THE CONSTRAINED MOBILITY AND ECONOMIC ACTIVITY OF EGYPTIAN WOMEN

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Abstract

This study shows how Marriage and cultural norms still play a major role in determining the mobility of women and their employment outcome and the interrelationships between the two variables. Marriage still plays a restrictive role on the economic empowerment of Egyptian women. The empowerment of Egyptian women, therefore, needs further investment within the institution of marriage and in the household perspective of the female labor supply.

ملخص

تبين هذه الدراسة كيف أن الزواج والعادات الثقافية لا تزال تلعب دورا رئيسيا في تحديد حركة المرأة ونواتج تشغيلها والعلاقات البينية بين هذين المتغيرين. حيث لا يزال الزواج يلعب دورا تقييديا يحول دون التمكين الاقتصادي للمرأة المصرية، ومن هنا تأتي الحاجة إلى ضرورة الاستثمار بصورة أكبر في مؤسسة الزواج والمنظور الأسري لعمل الإناث.

JEL classification: J16, J21, J61, O15

I. INTRODUCTION

Women empowerment is all about the possession of resources that enable women to make their own choices and enhance their well-being. The possession of these resources is sometimes considered an end in itself and in other cases it is a useful means to achieve other goals in their own lives, or their children's and all members of their household in general. The proven correlation between poverty and disempowerment has given this concept more significance in the recent years. Therefore, identifying the determinants and the constraints to women empowerment has become a recent priority for many countries, especially in the developing world. This significance in the developing world has originated from the degree of gender inequality prevalent in these countries, advocated for by the patriarchal society common in a number of developing countries.

The limited economic activity of Egyptian women, together with the social context of the patriarchal Egyptian society have led to the consequential disappearance of women from the migration context, both internal and international, with very few exceptions. Women and migration in the Egyptian literature has been covered through studying the impact of international migration on the socio-economic circumstances of the wife and the children.[1] Migration of women has taken the form of accompanying someone, whether family or husband. This prevalent situation has, therefore, dictated the migration role of women in the "left behind" context.

On the other side of the World, the international research is currently greatly focused on the feminization of migration. The migration of women in Western societies has proved its important implications for economic development. Oishi (2002) shows that approximately half the international migrants to the OECD countries and non-OECD countries are women, and more women are moving as independent or single migrants, rather than as the wife, mother or daughter of male migrants. Women have recently appeared to be independent migrants either for seeking income for the family being the principal wage-earner to their families, or fleeing conflicts, famine and other situations negatively affecting their livelihoods and security.

On the other hand, Egyptian migration, both internal and international, is highly male dominated. Despite of the gender specific literature on the labor market activity of women, very little has been done on the decision and aspirations to migrate from a gender perspective.

[1] Gender specific studies on internal migration are non-existent.

However, the limited Egyptian literature on the economics of migration has highlighted the positive economic development contribution of the migration of women (Zohry 2007; Assaad 2010).

Women of Egypt face a number of challenges when it comes to migration and economic participation. Forming only a quarter of the labor force, unemployment rates among women are almost four times the rates for men. Along with limited economic activities, the poverty and vulnerability in Egypt have been largely feminized, highly concentrated among the female-headed households (HIECS 2017/18). This vulnerability acts as a limitation on intergenerational social mobility, constraining poor households from achieving higher education for their children and therefore improving their chances of getting jobs. The limited access to the labor market for women has exacerbated this concentration of poverty among females.

This limited access of females to the labor market has been widely researched in Egypt, highlighting a number of different factors, most important of which is the patriarchal society common to most of the MENA region. The restricted mobility of women in Egypt could reflect the traditionality of the patriarchal society having consequential impact on the economic activity of women.

In light of this potential positive economic contribution, this paper aims to identify the observable constraints to women internal mobility in Egypt.[2] Furthermore, whether or not this constrained mobility helps explain the limited economic activity of women in Egypt. It is generally accepted that the role of women in the society, as dictated by culture and tradition, acts as the biggest constraint on the mobility and the economic activity of women.

The paper makes use of the recently released data on the Egyptian Labor Market Panel Survey 2018 (ELMPS18). The survey encompasses rich data modules on migration aspirations, actual migration (both internal and international), education, employment and family formation. Moreover, ELMPS18 provides modules on social perceptions that provide insights into gender roles, gender attitudes and gender discrimination. The nature of the data does not allow for the study of females in international migration,[3] however, the richness of the data

[2] This paper focuses on the internal migration due to the limited country-wide data on women international migrants and therefore their absence in household surveys.

[3] Information on current migrants is gathered by interviewing the family members staying in Egypt. The international migration of women in family context limits the representativeness in the sample and therefore very few information is available that makes it very difficult to draw conclusions.

permits the study of women's internal mobility and economic participation, across the different age groups, different regional governorates and rural-urban areas.

The paper contributes to the available literature on Egyptian women economic empowerment by identifying the social, economic and cultural constraints to internal mobility. More specifically, how the gender attitudes as opposed to the economic circumstances help shape migration decisions for women. Furthermore, whether or not these identified constraints have an effect on the economic activity of women. r

II. LITERATURE REVIEW

International Views on Women Migration

International literature has been more focused on the study of international migration with less attention paid to internal migration. The historical rural-urban movements of people, urbanization and the structural transformation highlight the significance of studying internal migration, especially in developing countries. Few studies, including Lucas (2015) and WEF (2017), have focused on the role of internal migration in shaping the cities, while understanding the drivers, constraints and the consequences of internal migration. For the limited studies exploring internal migration, migrants were studied collectively with minimal, if any, reference to the gender composition of migrants, or gender specific drivers, constraints and consequences. From another perspective, the migration of women, in the international context, and mainly originating from countries with conflicts and wars, has been highlighted in studies examining the impact of this migration on the left behind (Liem, Yeoh, and Toyota 2006; Assaad 2010).

Internal migration in its rural-urban context is a representation of structural transformation to economies with a shift towards industrial and services sector. The move is motivated by the expectation of jobs availability and income premium in the destinations as opposed to the origin areas. Moreover, escaping hardships and moving towards centers where provision of amenities is more stable and more widely spread, appear as other important motives for internal migration (Herrera and Badr 2012).

Evaluating these benefits of migration and motivated by the financial costs on families, women continue to appear in the left-behind context in migration literature, both internal and international. Women also appear through the accompanying role they play in migration with husband or parents (family in general).

The "feminization of migration" correctly refers to the "qualitative characteristics of women migrants, how women move, in what capacity and for what purposes" (Engle 2004). This recent attention to the concept is driven by the increased voluntary and involuntary migration of women escaping poverty, wars, famines and hunger. Moreover, women migration has started to evolve from being related to family reunification to labor migration of low wage earners looking for opportunities in a global labor market. A noticeable characteristic of the feminization of migration is the representation of young, single women. Recent literature has also acknowledged the relatively lower wages of women migrants compared to men. However, women migrants (internal and international) tend to remit more proportion of their earnings and more frequent as compared to men (Le Goff 2016; UN Women 2016). Accordingly, women internal migration appears to be a tool for inclusive economic growth and development.

Women in the Egyptian Migration Context[4]

Assaad (2010) and Elbadawi and Roushdy (2009) show that given the accompanying role of women in migration, they tend to acquire more power in the household decision-making. Moreover, the literature on international migration, and to a lesser extent internal migration, of Egyptians, has elaborated on the role of mobility in facilitating the labor market participation of men (ILO 2019). In this context, the absence of women from the migration process and the constraints on their mobility could expand the causes of the limited economic participation of women.

The absence of Egyptian women from migration literature as well as from the migration process itself comes at a time the international literature is emphasizing the "feminization of migration." In this context, Salih (2011) shows that approximately only 2-5 percent of Egyptian women migration is for economic reasons, while the remaining is for marriage and family reunification reasons. Evidence, however, shows that once women migrate, "women are twice as likely to work than the women who stayed home in Egypt and this is seen as an empowering factor" (Salih 2011). In this context, liberating the movement of women and understanding what constraints exist to the feminization of migration and how this facilitated mobility could enhance the economic activity of women is key to understanding the real economic empowerment of women ensuring their financial autonomy and stronger bargaining power.

[4] The available Egyptian literature on migration from a woman's perspective mainly discusses international migration. Given the main concern of this paper, the constraints on women international mobility also act as constraints on internal mobility. Therefore, the available literature is important in guiding the forthcoming discussion.

Women in the Egyptian Labor Market

Egypt has recorded a female unemployment rate of 19.5[5] (27.8) percent using the standard (broad) definition (Krafft et al. 2019). The considerable difference between the two rates indicates the proportion of women who are neither employed nor actively searching for jobs, discouraged by the unsuccessful searches.[6] In addition to this relatively high unemployment rate, economic participation rate among women is only 25 percent.[7] This is happening in a society where education attainment among women is generally higher than that among men at all levels of schooling. A situation referred to as the "MENA paradox."

This absence of females in the Egyptian labor market stands in a clear contradiction to the government's efforts to empower women socially and economically. Women empowerment efforts have clearly focused on the education of women (access to resources), but have not managed to extend this empowerment to the engagement in the labor market.[8] This labor market empowerment would lead to the financial autonomy of women along with a stronger bargaining power in the household. In other words, it needs to translate into "women's involvement in decision-making processes and impinge upon their sense of self" (Salih 2011).

