.

Participant 8, a female professor of math at a HSPU, explained that:

I never experienced anything bad because I am Turkish. Everything was nice, but I realized at some point in time that I am like a second-class citizen, not a U.S. citizen. That always made me think that it would affect

my heart. I could manage it, but I knew that at some point in time in my life I would go back to Turkey, so I wanted it to be at an early moment in my career.

Although Participant 2, a male professor, did not experience discrimination directly, he felt that his scholarship application was denied because of his ethnic background. Participant 9, a male professor, has not felt directly discriminated against. However, he emphasized that he went through some emotional stages where he did not feel like he belonged there since he was from a minority group. He wanted to live in a culture where he belongs to the majority.

These types of negative experiences made participants feel that they were being treated differently, as if they were second-class citizens. Although not every participant claimed to have received unfair treatment due to their ethnic or religious background, it seemed to be a threat for some foreigners, which made them consider leaving their host country. In addition to being discriminated against, due to language barrier, some foreigners might experience challenges in class.

***Challenges of living in a different culture.*** Growing up in Turkey and going to the U.S. in order to pursue their doctoral degrees and to live there for a certain amount of time presented some challenges for some of the participants who decided to return to Turkey, such as cultural adjustment and adaptation to the different lifestyle.

Participant 9, a male professor of civil engineering at a LSPU, complained about the fast-paced lifestyle in the U.S. He wondered whether being really busy, physically or mentally, would present challenges to his ability to fulfill his responsibilities to his kids as a father. Thus, he preferred being in his home country where the lifestyle allows him to be a more family-oriented person.

Participant 3, a female professor of economics, was different from the majority of the participants. Although she returned to Turkey, she felt that she liked and embraced the cultural values in the U.S. and that she had more freedom to be more individual and to live independently. She elaborates that: “As I said, I feel much more free over there to live my cultural identity and values. It is much easier. You are on your own, so you are an individual rather than part of society. As an individual you are much more free.”

Being an international student and foreigner and the process of transition from a highly people-oriented culture to an individualistic one created some challenges for U.S.-educated Turkish participants (Participant 4).

Coming from a different cultural background and a different lifestyle stood out among the challenges that some returnees encountered when they were in the U.S.

*The role of the economic crisis in the U.S.* The faculty members who returned thought that the U.S. had experienced an economic crisis, while Turkey had passed through that period without being greatly affected.

However, participant 6 did not think that the economic crisis in the U.S. and the economic growth in Turkey influenced her decision: “The economy is growing, but that was not a factor. My peers back in the U.S. who decided to stay there found good jobs. If you are not qualified, of course you will be affected by the economic crisis. But if you are qualified enough, you will get the job.” Likewise, the economic crisis in the U.S. was not a factor in the decision to leave the U.S. of participant 7, a male professor. He feels that, if you are a good researcher, you will have opportunities to get a position at a university in the U.S.

Despite being asked follow-up and probe questions, most participants responded to the question about economic growth with an unelaborated “NO” and emphasized that family ties, cultural values, and social adjustment issues were the primary reasons for their return.

***The role of teaching and research assistantships.*** To understand the role of working as a research or teaching assistant at U.S. universities in the participants’ decisions to return to Turkey, the resumes of the participants were reviewed. The returnees had between two and five publications and their teaching and/or research experience ranged from two to six years. When they have no publications or research and teaching experience, it is easier to conclude that a lack of teaching and research experience and an insufficient number of publications would impel them to return to Turkey. However, to assess whether or not these factors influenced their decisions to return, it is helpful to compare resumes of returnees with those of stayers. After discussing the findings for stayers, the resumes of both returnees and stayers will be compared.

***The role of incentives.*** With the increase in the number of universities there, Turkey is in the process of encouraging U.S.-educated Turkish scholars to come back. The participants are familiar with the initiatives of the TUBITAK. However, a majority of the participants expressed their opinions regarding the initiative of the by TUBITAK stating that: a) it is a good attempt as an idea, b) it is problematic in terms of its applicability, c) it lacks adequate research equipment and research opportunities, and d) they would suggest that Turkish PhDs gain some teaching and research experience in the U.S. for a while, even though that might create the risk of them not wanting to return.

***Good idea, problematic incentive.*** Most of the returnees liked the offers that TUBITAK made. However, they were dissatisfied with details of the initiatives since they were mainly for hard science professors, and monetary rather than research and development focused.

Participant 1, a male professor at a LSPU, strongly supports the initiatives of the TUBITAK. However, he complained about the applicability of the idea due to the “weird conditions” of the program. He elaborated as follows:

I wanted to apply, but the requirements and conditions were very strange.

Because they do not support somebody’s returning, they support somebody, a person who will come to Turkey for a year, maybe do research, and then go back. So, they do not support somebody who is returning, because I decided to return and learned that the salary is low, then I wanted to apply but they said you already have connections, you already started at a university so we do not need to support you. Yeah, I mean conditions are kind of weird.

The majority of the professors think that the conditions of the program are not appealing to U.S.-educated faculty since the program has its flaws. While the program encourages faculty in the hard sciences by offering incentives, it fails to offer similar incentives to social science professors. Participant 4, a female professor of math at a HSPU, shares her concerns that the initiatives are only for engineers. She adds that, although they all have their doctoral degrees from the U.S., they may be treated differently based on the university from which they received their doctoral degree. She elaborated that Turkish universities offer you free housing if your doctoral degree is from highly selective university such as Harvard. Otherwise, you are not offered free housing, which may prevent some people from returning

The promises offered by TUBITAK do not seem to convince the majority of the participants. They complain that TUBITAK only says that they have funding for specific types of projects. However, when faculty are in the academic world, they encounter the challenge that

they have to share their office with other faculty, or they are not offered a computer unless they are associate professors. As participant 2, a male professor of math at a LSPU, put it: “You know that in our university there is nobody like that. We have 1,000 academicians here. Nobody came with the help of TUBITAK projects. Of course, many professors got their PhDs from the U.S., close to 100.”

*The lack of research facilities.* The lack of adequate research equipment, opportunities, and tools are among the concerns shared by a majority of the faculty who returned to Turkey despite promises made by TUBITAK.

Participant 6 elaborates on this issue as follows:

In a university that does not have a lab you will be miserable. I used an instrument throughout my PhD, for five years (in the U.S.). My adviser in collaboration with another professor purchased it for me. In Turkey there are only two of these instruments. People want U.S.-educated Turkish scholars, but you have to provide the tools, otherwise they will go back.

According to some faculty members who returned, the lack of sufficient research opportunities and the academic environment can hinder individuals from returning, since even if they return, they may be unable to employ their knowledge efficiently. Participant 5 complained about the limited number of opportunities in Turkey, although he is also hopeful. He explains that: “Actually, we do not have the opportunities to do good research here, but the situation is changing. People are returning from the U.S. and getting administrative jobs, so compared to the past they can do better things.”

The dearth of research equipment, the limited value placed on research, and the increased teaching load have caused the great majority of returnees to feel alienation from their institutions and from TUBITAK. This situation also causes them to be less focused on research.

***The role of economic growth.*** The primary reason for U.S.-educated Turkish scholars' decisions is family ties, cultural values, and social difficulty. One may think that the recent economic growth in Turkey would have a great influence on their decisions to return. Furthermore, the economic crisis in the U.S. might be seen as a reason to return to Turkey.

Participant 10 was the only returnee to address the role of the recent economic growth in Turkey. In response to follow-up questions, most agreed that Turkey is improving economically, even though some had doubts about it. They did not think it was attractive to them since they would most likely receive a higher salary in the U.S.

Participant 3 explains as follows:

Because of the many structural changes and regulations, the Turkish economy is doing very well. Overall, we have experienced ten years of improvement in our economic situation. It is a short-term assessment in economic terms. We should not be so happy and simply relax. We should be careful and expect the worse, and be prepared for that. In that sense, the economy is great, but that was not the reason I returned.

Another professor, participant 2, who returned in 2005, stated that at that time the economy was not as good as it is now. Thus, the economic situation did not influence his decision. A female professor of educational technology, participant 8, also agreed that Turkey is improving economically, however she was concerned that economic stability may be temporary.

Although the majority of the participants did not tend to address the economic growth as a major reason, participant 10 counts the economic growth among the factors that attracted him to Turkey: “The beauty and growth in Turkey was charming. The economic growth has affected the beauty of Istanbul. That, and being close to our relatives, influenced our decision to return, when I think about it.”

*Ideas on gaining teaching and research experience in the U.S.* Although the majority of the participants have liked the idea of the TUBITAK incentives, some participants were against the idea of bringing back U.S.-educated Turkish faculty, as they thought that these scholars could contribute to the development of Turkey in other ways.

Participant 2, a male professor of math, completely opposed the idea of attempting to bring scholars back. He argued that there are a large number of Chinese and Indian PhD recipients in the U.S. with vast experience. It might be more beneficial to their country in the long term if they return. However, we have a smaller number of Turkish professors there. He wants Turkish professors to gain teaching and research experience at U.S. universities and then return. This could help Turkey more in the long term. He complains that “We want them back without that experience.”

