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THE IMPACT OF ECONOMIC CONDITIONS ON EGYPTIAN INTERNATIONAL LABOR MIGRATION

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Abstract: International labor migration is a complex and dynamic phenomenon that has been influenced by globalization. The ILO estimates that there are 169 million international migrant workers in the world, and they make up nearly 5% of the global labor force. Migrant workers play an important role in the economies of both their countries of origin and destination, and they can contribute to economic growth, development, and social cohesion. However, migrant workers also face many challenges, such as discrimination, exploitation, and lack of access to basic services.
Keywords: International labor migration**,** Globalization**,** Migrant workers**,** Economic impact of migration**,** Social, impact of migration**,** Challenges of migration

1. Introduction

International labor migration is a growing force that is becoming more complex and dynamic in today‟s globalizing world. Globalization has become a common name in the world today as technology, information, businesses and education expands beyond the borders of politics and geography (Adams & Page, 2005). Still, migration is not a recent phenomenon; people have always migrated in search of food, shelter and fortune, but over the years, migration has undergone numerous changes depending on various economic, technological and social factors. These factors have encouraged people to move from one geographical area to another, from even one country to another, in search of better living conditions (Postelnicu, 2012).

Several previous studies have been conducted to study behavior and migration trends of the labor force in developing countries. The study of migration could be tackled from a macro or a micro perspective. Macro-level analysis is concerned with explaining trends and flows of international migration using aggregate country-wide (Davanzo, 1980). For example, Ortega and Peri (2009) attributed flows of international migration to wage differentials between receiving and sending countries, Bukenya, Schaeffer, and Gebremedhin (2003) attributed the number of international migrants to unemployment differentials in different counties, Mayda (2010) related migration to the destination country‟s GDP, and Greenwood, Ladman, and Siegel (1981) explained international migration by the distance between sending and receiving countries.

Micro-level analysis is concerned with understanding individual or household characteristics that affect the decision to migrate (Davanzo, 1980). For example, Cushing (1993) attributed the migration decision to the individual‟s income group, gender and family status, Kaluzny (1975) used race and poverty status, and several

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other studies such as Mincer (1971), Polachek and Horvath (1977), and Arenas, Conroy, and Nobles (2009) explore the relationship between individual or household characteristics, such as age, gender, educational attainment, assets, marital status and access to credit, and migration decisions.

This research tackles migration from a micro-level perspective with the purpose of identifying the factors that affect and determine international migration and return decisions among the labor force. The study analyzes migration from the perspective of the source country (Egypt) and specifically focuses on temporary and return migration. The aim is to understand the characteristics that influence individuals‟ decision to migrate and then distinguish between the characteristics of those who migrated and eventually returned to Egypt compared to those who remain abroad. The clear understanding of such factors and their effect on migration decisions could play an important role in the socio-economic progress of Egypt, especially that a survey conducted by Egypt‟s Central Agency for Public Mobilization and Statistics (CAPMAS, 2014) showed that 17% of Egyptian youth want to live abroad. Considering the current and continuing economic transition in Egypt, identifying the factors influencing Egyptians‟ decision to emigrate/return and noting how those factors change over time could provide insights into the characteristics of potential future migrants and so aid in managing the Egyptian labor market more efficiently.

The paper is divided in to four chapters. The first chapter is a review of the literature on forms of migration and a description of Egypt‟s migration history and past trends. The second chapter covers the methodology and data used to analyze Egyptian migration. The third chapter shows the results of the study with a detailed description of Egyptian migrants‟ characteristics, determinants of the migration decision, and determinants of the return decision. The final chapter covers the conclusion of the research with recommendations for future research possibilities.

2. Migration Overview

Migration refers to the movement of individuals from one geographic location to another for various reasons, most prominent of which is the search for better living conditions (Özden and Schiff, 2006; Hagenzanker, 2008). In 1932, Nobel Prize holder John Hicks proposed that “differences in net economic advantages, chiefly differences in wages, are the main causes of migration.” Practically all modern analysis of migration decisions uses this hypothesis as a starting point, where migration is viewed as a consequence of a utilitymaximizing choice (Borjas, 2012). Workers calculate the value and cost of employment opportunities available in alternative labor markets and choose whichever option maximizes their earnings (Gaston & Nelson, 2013).

As new economic opportunities arise, the number of those who leave their place of origin in search of better opportunities increases. In 2015, migrants constituted 3.9% of the total global population aged 15 years and above (ILO, 2015) and according to the International Organization for Migration (2010), if migration flows continue to increase at the same pace as the last 20 years, the total number of migrants worldwide by 2050 will slightly exceed 405 million as compared to 214 million in 2010.

Migration occurs at a variety of scales, one of which is location, which determines whether migration is internal or international. Internal migration refers to the movement of individuals within a country without crossing its external borders. The most common form of internal migration is rural-urban migration however the magnitude and patterns of such movement is poorly documented where data collection methods are not thorough or not published with sufficient details (Van Der Gaag & Van Wissen, 2008). That is why this research focuses on international migration, which refers to the external movement of individuals from their home country to a foreign

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country in search of a better life (Adams & Page, 2005). Such vast movement of people across international boundaries has economic, social, and cultural implications in both origin and destination countries (Özden and Schiff, 2006) and so is the main focus of this study. The nature of the migration decision distinguishes between involuntary and economic migration. Some forms of international migration could be involuntary, such as that of refugees and asylum seekers, typically to flee military conflicts, civil wars, political turmoil, and ethnic and religious repression (Özden & Schiff, 2006). The migration decision in this case is determined by circumstances external to the individual that forced the move however, the term migrant is usually understood to refer to cases where the decision to migrate is taken freely by the individual for personal convenience (Vogler & Rotte, 1998). In this case, the decision to migrate is viewed as an economic choice, which is the focus of this paper. Economic migration refers to the transfer of some factors of production, namely labor, from one geographical location to another (Gaston & Nelson, 2013). There is a great deal of mobility in labor markets around the world driven by workers‟ need to improve their economic situation and firms‟ desire to hire more productive and skilled labor (Borjas, 2012).

Finally, the duration the migrant intends to spend abroad determines whether migration is temporary or permanent. Permanent migration refers to the movement of a national to a foreign country for an unlimited period of time. It is viewed as a single transition that involves a lasting relocation of migrants to a new place of residence with no intention to return to their country of origin. That is why such permanent change of residence usually involves the movement of the entire household (Bell & Ward, 2000; Longino, Marshall, Mullins, & Tucker, 1991). As for temporary migration, which is the main focus of this study, it refers to the movement of a national to a foreign country for a set duration which is limited to the time required to achieve the goal the individual migrated to fulfill (Piper, 2009; Porumbescu, 2015).