Understanding the current situation of Egyptian women and focused on improving the status of women, the "National Strategy for the Empowerment of Egyptian Women 2030" was formulated in March 2017 by the National Council of Women. the main vision of the strategy is that "… [b]y 2030, Egyptian women will become active contributors to the achievement of sustainable development in a nation that guarantees their constitutional rights, ensures their full protection, and provides, without discrimination, political, social and economic opportunities to enable them to develop their capacities and achieve their full potential." Accordingly, this strategy is highly focused on responding to the real needs of Egyptian women and realizing their necessary role in achieving the sustainable inclusive economic growth of the country.

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[5] A rate that goes up to 25 percent for the highly educated ones (university and above degree)

[6] Unemployment rate has reached a peak of 40 percent for women aged 25 years, a rate that goes down to 20 percent for women aged 25 to 35 years old.

[7] Women in the Egyptian labor market are mainly concentrated in the service sector. Women are also highly concentrated in the agriculture sector, being the highest absorbing sector for economically active women in Egypt.

[8] This limited participation of women is motivated by general and women-specific limited opportunities in the private sector as well as the relatively smaller number of opportunities in the public sector. Women either queue up for the formal public or private sectors jobs, or resort to work in the informal sector with inappropriate working conditions and low wages. An alternative opportunity is female entrepreneurship with significantly less female entrepreneurs compared to men and are mostly engaged in small-scale home industries. Limited access to finance, information and community support is the main reason for the limited entrepreneurial activities for women.

On its side, the government of Egypt has taken numerous efforts in laying the foundation for gender equality and economic, social and political empowerment of women. This has been achieved by mainstreaming gender equality in the constitution, the laws and regulation as well as in the gender-specific policies. On the other hand, there remain a number of constraints that limit the participation of women on the supply side. The government has highly focused on the demand-side policies facilitating women labor market participation.

The supply side is still highly constrained by a number of factors, directly and indirectly related to the choices of women. Marriage and cultural norms are considered the main social factors explaining the supply side of the limited labor market participation.[9] Social and economic as well as regional and economy-wide variables play a significant role in shaping women's economic participation.

In light of the previous assessment of the available literature, this paper aims to fill a huge gap in the gender literature. This paper studies the factors that hinder or facilitate the mobility of women for economic or family and marriage related reasons. Within this facilitated mobility, how does the decision to move internally shape up women's economic participation. The analysis takes into consideration the socio-economic characteristics of the woman, her parents and her husband (in the case of marriage). Additionally, regional economic indicators are used to reflect on the economic and market potential of the area of residence and how it helps shape up the decision to migrate. Finally, the financial autonomy, the bargaining power and the traditional or egalitarian gender attitudes help explain the economic participation of women alongside the mobility decision.

III. DATA SAMPLE

The data used for the empirical investigation is drawn from the sample of females collected from the 2018 Egyptian Labor Market Panel Survey (ELMPS18). The survey is rich in its modules on current internal and international migrants, migration aspiration as well as return migration. It has been commonly noted, however, the exceptionally low representation of females in the current international migration as well as the return migration. Additionally, the survey's reported proportion of females aspiring migration is as low as 0.83 percent of the total females represented in the sample.

[9] Hendy (2015) and Abdel Fattah (2018) show that marriage is a turning point for the Egyptian women labor market participation.

Table 1 below shows the gender distribution of the different migration related variables in the survey. The observed minimal representation of females in the migration variables in the sample highly reflects the reality with the absence of females from the migration context. Decent representation has only been found with the internal migration, with the majority of the female internal migrants have moved for family related reasons (for marriage or to accompany husband or family). Therefore, the main question studying the mobility of women highly makes use of the internal mobility of women measured by the women reporting having ever moved inside of Egypt.

Table 1. Gender Distribution across Different Migration related Variables

Variable	Males	Females
Internal Migration	2,863	2,234
International Migration	2,810	107
Return Migration	1,628	19
Migration Aspiration	989	164

Source: Author's own calculations using ELMPS18.

With a sample of approximately 25 thousand females, 2,234 of them reported moving inside of Egypt at least once for work, education, family or housing reasons as well as security and fleeing violence. With very small numbers on the different categories, the main dependent variable reflecting on women mobility is a binary variable =1 if the female has ever moved inside of Egypt for any of the above listed reasons, and =0 if she has never moved inside of Egypt.[1]

IV. METHODOLOGY

The primary aim of the current analysis is to study the constraints on women mobility in Egypt and how these constraints could further act as restrictions on the economic participation of Egyptian women. Major theoretical approaches to migration generally focus on the cultural factors and the individual strategies explaining the mobility or immobility of women. A wider approach is needed that aims to explain the mobility decision of women through economic factors as well as the reproductive roles of women along with their hierarchies within the household. Therefore, this paper combines socio-economic variables along with household characteristics and family/marriage related variables to explain the mobility of women and then explains how this mobility affects the economic participation of women.

[1] Missing observations, mainly on the gender related variables, have reduced the full sample to 19,014 females, with 2,124 of them have ever moved inside Egypt.

Both models employ binary dependent variables: Female mobility and economic participation. Given this binary nature of the variables, probit models are used. The first model is a probit model estimating the probability of a women being mobile. This mobility is explained by whether this woman has ever been an internal migrant. Therefore, the model is estimated as:

$$Pr[Mobile=1]= \Phi (Z`\gamma)$$

where $\Phi(.)$ is the Cumulative Density Function (CDF) operator, Z is a vector of discrete and continuous regressors and γ is a vector of unknown parameters.

The second model uses a binary variable to model the economic participation of women. The concern here is not in understanding the sector of participation, but the fact that the woman is actively employed (either in the public sector, private sector, formal or informal, unpaid family work, employer or self-employed), neither unemployed, nor out of the labor force. Accordingly, the model is estimated as:

$$Pr(Economic\ Active=1]= \Phi (X`\beta)$$

where $\Phi(.)$ is the Cumulative Density Function (CDF) operator, X is a vector of discrete and continuous regressors and β is a vector of unknown parameters.

With the economic activity model, it is believed that the determinants of the economic activity of women depend on their marital status. Therefore, it is believed that estimating the model separately for married and unmarried women would be more informative than a pooled model of all women in the sample.[1] Accordingly, a chow test was performed to test for the efficiency of estimating the pooled model, versus the separate models for married and unmarried women.

V. SUMMARY STATISTICS

Given the objective of the paper, two variables are separately used as dependent variables for the two separate models. The first variable (women mobility) is a binary variable capturing whether the female has ever moved inside of Egypt for the purpose of work, education or other family related reasons. The second variable is constructed as a binary variable reflecting whether the female is actively employed or not. At this stage, it is more important to understand

[1] This is motivated by the significance of the marital status in explaining the economic activity of women.

the determinants of women employment in general rather than the employment in specific economic sectors.

The list of independent variables used for both models overlap with respect to the demographic characteristics of the woman. In this aspect, the age, marital status, household wealth, education and geographic location are used as the main identifying demographic variables. However, given the concern of the mobility model, the demographic and economic variables of the woman are represented at the time of migration not the time of the data collection.[1] [2]

Upon selecting the sample and the list of covariates of interest, some descriptive analysis is undertaken. Appendix Tables A1 and A2 provide the definitions and the data summary for the selected variables of interest for the full list of females in the sample and separately for the mobile and non-mobile females (Table A1) and for the actively employed and non-employed females (Table A2). Table 2 below reports the correlation between the different covariates with the women mobility and economic activity.

Table 2. Correlation Coefficients of Women Migration and Women Economic Activity with Selected List of Variables

Variables	Mobile	Economically active
Age	0.05***	0.16***
Married	-0.01	0.02***
WIQ1	-0.06***	-0.02***
WIQ2	-0.07***	-0.04***
WIQ3	-0.002	-0.02***
WIQ4	0.04***	0.01
WIQ5	0.11***	0.08***
No education	-0.07***	-0.03***
Less than secondary	-0.005***	-0.13***
General secondary	0.03	-0.07***
Vocational secondary	0.02***	-0.009
University and above	0.07***	0.24***
Greater Cairo	0.08***	0.06***
Alexandria and Suez	0.14***	0.001
Lower Egypt	-0.01	0.05***
Upper Egypt	-0.1***	-0.06***
Household size	-0.02***	0.009
Financial autonomy	0.04***	0.15***
Number of siblings	0.006***	0.02***
Gender attitude	-0.03***	-0.03***
Log(GDP per capita)	-0.01	0.04***
Female unemployment	0.09***	-0.01

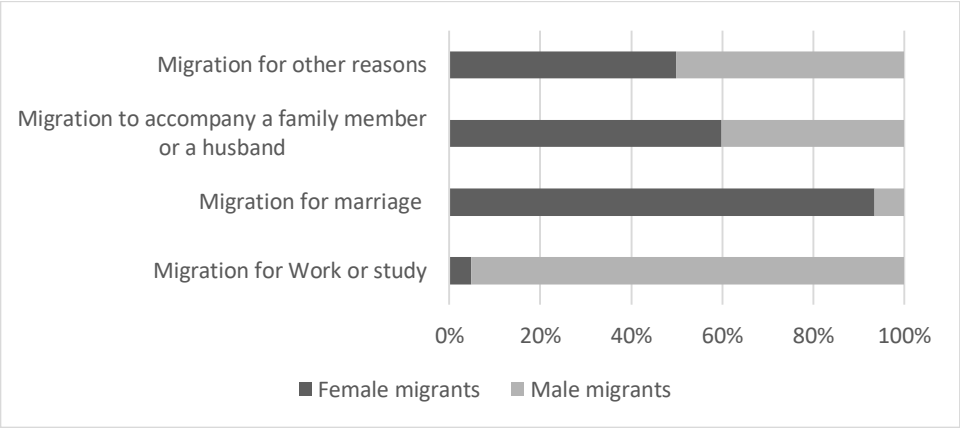
Source: Author's own calculations using ELMPS18.