Participant 3, another male professor, thinks that U.S.-educated Turkish faculty might contribute in other ways. For example, his university invites Turkish professors from the U.S. to do collaborative work. He explains that: “One professor brought 35 students from Rice University for a workshop, research, and sightseeing, so we could do collaboration with them. We can benefit from them even if they are there.”

The U.S.-educated Turkish faculty members were also asked if they would want other U.S.-educated Turkish faculty members to return upon graduation or to stay there. While some

faculty members encouraged them to return immediately since it would be hard to return after adjusting to the culture there, other faculty members felt that they should return later so that they could gain more experience.

Participant 1, who was for them staying in the U.S., explains as follows:

I would suggest that Turkish scholars stay in the U.S. to pursue post-doctoral studies because post-doctoral studies is a different experience. It teaches you more independent research capabilities, plus you gain more experience, even if you change your field. For example, I did my PhD in molecular biology, and then added computational biology on top of it. I was not the only one. Some people choose to do their PhDs in one area and their post-doc in different areas.

Although some faculty members would want U.S.-educated Turkish faculty to stay in the U.S. longer, they are concerned that they would adjust to the culture and lifestyle and would be unwilling to return. Participant 4 elaborates that nobody would come back after having stayed in the U.S. for five years since they would get adjusted to the system and culture. Participant 6 adds that: “If they stay there and gain knowledge and experience, it would be harder for them to come back. I know from myself. If I had stayed there for five years, it would have been harder to come back.”

Another faculty member, participant 3, suggested that Turkey might consider offering additional incentives to benefit from the U.S.-educated faculty while they are in the U.S. He explains the endeavors of his university as follows: “In this school, we bring many Turkish academicians who are faculty members in the U.S.” In a globalized world where the technology

permits people to circulate knowledge at a faster rate, U.S.-educated Turkish faculty may also contribute while they are in the U.S.

For Turkey's benefit in terms of recruiting a more highly developed and knowledgeable faculty, it might be more beneficial to suggest that faculty members stay there and gain more teaching and research experience when there is an opportunity.

**The return decisions are voluntary.** To determine whether the decisions were voluntary, the participants were asked if they were offered positions in the U.S. and if they returned willingly. The majority of the returnees chose to return to Turkey. Participant 2 states that when she got close to receiving her doctoral degree, she got a couple of job offers from different universities. However, she returned since she wanted to live close to her parents. Also, she adds that she could not create her own mini culture in the U.S. and had difficulty in adapting to the culture.

Participant 2 shared similar feelings as follows: "Family ties [were important]...My wife wanted to return. Just being able to speak your own language. Being able to live in the country you grow up in." He explained that he did not even consider applying to universities as his decision was firm. Participant 6 also states that she just wanted to live in Turkey as it is her home country. She applied for a position in Turkey, got an offer, and accepted it. She claimed that: "My peers back in the U.S. who decide to stay there found good jobs, you were affected by the economic crisis, but if you are qualified enough, u get the job."

Interestingly, all the participants chose to return to Turkey because they wanted to. Thus, none of the participants were forced to return to Turkey as a result of not finding employment.

## Conclusion

The reasons for U.S.-educated Turkish scholars' decisions to return were explored in this section. Turkey has recently undertaken initiatives to encourage U.S.-educated Turkish scholars to return to Turkey. While some of them chose to stay in the U.S., others preferred to return. Various reasons for their decisions to return stand out. Many Turkish scholars choose to return for family reasons and difficulties regarding cultural values and social adjustment. Incentives offered by the Turkish government, and private and public institutions such as TUBITAK and the Turkish Aeronautical Association (TAA), did not seem to appeal to them since they thought that the applicability of their ideas would not be possible. In addition, they were concerned that they would not find the same academic environment in their home country as they had found in the U.S. Thus, the potentially positive factors that it was assumed would attract them did not appeal to them.

Surprisingly, the recent economic growth in Turkey was not a major factor in their decisions to return. In addition, compared to the U.S.-educated Turkish scholars who stayed in the U.S., those who returned had acquired an almost equal amount of research and teaching experience during their doctoral studies, however the stayers had more publications and patents than the returnees when they started teaching at the university level in the U.S.

The data collected from interviewees who had received their PhDs within the last five years was compared with those who had received their PhDs more than five years before. No noticeable differences were found.

## **Stayers**

In this section, first information on participants who stayed will be provided. Secondly, the reasons for U.S.-educated Turkish scholars' decision to study in the U.S. will be explored. Thirdly, the reasons for their decisions to stay will be elaborated.

The participants majored in a variety of fields, including sociology, mathematics, finance, education, political science, and engineering. None of the stayers were sponsored by the government or by any other affiliated institutions such as Fulbright. Thus, they were not required to return. While five of the participants had received their PhDs within the last five years, the rest had completed their degrees more than five years ago. The stayers include five male and five female participants. Table 2 provides more detailed information about the stayers.

**Table 3. Background Information about Stayers**

<b>No</b>	<b>Univ. Type</b>	<b>Academic Field</b>	<b>Gender</b>	<b>Date of PhD</b>	<b># of Publications during PhD</b>	<b>Years as TA or RA</b>
<b>1-</b>	LSPU1	Sociology	<b>Female</b>	<b>2007</b>	1	4
<b>2-</b>	LSPU2	Engineering	<b>Male</b>	<b>2001</b>	5	4
<b>3-</b>	LSPU2	Finance	<b>Male</b>	<b>2009</b>	5	4
<b>4-</b>	LSPU2	Industrial Engineering	<b>Male</b>	<b>2000</b>	4	5
<b>5-</b>	LSPU2	Industrial Management	<b>Male</b>	<b>1999</b>	4	4
<b>6-</b>	LSPU1	Political Science	<b>Male</b>	<b>2010</b>	2	5
<b>7-</b>	LSPU1	Finance	<b>Male</b>	<b>2011</b>	<b>0</b>	<b>8</b>
<b>8-</b>	LSPRU	Math	<b>Male</b>	<b>2006</b>	<b>2</b>	<b>5</b>
<b>9-</b>	HSPRU	Chemical Engineering	<b>Female</b>	<b>2003</b>	<b>6</b>	<b>5</b>
<b>10-</b>	HRPRU	Education	<b>Female</b>	<b>2012</b>	<b>3</b>	<b>4</b>

**Reasons for attending U.S. universities.** The faculty members who chose to study in the U.S. were asked about their reasons for attending U.S. higher education institutions. The responses enabled me to assess whether their reasons are still valid and continue to influence

their decisions to stay in the U.S. The reasons included: a) quality of the schools and b) experience abroad.

Participant 1 had an interesting journey. She was offered a full scholarship to study at a university in Japan. She also considered studying in France. In the end, she decided to study in the U.S., where she was also offered a full scholarship, since U.S. universities have a better reputation in the social sciences. Participant 8 graduated from one of the most selective universities in Turkey, whose graduates often choose to study in the U.S., so it was a tradition at his university. He also stated that: “People knew that professors at the big schools are the greatest math professors.” In a similar vein, participant 6 was also influenced by his peers who had always wanted to study in the U.S. He wanted a career in political science, had a good GPA, and thought that it would be best for him to study at a university in the U.S.

Students who want to study abroad mainly choose to go to the U.S. Participant 6 was planning to pursue his PhD and thought that the U.S. had the best schools. Furthermore, when he was offered a full scholarship, the U.S. became the best choice for him. Before coming to the U.S., participant 3 did research on the highest quality schools in the hard sciences in the world. The statistics showed that they were in the U.S. He explained: “Based on the papers I read, the U.S. is the best in the hard sciences.”

A couple of stayers had based their initial decision to attend graduate school in the U.S. on their desire to get experience living abroad. Participant 1 wanted to travel abroad to expand her views. In her words: “I was not interested only in the U.S. I simply wanted to travel outside Turkey. Actually I applied to universities in different countries... I got a full scholarship from a university in Japan and was also thinking about going to French. But the U.S. schools were better so I just thought that would be the better choice.” Besides academic reasons, participant 4 also

emphasized the importance of getting experience abroad in her choice to study in the U.S. since she wanted to learn more about different cultures.

Participant 6 thought that having a doctoral degree from a U.S. university would enable her to have a better career in the future. She states: “X University was not my first choice, but it was a good university. I knew that I would have a better shot at a job with a U.S. PhD.” The lack of availability of PhD programs that participant 10 wanted to pursue made her come to the U.S. She elaborates: “I wanted to study the linguistics in Turkey, but there are not many universities that offer linguistics programs at graduate level. Most prominent linguists are in the U.S. That is why I came here.”

**Stayers’ reasons to stay in the U.S.** The following paragraphs includes a discussion of the reasons of U.S.-educated Turkish faculty to stay in the U.S.: availability of academic opportunities, academic freedom, positive experiences, the role of incentives, and the role of economy.

