The Migration's Impact on The Empowerment of Women Left Behind: Evidence from Egypt

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2023

May 4 - 6,
Cairo Egypt

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Abstract:

This study examines the impact of male international migration on the labor market outcomes and empowerment of women left behind in Egypt (WLB). Data is obtained from 2006, 2012, and 2018 Egyptian Labor Market Panel Survey (ELMPS). Two batteries of outcomes variables are modeled including the labor supply of WLB and three pillars of women empowerment. The findings show that the migration of a male member in the household is associated with a lower level of labor market participation for women. However, these effects are not driven by lower empowerment, but mostly because WLB replaces the role played by the male migrant in subsistence and non-paid family work, particularly in rural areas. Both WLB living in rural and urban areas are less likely to ask for permission their husband or another family membersmembers when going out and are more likely to have personal savings than women living in a non-migrant household. Our results show that socio-economic changes happening in the destination countries may have contributed to the progress we observe in terms of WLB empowerment.

1 Introduction

The migration literature drew attention to the impact of international migration on the origin country. However, less is known about the impact of migration and remittances on the empowerment of women left behind (WLB). Women empowerment generally includes three main pillars, namely women's employability, perception of gendered roles, and women decision-making (Tuccio and Wahba 2018; Samari 2021). Understanding the relationships between migration, remittances, and empowerment of WLB is of particular importance in countries governed by patriarchal communities such as Egypt and the Middle East and North African (MENA) region in general. Patriarchal systems generally create unequal gender empowerment and conflicting hierarchies of power that can be reflected in women's roles in the household and labor market outcomes (De Haas and Van Rooij 2010, Samari 2021). In Egypt, as of 2020, the United Nations Department of Economic and Social Affairs (UN DESA, 2020) indicated that most Egyptian emigrants are men often leaving women and children behind and moving temporary to Arab countries, also ruled by patriarchal systems. Hence, the emigration of males can be the source of significant changes in the lives of WLB that is worth studying.

The literature on the impact of migration and remittances on the empowerment of WLB has been recently growing worldwide. Some endeavors found that male migration allows women to become the primary decision-makers in household affairs', to have autonomy of mobility (Bojorquez, et al., 2009), self-determination (Matz and Mbaye, 2017), and financial autonomy (Singh, 2018). Other evidence showed that women tend to increase their home production to fill the role of the migrant, substitute wage to non-wage work (Rodriguez and Tiongson, 2001; Amuedo-Dorantes et al., 2006; Carletto and Mendola, 2009; Acosta, 2011), experience policing from their extended families (McEvoy et al., 2012), and their husbands even when abroad (Lopez-Ekra et al., 2011).

A few studies focus on the MENA region and even less on Egypt (Binzel and Assaad, 2011; Truccio and Wahba, 2018, Samari, 2021). Binzel and Assaad (2011) showed that women living in households receiving remittances in Egypt substituted wage work for non-wage work, using the 2006 wave of the Egyptian Labor Market Survey (ELMPS). More recently, Tuccio and Wahba (2018) and Samari (2021) found that return migrants

valued more traditional gender norms or adopted and internalized more unequal ones in their home countries relative to households with no migrants in Jordan and Egypt, respectively.

Through a scoping review, Fernández-Sánchez et al. (2020) argued that the net effect of migration on WLB's empowerment depends on the destination and sending countries' context. Male migrants can, and often do, contribute towards household income through remittances, whilst WLB can become the primary decision-maker in the management of household affairs. If such is the case, WLB would then face an expansion in responsibility and duties which may enable them to exercise greater authority, thereby providing a channel for greater empowerment. The authors conclude that such a nexus remains relatively under-explored in the literature.

This paper offers new evidence of the impact of migration on the empowerment of women in Egypt by extending current literature in three ways. First, we drew on longitudinal data from the 2006, 2012, and 2018 Egyptian Labor Market Panel Survey (ELMPS). Second, we adopt a comprehensive definition of empowerment that includes the participation of women in the labour market, differentiating between wage and non-wage unemployment, as well as women empowerment indicators that reflect whether a woman has mobility of freedom, contributes, or takes decisions independently within the household, and has her own financial independence. Third, we use a novel methodology based on parametric (probit and 2SLS IV) and non-parametric (matching) models which assume that selection into migration is based entirely on observables. Throughout, we accounted for different migration patterns and labor market characteristics in rural and urban areas by running the regressions separately for rural and urban areas.

This paper is organized as follows: Section 2 provides some background information on social remittances, gender norms, and women empowerment followed by section 3 which looks at data on migration, remittances, and socioeconomic characteristics of WLB and describes the empirical approach. In section 4, we discuss the main empirical findings. In Section 5 we discuss our results and conclude.

2 Context, Theory, and Evidence

2.1 Theoretical considerations: Social remittances, gender norms and female empowerment

2.1.1 Social remittances and gender norms

The empowerment of WLB is considered a form of social remittances. They are different from financial remittances which refer to the interpersonal financial transfers between migrants and their country of origin. Rather, social remittances are a recent concept that was introduced by Levitt (1998: 927) to describe "the ideas, behaviors, identities, and social capital that flow from receiving- to sending-country communities". Difficult to define and quantify, the concept carries development potential for less-developed countries (Isaakyan and Triandafyllidou, 2016) as it can lead to behavioral and norm changes in individuals, groups, and communities.