[1] This identification of the variables at the time of migration happens by comparing the starting date of migration and the date of change in the economic and demographic status of women.

a. The Mobility Model

Egyptian migration, both internal and international, is more common among younger age groups. Therefore, it is believed that the woman's age at migration would significantly impact her mobility. Internal migration of Egyptian women is also common for reasons that are non-economic and rather highly influenced by marriage and family reunification. Looking at the reasons for migration, Figure 1 below shows the distribution of migrants and the primary reason for migration for both men and women.

Figure 1. Reasons for Migration by Gender



Source: Author's own calculations using ELMPS18.

While men mostly migrate for work or study purposes, women migrate for marriage or to accompany a husband or a family member. Further classifying women, it can be reported that among the actively employed women, 85 percent are married.[1] Moreover, active employment is found to be more common among relatively older women. This shows that non-employment is young women's problem, confirming that overall unemployment and inactivity rates being more prevalent among the younger population, both men and women.

The education of a female is a signal of the gender role attitudes of the household where this female has grown. It is believed that education is considered an empowering tool for females and could therefore affect the decision to relocate, in a family or separately. The data, however, shows that uneducated females are the most likely to move. Looking at migrant women, it is noted that at the time of migration they are either uneducated, or have less than secondary degree. When these women were followed through time until the time of the survey, it is found that the women with less than a secondary degree have managed to continue

[1] A percentage that goes up to 89 percent among the non-employed ones.

education, with the highest representation being between the vocational secondary or the university degree holders. This initially reveals the role of education in shaping the mobility of women, which is confirmed with a positive significant correlation of women migration and her education attainment.

The other role of education is shaping the employability of women. Actively employed women are more concentrated among the uneducated and the highly educated and to a lesser extent among the vocational degree holders. This is further confirmed with a positive and significant correlation between the active employability of women and their high level of education.

The current geographic location of the female is a mirror to the degree of culture rigidity that adds to the economic and social constraints on women in general, and on women mobility and active employability in particular. Female mobility shows a negative and significant correlation in the case of Upper Egypt and a positive and significant one in the case of Greater Cairo, which signals culture rigidity. Women are more mobile and actively employed in Greater Cairo as opposed to the more culturally rigid Upper Egypt.

The regional cultural variations and their impact on the mobility outcome of women indicates differences in the characteristics of women by region, as shown initially through the summary statistics presented in Table 3 below. The data shows that regional differences, acting as a proxy for the level of economic infrastructure in addition to the rigidity of the cultural norms, have led to general differences in the characteristics of women.

The women of Upper Egypt are amongst the least educated, the least likely to migrate and the poorest in the wealth distribution. They are also experiencing the least financial autonomy, and with the highest degree of fear from any male member of the family and they do not live in small families.[1] Finally, on the national level, Upper Egypt is doing worse economically, and has the least GDP per capita and the least female participation in the labor force. These characteristics inherently carry the load and the burden of the cultural norms and tradition that shape the life quality of women across the governorates, the most severe of them is Upper Egypt.

[1] The average household size and the number of siblings are the highest compared to the three other regions.

Table 3. Women Mobility Summary Statistics across Regions

Variable	Greater Cairo	Alexandria & Suez	Lower Egypt	Upper Egypt
Internal migration	0.18	0.27	0.11	0.07
Age	42.8	41.27	38	36.6
Married	0.54	0.64	0.7	0.68
Wealth				
WIQ1	0.05	0.06	0.16	0.32
WIQ2	0.05	0.11	0.2	0.26
WIQ3	0.16	0.13	0.23	0.18
WIQ4	0.24	0.32	0.22	0.13
WIQ5	0.49	0.37	0.17	0.1
Education				
No Education	0.23	0.23	0.34	0.43
Less Than Secondary	0.19	0.19	0.15	0.21
General Secondary	0.08	0.05	0.06	0.05
Vocational Secondary	0.2	0.27	0.28	0.2
University and above	0.29	0.24	0.15	0.1
Household Size	3.97	3.9	4.2	4.6
Financial Autonomy	0.71	0.64	0.72	0.54
Number of siblings	4.1	4.28	4.68	5.3
Gender attitude	0.19	0.23	0.24	0.26
Log(GDP per capita)	9.26	9.4	9.54	9.2
Female unemployment	26.1	32.8	22.55	22.8
Female labor force participation rate	23.9	23.8	26.8	20.9
N	1728	1158	7299	8829

Source: Author's own calculations using ELMPS18.

Finally, it is commonly accepted that migration is considered a costly process that requires sufficient financial resources. Therefore, household wealth is expected to affect the migration outcome of both men and women. In this context, women migrants are found to be highly concentrated in the households of the upper wealth distribution. Economically active women are concentrated as well in the upper wealth distribution. This further confirms the negative significant correlation of female mobility and economic activity with the first three wealth quintiles and a positive and significant one with the richest two quintiles in the wealth distribution. This highlights the initial relationship between the household wealth in constraining or facilitating women mobility and economic activity.

Given the lack of retrospective data with regards to asset possession, capturing the wealth profile of the households becomes a difficult task. Given this data absence, the distance travelled during the migration journey (the distance from the origin governorate to the destination one) acts as a proxy for the transaction cost of migration (Todaro 1980; Greenwood,

1969, 1985, 1997; Cadwallader 1992).[1] Therefore, the further the destination is and therefore the larger the distance travelled, the more costly it is and therefore the more the household resources freed up to finance the migration journey.

In addition to the common list of demographic variables, specific regional variables as well as migration and labor market specific variables are added to the model to help explain the migration and economic activity outcomes for women. Among these variables are the household size, the financial autonomy of the woman, the number of siblings and a perceived gender role variable. GDP per capita and the female unemployment rate at the current governorate level are also added to reflect the regional differences. These variables have commonly been identified by the limited existing literature on the 'feminization of migration' and female economic empowerment and are expected to cover the regional economic indicators, the family structure and the perceived gender discrimination at the household. The significant correlations and the data distribution confirm the projected effects of these selected variables on the migration and economic activity outcomes of women.

VI. RESULTS

The previous discussion and the preliminary relationship identified between the different selected variables and the mobility and economic activity outcomes lay the foundation for a further analysis of the econometric relationship between the variables.

1. Egyptian Women Mobility

The existing empirical work highlighted the role of the demographic as well as the migration and regional specific variables in shaping the decision to migrate among Egyptian women. The model is informative of the determinants of the internal migration outcome for women. The estimated results in Appendix Table A.3 are generally in agreement with the hypothesized relationships.

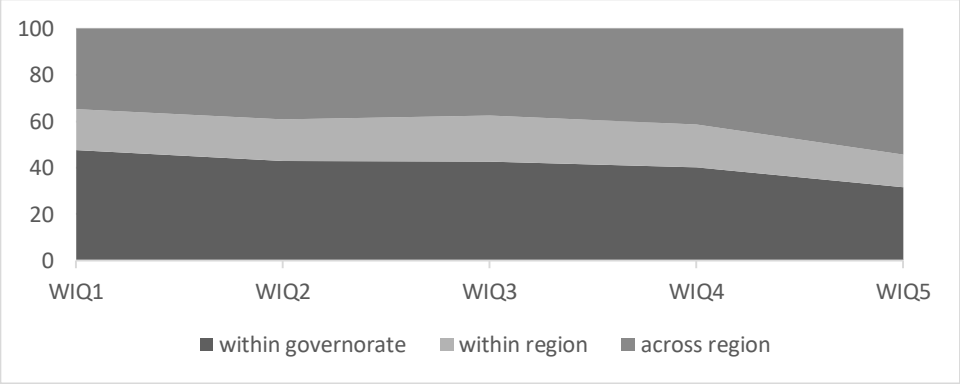
The empirical relationship between the demographic variables, collectively, shows the significance of the demographic characteristics of women in determining their migration outcome. The age of the woman negatively affects her probability of migration. This shows that the migration outcome decreases with age.

[1] The migration literature in that case stresses the relationship between the distance travelled as a proxy for the cost of migration, and the wealth of the households. The distance travelled therefore proxies for the degree of wealth of the household at the time of migration.

The age of women further dictates another phenomenon in Egyptian societies, namely marriage. The higher the age of a woman, the more likely she is to be already married. This declining relationship in the mobility of women with age is also influenced by the marital status. Therefore, the marital status of the woman is believed to largely affect the mobility of women and influence the push factors that differ from those affecting men, as shown in Figure 1 above. Given the significant role of migration for marriage or to accompany a husband in the list of push factors for women, an empirical relationship is confirmed here. The marital status of the woman at the time of migration highly dictates a specific type of mobility: Migration for marriage. The model, however, shows that marriage is found to restrict the mobility of women (for other reasons) by 16 percentage points as compared to the unmarried ones.