***More academic opportunities.*** The primary reason for U.S.-educated scholars to stay in the U.S. and teach at American universities was the availability of academic opportunities. The sought-after opportunities included lab facilities, library systems, funding and grant availability, well-trained faculty, easy access to scientific journals, reports, and conferences, and so on.

Participant 2 elaborates that:

I stayed mainly because of the educational opportunities, lab facilities, well-trained staff, and easy access to all the scientific journals, reports, and

conferences. Whatever I needed to do, everything was available, so I decided to stay here.

As a scholar who has experience in the Turkish, British, and American education system, participant 6 compared all three, emphasizing that academic prospects, better networking, and library system impelled her to stay in the U.S. According to her, this type of high quality system does not exist in Europe or Turkey.

The decision to stay in the U.S. was not easy for some participants due to family members who might want to go back to Turkey. Participant 3 was unsure about staying in the U.S.; however after being offered a position at a university, he decided to stay because of the academic opportunities, lower teaching load, and better career opportunities.

The availability of academic opportunities at universities in the U.S. was the most influential factor that attract stayers. When they compared the opportunities in the U.S. to those in Turkey, those in the U.S. stand out significantly.

*Desire for more experience.* Gaining teaching and research experience is another great source of motivation for the U.S.-educated faculty to stay in the U.S. Participant 5 supports this argument as follows: “The primary reason is [that] I just wanted to stay [for] one more year to do more research, gain teaching experience, offer courses in English, and publish articles.” The reason that participant 10 gave also focused on gaining more academic experience.

The research and teaching experience acquired at universities in the U.S. help Turkish faculty to increase their area of knowledge and experience, which also helps them become more well-rounded faculty.

***Academic freedom.*** Academic freedom present at university settings in the U.S. and the lack of academic freedom at universities in Turkey made the majority of the stayers want to stay in the U.S instead of returning to Turkey.

According to participant 1, the additional possibility of academic freedom impelled her to stay in the U.S. Since she is a political sociologist she writes on topics that are highly sensitive, so she wanted to have absolute academic freedom. She did not want anyone interfering with what she was writing. Participant 6 who is teaching political science courses also felt uncomfortable with the fact that Turkish politicians might interfere with academics and may even threaten to fire them. Thus, he does not want to return. Participant 10 shares her colleagues' opinions on the presence of ideological biases and the lack of academic freedom in Turkish university settings: "I hate the presence of the Higher Education Council in Turkey. They control everything. Its president is appointed by the president of Turkey, most likely someone holding a similar ideology. They may try to oppress you if you disagree with their ideas. In this kind of environment, it is hard to produce pure knowledge and science."

Participant 2 disagrees with participant 1 in terms of academic freedom by stating that: "Politics is going much better in Turkey. There is more freedom of speech, and more stability. People can freely talk about their opinions, much more so than ten years ago, but the situation is not as good as in the U.S. or Europe."

Although one participant is more optimistic about the political interference in academics, the majority of the stayers felt uncomfortable with the current lack of academic situation in Turkey which still constitute a hinder for stayers to possibly return to Turkey.

***The role of salary.*** The majority of the participants who decided to stay in the U.S. valued research opportunities more than money. When asked about the role of salary in their

decision to stay, participant 1 stated that: “Considering the education received, the salary is low. In Turkey, some of the good public schools do not pay you much, but private ones pay better.” Between public and private universities in Turkey, there seems to be a salary difference. Some private ones offer acceptable salaries that might even compete with some of their U.S. counterparts.

Participant 3 also emphasized that high salary did not motivate him to stay, since, when salary and fringe benefits are considered, Turkish private universities are a better deal. He elaborates his point as follows: “If I compare salaries in Turkey to those here, I actually got a better offer in Turkey. But I did not accept the offer simply for financial reasons.”

Regarding the travel distance between Turkey and the U.S., it might create extra costs for those who want to go to Turkey every summer. Thus, salary may not be attractive with regard to this point. As an experienced male professor, participant 4, stated:

The salary does not really matter for foreign faculty, if a professor wants to go back to his country every year. If he has a family... in terms of real dollars, the Turkish salary was low, but if you want to go back to your country every year, it was not a good deal. It was not financial reasons, but instead because of potential instability.

Apparently, salary did not influence the decisions of the majority of the stayers in this study. They chose to stay mainly for academic-related rather than monetary reasons.

***The ease of social adjustment.*** Due to cultural differences, in particular the language barrier, many international students may experience challenges, which force them to return to their home countries. However, U.S.-educated Turkish scholars who chose to stay in the U.S. seem to have had an easy transition from their own culture to American culture.

Participants 1 had interacted with people of different cultures from an early age since she went to French middle and high schools and her university also employed a great number of faculty members who hold PhDs from American universities. She thinks of herself as a “world citizen.”

Having more freedom in the U.S. is an important factor for some participants in deciding to stay in the U.S. Participant 4 thinks that the U.S. is a country where members of any religion or culture can live and express themselves freely. Concerning this issue, he shared a story about his daughter: “I have a daughter. I can send her to an Islamic school, where she can learn math, science, and English. I do not have this opportunity in Turkey.” The situation that participant 4 shared has been a significant issue in Turkey. Many people were unable to go to religious high schools because of certain regulations. However, these challenges have since been eliminated.

The social environment where people live may facilitate their adjustment to the different lifestyle in the U.S. A professor from Turkey who is ethnically Arab, participant 5, is another case of someone who easily adjusted to life in the U.S. He thinks of the city where he lives as “highly international,” and although he and his wife do not have many Turkish friends, they can speak Arabic, which permits them to communicate with people from Middle Eastern countries. He adds: “There is a community here of 5 to 6 thousand. My wife and I get along with them and have common ground with them, so adjusting was smooth and easy.”

It was the family members of participant 4 living in the U.S. who motivated him to stay. Participant 10 thinks that it is nice to be close to her family. Her mother lives in the U.S., although his father lives in Turkey. So it is easy for her to see her mother whenever she wants. Participant 6 spent her early childhood in the U.S., so she was familiar with the lifestyle and living conditions of her host country. She identifies as “Americanized Turkish.”

While all of the participants who stayed have adjusted to life in the U.S., participant 7 still faces challenges. Although he has been living in the U.S. for ten years, he misses his family. In addition, he thinks that the lifestyle in the U.S. is boring and individualistic. Dietary restrictions are another problem since it prevents him from going out whenever he wants.

Regarding the responses of the majority of stayers, they had been exposed to more cultural diversity since their childhoods which also encouraged them to stay in the U.S. Also, being close to some family members motivated some of them to stay in the U.S.

***The role of incentives.*** TUBITAK and other private and public institutions want to attract U.S.-educated Turkish scholars who have decided to stay in the U.S. Thus, it is crucial to examine their opinions on this issue. The majority of the participants said that: a) the idea is good, b) they are concerned about the project's applicability, c) they may go back regardless, and d) the bureaucracy in Turkish higher education system is excessive.

*Good idea, but problematic applicability.* Similar to returnees, the majority of stayers felt positively about the initiatives undertaken by the government and TUBITAK although they were also not satisfied with the applicability of the projects.

Participant 2 likes the initiatives and asserts that there are about 10,000 U.S.-educated Turkish PhD holders in the U.S., some of whom will go back. However, he is concerned about the conditions at Turkish universities such as the availability of lab facilities. In addition, he thinks that this attempt is a government project and is unsure about what will happen if the government loses in the next election. He adds: "We do not know what will happen. If I resign here and go back to Turkey, and the political situation changes, I will be without a position." Participant 8's concern that the economic and political stability might affect incentives offered by current institutions made him decide not to return.

In a recent conference organized by the TUBITAK to announce their project on reverse brain drain, some U.S.-educated Turkish faculty members were dissatisfied with their promises, arguing that the project focuses on salary rather than research opportunities. Although participant 3 likes the idea, he elaborates his view as follows: “I view the attempts as nice, and good, but they should not be simply salary based. They should [also] provide an academic environment.”

*Bureaucracy.* Another concern shared by the stayers was the fact that the presence of bureaucracy, nepotism, and interference of politics in academia. They were fearful about taking academic positions at Turkish universities because the evaluation criteria were not objective and fair.

A recent PhD recipient in linguistics, participant10, also supports the project to bring scholars back to Turkey. However, she thinks that the TUBITAK and other institutions should be more active in this attempt. She would have some concerns about bureaucracy and nepotism if she went back: “In Turkey, you need to be Turkish citizen and take an exam like the GRE to be an assistant professor. You need somebody, a contact, to help you. Here in America, you do not need to know somebody... In Turkey they need to change that.”

Although it does not specifically apply to his area, which is finance, participant 7 likes the attempt to bring scholars back to Turkey. However, he shares the concern about politics and the bureaucracy with participant 10: “I like these initiatives. [However] [t]he problem in Turkey [is that] the bureaucracy is killing a lot of opportunities. The problem is [that] politics dominates all aspects of life.” He also thinks that more incentives should be offered such as higher salaries and all the necessary equipment to do research.