One of the main goals of temporary migration is saving for future consumption, which is why a lot of migrants return to their country of origin despite higher earnings in the destination country. Hill (1987) and Djajić and Milbourne (1988) attribute return migration to a preference for consumption in the country of origin; where individuals find it more satisfactory to consume goods at home rather than at the destination country. So, temporary migration is viewed as a means to accumulate sufficient savings abroad in order to finance higher and more enjoyable consumption at home (Dustmann & Görlach, 2016; Lucas, 2008). Another reason for temporary migration could be the high purchasing power of the destination country‟s currency, which, from the migrant‟s perspective, makes price levels lower in the country of origin. Thus, by saving in the destination country‟s currency, migrants can increase their consumption upon their return due to the higher purchasing power of their savings even if earnings were the same in both origin and destination countries(Dustmann, 1995; Dustmann & Görlach, 2016).

Human capital accumulation also acts as a motive for temporary migration, especially if skills are scarce in the country of origin. In this situation, high wages abroad initially attract migrants however as skills accumulate, migrants have an incentive to return as their newly acquired skills will be met with a higher rate of return at home (Borjas & Bratsberg, 1996; Dustmann & Görlach, 2016). This is especially prevalent when skills can be acquired faster in the destination country than in the country of origin. In this case, skills and knowledge that are more valuable at home can be acquired easily abroad due to the exposure to advanced technology and highly skilled colleagues in the destination country. Thus, migrants increase their earnings potential in their skills-scarce

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countries of origin by migrating temporarily and so raising their level of human capital (Dustmann, Fadlon, & Weiss, 2011; Dustmann & Görlach, 2016).

Temporary migrants are often referred to as Guest Workers who are employed in a foreign country for a limited period of time that depends on fulfilling specific jobs. They mostly migrate individually, unaccompanied by their families and work in fields such as financial services, teaching, construction or seasonal agriculture (Freeman, 2006; Porumbescu, 2015). In most cases, the length of stay is not determined by the migrant, but depends on the type of work contract and the economic conditions of the host country (Dustmann & Görlach, 2016). However, some countries, namely Gulf Cooperation Council states, allow migrants to renew/terminate their work permits, provided the request is supported by the employer (Djajić & Vinogradova, 2015).

3. Egyptian Migration

Egypt is one of the world‟s top emigrating countries, with nearly 10% of the labor force living abroad (Wahba, 2015). Most Egyptian migrants have chosen neighboring Arab countries as their destinations which is why migration in Egypt can be largely attributed to changing international conditions and labor market needs in the Arab region (Zohry, 2007). Table 1 demonstrates the share of Egyptian migrants in top destination countries over time.

Table 1: Total Migrants' Destination Countries over Migration Phases

	Phase 1: Expansion (1974-1989)	**Phase 2: Deterioration (1990-2003)**	**Phase 3: Recent (2004-2012)**
Total Observations	**521**	**554**	**824**
Destination			
Saudi Arabia	0.17	0.38	0.40
Jordan	0.12	0.16	0.14
Libya	0.05	0.20	0.16
Kuwait	0.05	0.08	0.12
Iraq	0.55	0.03	0.006
UAE	0.03	0.04	0.08
Other	0.03	0.19	0.15

Source: ELMPS, 2012

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The migration Expansion Phase in Egypt started in the 1970s when, after the oil boom of 1973, the Gulf oil exporting countries found their development programs constrained by labor shortages and so started importing large numbers of workers from neighboring countries (Nassar, 2011; Wahba, 2015). This phase also witnessed high demand for educators and healthcare workers needed for the development of their respective sectors in several Arab countries. Being the most populous country in the Arab world, Egypt became a major source of migrant labor. Migration was encouraged by the government with the purpose of sending doctors, pharmacists, teachers, and construction workers to help the Gulf States in their development plans as well as relieve the pressure on the government in facing internal economic issues (Sell, 1988; Wahba, 2015; Zohry & Harrell-Bond, 2003).

This rapid increase in Egyptian migration continued into the early 1980s reaching 3.3 million Egyptian migrants in oil-rich countries by 1983. Iraq was the most popular destination for Egyptian emigrants during the 80‟s due to its liberal immigration policies towards fellow Arabs. However, by the second half of the 80‟s, the Contraction Phase began as political and economic developments in the Arab oil-producing countries caused a cutback in employment opportunities. The decline in oil prices due to the Iran-Iraq War forced the Gulf oil industry into a recession, which cost many Egyptian construction workers their jobs. Moreover, Egyptian migrants started facing competition from low-paid Asian workers that started migrating to oil-rich countries as well (Paton, 2015; Zohry, 2007).

Such migratory contraction pushed Egyptian migration into a Deterioration Phase, which was fueled by the Gulf War in 1990. This phase witnessed a significant flow of return migrants from Iraq and Kuwait, temporarily reducing the number of Egyptian emigrants to about 1.4 million (Paton, 2015; Zohry, 2007). After the war, Egyptian emigration rates went up again raising the number of Egyptian emigrants to more than 2.8 million by 1996 (Paton, 2015)and contracts with Saudi Arabia and Libya pushed Egyptian emigration to a steady pace over the 90‟s (Nassar, 2011; Zohry & Harrell-Bond, 2003).

Migration in Egypt is viewed as not only a response to the oil boom in Arab Gulf countries, but also as a consequence of numerous economic difficulties that Egypt has continued to experience over the years. In 2008, it was estimated that around 6.8 million Egyptians were living abroad (Paton, 2015). Such increase in Egyptian emigration can be considered a natural response to poverty, uneven distribution of economic activities, income and wealth as well as overpopulation and high unemployment rates which plagued Egypt over the 2000‟s building up to the uprising in 2011 (Paton, 2015; Zohry, 2007; Zohry & Harrell-Bond, 2003).