The willingness to migrate has to be coupled with the ability to migrate. The ability here is signaled through financial ability. Therefore, mobilization of resources becomes an important prerequisite for migration in Egypt. The move from one place to another necessitates the accumulation of the necessary resources that would allow the realization of migration. Accordingly, a measure of affordability plays a role in defining the mobility outcome of women. As mentioned previously, given the limited data on the household wealth at the time of migration, the common approach followed in the literature of migration is followed here (McCormick and Wahba 2004; Herrera and Badr 2012). The distance travelled is used as a proxy for the transaction cost of migration and is, therefore, expected to be influenced by the wealth of households. Figure 2 below shows the geographical move of migrant women as per the household wealth distribution.

Figure 2. Geography of Migration by Wealth Distribution



Source: Author's own calculations using ELMPS18.

Figure 2 above shows that the households at the lower wealth quintiles more likely move within the same governorate. The wealthier the households, the more likely they are to

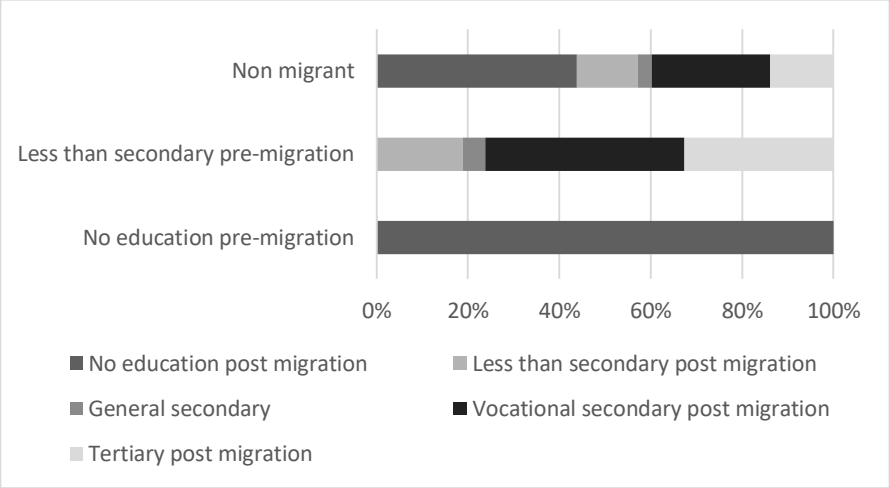
move further to other governorates in other geographical regions.[1] Empirically, the degree of wealth, as proxied by the distance travelled, significantly increases the migration outcome for women by 9 percentage points. This emphasizes the positive correlation between the wealth and the migration outcome.

Moving on to human capital indicators, education is expected to significantly shape the mobility outcome of women. The selected sample shows that all female migrants represented in the model are either showing no education at all at the time of migration, or some level of education that is less than secondary level. In light of this, the model still shows that some education is still better than nothing. Accordingly, having less than secondary degree significantly increases the mobility outcome of women. In addition to this finding, Figure 3 below shows that by looking at the current education level of these women migrants who previously had no education or less than secondary education at the time of migration, it is found that they are more likely to continue and reach higher levels of education, when compared to the education level of the non-migrants. This finding confirms the role of migration of women in improving their own economic outcome.

This is considered one of the initial proofs on the empowering tool of migration (either independent or within family) of women. This comparison between the profile of women migrants to those who have never migrated, it is found that pursuing education among women has shown higher probabilities compared to the non-migrant women. In this sense, the purpose and the nature of migration does not matter, what matters more is the impact of this process on the education outcomes of women.

[1] The main regions are: Greater Cairo, Alexandria and Suez, Lower Egypt and Upper Egypt

Figure 3. Progression of Women Education before and after Migration



Source: Author's own calculations using ELMPS18.

Note: The figure shows on the y-axis the education of women migrants before migration (no education and less than secondary education) as well as the overall education level of non-migrants for comparison purposes. The x-axis shows the education level of migrant women after migration.

The significance of this finding would require further and deeper analysis for the confirmation and the assertion of it. Figures 4 and 5 below show the geographical distribution of female migrants by education level confirming the common findings concluded above. The education distribution of migrant women by region of birth and the current region after the move shows the concentration of illiteracy among women in Upper Egypt. The majority of the currently uneducated women migrants (at the time of the survey) have originated from Upper Egypt. The contrary is the case with the women migrants from Greater Cairo and Alexandria and Suez region. Moreover, the concentration of migrants with current post-secondary education, university and above originate from those two regions. Across this spectrum, there is no much difference in the education of migrant women originating from or migrating to the different regions with middle levels of education (less than secondary and general and vocational secondary).

Figure 4. Education Attainment of Migrant Women at Region of Birth

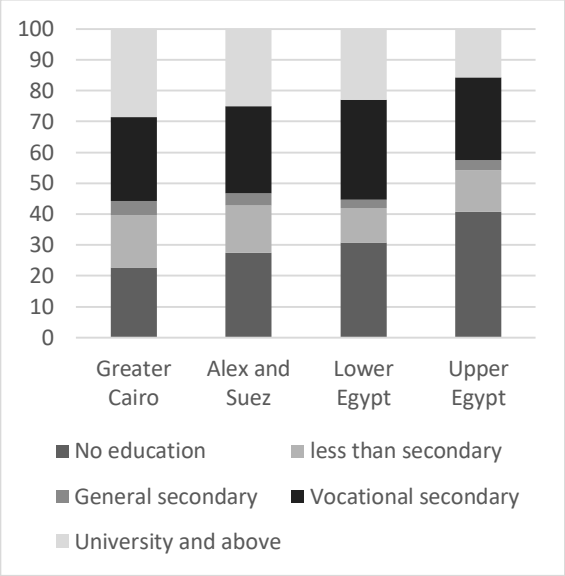
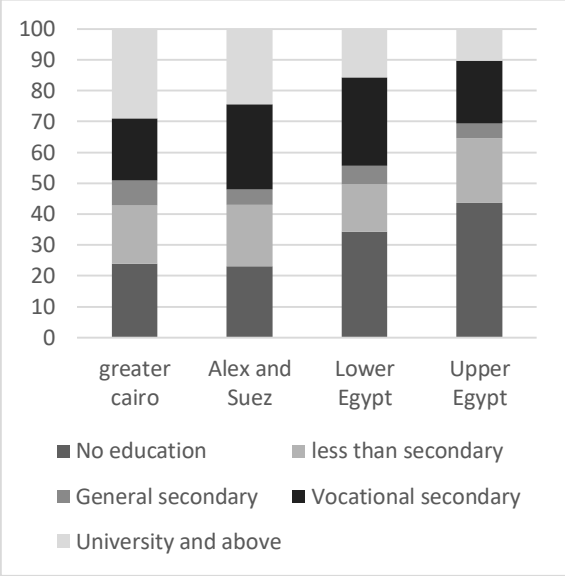


Figure 5. Education Attainment of Migrant Women at Current Region



This relationship emphasizes that it is not only migration that improves the education of women, but the region of origin as opposed to that of destination plays a role in the economic outcome of migrant women—a relationship that is motivated by the cultural differences and rigidity of one area versus another, even within the same country.

In this context, regional differences in the education attainment is signaling regional differences in other characteristics of the females as well. These differences give rise to different constraints across different regions. Egyptian women residing originally in Greater Cairo are significantly more mobile when compared to the other governorates. The migration outcome, however, is at its lowest among women originally residing in Upper Egypt, who are 14 percentage points less likely to migrate, compared to women originally residing in Greater Cairo.

Another influencing factor is the household and family composition measured through the size of the household, which significantly affects the probability of being a migrant. The larger the household, the more likely for the woman to be a migrant. The size of the household in that sense refers to the support system especially with respect to the shared responsibilities inside the household. The larger the number of household members the more left behind members who can cover for her role in the household or with taking care of the parents and the family in her absence.

Moving closer to the factors that are directly related to the woman herself. The financial autonomy of the woman and her psychological power, both significantly but oppositely, affect

the probability of being a migrant. The financial autonomy and the power of having her own savings and using them as she sees fit is reflective of the financial empowerment the female is experiencing. This empowerment increases the probability of the woman to become a migrant by approximately two percentage points.

On the other hand, expressing fear in talking to a male figure in the family (husband, father or brother) is very dis-empowering for women. Expressing this fear reduces their probability of being a migrant by two percentage points. This shows that the empowering environment the woman experiences increases or restrains her mobility with all the other social and economic constraints that come along with it.

Finally, the education and employment outcome of the parents contribute to the migration decision of the woman. The father's education plays no significant role in the migration decision of the woman. On the other hand, the mother's education positively and significantly increases the mobility outcome of women. Women whose mothers have some level of education (less than secondary) or higher levels of education (post-secondary) both increase the probability of their daughter being a migrant by 2 and 3 percentage points, respectively, when compared to the uneducated mother. The focus on two kinds of mothers: the uneducated and the highly educated reflects on two distinct supports the mother provides to her daughter. On the one hand, the uneducated mother would want to support her daughter to live and experience a better life outcome as compared to hers, and therefore may be more encouraging for the migration of her daughter. On the other hand, the educated mother, is empowering for her daughter and believes in the equality of opportunity and would therefore be more open to the migration of her daughter, for as long as this migration is still abiding by the social and cultural norms. This abidance by the social and cultural norms is highlighted through the most common type of migration within this sample: the migration for marriage or in the company of a husband or a family member.