The bureaucracy and nepotism that are present at universities in Turkey might hinder the attempts of Turkish Government and TUBITAK to recruit U.S.-educated Turkish faculty who are used to objective job application procedures and evaluation criteria in the U.S.

***The Role of Economic Growth.*** The U.S.-educated faculty members who decided to stay in the U.S. were mainly influenced by the academic opportunities, followed by positive experience. The recent economic growth in Turkey seems to be a factor that might encourage some faculty members to return in the future. While some thought that they might return to Turkey due to the recent economic growth, others explained that academic freedom, political stability, and academic opportunities would be more important reasons than economic growth for them to ever decide to go back to Turkey.

***Economic growth in Turkey and possible return.*** Although the developing Turkish economy and increasing political stability did not encourage U.S.-educated Turkish faculty to return, the majority of them were optimistic about returning to Turkey as a result of those changes.

Participant 2 is impressed by the recent economic growth and current political stability in Turkey, and he and his wife have started to discuss whether they should return or stay. He thought that, after his wife received her post-doctoral degree, they might return due to the opportunities at Turkish universities. He adds: “Politically, it is going much better. There is more freedom of speech, more stability.”

The recent economic growth is an appealing factor for some faculty members. According to participant 5, Turkey’s economy has boomed within the last five years, and he and his family have been thinking of going back, particularly in the past two years. In his words: “...Turkey

seems more powerful... [There has been] no pay increase in the U.S. in the last five years, [so] now the budget cuts are becoming more strict.”

The economic growth in Turkey parallels the economic growth in the U.S., as participant 5 mentioned, which might be a factor in some faculty members' decisions to return to Turkey.

Participant 6 supports this argument as follows:

I have thought about it actually. We are told that we could easily get jobs in the U.S. with some publications, but in 2008 it was hard. No jobs were available, so there is still a horrible market, this year curiously, but I think the market in Turkey is booming, so there must be better opportunities, more positions available.

In addition, participant 7 elaborates that, after he becomes a well-known, established scholar, he may go back, “...since the growing Turkish economy and political stability help me think that I am not gonna have lower standards than here.” He thinks: “When the economy is better, salaries are better, working conditions are better, and teaching workloads will decrease.”

Different from other participants, participant 5, a male professor of industrial management at a LSPU, likes the initiatives and plans to return to Turkey soon. In his words:

They seem to be very serious and their initiative is kind of significant, I would say. Even [I] myself [am] considering going back. I may benefit from their offer They give around 2,500 Euros for two years. That's a really big factor in my decision if I go back, you know monetarily.

The majority of the participants are satisfied with the academic opportunities that American universities possess. Thus, in spite of the promising betterment of Turkish economy

and politics, they chose to stay in the U.S. However, they are also thinking of returning in the future.

***Concerns about returning despite the economic growth.*** In spite of the economic growth and political stability, the rest of the participants were not convinced to return. Some had concerns especially about the higher education system in Turkey.

Participant 3 complains about the higher education system in Turkey. He explains that it is problematic. Rather than being influenced by the economic growth or political stability, he thinks that the system and the mentality need to change. He continues: “More than the Turkish economy I think the education system play a larger role....The system should value the academic incentive more, salaries should be higher, the undergraduate system is good, but the MA and PhD are not good. There is so much incentive here in the U.S.”

Participant 4 is also concerned about whether the economic growth and political stability, which began only ten years ago, will continue. He is concerned that they may not end.

In contrast to the positive opinions of the majority of the participants regarding economic growth, participant 10 does not think that the economic growth is promising, since, as she expressed it, “The poor are getting poorer and the rich are getting richer.” Participant 9 also thinks that the economic growth should not be a factor in scholars’ decisions to stay in the U.S. or to return to Turkey. She explains as follows: “We are scientists. We are not companies.”

Some stayers mentioned economic growth and its influence on their decision to possibly return. Some of them thought that the growth was promising, while others were skeptical about the changes. Thus, they were unwilling to return.

***The role of teaching and research assistantships.*** Understanding the role of working as a research or teaching assistant may enable us to explore other reasons behind U.S.-educated

Turkish scholars' decisions to stay in the U.S. Their resumes were reviewed in search of answers. The number of publications listed on stayers' resumes ranged from 0 to 6 and the length of their teaching assistantships was between 4 and 8 years. If we compare their publication lists and teaching and research experience to those of returnees, we find little difference. However, if we compare their resumes during and after their doctoral studies, we see that those who decided to stay have more publications and patents, and greater overall career development, than those who returned. For example, each stayer has about 15 publications whereas returnees have only about 6 publications per person. Also, a couple of stayers, participants 2 and 9, have received patents for the products that they have produced.

*The stay decisions are voluntary.* To find out if the stay decisions are voluntary, the stayers were asked if they chose to stay in the U.S., and if they looked for a position in Turkey. The stayers had a tendency to stay in the U.S. and they also had an easier transition to live in the U.S.

Participant 1 explains that she was not sure if she wanted to stay in the U.S. When she applied for jobs, she received a few job offers and immediately accepted, as she had gotten used to living in the U.S. Participant 3 also states that she chose to stay in the U.S. due to more opportunities and that the U.S. academic system is better. So, it was totally his own decision. Participant 6 states that she chose to stay in the U.S. not for mainly personal, but rather academic reasons. She always wanted to have the option to go back. She thinks that she had better networking opportunities in the U.S.; the universities had rich library systems which did not exist in Turkey or Europe.

In the case of all of the stayers in the study the choice to stay in the U.S. was based on their own personal decisions. Particularly, the availability of academic opportunities impacted their preference to stay in the U.S.

The reasons for U.S.-educated Turkish scholars' decisions to stay in the U.S. were explored in this section. Since they had already decided to stay in the U.S., the economic growth, political stability, and incentives offered by TUBITAK and other institutions did not motivate them to return to Turkey. However, some expressed their intentions to return due to these factors. Nonetheless, the majority was attracted by the wider availability of academic and research opportunities found at American universities rather than the economic incentives or higher salaries that they offered. Thus, it is reasonable to assume that if the Turkish government provided more academic and research opportunities, in addition to financial incentives, more U.S.-educated Turkish scholars would be impelled to return to Turkey.

## **Conclusion**

Although Turkey is experiencing some positive changes, such as economic growth and political stability, which could enable the government to offer more financial incentives to U.S.-educated Turkish scholars, some participants did not seem to be attracted by those opportunities. This study found that the majority of the participants preferred to stay in the U.S. as a result of the greater availability of academic opportunities at universities there. Furthermore, most of the stayers had had positive experiences in their daily and academic lives. In addition, those who decided to stay in the U.S. seemed to be academically better equipped with regard to publications and patents than those who decided to return to Turkey. Last, the data collected from the interviewees who had received their doctoral degrees within last five years was compared to

those who had received them more than five years ago. However, no noticeable differences were found.

In sum, this section included findings on both returnees and stayers. Returnees mainly returned for family-related and academic reasons. In addition, they had less positive experiences in the U.S. The incentives offered by the Turkish government and the TUBITAK, and the recent economic growth in Turkey did not influence their decision to return. All the decisions were voluntary. The stayers remained in the U.S. mainly because of the availability of academic opportunities and academic freedom. The salary was not a big factor, whereas having a positive experience both academically and socially pushed them to stay in the U.S. The incentives from the government and TUBITAK obviously did not impel them to return and all the stay decisions were voluntary. Interestingly, the findings showed that the stayers had more publications and patents after starting their job although there was no significant difference during their education.

The next chapter includes a discussion of the findings in relation to the push-pull model, the study's central conceptual framework, as well as to human capital and global political economy theory and additional push and pull factors. The study ends with a discussion of implications, limitations, and future directions.

## **Chapter V**

### **Discussion**

Chapter IV included a discussion on the findings of the study, particularly the role of family, culture, academic freedom, human capital and global political economy on stay versus return decisions of U.S.-educated Turkish scholars. For returnees, family-related issues, and culture were pull factors to return to Turkey, whereas academic freedom and the availability of academic opportunities were pull factors for stayers. For none of the groups, did Turkey's economic growth and incentives play a big role in their decision-making to stay or to return.

This study explored the reasons why U.S.-educated Turkish scholars decide to stay in the U.S. or return to Turkey at a time when Turkey is growing economically and becoming politically more stabilized. The study used the push-pull model developed by Matier (1990) as an umbrella framework and the role of human capital and global political economy to explain the reasons. In addition, the study applied Matier's framework (1990), which developed the push-pull model most effectively. To collect data, interviews were conducted with a total of 20 U.S.-educated faculty members, ten of whom returned to Turkey and ten of whom remained in the U.S. The interviews allowed me to understand the reasons and to elucidate them in more depth. In the following paragraphs, the findings and their relation to the conceptual frameworks used will be elaborated. Secondly, recommendations will be offered. The study ends with a conclusion.