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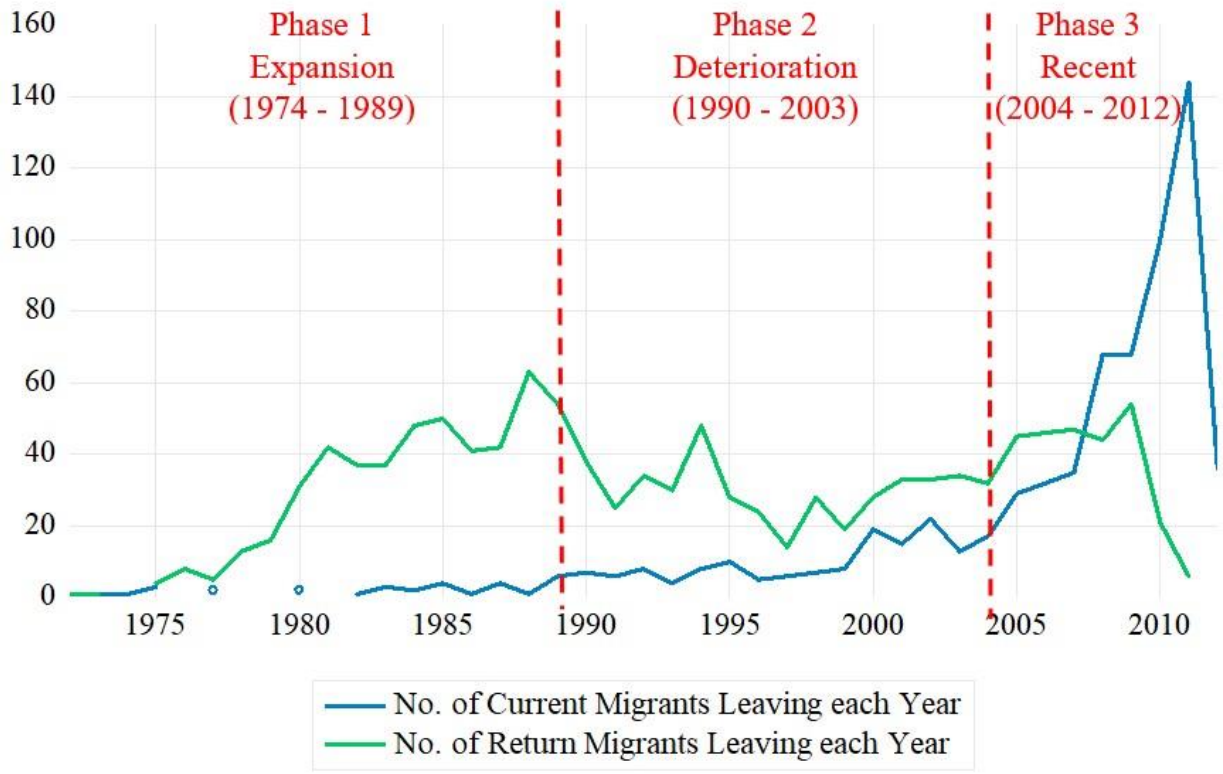

Figure 1: Number of Current and Return migrants leaving Egypt each year over 1974-2012 Source: ELMPS, 2012

Figure1 demonstrates the number of Egyptians who temporarily emigrated and eventually returned (Return Migrants) compared to those who emigrated but stayed abroad (Current Migrants) over the period 19742012. The plot greatly matches the migration trends defined by Egyptian migration phases. The expansion phase witnessed the largest number of Egyptian workers temporarily emigrating in response to the high demand for labor in the Gulf countries. But, since they were mostly "guest workers," more migrants from this phase have returned compared to those who stayed abroad. The deterioration phase exhibited a low number of both temporary and current Egyptian emigrants due to the political and economic turmoil in the Gulf region during that phase. The most recent phase exhibited the largest number of Egyptians who migrated and are still abroad compared to those who returned.

It is interesting to note that the largest number of migrants of the third phase left Egypt specifically during 2011, the year in which the 25th of January Revolution took place. This raises a lot of questions regarding whether such a large number of emigrants can be attributed to the political instability in Egypt brought on by the revolution. Also, since migration during that phase was mainly fueled by the adverse social, political, and economic conditions of the Egyptian market, it is unknown whether such migrants have eventually returned -or still plan to return- to Egypt at some point past 2012.

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Still, despite the growth in Egyptian migration over decades, the majority of Egyptian emigrants are expected to return home eventually (Zohry, 2007). Figure 1 illustrates that by showing that very few of the Egyptians who migrated in the first and second phase were still abroad by 2012. During the 70‟s and 80‟s, Secondment Policies established by the Egyptian government encouraged temporary migration through bilateral contracts where public sector employees were allowed to take leaves of absence, for years at a time, to work abroad with the guarantee that their positions would remain available upon their return (Sell, 1988; Zohry & Harrell-Bond, 2003). Moreover, most Arab countries accept migrant labor under the "kefala" system, where foreigners must be "sponsored" for admission, making permanent residency and citizenship impossible for foreigners (Jureidini, 2010). Such system was developed with the purpose of preventing permanent immigrant settlement by depriving them of political, social or economic rights in their destination country and stipulating that the migrant leave the country upon termination of employment (Sell, 1988; Wahba, 2015). Table 2 highlights the most prominent reasons for Egyptian migration and return.

Table 2: Return Migrants' Reasons for Migration/Return

Reason for Migrating	
Found a Better Job Abroad	0.67
Unemployed and Seeking Work	0.19
Higher Wages	0.08
Reason for Return	
Poor Working Conditions	0.26
Contract Ended	0.18
To Get Married	0.14
To Care for Family	0.10
War in Iraq/Kuwait. Desire to Return. Bad weather	0.10

Source: ELMPS, 2012

Focusing on return migrants only, figure 2 illustrates the number of temporary migrants who left compared to those who returned to Egypt in each phase. The expansion phase naturally had more people emigrating from Egypt compared to those returning, while the deterioration phase had more migrants returning to Egypt compared to those leaving during that phase. The year 1990 in particular had a large number of returnees due to the political and economic turmoil that pushed migrants out of Iraq. The most recent phase witnessed a lot more Egyptians returning compared to those temporarily leaving Egypt during that period which could be because by that time, many of those who had migrated in phase 1 and 2 had already been abroad for about 10-20 years, thus had completed their migratory purpose and returned home.

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It could also be attributed to the 2011 Revolution which might have encouraged a lot of Egyptians to return from abroad; either to actively partake in such national event or because of tense relations that the revolution sparked with some countries.