Not only is the education of mothers, but following the definition of empowerment referred to earlier, the use of this education in the economic participation in the labor market is also important. Parents employment, therefore, is another variable that is found to significantly shift the mobility outcome of women. Employment in the public sector for the father and the mother increases the probability of women mobility, with a stronger effect for the employment of the mother (8 percentage points) than the father (4 percentage points).

2. Egyptian Women Economic Activity

Moving on to the second part of the analysis, which is more concerned with the impact the mobility of women has, among other explanatory variables, on their employability. Given the richness of the data pertaining to the variables available for both the husbands and the wives, and the significant role of marriage in defining the economic activity of women, the model is estimated collectively for all women (pooled model), then separately for married and unmarried ones. A Chow test[1] of structural difference confirms that significant differences exist between the economic activity of the married versus the unmarried women.[1]

The basic model estimated and presented in Table A.4 relies on the woman's own characteristics along with her parents and her respective current governorate to identify the determinants of the employability. Common variables identifying the women employability among the married and unmarried ones include higher levels of education, mother's higher levels of education and labor market status, the woman's own gender attitude (as more traditional or more egalitarian) and the reduced income of the household.

At the level of the economy, both the GDP per capita and the female unemployment rates at the governorate level significantly determine the employability of both married and unmarried women. All the previously named variables positively contribute to the female employability whether married or not, except for two variables: the mother's higher levels of education and the regional level female unemployment rates both negatively affect the employability of married and unmarried women.

In addition to common variables, a list of distinct variables shifts the employability of married women and differs from the unique ones for the unmarried ones. For the married women, belonging to the lowest wealth quintile and the fourth wealth quintiles significantly improves the married women's employability. Judging by the wealth of the household, the women belonging to the poorest households are 4 percentage points more likely to be employed; this represents a work out of need. It could be that these women are the sole earners of the household, shedding light on the feminization of poverty. It could also refer to the economic need for an added income to the household and therefore the woman is encouraged to have a job. Belonging to the fourth wealth quintile improves the economic participation of

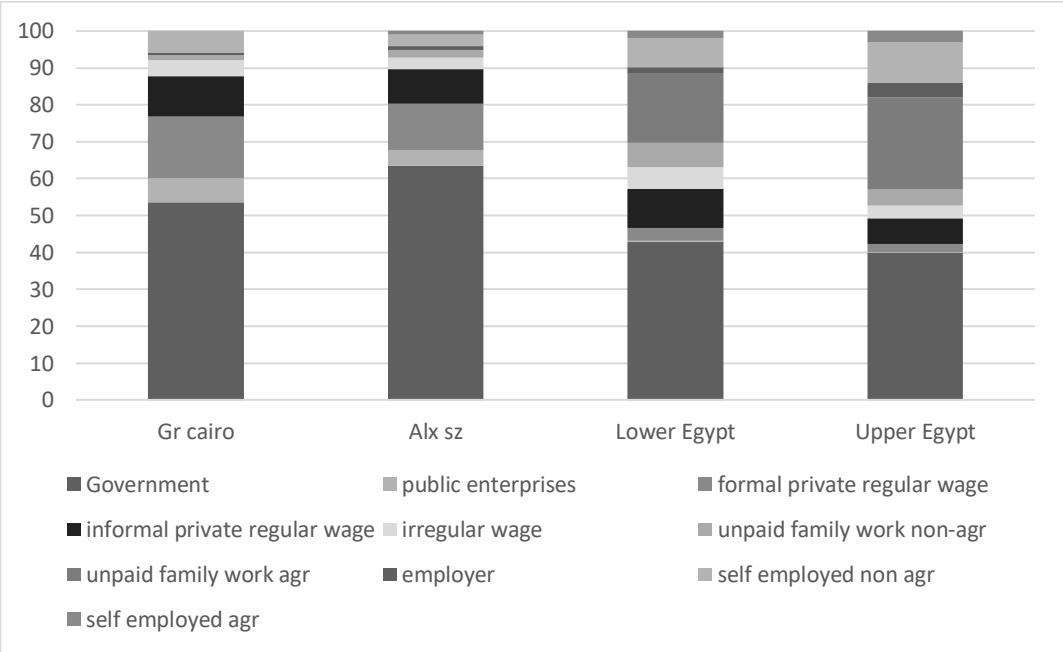
[1] The Chow test with a critical value of 4.19 rejects at the 1 percent significance level, the null hypothesis of using a pooled model to estimate the relationship.

[1] Appendix Table A.4 shows the estimated results of the three models (pooled, married and unmarried).

married women by 2 percentage points. This refers to an added worker effect, where possibly the household is not wealthy enough to sacrifice the added income of the active women members of the household. It can also reflect the career orientation of women and their beliefs in the women's independence, which starts by having an own job where she gets to witness a different level of commitments and responsibilities and enjoy her own income.

Living in lower Egypt or upper Egypt governorates increases the employability of women by 8 and 7 percentage points, respectively. Figure 6 below shows the economic sectors' distribution of the economically active married women by region of residence. Apart from the public sector which absorbs most of the employed married women across the governorates, unpaid family work in the agricultural sector appears to be more unique to lower and upper Egypt, absorbing approximately a quarter of employed women. It is the existence of these sectors that has permitted women in these two regions specifically to attach themselves with some kind of employment. This highlights the significance of household agricultural activity in absorbing most of the married women activities in the lower Egypt and upper Egypt regions.

Figure 6. Economic Sector of Economically Active Married Women by Region



Source: Author's own calculations using ELMPS18.

Parents' employment significantly increases the employability among married women. This refers to the role of parents economic activity in shaping up the beliefs and actions of the daughter, even after getting married and transitioning into independent adulthood. Furthermore, and focusing primarily on the household role of women, the number of hours spent on household chores significantly decreases the probability of employability among

married women. This highlights the role of the household chores and the engagement in the care activities at the household level in a way that reduces the economic participation of married women.

Finally, the reduced income of the household positively impacts the economic participation of married women. This reduced income acts as a shock to the household resulting from the economic reforms and the devaluation of the currency leading to a drop in the real value of wages at the country level. This has positively impacted the employability of married women in an attempt to add nominal wages to the household in an attempt to preserve back the real value of the household income.

The economic participation of unmarried women is affected by the same common variables identified earlier, in addition to few distinct ones. The most significant of these distinct variables is the mobility outcome of the woman. Being an internal migrant, in other words being a mobile woman significantly improves the employability of unmarried women, without playing a similar role for the married ones. This highlights the significance of the mobility in the employability of women, in a way that is masked by the cultural norms accompanying marriage in a patriarchal society.

Given that role marriage has in determining the employability of women, as well as in mediating the impact of migration on the employability, then the characteristics of the husband, especially in the context of determining the employability of his respective wife is worth studying.

Most of the wife's own characteristics used to determine her economic participation still hold after adding the respective husband's characteristics. Looking specifically at the husband's characteristics, a negative significant impact of the spousal age difference in economic participation is observed. Regardless of the age at marriage, the wider the age gap between the husband and wife, the less likely for the wife to be employed. Planning to have a new child in three years' time significantly reduces the employability of women today.

Looking at the characteristics of the husband, the higher the education level of the husband, the lower is the economic participation of women, however, the employment status (especially in the public sector or as an employer or self-employed) positively impacts the employability of the respective wives.

Finally, the more egalitarian (non-traditional) the husband is, the more likely it is for his wife to be employed. Additionally, and further exploring the role of migration, it can be

concluded that women migration did not significantly determine the economic participation of married women. However, holding for the respective husband's characteristics, migration seems to reduce the employability of wives. Therefore, migrating to accompany a non-traditional husband, who is educated and employed in the public sector or as an employer restricts the employability of the wife.

VII. CONCLUSION

The models explored above highlight a number of features as they pertain to Egyptian women with regards to their mobility and employability. Marriage and cultural norms still play a major role in determining the mobility of women and her employment outcome and the interrelationships between the two variables. Marriage still plays a restrictive role on the economic empowerment of Egyptian women. The empowerment of Egyptian women, therefore, needs further investment within the institution of marriage and in the household perspective of the female labor supply.

Finally, migration is potentially an empowering enterprise that gives women access to new resources or symbolic capital, notably, by providing women with jobs in the labor market, whether informal or formal, by exposing them to new lifestyles or, in the case of women left behind, by providing them with greater decision-making power within households.

More household specific data within the context of marriage is therefore needed to understand the gender selectivity in migration and economic participation focusing on the real bargaining power of women and the hierarchies within the household along with the reproductive role of women.