### **Findings for Returnees**

Returnees are influenced by family-related reasons and culture as pull factors to return and negative experiences and adjustment issues as push factors to leave the U.S. Since all stayers and returnees received doctoral degrees from U.S. universities, they had a similar level of human capital, although the stayers increased their human capital after starting jobs in the U.S. The

following pages will explain the findings for returnees in relation to Matier's framework (1990) for the push-pull model.

**Family and cultural values.** Among the reasons for U.S.-educated Turkish scholars' choice to return to Turkey, family and cultural values stand out first, particularly proximity to immediate family members and relatives and the inability of wives to work in the U.S. due to the language barrier. Similarly to Lee and Kim's (2009) focus in their study, this study emphasizes the importance of family and cultural values in explaining the mobility of U.S.-educated Turkish scholars.

Turkish people come from a more collectivistic culture which stresses interdependence (Ayse et al., 2010) and a tendency to pay more attention to other's rather than their own needs (Markus & Kitayama, 1991). In individualistic cultures, such as American culture, self-interest, autonomy, and self-reliance is more common in the socialization process (Markus & Kitayama, 1991). Coming from a collectivistic cultural background, Turks tend to live close to their family members, and they have tighter connections with them. They feel responsible for taking care of their parents (Iyengar, Lepper, & Ross, 1999; Markus & Kitayama, 1991; Triandis, McCusker, & Hui, 1990). As some other research also suggests, these collectivistic culture values could be considered pull factors for U.S.-educated Turkish faculty members to return.

Matier (1990) emphasizes the role of "Ease of Movement" in the mobility of individuals. Accordingly, marital status and spousal employment, which are counted among personal characteristics, impelled some U.S.-educated Turkish scholars to return to Turkey. According to Matier (1990), family and cultural values may be assessed as external environmental influence. The desire to be near their family members and friends in Turkey and wanting a more interesting life impelled some of the scholars to choose to return to Turkey. Thus, this study's findings on

the extent of the influence of family and cultural values contradict those of Matier's (1990), as he claimed that external environmental factors alone cannot impact behavior. However, this finding aligned with the findings of Ambrose, Huston, and Norman's (2005) study, which emphasizes the role of external factors in decisions to stay or return.

**Negative experiences and adjustment issues.** Some of the U.S.-educated Turkish scholars choose to return to Turkey as a result of negative experiences. Lloyd (2003) and Grey (2002) found that international students might experience adaptation problems and challenges at school and in their daily lives due to language barrier. Some participants in this study and their spouses experienced discrimination and cultural adaptation issues, which made them want to return to Turkey (push). In addition, some of the wives of male professors spoke little English, which prevented them from working in the U.S. or having an active social life, although both would have been possible in Turkey. Thus, they felt that they had a "boring life" and wanted to return to Turkey (push).

Matier (1990) also addresses this issue as an external environmental factor. According to him, quality of life might influence people's decision to stay in their current institution or move to another one. Regarding this study, some participants chose to return to Turkey where their lives would be more interesting and the quality of their lives would improve because they would feel a sense of belonging.

**The role of human capital.** Since the number of articles that returnees published and their experience of working as a teaching or research assistant impacted their decision to return to Turkey, I compared this data with the data on stayers. However, the review of the curricula vitae did not provide a full picture of the individuals' human capital, I saw that they have similar qualifications. However, by reviewing their resumes, I noticed that stayers had more publications

after they started their professional careers as academicians and some of them even had their own patents.

Matier (1990) also underscores the importance of human capital. Visibility, which, in Matier's (1990) study, refers to publishing, presenting papers at conferences, and involvement in professional organizations affects the individuals' decisions regarding whether to stay in the U.S. or return to Turkey, as it impacts their ability to get hired. Furthermore, he adds that propensity, which implies applying for jobs, participating in job interviews, and receiving job offers, enables individuals to move to locations that they prefer. In this study, I concluded that, although the returnees had publications and conference presentations, most of them did not apply for jobs in the U.S. Those who did apply for jobs in the U.S. received job offers, but nonetheless decided to return mainly due to family and cultural reasons.

This study also supports Matier's (1990) conceptualization of human capital that having high human capital allows individuals to easily move to locations that they prefer. In keeping with this conceptualization, the high human capital of the participants in this study enabled them to choose, in some cases to return to universities in Istanbul and in others to stay in the U.S.

**The role of economy.** The interviews with the returnees were closely analyzed. Only a few of them emphasized the role of Turkey's recent economic growth and of the economic crisis in the U.S. in influencing their decisions to return to Turkey. McMahon (1992) argued that international students choose to go to countries that are doing better economically than their home countries. Although Turkey's economic situation had improved considerably after its 10.3 % percent growth (Turkish Statistical Institute, 2012), that growth did not have much influence on returnees. Only one returnee emphasized the role of the economic growth in his decision-making process to return, while the majority rejected the idea that it played a significant role.

**The role of incentives.** According to Matier (1990), facilities, wages, work rules, and financial considerations beyond salary (tangible benefits) might influence individuals' decisions to move to another institution. In this study, when I analyzed the interviews with the returnees, I saw that the role of incentives, which were mainly monetary, did not play a big role in the participants' decisions to return to Turkey. Instead, they viewed these incentives as superficial. Only one faculty member emphasized the role of salary in his decision to stay in the U.S. Unlike other stayers, he chose to stay in the U.S. although he does not like the lifestyle there.

To elaborate, they complained about the lack of research labs and equipment, funding, and opportunities, even though they have been improving. Furthermore, the work conditions did not appeal to them. They would have to teach 30 to 40 hours a week, which would potentially decrease their research time and number of publications. None of the recent incentives offered by TUBITAK constituted pull factors for returnees.

Moreover, the participants think that the incentives were not fair since they were mainly directed toward hard science professors and thus excluded social science professors. Not being offered computers until they are associate professors was another complaint made by returnees. Thus, it does not seem that facilities and work conditions significantly influenced the decisions of the returnees.

### **Findings for Stayers**

Stayers are drawn by facilities, emphasis on research, and academic freedom. In the following pages, the findings for stayers will be elaborated in relation to the push-pull model and Matier's framework (1990) that develops the push-pull model.

**Academic reasons.** The reasons for staying in the U.S. that the stayers in this study mentioned can be identified as intangible and tangible benefits. In the case of stayers, the

intangible benefits that were mentioned included the high quality of the schools, autonomy, well-trained faculty, and better networking options and the tangible benefits encompassed facilities, work conditions, and fringe benefits. The stayers did not mention salary, which is a tangible benefit, among factors that influenced their decisions. They explained that, in spite of the difference between the two countries, the salary would ultimately be roughly equivalent when they considered the cost of travel to and from Turkey, which they would frequently have to undertake to visit their families if they took positions in the U.S. As Matier (1990) asserts, tangible benefits (internal factors) significantly influence faculty members' decisions to stay in or to leave their current institutions, which is also the case for the participants in this study.

Regarding the decisions of the stayers, this study also supports the argument by Matier (1990) that: “without strong internal pushes to invite individuals seriously to consider external offers, lavish external pulls are typically not sufficient in and of themselves to disengage a faculty member” (1990, p. 58).

**Positive experiences.** Some of the stayers in this study had family members living in the U.S., some of whom were born in the U.S., and some were more open to international diversity as they grew up in different cultures. The stayers in this study did not encounter these challenges, thus increasing their quality of life, although most international students encounter cultural adjustments due to language barrier and lack of knowledge, which are push factors (Li, 2006; Zhao et. al, 2002; Zhao et al., 2005). Matier (1990) considers positive experience an external environmental factor that influence quality of life. In addition, external benefits such as being able to express their ideas and to live their culture freely (Matier 1990), which helped them to have a more comfortable life in the U.S., influenced some faculty members to stay in the U.S. (pull).

**Academic freedom.** A great number of the stayers mentioned the academic freedom (pull) that is found at universities in the U.S. and the more limited presence of ideology as another crucial intangible factor (internal benefit) that shaped the stayers' decisions to stay in the U.S. The influence of ideology and political networks at Turkish universities were among the conditions that made returnees feel uncomfortable since they had enjoyed more academic freedom in the U.S. They were fearful of losing their jobs in the case of ideological conflicts with department heads, deans, and the current government. In this regard, this study supports Matier's (1990, 1991) argument that internal benefits significantly influence individuals' decisions to move to and to stay in the host country after graduation.

**The role of incentives.** In this study, returnees liked the idea of the initiatives by undertaken by TUBITAK. However, most of them emphasized the fact that the incentives were mainly monetary and asserted that offering labs and other facilities to conduct research would have been more appealing to them. Additionally, some had concerns regarding the durability of Turkey's new political and economic stability. While most faculty members recommended revisions to the TUBITAK initiatives and suggested that they should be advertised more widely, only one stayer was completely supportive of the initiatives by TUBITAK and articulated his intention to eventually return to Turkey in the future. The findings in this study, echoing Matier's (1990) conclusion, reveal that the current work conditions and lack of research opportunities and facilities at Turkish universities, which constitute tangible benefits, impelled most of U.S.-educated Turkish faculty members to stay in the U.S. as they were available in the U.S.