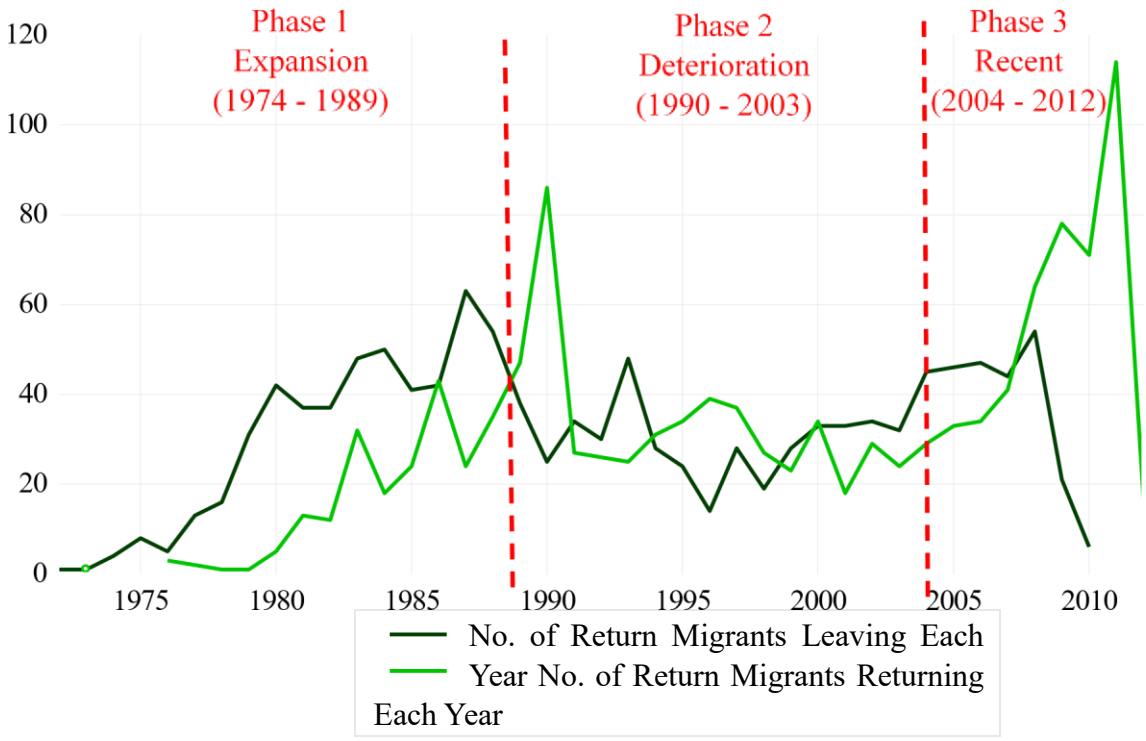

Figure 2: Number of Return Migrants leaving and returning to Egypt each year over 1974 - 2012
Source: ELMPS, 2012

3. Data and Specifications

This research gives an overview of the characteristics of Egyptian migrants by identifying the factors that affect and determine international migration decisions among the Egyptian labor force. Given that Egyptian migration is mostly temporary, the analysis is extended to differentiate between the characteristics of those who migrated and eventually returned to Egypt compared to those who still remain abroad. Both migration and return decisions are analyzed from a micro level perspective with the purpose of identifying the characteristics that influenced the worker‟s individual decision to migrate/return.

The study is conducted using data from the Egyptian Labor Market Panel Survey (ELMPS), which is a longitudinal survey that has been carried out by the Economic Research Forum (ERF) in cooperation with Egypt‟s Central Agency for Public Mobilization and Statistics (CAPMAS) since 1998. ELMPS 2012, the third and most recent round of the survey is used in this analysis.

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Since the focus of this research is to identify the factors that affect migration decisions among the Egyptian labor force, only respondents aging between 20-60 years are considered. The sample was also restricted to include only males since preliminary results showed that females only represent about 5% of total migrants. The small percentage is not surprising given the relatively low female labor force participation rate in Egypt discussed in Hosney's (2016) study as well as the social and cultural norms of the Egyptian society.

Based on the questionnaire design, respondents can be classified as migrants or non-migrants. Migrants can be categorized as either current or return migrants. Current migrants are workers who were abroad at the time the survey was conducted while return migrants are workers who have worked abroad for more than 6 months but were residing in Egypt in 2012. Separate models will be estimated for the 2 types of migrants to compare their characteristics and distinctions

Respondents are then further grouped, based on the migrants‟ year of emigration, into to 3 phases which correspond to Egypt‟s history of migration described in the literature. The first phase is when Egyptian migration began to flourish, so is referred to as the Expansion phase, taking place during 1974-1989. The second phase, referred to as the Deterioration phase, is the period during which Egyptian migration slowed down due to the political and economic turmoil in the region from 1990-2003.

The third phase is the more Recent phase, taking place during 2004-2012, where Egyptian migration became not just a matter of pull factors abroad but also push factors at home.

For the Migration model, each phase group includes migrant workers who first emigrated during that phase and non-migrant workers aged between 20-60 years who stayed in Egypt during that time. For the Return model, each phase group includes only migrant workers who first emigrated during that phase, some are still abroad so are categorized as current migrants, while others have eventually returned so are categorized as return migrants. For both models, each phase group only includes migrants who first emigrated in that phase, so for example, a worker who first migrated in 1980 is included only in the phase 1 group and not any other. That way, by running a separate estimation for each phase, any distinction between migrant characteristics and their influence on migration/return probability over phases can be observed.

The models used in this paper is based on the Hierarchical Regression Approach developed by Chi and Voss (2005). The model and variables used in the Chi and Voss‟ study were modified in order to better suit the micro level, individual specific, analysis intended in this study and the Egyptian labor force‟s characteristics.

In order to determine the factors influencing workers‟ decision to migrate, Probit Regression Model (1) is used with “Migrate” as a dependent variable classifying the worker as either a migrant or non-migrant. It is a qualitative binary variable so is expressed by a dummy variable representing the worker‟s decision to migrate. The sample for this model is all male individuals within the specified age range so includes both, migrants and nonmigrants.

Pr (Migrate) = F (Age, Educational Attainment, Region) (1)

The regressions then estimate the factors that influence a worker‟s probability of migrating which are represented by a set of continuous and dummy individual specific variables, listed in Table3 that are hypothesized to influence a worker‟s decision to migrate. Starting with Age, for migrants, the age considered is that when they first emigrated from Egypt. As for non-migrants, age is calculated at a median reference year depending on the phase used in the estimation. So, for example, the age variable of the first phase‟s estimation considers the age of the migrants when they first emigrated during that phase while the age of non-migrants in 1981. That way, the

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comparison between migrants and non-migrants is estimated at a relatively similar point in time. Based on the Human Capital theory, the worker‟s age is hypothesized to have a nonlinear relationship with the probability to migrate (Chi & Voss, 2005). It is expected that since younger people have more to gain from migrating and are more willing to take the risks associated with migration than older people, they are more likely to migrate (Ghoneim, 2010).