Appendix

Table A1. Women mobility variables definition and summary statistics

Variable		Description	Full sample	Migrant	Non-migrant
			Mean (st. deviation)	Mean (st. deviation)	Mean (st. deviation)
Mobility		=1 if the woman has ever moved inside or outside of Egypt, =0 otherwise	0.19		
Age		A continuous variable reflecting the current age of women	40.35 (17.97)	22.35 (8.58)	44.6 (16.9)
Married		=1 if the female is married, =0 if the female has either never been married, or is currently divorced or widowed	0.74	0.66	0.76
Region					
	Greater Cairo	=1 if the female is currently living in Greater Cairo, =0 otherwise	0.07	0.19	0.04
	Alexandria and Suez	=1 if the female is currently living in Alexandria or Suez, =0 otherwise	0.04	0.09	0.03
	Lower Egypt	=1 if the female is currently living in Lower Egypt, =0 otherwise	0.36	0.39	0.36
	Upper Egypt	=1 if the female is currently living in Upper Egypt, =0 otherwise	0.51	0.32	0.55
Education					
	No Education	=1 if the female has no education, =0 otherwise	0.67	0.32	0.76
	Less Than Secondary	=1 if the female has less than secondary degree, =0 otherwise	0.32	0.68	0.24
	General Secondary	=1 if the female has general secondary degree, =0 otherwise	0	0	0
	Vocational Secondary	=1 if the female has vocational secondary degree, =0 otherwise	0	0	0
	Post-Secondary	=1 if the female has post-secondary degree, =0 otherwise	0	0	0
	University and above	=1 if the female has a university degree or above, =0 otherwise	0	0	0
Household Size		A continuous variable reflecting on the number of people currently living in the female's household	4.15 (2.13)	4.05 (1.8)	4.17 (2.2)
Older siblings		A continuous variable reflecting on the number of older female siblings	1.08 (1.26)	1.1 (1.2)	1.08 (1.26)
Father Education					
	No education	=1 if the female's father has no education, =0 otherwise	0.86	0.67	0.9
	Less than secondary	=1 if the female's father has less than secondary degree, =0 otherwise	0.06	0.12	0.05
	Secondary and post-secondary	=1 if the female's father has a secondary or post-secondary degree, =0 otherwise	0.05	0.15	0.03
	University	=1 if the female's father has a university degree, =0 otherwise	0.01	0.05	0.006
Father employment					
	Public sector	=1 if the female's father is employed in the public sector or the government, =0 otherwise	0.19	0.37	0.15
	Private formal sector	=1 if the female's father is employed in the private formal sector, =0 otherwise	0.004	0.001	0.005
	Private informal sector	=1 if the female's father is employed in the private informal sector, =0 otherwise	0.14	0.13	0.15

	Unpaid family work	=1 if the female's father is an unpaid family worker, =0 otherwise	0.3	0.18	0.32
	Employer/ self-employed	=1 if the female's father is an employer or is self-employed, =0 otherwise	0.29	0.26	0.29
	Unemployed	=1 if the female's father is unemployed, =0 otherwise	0.017	0.008	0.02
	Out of the labor force	=1 if the female's father is out of the labor force, =0 otherwise	0.04	0.03	0.05
Mother Education					
	No education	=1 if the female' mother has no education, =0 otherwise	0.91	0.75	0.95
	Less than secondary	=1 if the female' mother has less than secondary degree, =0 otherwise	0.05	0.11	0.03
	Secondary	=1 if the female' mother has secondary degree, =0 otherwise	0.009	0.02	0.006
	post-secondary	=1 if the female' mother has post-secondary degree, =0 otherwise	0.02	0.08	0.007
	University	=1 if the female' mother has university degree, =0 otherwise	0.004	0.01	0.001
Mother employment					
	Public sector	=1 if the female's mother is employed in the public sector or the government, =0 otherwise	0.01	0.05	0.004
	Private formal sector	=1 if the female's mother is employed in the private formal sector, =0 otherwise	0.01	0.01	0.01
	Private informal sector	=1 if the female's mother is employed in the private informal sector, =0 otherwise	0.02	0.01	0.02
	Unpaid family work	=1 if the female's mother is an unpaid family worker, =0 otherwise	0.06	0.03	0.07
	Employer/ self-employed	=1 if the female's mother is an employer or is self-employed, =0 otherwise	0.01	0.01	0.01
	No job	=1 if the female's mother is unemployed or out of the labor force, =0 otherwise	0.87	0.87	0.88
Gender attitude		=1 if the female thinks that when jobs are scarce the priority should go to males, =0 otherwise	0.93	0.9	0.93
Siblings abroad		=1 if the woman has any siblings living abroad, =0 otherwise	0.05	0.05	0.05
Migration cost 1		=1 if the female belongs to a household incurring lowest cost of migration if any, =0 otherwise	0.58	0.43	0.62
Migration cost 2		=1 if the female belongs to a household incurring middle cost of migration, =0 otherwise	0.20	0.2	0.2
Migration cost 3		=1 if the female belongs to a household incurring highest cost of migration, =0 otherwise	0.21	0.36	0.17
N			9335	1783	7552

Notes to Table A1: Standard deviations are reported in brackets for the non-binary variables in the data-set.

Table A2. Women economic activity variables definition and summary statistics

Variable	Description	Full sample	Active	Inactive
		Mean	Mean	Mean
Employability	=1 if the woman is employed, neither unemployed, nor out of the labor force	0.18		
Age	A continuous variable reflecting the current age of women	41.2 (16.2)	40.9 (11.42)	36.7 (12.6)
Married	=1 if the female is married, =0 if the female has either never been married, or is currently divorced or widowed	0.82	0.85	0.89
Wealth				
WIQ1	=1 if the female's household belongs to the lowest wealth quintile, =0 otherwise	0.22	0.19	0.21
WIQ2	=1 if the female's household belongs to the second wealth quintile, =0 otherwise	0.21	0.17	0.22
WIQ3	=1 if the female's household belongs to the third wealth quintile, =0 otherwise	0.19	0.17	0.2
WIQ4	=1 if the female's household belongs to the fourth wealth quintile, =0 otherwise	0.19	0.21	0.19
WIQ5	=1 if the female's household belongs to the highest wealth quintile, =0 otherwise	0.17	0.25	0.16
Education				
No Education	=1 if the female has no education, =0 otherwise	0.42	0.32	0.38
Less Than Secondary	=1 if the female has less than secondary degree, =0 otherwise	0.13	0.06	0.15
General Secondary	=1 if the female has general secondary degree, =0 otherwise	0.03	0.01	0.03
Vocational Secondary	=1 if the female has vocational secondary degree, =0 otherwise	0.26	0.26	0.29
University and above	=1 if the female has a university degree or above, =0 otherwise	0.15	0.33	0.12
Region				
Greater Cairo	=1 if the female is currently living in Greater Cairo, =0 otherwise	0.08	0.07	0.07
Alexandria and Suez	=1 if the female is currently living in Alexandria or Suez, =0 otherwise	0.06	0.05	0.06
Lower Egypt	=1 if the female is currently living in Lower Egypt, =0 otherwise	0.4	0.46	0.39
Upper Egypt	=1 if the female is currently living in Upper Egypt, =0 otherwise	0.46	0.41	0.48
Household Size	A continuous variable reflecting on the number of people currently living in the female's household	4.14 (1.95)	4.45 (1.99)	4.2 (1.8)
Number of Sisters	A continuous variable reflecting on the number of female siblings	2.25 (1.75)	2.3 (1.65)	2.31 (1.79)
Afraid to disagree	=1 if the female is ever scared to disagree with any male in the family, =0 otherwise	0.24	0.22	0.25
Log(GDP per capita)	The log of the GDP per capita of the current governorate where the female resides	9.38 (0.39)	9.42 (0.42)	9.37 (0.38)
Female unemployment	The female unemployment rate prevalent in the current governorate where the female resides	23.5 (6.83)	23.07 (6.4)	23.55 (6.9)
Father Education				
No education	=1 if the female's father has no education, =0 otherwise	0.75	0.68	0.75
Less than secondary	=1 if the female's father has less than secondary degree, =0 otherwise	0.09	0.1	0.1
Secondary and post-secondary	=1 if the female's father has a secondary or post-secondary degree, =0 otherwise	0.11	0.14	0.11

University	=1 if the female's father has a university degree, =0 otherwise	0.03	0.07	0.03
Father employment				
Public sector	=1 if the female's father is employed in the public sector or the government, =0 otherwise	0.27	0.34	0.27
Private formal sector	=1 if the female's father is employed in the private formal sector, =0 otherwise	0.004	0.004	0.004
Private informal sector	=1 if the female's father is employed in the private informal sector, =0 otherwise	0.13	0.13	0.14
Unpaid family work	=1 if the female's father is an unpaid family worker, =0 otherwise	0.25	0.18	0.26
Employer/ self-employed	=1 if the female's father is an employer or is self-employed, =0 otherwise	0.27	0.28	0.26
Unemployed	=1 if the female's father is unemployed, =0 otherwise	0.015	0.01	0.01
Out of the labor force	=1 if the female's father is out of the labor force, =0 otherwise	0.04	0.04	0.04
Mother Education				
No education	=1 if the female' mother has no education, =0 otherwise	0.82	0.75	0.82
Less than secondary	=1 if the female' mother has less than secondary degree, =0 otherwise	0.08	0.1	0.08
Secondary	=1 if the female' mother has secondary degree, =0 otherwise	0.02	0.02	0.02
post-secondary	=1 if the female' mother has post-secondary degree, =0 otherwise	0.06	0.08	0.06
University	=1 if the female' mother has university degree, =0 otherwise	0.01	0.03	0.01
Mother employment				
Public sector	=1 if the female's mother is employed in the public sector or the government, =0 otherwise	0.03	0.07	0.03
Private formal sector	=1 if the female's mother is employed in the private formal sector, =0 otherwise	0.01	0.02	0.009
Private informal sector	=1 if the female's mother is employed in the private informal sector, =0 otherwise	0.01	0.03	0.01
Unpaid family work	=1 if the female's mother is an unpaid family worker, =0 otherwise	0.05	0.09	0.04
Employer/ self-employed	=1 if the female's mother is an employer or is self-employed, =0 otherwise	0.01	0.02	0.01
No job	=1 if the female's mother is unemployed or out of the labor force, =0 otherwise	0.87	0.76	0.89
Attitude index	An index showing how egalitarian or traditional the female is	0.18 (0.83)	0.51 (0.75)	0.14 (0.81)
Savings	=1 if the household has savings, =0 otherwise	0.09	0.13	0.08
Worry about food	=1 if the female is worried about the food security of the household, =0 otherwise	0.17	0.13	0.18
Income reduced	=1 if the household's income has been reduced, =0 otherwise	0.13	0.12	0.13
Household chores	A continuous variable reflecting on the number of hours the female spends on household chores	5.56 (3.7)	5.93 (3.55)	6.03 (3.56)
Population density	The log of the number of individuals per squared kilometers in the governorate where the female resides	7.8 (0.98)	7.77 (1.0)	7.77 (0.94)
Work establishments	The log of the number of work establishments in the governorate where the female resides	10.49 (0.46)	10.49 (0.45)	10.48 (0.46)
Migrant	=1 if the female has ever moved inside Egypt, =0 otherwise	0.13	0.14	0.12
N		13544	2453	11091
Husband related variables for married women in a couple				