**The role of economic growth.** The U.S.-educated faculty who stayed in the U.S. did not seem to be greatly influenced by the recent economic growth and political stability in Turkey. Although the majority of the stayers asserted that the economic and political situation did not

play a role in their decision-making processes, some stayers responded to questioning about that situation by expressing the possibility of returning to Turkey in the future. The stayers who are not satisfied with the recent economic growth and political stability tended to complain more about the conditions of the current higher education system in Turkey, the limited academic value of Turkish universities, and the dearth of research opportunities there, all of which are referred to as internal benefits by Matier (1990). Thus, the tangible internal benefits, except for salary, offered by U.S. universities seemed to play a bigger role compared to Turkey's recent economic growth, many of the gains of which have not been sufficiently invested in research facilities and opportunities, according to the participants.

In addition, the global political economy seems to have influenced U.S.-educated Turkish professors to stay in the U.S. where they feel more academically secure with the availability of research opportunities and financial incentives to conduct high quality studies. Thus, the stayers in this study seemed to be more influenced by the U.S. political economy compared to the emerging political and economic power and stability in Turkey.

**The role of human capital.** This study employed the human capital concept from the perspective of the quality of degrees in particular by reviewing the participants' resumes, which helped to elucidate the influence of their publication records and work experience that they acquired as university teaching and research assistants.

Matier's (1990) approach to the role of human capital is worth applying in this study, as he explains that high human capital enables individuals to be more flexible when choosing where they want to work. Matier (1990) asserts that publishing research findings and presenting papers on them (visibility) increases individuals' ability to move on to new positions and locations. In

this section, stayers completed all three stages, applying for jobs, having interviews, and receiving job offers, which Matier (1990) calls “propensity” and decided to stay in the U.S.

Five of the stayers have remained in the U.S. for five years and five have remained longer than five years, during which time they received their tenure at their institutions.

Even though the review of the curricula vitae did not offer a complete representation of the individuals, I found that publishing and working as teaching and research assistants increased their human capital. In addition, they had more publications than the returnees and some acquired patents. These facts gave them the flexibility to stay in the U.S. or return to Turkey. In this case, although the participants in this study chose to stay in the U.S., some considered the possibility of returning to Turkey thanks to this high human capital.

This study replicated the finding by Matier (1990) that individuals who have high human capital have the opportunity to choose the place where they teach. In this case, stayers were able to choose to work at universities in the U.S. and returnees were able to choose to return.

### **Recommendations**

The recommendations here are mainly for Turkey. This study is unique as it attempts to compare both the opinions of returnees and stayers on their choice of work place. It is crucial to determine the underlying factors at a time when Turkey is rapidly developing. As mentioned above, Turkey has initiated projects to reverse brain drain. The findings showed that most of the U.S.-educated professors chose to stay due to the academic opportunities. In their comments on the recent conference organized by TUBITAK, U.S.-educated Turkish scholars asserted that the Turkish representatives from TUBITAK focused more on increasing salaries, instead of discussing research and academic opportunities and lab facility development. Thus, if Turkey would develop projects that focus on increasing the availability of academic opportunities, it

could enhance its appeal to these U.S.-educated scholars. This would encourage them to return to Turkey and to put into practice the experience that they gained in the U.S. This would enable them to model their planning in keeping with Matier's (1990) assertion that internal benefits are highly influential with regard to individuals' decisions to move.

The findings suggest that Turkish universities should work with companies to get grants that would enable them to afford the labs, facilities, and equipment necessary for expanding research opportunities. Turkish universities do not collaborate with companies that might provide grants as they do in the U.S. Turkish universities should organize conferences and or workshops to discuss the implications of collaborations between universities and companies.

In addition, one finding of this study suggests that satisfaction with work conditions, the work environment, and relationships with colleagues is another significant factor that influences individuals' decisions regarding employment. This finding is supported by Matier (1990), Ambrose et al. (2005), Kim, Wolf-Wendel, and Twombly (2013). Celik's (2012) study discusses returnees' dissatisfaction with work conditions and environment in Turkey. Some are the only U.S.-educated Turkish professors in their universities. They complain about not receiving enough support from their employers, which limits their ability to apply their knowledge and experience. This complaint was also articulated by interviewees in this study. This fact could discourage other U.S.-educated Turkish professors from returning to Turkey.

Although the stayers were satisfied with their current institution, they were concerned about the work conditions and atmosphere at the universities in Turkey. They articulated their concerns about the presence of ideological pressure and the threat of being fired if they disagreed with the prevalent ideology at their universities and the Turkish Higher Education Council (HEC), whose president is appointed by the government. Thus, Turkey should create more

objective standards to evaluate faculty members' success rather than subjectively assessing them. For example, Turkish universities could create a "performance-based evaluation" process, which could focus on specific teaching, research, and service requirements, including a specific number of publications and conference or workshop presentations, and a reasonable course load, rather than expecting faculty to teach 30 to 40 hours class a week and to conduct research on the side. The U.S. tenure process could serve as a model. Clarity of evaluation criteria would decrease the risk of preferential treatment based on ideological differences. Feeling that regardless of whether a professor publishes on and presents research findings at conferences, and teaches the required number of hours, he/she can lose his/her job based on ideological differences and preferential treatment constitute one factor in their decisions to remain in the U.S.

The conditions of the reverse brain drain project by TUBITAK and the Turkish government should be improved, as most of the participants were not satisfied with them. For example, the incentives appeal mainly to hard science professors and ignore social science professors. Thus, in the future if they want to attract more U.S.-educated Turkish scholars, they should treat them all fairly and equitably, since Turkey is also in need of highly educated social science professors. Otherwise, even if they return willingly, they may lose their motivation to do high quality work. Fair and equal treatment is crucial to individuals' success. Adams (1965) asserted that fair and equitable treatment affects individuals' motivation. He claimed that when people feel that they are treated unfairly, their motivation diminishes.

Although the stayers claimed that salary increases at Turkish universities do not impel them to consider returning, salary is considered among the tangible internal benefits in Matier's (1990) framework, which are important factors in the decision-making process. Thus, professors' salaries should be higher, or they might increase their salaries based on performance.

Thelin (2004) asserted that to save money, colleges and universities must spend money. His assertion is also applicable in this study. If Turkish universities, research institutions, and the government want to attract higher quality U.S.-educated Turkish professors, they should invest in building more research facilities, create more academic opportunities, increase salaries, and offer startup money to cover moving expenses.

Another concern is the lack of academic freedom since Turkish university administrators and even presidents and the Higher Education Council may intervene in faculty members' work if they have different perspectives. Thus, Turkey should apply the academic freedom concept found at U.S. universities that allows professors to articulate their views freely. The authors of the American Association of University Professor Statement in Academic Freedom of Tenure suggested that academic freedom should be a fundamental principle of every university and college and those who work in academia should be afforded the rights and responsibilities associated with that principle (Tierney, 2002). In Turkey, even when faculty members have tenure, they risk losing their job in the case of ideological clashes with administrators. Thus, the Higher Education Council and universities should consider the importance of academic freedom and offer faculty an environment in which they can express their opinions more freely and safely.

Furthermore, as a form of brain circulation, to ensure mutual benefit from the knowledge, skills, and experience of U.S.-educated Turkish professors, returnees should maintain networks with their former professors and colleagues in the U.S. and current colleagues. Particularly those, returnees who work in the public universities seem to discontinue their relationship with their professors abroad. Turkey could greatly benefit from their connection. For example, through the returnees they could encourage professors of any country of origin to teach in short-term summer sessions and organize workshops at their universities (brain circulation).

### **Future Research Questions**

The limitations and findings of this study offers several future questions. The returnees mainly work at universities in Istanbul which is the cultural and social capital city of Turkey.

As Lee and Kim (2010) assert, the location of the universities matters. Thus, the location might have influenced their decisions to return. Thus, future studies could include universities from different cities in Turkey and the U.S. to incorporate more variety among the participants and reduce the impact of location.

In addition, while Finn (2010) suggest that international doctoral degree holders who graduated from high quality programs were less likely to stay in the U.S., Black and Stephan (2007) assert that doctoral degree holders from prestigious universities are more likely to stay in the U.S. Thus further studies should explore the influence on the quality of the program and institution where doctorate recipients graduated from.

Although this study did not particularly focus on brain gain of U.S.-educated Turkish scholars who return, the return of these individuals implies brain gain for Turkey. Brain gain implies that individuals bring additional skills earned in the host country to their home country (Stark, Helmenstein, & Prskawetz, 1997). Thus, future studies should attempt to explore the level and scope of brain gain and how Turkey benefit from U.S.-educated Turkish faculty. For instance, future studies could elaborate on the extent to which U.S.-educated Turkish faculty apply teaching styles and methods of the host country in their own classrooms such as underscoring the importance of discussion groups over lecturing.