As for Educational Attainment, it refers to the highest educational level an individual has reached and is represented by dummy variables for 3 main educational categories: primary education, secondary education and higher education. It is hypothesized that the higher the individual‟s educational attainment, the more likely they are to migrate due to their increased awareness of possible opportunities abroad (Borjas, 2012; Greenwood, 1969).

Finally, Region refers to the region in Egypt where the individual lives. Egypt can be divided into 3 regions represented by the dummy variables Metropolitan, Rural and Urban Egypt. It is hypothesized that workers living in less developed regions are more likely to migrate than those living in developed regions because they have a stronger motive to seek better living conditions abroad (Cushing, 1993; Zohry, 2007).

In order to determine the factors influencing migrant workers‟ decision to return, Probit Regression Model (2) is used with “Return” as dependent variable identifying the worker as a current or return migrant. It is a qualitative binary variable expressed by a dummy representing the worker‟s decision to return. The sample for this model is male migrants within the specified age range so includes only migrants, some of which are current migrants and some are return migrants.

Pr (Return) = F (Age, Educational Attainment, Region) **(2)**

The regressions then estimate the factors that influence a migrant‟s probability of returning using the same explanatory individual specific variables listed in Table 3, which are hypothesized to influence a worker‟s decision to return. Starting with age, it is hypothesized that the older the worker was when they first emigrated, the less likely they are to return. It is expected that if a worker had migrated at an older age, then they are likely to stay abroad for a longer period to reap the rewards of their late migration decision. As for educational attainment, it is hypothesized that the higher the worker‟s educational attainment, the less likely they are to return. This is expected because those with a higher education are more likely to find suitable jobs abroad and so would be less motivated to return compared to those with a lower education.

Finally, regarding region of residence, it is hypothesized that the more developed the region in which the migrant lived in before they migrated, the more likely they are to return. This expected because those from more developed or metropolitan regions have more opportunities to return to at home compared to those from less developed regions.

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Table 3: Variable Description

Variable Name	Variable Description
Dependent Variables	
Migrate	Refers to workers‟ migration status = 1 if migrant = 0 if non-migrant
Return	Refers to migrant workers‟ return status = 1 if return migrant = 0 if current migrant
Independent Variables	
Age	For migrants: age at emigration. For non-migrants: age at a median reference year depending on the estimated phase = The age of the respondent ranging 20 – 60 years
Educational Attainment	Refers to the highest educational level reached with secondary used as the reference variable.
Primary	= 1 if illiterate, literate, elementary, or preparatory = 0 otherwise
Secondary	= 1 if general/vocational secondary or post-secondary institute = 0 otherwise
Higher	= 1 if university or post-graduate = 0 otherwise
Region	Refers to the region in Egypt where the individual lives with Rural used as the reference variable
Rural	= 1 if Rural Lower/Upper Egypt = 0 otherwise
Urban	= 1 if Urban Lower/Upper Egypt, = 0 otherwise
Metropolitan	= 1 if Cairo, Alexandria, or Suez Canal = 0 otherwise

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4. Results

This chapter covers the results of the data analysis and model estimations. The first section covers descriptive statistics which demonstrate the different characteristics of current, return, and non-migrants. The second section covers the output and discussion of the migration model. The third section covers the output and discussion of the return model.

4.1 Table 4: Descriptive Statistics

Variable	**Current Migrants**	**Return Migrants**	**Total Migrants**	**Non-Migrants**
Total Observations	698	1,204	1,902	9,869
Average Age at Migration	28	26	27	-
Destination Country				
Saudi Arabia	0.46	0.25	0.33	-
Jordan	0.12	0.15	0.14	-
Kuwait	0.15	0.05	0.09	-
Libya	0.07	0.19	0.14	-
Iraq	0.003	0.25	0.16	-
UAE	0.05	0.008	0.02	
Average Duration Spent Abroad	0.08	0.05	0.06	-
Marital Status	6	5	5	-
Married				
Unmarried	0.76	0.93	0.87	0.75
Migration Companions	0.24	0.06	0.13	0.24
Alone				
With Family Members	0.92	0.95	0.94	-
Position in Household	0.08	0.05	0.06	-
Male Spouse				
Son	0.59	0.91	0.58	0.70
Educational Attainment	0.35	0.08	0.21	0.28
Primary				
Secondary	0.29	0.42	0.37	0.39
Higher	0.50	0.44	0.46	0.42

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Region of Residence in Egypt	0.21	0.14	0.17	0.19
Rural				
Urban	0.10	0.65	0.45	0.53
Metropolitan	0.17	0.23	0.21	0.26
Source: ELMPS, 2012				

4.1 Table 4 shows that 16% of the total sample are migrants, 63% of which have migrated and returned while37% were still abroad at the time the survey was conducted, and so are referred to as current migrants. The majority of both types of migrants first left Egypt in their20schoosing neighboring Arab countries, especially oil exporting countries suffering from labor shortages, as their destination with the majority residing in Saudi Arabia. Interestingly, a large share of return migrants (25%) were residing in Iraq during their migration years but their share dropped significantly among current migrants (0.3%), further demonstrating how the economic and political turmoil of the 90"s pushed Egyptian emigrants out of Iraq even decades after the war. Only about 5% of total migrants reside in USA and Europe combined. Regardless of the destination, the average duration migrants have lived abroad is 5-6 years.

Currently, most migrants are married, which explains why they are mostly described as spouses however, at the time of their migration, 94% stated that they had migrated alone. This indicates that for most households, the migrant is the husband or the male child. The highest educational attainment reached by the majority of migrants and non-migrants is a secondary education. It is notable though that a primary education is more dominant among return migrants (42%) compared to current migrants (29%) while a higher education is more prominent among current migrants (21%) compared to return migrants (14%). Indicating that current migrants tend to be more educated than return migrants. Also, most current migrants (73%) used to live in Greater Cairo and Alexandria, the most developed metropolitan regions in Egypt compared to only 12% of return migrants, who mostly lived in rural Egypt (65%). Indicating that current migrants tend to have lived in more developed regions of Egypt before migrating than return migrants.