Age at first marriage	A continuous variable representing the age of the women at the first marriage	20.97 (4.87)	22.05 (5.3)	20.77 (4.7)
Spousal age difference	A continuous variable representing the age difference between the husband and wife	6.21 (4.9)	5.69 (5.02)	6.3 (4.87)
New child in 3 years	=1 if the couple plan to have a new baby in three years' time	0.72	0.56	0.75
Husband education				
No Education	=1 if the female' husband has no education, =0 otherwise	0.24	0.21	0.25
Less Than Secondary	=1 if the female' husband has less than secondary degree, =0 otherwise	0.13	0.11	0.13
General Secondary	=1 if the female' husband has secondary degree, =0 otherwise	0.02	0.02	0.02
Vocational Secondary	=1 if the female' husband has post-secondary degree, =0 otherwise	0.39	0.3	0.41
University and above	=1 if the female' husband has university degree, =0 otherwise	0.2	0.34	0.18
Husband employment				
Public sector	=1 if the female's husband is employed in the public sector or the government, =0 otherwise	0.21	0.37	0.18
Private formal sector	=1 if the female's husband is employed in the private formal sector, =0 otherwise	0.1	0.1	0.1
Private informal sector	=1 if the female's husband is employed in the private informal sector, =0 otherwise	0.43	0.23	0.47
Unpaid family work	=1 if the female's husband is an unpaid family worker, =0 otherwise	0.1	0.09	0.01
Employer/ self-employed	=1 if the female's husband is an employer or is self-employed, =0 otherwise	0.2	0.25	0.19
Unemployed	=1 if the female's husband is unemployed, =0 otherwise	0.01	0.01	0.018
Out of the labor force	=1 if the female's husband is out of the labor force, =0 otherwise	0.03	0.02	0.03
Gender attitude	An index showing how egalitarian or traditional the husband is	2.58	3.19	2.46
Household chores	A continuous variable reflecting on the number of hours the female spends on household chores	0.5 (1.3)	0.54	0.54
N		9106	1469	7627

Notes to Table A2: Standard deviations are reported in brackets for the non-binary variables in the data-set.

Table A3. The probit model of women mobility

Variable	Coefficient (St. error)	Marginal effects
Constant	3.05 (0.18)	
Age at migration	-0.08*** (0.0052)	-0.008*** (0.0003)
Married at migration	-1.15*** (0.06)	-0.18*** (0.01)
Region of origin		
Alexandria and Suez	-0.37*** (0.1)	-0.02*** (0.006)
Lower Egypt	-0.8*** (0.07)	-0.07*** (0.007)
Upper Egypt	-1.2*** (0.08)	-0.14*** (0.01)
Education at migration		
Less than secondary	0.36*** (0.04)	0.04*** (0.006)
Older sisters	0.007 (0.01)	0.0007 (0.001)
Household size	0.04*** (0.01)	0.004*** (0.001)
Father education		
Less than secondary	-0.02 (0.07)	-0.002 (0.007)
Secondary and post-secondary	0.06 (0.08)	0.006 (0.009)
University and above	0.17 (0.15)	0.02 (0.02)
Father employment		
Public sector	0.34*** (0.11)	0.04** (0.016)
Private formal	-0.7 (0.56)	-0.04*** (0.01)
Private informal	-0.03 (0.11)	-0.003 (0.01)
Unpaid family work	-0.05 (0.11)	-0.005 (0.01)
Employer/ self employed	0.15 (0.11)	0.01 (0.01)
Unemployed	-0.08 (0.23)	-0.007 (0.02)
Mother education		
Less than secondary	0.2** (0.08)	0.02** (0.01)
Secondary	-0.18 (0.16)	-0.01 (0.01)
Post-secondary	0.28** (0.12)	0.03* (0.02)
University and above	0.43 (0.29)	0.06 (0.05)
Mother employment		
Public sector	0.55** (0.16)	0.08** (0.03)
Private formal	-0.36** (0.17)	-0.02*** (0.009)

Private informal	-0.57***	-0.03***
	(0.18)	(0.007)
Unpaid family work	-0.29***	-0.02***
	(0.09)	(0.006)
Employer/ self employed	-0.2	-0.01
	(0.17)	(0.01)
Gender attitude	-0.1***	-0.01
	(0.07)	(0.008)
Siblings abroad	0.06	0.006
	(0.09)	(0.01)
Migration cost 2	-0.047	-0.004
	(0.05)	(0.005)
Migration cost 3	0.08*	0.009*
	(0.05)	(0.005)
N	9335	15,360
LR Chi2	Chi(30)=4426.51***	

Table A.4. The standard probit results of women Employability for the pooled sample and by marital status

Variable	Pooled model	Married	Unmarried
Constant	-6.08	-6.1	-6.34
	(0.67)	(0.72)	(1.98)
Age	0.098***	0.11***	0.007
	(0.008)	(0.009)	(0.02)
Age-squared	-0.0009***	-0.001***	0.00001
	(0.00009)	(0.0001)	(0.0002)
WIQ1	0.2***	0.19***	0.2
	(0.04)	(0.05)	(0.12)
WIQ2	0.07	0.06	0.13
	(0.04)	(0.05)	(0.12)
WIQ4	0.08**	0.1**	0.07
	(0.04)	(0.05)	(0.13)
WIQ5	-0.03	0.01	-0.26*
	(0.05)	(0.05)	(0.15)
Less Than Secondary	-0.06	-0.06	-0.15
	(0.05)	(0.05)	(0.15)
General Secondary	0.04	0.02	0.15
	(0.09)	(0.1)	(0.27)
Vocational Secondary	0.21***	0.17***	0.62***
	(0.04)	(0.04)	(0.12)
University and above	0.88***	0.86***	1.14***
	(0.05)	(0.05)	(0.16)
Alexandria and Suez	0.16	0.14	0.21
	(0.1)	(0.11)	(0.28)
Lower Egypt	0.33***	0.37***	0.25
	(0.09)	(0.1)	(0.25)
Upper Egypt	0.29***	0.33***	0.14
	(0.08)	(0.09)	(0.22)
Sisters	0.01	0.003	0.04**
	(0.007)	(0.008)	(0.02)
Household Size	0.04***	0.04***	0.02
	(0.008)	(0.008)	(0.02)
Father Education			
Less than secondary	0.004	-0.02	0.16
	(0.05)	(0.05)	(0.14)
Secondary and post secondary	0.08	0.02	0.32**
	(0.05)	(0.06)	(0.16)
University and above	0.1	0.04	0.6**
	(0.08)	(0.09)	(0.3)
Father employment			
Public sector	0.02	0.16*	-0.24
	(0.07)	(0.08)	(0.16)
Private formal	0.13	0.29	-0.38
	(0.21)	(0.23)	(0.66)
Private informal	0.01	0.12	-0.08
	(0.07)	(0.09)	(0.17)
Unpaid family work	-0.06	0.06	-0.16
	(0.07)	(0.08)	(0.16)
Employer/ self employed	0.05	0.17**	-0.09
	(0.07)	(0.08)	(0.15)
Unemployed	-0.25*	-0.08	-0.98**
	(0.14)	(0.15)	(0.39)
Mother education			
Less than secondary	-0.01	-0.02	-0.01