I did not attempt to find out if U.S.-educated Turkish faculty maintain their academic relationship with their professors or colleagues in the U.S. which is called brain circulation in academic literature. Since brain circulation also implies that highly skilled individuals become

more productive in their home country due to continuing social and professional relationships in the U.S. (Aysel and Tansel, 2003; Saxenian, A. , 2005), further studies could attempt to understand if U.S.-educated Turkish scholars maintain their relationship with professors in the U.S. universities collaborates and publish articles

The qualitative study does not allow this study to be generalizable. Thus, future studies could also employ quantitative method in order to include more participants, broaden the scope, and expand the perception to other dimensions of the situation.

### **Conclusion**

Understanding the U.S.-educated Turkish scholars' reasons for their decisions is highly significant, as Turkey is trying hard to draw them back. This study applied the push-pull model as a conceptual framework, which is most effectively applied in Matier's (1990) framework, as well as human capital and global political economy theory. This combination of models and frameworks enabled me to reach more expansive and useful conclusions about migration impetus and mobility patterns.

With regard to Matier's (1990) framework, the returnees in this study emphasized external benefits, including quality of life, family, friendship, proximity to relatives, and cultural values, as the most important reasons for returning to Turkey. This finding contradicts Matier's (1990) conclusion, which asserts that external factors are not particularly significant. However, it validates the study by Ambrose et al. (2005), which noted the importance of external factors. These findings suggest that Turkish people are representative of their collectivistic culture and tend to live close to their families and in settings where they can live their own culture, which the data collected by Markus and Kitayama (1991) also revealed.

Although the returnees were satisfied with internal benefits (when they were TA or RA in the U.S.) such as institutional reputation, autonomy, relationships with the professors, facilities and work conditions, the external benefits more significantly influenced their decisions. In addition, this study also contradicts Matiers' (1990) third argument that a combination of factors, such as low internal benefits in the current institution and expectations of higher internal benefits in the institution they move to, is likely to determine a faculty member's decision. The only factors that influenced returnees' decisions were external benefits, which were explained above.

In addition, Turkey's recent economic growth did not seem to play a significant role in returnees' decisions. Human capital gave them the flexibility to choose to return to Turkey and find faculty positions in there.

For returnees, family and cultural values were the main factors that pulled them back to Turkey and negative experiences and cultural adjustment issues were the most common factors that pushed them to leave the U.S. and return to Turkey.

The reasons for the stay and return decisions of U.S.-educated Turkish faculty is crucial for the U.S., as it also wants to retain U.S.-educated Turkish scholars who rank fifth among European faculty in the U.S. (Institute of International Education, 2012). A few studies (Institute of International Education, 2005; National Science Foundation, 2005) suggest that the U.S. might be less attractive for new international students due to changes in economic and employment conditions. The findings of this study suggests that the U.S. is still attractive for U.S.-educated Turkish scholars.

The findings also revealed that incentives by TUBITAK and European Union to encourage the research projects of University professors which used to be a reason of complaint in early 2000s did not influence the stayers. Gungor and Tansel (2010) found that economic

conditions were the greatest challenge that prevents graduate students from returning to Turkey in their study which was based on survey results conducted in early 2000s. Since then, Turkey's economy has greatly improved. However, the global political economy was apparently not a factor affecting their decisions to return, but it did influence stayers while U.S. investment in higher education and academic opportunities influenced them to stay. The findings suggests that stayers chose to stay in the U.S. due to the educational and economic opportunities as claimed by Chen and Barnett (2000) about international students.

With regard to Matier's (1990) framework, we can conclude that the stayers emphasized academic freedom, the availability of academic opportunities, high quality schools, labs, facilities, and research funding, as well as reasonable work conditions, which are identified as internal benefits. Also, Aw (1991) suggests that the U.S. attracts more international students than other developed countries due to the innovations in sciences and technologies (Aw, 2011). Freeman (2005) argues that: "Leadership in sciences and technology gives the U.S. its competitive advantage in the global economy."

In addition, stayers were satisfied with the social environment and lifestyle, and presence of family members living in the U.S., which Matier (1990) refers to as external benefits. However, insufficient research opportunities (tangible benefit), ideology, bureaucracy, and lack of academic freedom (intangible benefit) pushed them to leave and stay away from Turkey. In this regard, this study replicated Matier's (1990) finding by concluding that the combination of high external and internal benefits encouraged U.S.-educated Turkish faculty members to remain at universities in the U.S.

In Matier's (1990) view, personal characteristics, such as marital status and spouses' employment status, impact U.S.-educated Turkish scholars' decisions to return, although these

conditions did not have any influence on the stay decisions. Moreover, we see that having high human capital is not sufficient to explain the participants' mobility patterns since their resumes at the moment when they received their PhDs revealed limited differences. However, it was obvious that the stayers had higher human capital after they had taught in the U.S. for a while. It is worth mentioning that teaching workload at Turkish universities could have prevented returnees from publishing more articles, going to conferences, and earning patents.

When looking at whether the return and stay decisions are voluntary, we conclude that most stayers remained in the U.S. because they preferred to and that the majority of the returnees returned because they wanted to work and live in Turkey. In this study, people did not feel that they were forced to stay or return because they could not secure a job. Rather, it was their personal choice. This study contradicts the argument by Lee and Kim (2009) that individuals have to return to their country when they are unable to find the positions in the host country.

After comparing and contrasting my findings about returnees and stayers, I reached the conclusion that both return and stay decisions were voluntary. Family was the main factor that drew returnees back to Turkey. Although academics was the main factor impelling stayers to stay in the U.S., family also had a major impact on their decisions, since some of their family members lived in the U.S., which enabled them to experience ease in cultural adjustment. Incentives by the government and TUBITAK and the recent economic growth in Turkey did not seem to be appealing to either of the groups. While returnees had more negative experiences with regard to social adjustment, stayers had more positive experiences and enjoyed an ease of social adjustment, which encouraged them to stay in the U.S. While returnees did not mention global political economy as an important factor in their return decision, it was recognized by stayers as one of the pull factors impelling them to stay in the U.S. One explanation for the returnees'

failure to view global political economy as a push factor might be that the impact of the global economy on Turkey had been so positive that it had enabled the number of universities and job opportunities to rise and the risk of not securing a job to decrease. Therefore, it could be a misinterpretation to conclude that global political economy had no influence on the return decisions of the participants. Lastly, academic freedom in the U.S. was a pull factor for the stayers, while lack of academic freedom in Turkey was a push factor for them. Even the returnees complained about the lack of academic freedom at universities in Turkey.

Regarding returnees' reasons for studying in the U.S. and for returning to Turkey, I concluded that the availability of academic opportunities and the possibility of conducting high quality research in the U.S. did not have as great an impact on their decisions as cultural values and family, which were strong pull factors for them. The quality of U.S. schools and having the experience of living abroad were among returnees' main reasons for studying in the U.S. These reasons also pulled stayers to stay in the U.S. and become faculty members at universities in the U.S.

In sum, to attract U.S.-educated Turkish faculty, Turkey needs to develop more attractive research policies, invest more in R & D rather than solely monetary incentives, and eliminate the presence of bureaucracy, ideology and offer academic freedom. Otherwise, highly educated Turkish faculty will be unlikely return to Turkey. Also, U.S. should offer some programs to staff at daycare, middle and high schools as well as universities to increase the awareness for cultural and religious differences to satisfy highly educated people and retain more.

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## Appendix

### Appendix I

#### Adult Informed Consent Statement

The Reasons of US Educated Turkish scholars to stay in the US or return to Turkey

#### INTRODUCTION

The Department of Higher Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You may refuse to sign this form and not participate in this study. You should be aware that even if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your relationship with this unit, the services it may provide to you, or the University of Kansas.

#### PURPOSE OF THE STUDY

The purpose of this study is to explore the main reasons why some US educated Turkish scholars stay in the US while others return to Turkey.

#### PROCEDURES

This study is on the reasons US-Educated Turkish scholars stay in the US or return to Turkey.

The interviews were conducted between June, 2013-October, 2013.

Interviews will be conducted to gather data for this study. They will be asked questions about the reasons why they choose to return to Turkey or stay in the US upon they receive their doctorate degrees from the US, their opinions of Turkish government's attempts to draw them back to Turkey, and the role of human capital, political economy, and family, and culture influence on them to return to Turkey or stay in the US.

#### RISKS

No risks are anticipated. Participants may withdraw from the study whenever they want.

#### BENEFITS

*In this study, we expect to find benefits for the society, the governments, professors and the universities.*

#### PAYMENT TO PARTICIPANTS

*No payments will be made to the participants.*

#### PARTICIPANT CONFIDENTIALITY

Your name will not be associated in any publication or presentation with the information collected about you or with the research findings from this study. Instead, the researcher(s) will use a study number or a pseudonym rather than your name. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission.

"Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give permission for the use and disclosure of your information for purposes of this study at any time in the future."