Table 5: Education and Region for All Migrants over Migration Phases

	Phase 1: Expansion (1974-1989)	**Phase 2: Deterioration (1990-2003)**	**Phase 3: Recent (2004-2012)**
Total Observations	**521**	**554**	**824**
Educational Attainment			
Primary	0.48	0.40	0.28
Secondary	0.40	0.43	0.53
Higher	0.13	0.17	0.19

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Region			
Rural	0.62	0.66	0.74
Urban	0.23	0.23	0.18
Metropolitan	0.15	0.12	0.08

Source: ELMPS, 2012

Table 5 indicates that migration in Egypt has been increasing over time with the highest number of migrants leaving Egypt between 2004-2012. That is understandable since according to Zohry (2007), emigration in Egypt is not only a reflection of the oil boom in Arab Gulf countries, but also of economic difficulties and high rates of population growth that Egypt has continued to experience over the years.

Table 5 also demonstrates how certain variables have changed across the different time periods. Looking at migrants‟ educational attainment over migration phases shows that generally, migrants are becoming more educated. This is highlighted by the fact that over time, the share of migrants with a primary education has continuously declined while the share of migrants with a secondary and higher education has been on the rise. Regarding region, across phases rural regions have constantly been the largest source of Egyptian emigrants as opposed to metropolitan areas.

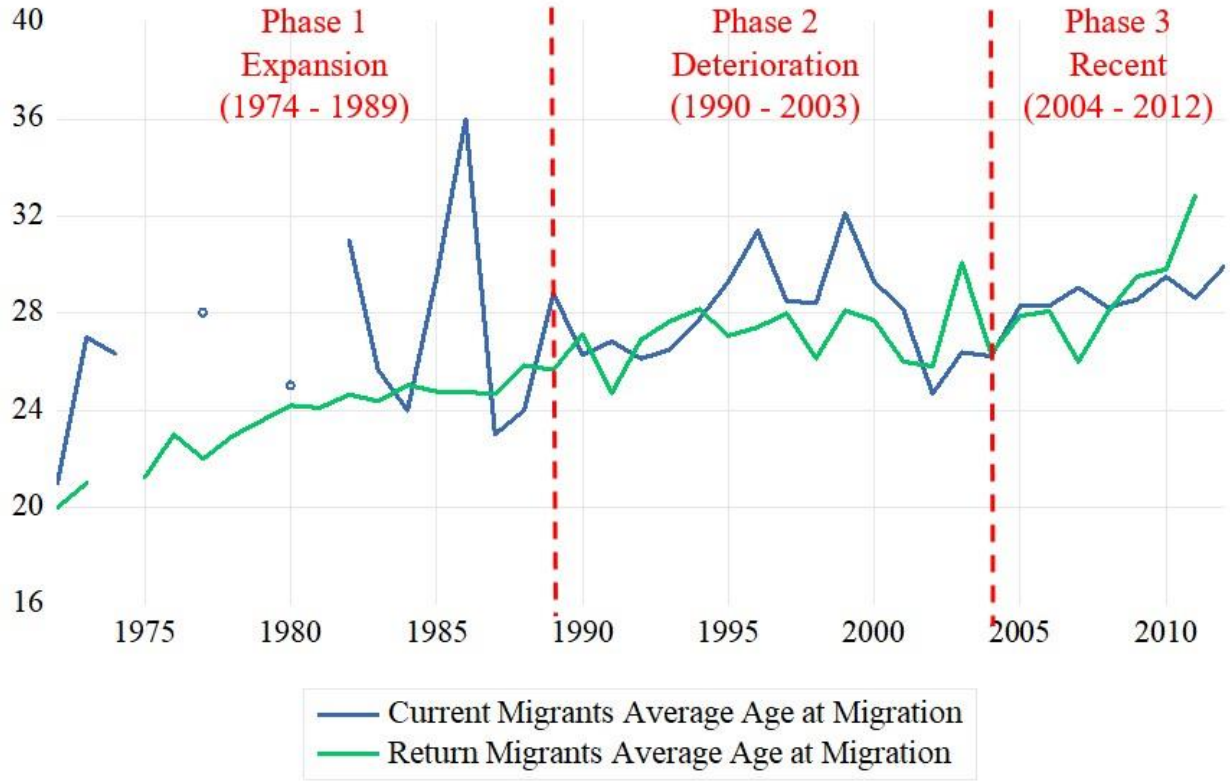

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Figure3: Current and Return Migrants Average Age at Migration over 1974 - 2012
Source: ELMPS, 2012

As for age, figure 3 demonstrates that there is a general upward trend for age at migration among both types of migrants indicating that people are recently choosing to emigrate at an older age than when they migrated in the past. Comparing current migrants and return migrants age at migration, it is clear that most migrants who remain abroad tend to have migrated at an older age than migrants who have eventually returned to Egypt.

4.2 Results: Migration Model

This section covers results of the migration model estimation, highlighting the individual factors that determine a worker‟s decision to migrate. The regression was run using a sample of all respondents within the restricted age limit thus including all migrants and non-migrants.

Table 6: Results Model (2) - Total Migrants' Variable Coefficients over Phases

Variable	**Phase 1: Expansion 1974 - 1989**			**Phase 2: Contraction 1990 - 2003**			**Phase 3: Recent 2004 - 2012**	
	Coeff.	**SE**		**Coeff.**	**SE**		**Coeff.**	**SE**
ß0	-12.25658***	2.043937		-6.458559***	1.371105		-3.595301***	0.933242
Age	1.272817***	0.193426		0.507896***	0.128631		0.222039***	0.083993
Age^2	-0.040714***	0.005797		-0.013768***	0.003876		-0.005654***	0.002410
Age^3	0.000379***	5.44E-05		0.000105***	3.75E-05		3.82E-05***	2.20E-05
Primary	-0.564164***	0.070873		-0.230097***	0.055451		-0.230645***	0.043967
Higher	-0.362897***	0.096087		-0.106042***	0.069974		-0.060109***	0.050271
Urban	-0.399391***	0.074140		-0.263744***	0.059038		-0.381961***	0.047308
Metropolitan	-0.631297***	0.081459		-0.484893***	0.070616		-0.599451***	0.059750
N with Dep=0	2989			5699			9906	
N with Dep=1	521			554			824	

Probit Regression estimates using ELMPS, 2012
Sample: whole sample (migrant and non-migrant) males aging 20-60 years old
(***) indicate significance at 1%, (**) indicate significance at 5%, (*) indicate significance at 10%

Looking at table 6, the age variable estimates indicate a nonlinear relationship between a worker‟s age and his probability of migration across phases. As an individual grows older, their probability to migrate increases but at

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a decreasing rate until reaching a certain age, in the case of phase 3 it is 28 years, after which the probability to migrate decreases as age increases. Such relationship is displayed in figure 4. The resulting age relation is not surprising since, based on the Human Capital theory, migration is viewed as an investment in the future, so a younger person has a longer period over which they can collect the returns to their migration investment (Borjas, 2012; Chi & Voss, 2005). Also, youth, especially at the beginning of their career, are more open to taking risks so they are more accepting of the risks associated with migration if it means getting a chance at a better life (Ghoneim, 2010).