	(0.05)	(0.05)	(0.15)
Secondary	-0.24**	-0.15	-1.01***
	(0.1)	(0.1)	(0.39)
Post-secondary	-0.27***	-0.19**	-1.11***
	(0.08)	(0.08)	(0.3)
University and above	0.04	0.09	-0.47
	(0.13)	(0.13)	(0.45)
Mother employment			
Public sector	0.41***	0.38***	0.6*
	(0.08)	(0.08)	(0.32)
Private formal	0.65***	0.7***	0.42
	(0.11)	(0.12)	(0.38)
Private informal	0.86***	0.96***	0.19
	(0.09)	(0.1)	(0.29)
Unpaid family work	0.67***	0.68***	0.5***
	(0.05)	(0.06)	(0.18)
Employer/ self employed	0.6***	0.59***	0.66
	(0.11)	(0.11)	(0.51)
Gender attitude	0.27***	0.26***	0.35***
	(0.02)	(0.02)	(0.05)
Savings	0.3***	0.36***	0.1
	(0.04)	(0.05)	(0.14)
Worry about food	-0.13***	-0.1***	-0.1
	(0.04)	(0.04)	(0.11)
Household reduced income	0.08**	0.08*	0.06
	(0.04)	(0.04)	(0.12)
Hours on chores	-0.005	-0.007	0.009
	(0.004)	(0.004)	(0.01)
Female unemployment	-0.006***	-0.007***	0.0004
	(0.002)	(0.002)	(0.006)
Population density	0.04*	0.04	0.05
	(0.02)	(0.02)	(0.06)
Work establishments	0.02	0.002	0.19*
	(0.04)	(0.04)	(0.11)
Afraid to disagree	-0.03	-0.03	0.02
	(0.03)	(0.03)	(0.1)
Log(GDP per capita)	0.16***	0.14***	0.21*
	(0.04)	(0.04)	(0.11)
Female migrant	-0.14	-0.05	0.3***
	(0.04)	(0.04)	(0.11)
N	13,544	12,000	1,532
LR Chi2	-5482.75	-4702.4231	-706.2

Table A.5. Marginal effects of the married and the unmarried women

Variable	Unmarried	Married
Age	0.002	0.02***
	(0.005)	(0.002)
Age-squared	3.91 x10^{-6}	-0.0002***
	(0.00006)	(0.00002)
WIQ1	0.05	0.04***
	(0.03)	(0.01)
WIQ2	0.03	0.01
	(0.03)	(0.01)
WIQ4	0.02	0.02**
	(0.03)	(0.01)
WIQ5	-0.06*	0.003
	(0.03)	(0.01)
Less than secondary	-0.04	-0.01
	(0.03)	(0.01)
General secondary	0.04	0.004
	(0.08)	(0.02)
Vocational secondary	0.2***	0.03***
	(0.04)	(0.01)
University and above	0.4***	0.24***
	(0.06)	(0.01)
Alexandria and Suez	0.06	0.03
	(0.09)	(0.02)
Lower Egypt	0.07	0.08***
	(0.07)	(0.02)
Upper Egypt	0.04	0.07***
	(0.06)	(0.02)
Sisters	0.01**	0.0007
	(0.006)	(0.001)
Household size	0.005	0.01***
	(0.005)	(0.001)
Father education		
Less than secondary	*0.05*	*-0.005*
	(0.04)	*(0.01)*
Secondary and post-secondary	*0.1**	*0.005*
	(0.05)	*(0.01)*
University and above	*0.2**	*0.009*
	(0.11)	*(0.02)*
Father employment		
Public sector	*-0.06**	*0.03**
	(0.04)	*(0.02)*
Private formal	*-0.09*	*0.07*
	(0.12)	*(0.06)*
Private informal	*-0.02*	*0.03*
	(0.04)	*(0.02)*
Unpaid family work	*-0.04*	*0.01*
	(0.04)	*(0.02)*
Employer/ self employed	*-0.02*	*0.04***
	(0.04)	*(0.02)*
Unemployed	*-0.16****	*-0.01*
	(0.03)	*(0.03)*
Mother Education		
Less than secondary	*-0.003*	*-0.005*
	(0.04)	*(0.01)*
Secondary	*-0.16****	*-0.03*
	(0.03)	*(0.02)*

Post-secondary	*-0.18***	*-0.03***
	(0.02)	*(0.01)*
University and above	*-0.1*	*0.02*
	(0.07)	*(0.03)*
Mother employment		
Public sector	*0.2*	*0.09****
	(0.12)	*(0.02)*
Private formal	*0.13*	*0.2****
	(0.13)	*(0.04)*
Private informal	*0.06*	*0.3****
	(0.09)	*(0.04)*
Unpaid family work	*0.19****	*0.2****
	(0.06)	*(0.02)*
Employer/ self employed	*0.22*	*0.17****
	(0.2)	*(0.04)*
Gender attitude	0.09***	0.05***
	(0.01)	(0.004)
Savings	0.04	0.09***
	(0.04)	(0.01)
Worry about food	-0.03	-0.02**
	(0.02)	(0.008)
Household reduced income	0.02	0.01*
	(0.03)	(0.01)
Hours on chores	0.002	-0.001*
	(0.003)	(0.001)
Female unemployment	0.0003	-0.001*
	(0.001)	(0.0005)
Population density	0.01	0.009
	(0.018)	(0.005)
Work establishments	0.05*	0.0005
	(0.03)	(0.009)
Afraid to disagree	0.005	-0.007
	(0.02)	(0.007)
Log(GDP per capita)	0.06*	0.03***
	(0.03)	(0.009)
Female migrant	0.09**	-0.01
	(0.03)	(0.009)

Table A.6. The probit model and the marginal effects of a married woman's (in a couple) employability

Variable	Coefficient (st. errors)	Marginal effects
Constant	-5.71 (0.92)	
Age	0.06*** (0.02)	0.013*** (0.004)
Age-squared	-0.0005** (0.0003)	-0.0001** (0.00006)
WIQ1	0.21*** (0.06)	0.04*** (0.01)
WIQ2	0.06 (0.05)	0.01 (0.01)
WIQ4	0.12** (0.06)	0.02** (0.01)
WIQ5	-0.01 (0.06)	-0.002 (0.01)
Education		
Less than secondary	-0.02 (0.06)	-0.005 (0.01)
General secondary	-0.12 (0.12)	-0.02 (0.02)
Vocational secondary	0.04 (0.05)	0.008 (0.01)
University and above	0.77*** (0.07)	0.19*** (0.02)
Region		
Alexandria and Suez	-0.06 (0.15)	-0.01 (0.02)
Lower Egypt	0.3** (0.12)	0.06** (0.02)
Upper Egypt	0.3*** (0.11)	0.06*** (0.02)
Sisters	0.006 (0.009)	0.001 (0.001)
Household size	0.03** (0.01)	0.006** (0.002)
Father Education		
Less than secondary	*-0.04 (0.06)*	*-0.007 (0.01)*
Secondary and post-secondary	*0.1 (0.07)*	*0.02 (0.01)*
University and above	*-0.0008 (0.1)*	*-0.0001 (0.02)*
Father employment		
Public sector	*0.11 (0.1)*	*0.02 (0.02)*
Private formal	*0.17 (0.28)*	*0.03 (0.07)*
Private informal	*0.13 (0.1)*	*0.02 (0.02)*
Unpaid family work	*0.04 (0.1)*	*0.009 (0.02)*
Employer/ self employed	*0.13 (0.1)*	*0.02 (0.02)*
Unemployed	*-0.05*	*-0.01*

	(0.19)	*(0.03)*
Mother Education		
Less than secondary	*-0.02*	*-0.004*
	(0.06)	*(0.01)*
Secondary	*-0.16*	*-0.03*
	(0.12)	*(0.02)*
Post-secondary	*-0.21***	*-0.03***
	(0.09)	*(0.01)*
University and above	*0.07*	*0.01*
	(0.16)	*(0.03)*
Mother employment		
Public sector	*0.5****	*0.12****
	(0.09)	*(0.03)*
Private formal	*0.6****	*0.16****
	(0.14)	*(0.05)*
Private informal	*0.92****	*0.27****
	(0.12)	*(0.04)*
Unpaid family work	*0.72****	*0.2****
	(0.07)	*(0.02)*
Employer/ self employed	*0.53****	*0.13****
	(0.14)	*(0.04)*
Gender attitude	0.06***	0.01***
	(0.01)	(0.003)
Worry about food	-0.13***	-0.02***
	(0.05)	(0.009)
Household reduced income	0.15***	0.03***
	(0.05)	(0.01)
Hours on chores	-0.01*	-0.002*
	(0.005)	(0.001)
Female unemployment	-0.008***	-0.001***
	(0.003)	(0.0005)
Log(GDP per capita)	0.16***	0.03***
	(0.05)	(0.01)
Population density	0.02	0.004
	(0.03)	(0.006)
Work establishments	0.03	0.007
	(0.05)	(0.01)
Afraid to disagree	-0.03	-0.006
	(0.04)	(0.008)
Female mobility	-0.09*	-0.017*
	(0.05)	(0.01)
Marriage and husband related variables		
Age at marriage	0.004	0.0009
	(0.003)	(0.0007)
Spousal age difference	-0.01***	-0.002***
	(0.003)	(0.0007)
New child in 3 years	-0.06**	-0.012**
	(0.02)	(0.0048)
Husband education		
Less than secondary	0.03	0.007
	(0.06)	(0.013)
General Secondary	-0.08	-0.015
	(0.12)	(0.02)
Vocational Secondary	-0.2***	-0.04***
	(0.05)	(0.01)
Post-secondary, University and above	-0.22***	-0.04***
	(0.07)	(0.01)
Husband employment		
Public sector	0.39***	0.09***

	(0.11)	(0.02)
Private formal sector	0.12	0.02
	(0.12)	(0.02)
Private informal sector	-0.15	-0.03
	(0.11)	(0.02)
Unpaid family work	0.27	0.06
	(0.2)	(0.05)
Employer/ self-employed	0.28***	0.06**
	(0.11)	(0.02)
Unemployed	-0.2	-0.03
	(0.18)	(0.02)
Gender attitude	0.12***	0.02***
	(0.01)	(0.003)
Household chores	-0.005	-0.001
	(0.014)	(0.002)
N	8,782	
LR Chi2	1400.08	

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