#### INSTITUTIONAL DISCLAIMER STATEMENT

NA

#### REFUSAL TO SIGN CONSENT AND AUTHORIZATION

You are not required to sign this Consent and Authorization form and you may refuse to do so without affecting your right to any services you are receiving or may receive from the University of Kansas or to participate in any programs or events of the University of Kansas. However, if you refuse to sign, you cannot participate in this study.

#### CANCELLING THIS CONSENT AND AUTHORIZATION

*Be sure to consider the length of time the data will be collected and include whether you will use information that was collected prior to the participant's cancellation of permission. For example:* You may withdraw your consent to participate in this study at any time. You also have the right to cancel your permission to use and disclose further information collected about you, in writing, at any time, by sending your written request to: *EYYUP ESEN, 2713 CRESTLINE DR., LAWRENCE, KS, 66047.*

If you cancel permission to use your information, the researchers will stop collecting additional information about you. However, the research team may use and disclose information that was gathered before they received your cancellation, as described above.

#### QUESTIONS ABOUT PARTICIPATION

Questions about procedures should be directed to the researcher(s) listed at the end of this consent form.

#### PARTICIPANT CERTIFICATION:

I have read this Consent and Authorization form. I have had the opportunity to ask, and I have received answers to, any questions I had regarding the study. I understand that if I have any additional questions about my rights as a research participant, I may call (785) 864-7429 or (785) 864-7385, write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email irb@ku.edu.

I agree to take part in this study as a research participant. By my signature I affirm that I am at least 18 years old and that I have received a copy of this Consent and Authorization form.

\_\_\_\_\_  
Type/Print Participant's Name                      Date

\_\_\_\_\_  
Participant's Signature

#### Researcher Contact Information

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## **Appendix II**

### **Interview Questions for Returnees and Stayers**

- Tell me about your PhD degree?
- Why did you decided to pursue your doctoral degree in the US?
- Describe your career after completing your PhD.
- Did you have any job offers from the US or from Turkey after graduating?
- When did you decide to return Turkey or stay in the US?
- What kinds of factors played into your decision to return to Turkey or stay in the US?

#### **Potential follow-up question:**

- How did the growing Turkish economy influence your decision return to Turkey or stay in the US?
- How does the economic crisis experienced in the US influence your decision to return to Turkey or stay in the US?
- What are differences in Turkey's economic, social and political conditions now and when you just left Turkey? How do the changing economic, political and social conditions affect your decision to return to Turkey or stay in the US?

#### **Other Factors:**

- Could you tell me how your family and cultural values influenced your decision on your decision to stay in the US or return to Turkey?

#### **Experience:**

- How was your experience in the US higher education as a graduate student? What are the main challenges you encountered in the US?

**Attempts by Turkish Government and some public and private Institutions to draw back the scholars**

- What do you think about Turkey's initiatives/ attempts to draw Turkish PhDs back to Turkey?  
(P.E.)
- What strategies/ initiatives made by Turkey would you recommend be sustained to draw Turkish PhDs back to Turkey?

### Appendix III

#### Biographical Sketches of the Returnees

**Participant 1:** He is a professor of molecular biology at a Less Selective Public University (LSPU). He received his PhD from a research-oriented university in 2006. After finishing his PhD, he held a post-doctoral research position in a lab at the same university for four years. After four years, he decided to return to Turkey.

**Participant 2:** He is a professor of molecular biology at a Less Selective Public University (LSPU). He received his PhD from a research-oriented university in 2005. He returned to Turkey after graduation. He worked as a research assistant for one year before becoming an assistant professor. He has been serving as an associate professor for the past two years.

**Participant 3:** He is a professor of economics in Highly Selective Private University (HSPRU). He received his PhD from a research-oriented university in 2009. He and his wife returned to Turkey after graduation. At first, he had a position at a private university, where he spent about 6 to 7 months teaching undergraduate and graduate courses.

**Participant 4:** He is a professor of math at a Highly Selective Public University (HSPU). He received his PhD from a research university in December 2009 and returned to Turkey in January 2010. He has been an assistant professor for three years.

**Participant 5:** He is a professor of education at a LSPU. He received his PhD from a research university in 2006. After completing PhD, he worked for one semester as a research assistant (RA). He returned to Turkey in June 2007. He worked at the Ministry of National Education (MONE) for one month before taking a teaching position at a university.

**Participant 6:** She is a professor of environmental engineering at a HSPRU. She received her PhD from a research university in 2006. She returned to Turkey after graduation. She has been

collaborating with several universities in Turkey. Two summers ago, she returned to another research university to conduct research and to attend an alumni meeting. She stayed for three weeks.

**Participant 7:** He is a professor of math education at a LSPU. He received his PhD from a research university in 2006. After completing his PhD, he worked as a lecturer for two years. In June of 2001, he returned to Turkey and worked at a public university for two years. After one and a half years, he took a position at a Less Selective University, where he worked from 2002 until 2008.

**Participant 8:** She is a professor of educational technology. She received her PhD from a research university in 2006. After completing her PhD, she returned to Turkey and took a position at a HSPU, where she works on projects, writes papers, teaches, and attends workshops. She has published articles and book chapters, but due to the situation in Turkey, she is now an instructor.

**Participant 9:** He is a professor of civil engineering. He received his PhD from a research university in 2012. He returned to Turkey after graduation. He has been teaching at a university for one and a half years. He mainly teaches undergraduate students.

**Participant 10:** She is a professor of education at a HSPRU. She received her PhD from a research university in 2012. In January of 2012, she returned to Turkey for the holidays and visited some universities in Bolu, Kocaeli, Ankara, and Istanbul. She chose to work at her current university after graduation.

### **Biographical Sketches of the Stayers**

**Participant 1:** She is assistant professor of sociology at a LSPU. She received her PhD from a research university in 2007. She specializes in political sociology, comparative-historical sociology, social theory, and research methods.

**Participant 2:** He is associate professor of engineering at a LSPU. He received his PhD from a research university in 2011. After he received his degree, he published four books, 110 articles, and one book chapter.

**Participant 3:** He is a professor of finance at a LSPU2. He received his PhD and MS in finance from a research university, and his BS in industrial engineering from Bilkent University in Turkey. He teaches upper level undergraduate courses. He has worked in the financial sector as an investment banking.

**Participant 4:** He is a professor of industrial engineering at a LSPU2. He received his PhD degree in 2000 from a research university. He is a graduate coordinator at his current university.

**Participant 5:** He is a professor of industrial management at a LSPU2. He received his PhD from a research university in 1999.

**Participant 6:** She is a professor of political science with a focus on international politics at a LSPU2. She received her PhD from a research university in 2010. She did her post-doctoral studies in England and has a great number of publications, fellowships, and awards.

**Participant 7:** He is a professor of finance at a LSPU1. He received his MA and PhD from a research university. He studied economics for three years before changing his major to finance.

**Participant 8:** He is a professor math at a LSPRU. He received his PhD from a research university and did his post-doctoral studies for three years. He chairs the math department at his current university.

**Participant 9:** She is a professor of chemical engineering at a HSPRU. She has taught at both Turkish and American universities. In both places she established Molecular Bio-Nano Technology centers. She received her PhD from a research university.

**Participant 10:** She is a professor in linguistics with a focus on Turkish language teaching at a HRPRU. She received her PhD at a HSPRU.

## Appendix IV

### Approval of Protocol

April 23, 2014

Eyyup Esen

[dersaadet34@ku.edu](mailto:dersaadet34@ku.edu)

Dear Eyyup Esen:

On 4/23/2014, the IRB reviewed the following submission:

Type of Review: Continuing Review

Title of Study: The Reasons of U.S.- Educated Turkish scholars to stay in the U.S. or return to Turkey

Investigator: Eyyup Esen

IRB ID: 20859

Funding: None

Grant ID: None

The IRB approved the study from 4/23/2014 to 5/6/2015.

1. Before 5/6/2015 submit a Continuing Review request and required attachments to request continuing approval or closure.
2. Any significant change to the protocol requires a modification approval prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at [https://rgs.drupal.ku.edu/human\\_subjects\\_compliance\\_training](https://rgs.drupal.ku.edu/human_subjects_compliance_training).
4. Any injury to a subject because of the research procedure must be reported immediately.
5. When signed consent documents are required, the primary investigator must retain the

signed consent documents for at least three years past completion of the research activity.

If continuing review approval is not granted before the expiration date of 5/6/2015 approval of this protocol expires on that date.

Please note university data security and handling requirements for your project:

<https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm>

Due to the eCompliance transition process documents associated with projects were not uploaded into the system. This means that consent forms, applications and other supporting documents were not automatically uploaded to this project. If you need a consent form with the new expiration date on it, you will need to complete a modification in eCompliance to add the consent documents to the project. You can do this by using the “Create Modification/CR” button and following instructions in the Modification/CR guide.

Sincerely,

Stephanie Dyson Elms, MPA

IRB Administrator, KU Lawrence Campus

**Human Subjects Committee Lawrence**

Youngberg Hall | 2385 Irving Hill Road | Lawrence, KS 66045 | (785) 864-7429 |

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