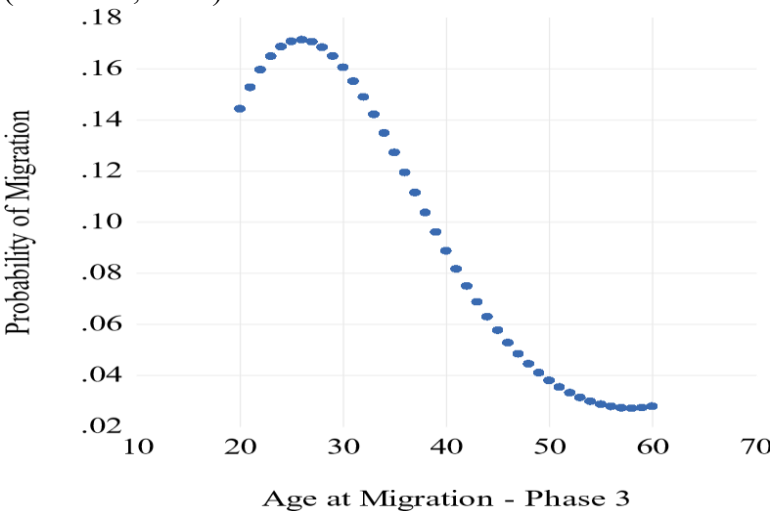

Figure 4: Relationship between probability of migration and age during phase 3

Regarding educational attainment, estimates indicate that, during all phases, workers with a primary education have a consistently lower probability of migrating than those with a secondary education. This can be attributed to the fact that, over several decades, Egyptians have migrated to cover labor shortages in their destination countries and a primary education, in most cases, is not sufficient to fulfill job requirements in industries such as construction, education or healthcare.

However, the probability of migration for a worker with a higher education differs over phases. In the expansion phase (1), workers with a higher education were less likely to migrate than those with a secondary education. This could be because, during the expansion phase, there was an urgent need specifically for technically skilled workers in the Gulf to contribute to building their oil industry. However, in the later phases (2 and 3), the probability of migration for a worker with a higher education is not significantly different from that of one with a secondary education, but both workers with a higher and a secondary education are more likely to migrate than a worker with a primary education. This supports the hypothesis that more educated workers are more likely to migrate than less educated workers.

This stems from the fact that Egypt is a country with relatively low returns to education, specifically higher education, which is made clear by the high unemployment rates present among university graduates in particular. Ghoneim's (2010) and David and Nordman's (2017) studies support these findings attributing them to a mismatch

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between the output higher education offers and what the Egyptian labor market demands. So, more educated workers seek work abroad in order to fully utilize the benefits of their knowledge.

Finally, region estimates indicate that, over all phases, those residing in metropolitan and urban Egypt are less likely to migrate than those living in rural Egypt, supporting the hypothesis that workers living in less developed regions are more likely to migrate than those living in developed regions. Since rural Egypt is less industrialized and less influenced by trade than the rest of Egypt (Zohry, 2007), a worker living in that region has a higher probability of migrating in search of better living conditions than a worker from metropolitan Cairo.

4.3 Results: Return Model

This section covers results of the return model estimation, highlighting the individual factors that determine a worker‟s decision to return, distinguishing between characteristics of migrants who eventually returned and those who remain abroad. The regression was run using a sample of all male respondents within the restricted age limit thus including migrants only.

The estimation was initially run for each phase separately, however output showed no significant distinction in impact of the explanatory variables on the probability of return across phases. The estimation output with the phase distinction is included in Appendix 1.

Table 7: Results Model (3) – Return VS. Current Migrants' Variable Coefficients

Variable	Coeff.	SE
ß0	1.268437***	0.141345
Age	-0.044034***	0.005210
Primary	0.504702***	0.069962
Higher	-0.188767***	0.086813
Urban	0.396896***	0.079167
Metropolitan	0.457026***	0.104686
N with Dep=0	698	
N with Dep=1	1204	

Probit Regression Estimates using ELMPS, 2012

Sample: only migrant (current and return) males aging 20-60 years old

(***) indicate significance at 1%, (**) indicate significance at 5%, (*) indicate significance at 10%

Considering 4.3 Results: Return Model This section covers results of the return model estimation, highlighting the individual factors that determine a worker‟s decision to return, distinguishing between characteristics of

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migrants who eventually returned and those who remain abroad. The regression was run using a sample of all male respondents within the restricted age limit thus including migrants only.

The estimation was initially run for each phase separately, however output showed no significant distinction in impact of the explanatory variables on the probability of return across phases. The estimation output with the phase distinction is included in Appendix 1.

, results show that generally, the older the migrant is at emigration, the less likely they are to return. This can be because workers that decided to emigrate at an old age have already had enough experience in the Egyptian job market and so, given the chance to experience a new market with added benefits, prefer to stay longer abroad. The negative relationship is displayed in Figure 5.

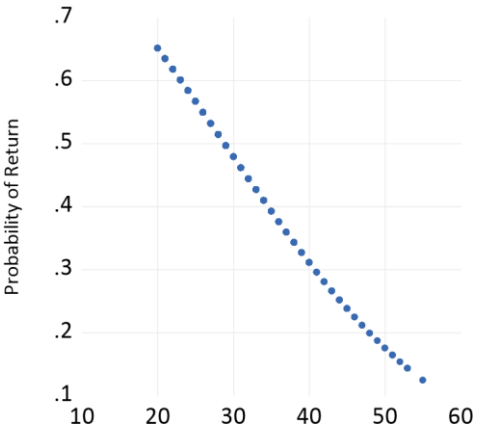

Figure 5: Relationship between probability of return and age during phase 3

Regarding educational attainment, primary education estimates indicate that those with a primary education are more likely to return than those with a secondary education. That is because less educated Egyptian migrants face strong competition from cheaper and more qualified Asian labor so are replaced and forced to return. As for higher education, estimates indicate that migrants with a higher education are less likely to return than those with a secondary education.

Which means that, despite the Secondment policies the Egyptian government adopted guaranteeing migrants with a higher education public jobs upon their return, highly educated migrants are still less likely to return than less educated migrants. Supporting the claim that return migrants tend to be less educated than the average migrant, which can be attributed to the mismatch between the outcomes of the educational system and qualifications required in the Egyptian job market that act as a disincentive for the return of the highly educated (David & Nordman, 2017; Ghoneim, 2010).

As for region, estimates indicate that migrants who used to live in Metropolitan and Urban areas of Egypt before they emigrated are more likely to return than those who lived in Rural Egypt. This can be because metropolitan and urban areas of Egypt are not as poorly endowed as rural areas, so those who used to live in the more developed regions are more likely to return, because they have more possibilities to return to compared to those from Rural Egypt.

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5. Conclusion

This paper tackled international migration analysis from a micro perspective by identifying the individual characteristics that affect each worker‟s decision to migrate and decision to return. It aimed to understand the characteristics that influence individuals‟ probability of migration, then distinguish between the characteristics of those who migrated and eventually returned to Egypt compared to those who still remain abroad. So, also highlighting the characteristics that determine an individual‟s probability of return. The study covered the period 1974 – 2012 which was divided into phases, with the estimates of the migration model run for each phase separately. Thus, noting how the effect of individual characteristics on migration decisions varied across migration phases.

Egyptian migration is mostly temporary; where emigrants are considered „guest workers‟ migrating to fulfill specific purposes. So, the majority return to Egypt after their purpose is complete. Most Egyptian emigrants, both current and return, are married males who migrated alone, in their late 20s, in search of higher wages and better working conditions abroad. The majority of migrants have a secondary education and used to reside in rural areas of Egypt before they migrated. Most Egyptian emigrants have chosen neighboring Arab countries as their destinations, namely Saudi Arabia, Jordan, and Kuwait, due to the distance and language advantages as well as the Gulf‟s need to cover domestic labor shortages.

For all migrants, estimates indicate that migration is a selective process as different individual, family, and community characteristics affect the migration and return decision differently. Regarding age, results indicate that older workers are less likely to migrate than younger workers, however, had they emigrated at an older age, then they are less likely to return. This is explained by the fact that migration is viewed as an investment in the future that younger individuals have more to gain from, but if a worker happened to migrate at an older age after having had more experience in the Egyptian job market, then they prefer to stay longer abroad to experience the new market with its added benefits.

As for educational attainment, there are distinctions between education levels‟ effect over time. Primary education results are similar across phases. Those with a primary education are consistently less likely to migrate and more likely to return than those with a secondary and a higher education. Results for higher education differ over phases of the migration model though. In the earlier phase, those with a higher education were less likely to migrate than those with a secondary education. However, in the more recent phases, those with a higher education are just as likely to migrate as those with a secondary education but, both are more likely to migrate than those with a primary education. As for probability of return, those with a higher education are less likely to return than both, those with a primary and a secondary education. Thus, indicating that, especially in the most recent period, the higher the individual‟s educational attainment, the more likely they are to migrate and the less likely they are to return. This can be attributed to the mismatch between the outcomes of the educational system and the qualifications required in the Egyptian job market that acts as an incentive for the highly educated to seek work abroad and a disincentive for their return.

Regarding region, results indicate that workers residing in less developed areas of Egypt, namely rural
Egypt, are more likely to migrate and less likely to return compared to those living in urban and metropolitan Egypt. The lack of social and economic amenities in rural areas encourages individuals from those regions to pursue better living conditions abroad and discourages their return.

Still, there are some distinctions between emigrants who returned and those who remained abroad. Return migrants tend to have migrated at a younger age compared to current migrants. They are generally less educated, based on the estimated negative relation between educational attainment and probability of return, which explains the smaller share of high educational attainment among returnees. They also used to reside in more developed areas before they emigrated, such as metropolitan Cairo and urban Egypt, which makes them more likely to return compared to those from rural Egypt. There are a number of limitations to the empirical procedures and results that should be taken into consideration. One of the main limitations of the study is the exclusion of some Egyptian emigrants from the sample.

Fully migrating families are not accounted for in the sample because all members of the household are abroad, so no one was present to respond to the survey questions. There is also the issue of illegal migrants who do reside outside of Egypt but are excluded from the sample because there is no record of their movement.

This study opens the door for several aspects of further research. Outcome of the models lead to implications regarding the phenomenon of Brain Drain, which is one of the most hotly debated issues regarding the consequences of migration, referring to the emigration of highly skilled and qualified persons from developing countries to developed countries (Wahba, 2015; Zohry, 2007). Even though it is not the focus of this study, the regression output suggests that Egypt may be suffering from brain drain due to labor migration. Especially during the more recent phase, where it was shown that those with a higher education have a high probability of migration and a low probability of return. Thus, further research could be directed towards reaching a more concrete view regarding brain drain and adding insights to the long-standing debate on its consequences.

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Appendix 1

Return Model with Phase Distinction

This section demonstrates results of the return model estimation with phase distinction, highlighting the individual factors that determine a worker‟s decision to return, differentiating between characteristics of migrants who eventually returned and those who remain abroad.

Results Model (3) – Return VS. Current Migrants' Variable Coefficients over Phases

Variable	Phase 1: Expansion 1974 - 1989		Phase 2: Contraction 1990 - 2003		Phase 3: Recent 2004 – 2012	
	Coeff.	**SE**	**Coeff.**	**SE**	**Coeff.**	**SE**
ß0	3.002069***	0.567672	0.887101***	0.277456	-0.010648***	0.200163
Age	-0.052333***	0.022887	-0.014977***	0.010366	-0.014587***	0.007121
Primary	-0.036995***	0.227342	0.276347***	0.136462	0.186891***	0.107900
Higher	-0.327042***	0.282485	-0.094537***	0.174340	-0.267679**	0.127790
Urban	0.338885***	0.278071	0.450739***	0.156091	0.169932***	0.121297
Metropolitan	-0.370837***	0.242047	0.172476***	0.196504	0.301252***	0.172418
N with Dep=0	30		138		529	
N with Dep=1	491		416		295	

Probit Regression Estimates using ELMPS, 2012
Sample: only migrant (current and return) males aging 20-60 years old
(***) indicate significance at 1%, (**) indicate significance at 5%, (*) indicate significance at 10%