Among social remittances, gender norms have generated an increasing interest. Gender is the social construct of male and female, and gender norms are defined as ideas about how women and men should be and act. They include the social rules and expectations that keep the gender system complete. Cislaghi and Heise (2020) listed four features that characterize gender norms: first, gender norms are learned in childhood, influenced by parents and peers, and reinforced lately in a larger social context including school, religion, and the media among other institutions. Second, a lack of equity in gender norms implies a lack of equity in power relations generally to the detriment of women and girls. Third, the institutions that intersect with individuals' lives reproduce and strengthen existing gender norms. These institutions are defined as the formal and informal laws, social norms, and practices, which play a role in shaping the decisions, choices, and behaviors of groups, communities, and individuals (Jütting et al., 2008). Fourth, social interactions build gender norms. Hence, gender norms can either empower or constrain the rights and opportunities of women and men.

2.1.2 Gender norms' impact on women empowerment

Gender norms essentially impact women empowerment by affecting perceptions related to the roles that women and men should play in society. Similar to social remittances,

women empowerment carries conceptual and analytical challenges that make its operationalization difficult. The difficulty of defining and measure empowerment comes from its multidimensionality and the fact that this is more of a process than a state. In his seminal work, Kabeer (1999) based the definition on three inter-related and indivisible dimensions: (i) resources as the access and future entitlement to material, human and social resources, (ii) agency as the ability to define one's goal and engage in decision-making and negotiation to act on those goals, and (iii) achievements as the outcomes of choices made. Kabeer (2003) strengthened the conceptualization of relational autonomy by making a distinction between active agency defined as a purposeful behavior and passive agency defined as actions taken when there is little choice. Narayan (2002) described women empowerment as the increase in resources and capabilities to partake, negotiate, exercise control, and hold responsible the institutions that affect their lives.

2.1.3 Migration and gender norms on the migrant itself

Gender norms can evolve over time. They are not perpetual. They can especially change with social location within the household (Doss et al., 2022) and over the life cycle. Thus, the fact that a family member emigrates and experiences in a country of destination a different culture with specific gender norms may influence his or her own perceptions of how women and men should be and act. The family members left behind can also be impacted by the departure and the norm changes of the migrant.

Egypt gives an interesting case to examine the evolution of gender norms. In the country, various types of gender disparity characterized by conservative social norms and challenging labor market conditions to the detriment of women remain prevalent (Elsayed et al., 2021). Women are generally expected to provide informal care for the family as well as their role and responsibilities as mothers and wives (Fernández-Sánchez et al., 2020

The transmission channels between migrants and those left behind are various (Drbohlav and Dzurova, 2020). They included the visits of family members to migrants in the country of destination, the visits of migrants to family members in the country of

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origin, the returns and reintegration of migrants to the country of origin as well as interpersonal communication such as e-mails, phone calls, or social media platforms.

2.2 Empirical evidence on the impact of migration on gender norm transfers

2.2.1 Two methodological challenges to address

Despite the growing interest in the academic community in this area, the so-called empirical migration-induced transfer of gender norms literature remains scarce. The main reason is related to the presence of two great methodological challenges that are difficult to address: reverse causality (or endogeneity) and selectivity. First, reverse causality refers to the fact that the migrant might have decided to move to adopt new norms and not the opposite. Hence, the decision to migrate is determined by the desire of the individual to change. Second, the selectivity problem arises when the sample is a non-random one. This can occur in two different ways in our case: the profile of the migrant and the choice of the destination country. In other terms, this means that migrants are not a random sample of the population in the country of origin. Similarly, the selected destination countries are not a random sample of all potential destination countries. This suggests that a series of unobserved characteristics of the migrants drive their decision and their attitudes toward females left behind.

2.2.2 A scarce, polarized, scattered literature

Given these two methodologic challenges, economists have started only recently, with the seminal empirical work of Spilimbergo (2009) to examine the impact of migration on social remittances. Using a panel dataset on foreign students based in the United States of America (USA) spanning over fifty years, the author studies the effect of foreign education on democracy and finds that the impact is significant and positive only when the destination country of the migrant is a democratic country.

Since then, the empirical economic literature on the impact of migration on gender norms and women empowerment has been growing rapidly (Fakir and Abedin, 2021; Luna and Rahman, 2019; Tuccio and Wahba, 2018; Bojorquez et al., 2009). However, this literature is polarized, drawing attention to a few less developed countries, namely Bangladesh, Nepal, and India. Besides, the literature in this area is scattered as studies

adopt different perspectives with various indicators of empowerment (Fernández-Sánchez et al., 2020).

2.2.3 *A literature with inconsistent results*

The findings of most available studies are inconclusive. Such inconsistency in the results comes mainly from the lack of comparability across studies and the inherent complexity of the empowerment concept.

Among relevant studies to the present paper, there is the recent work of Fakir and Abedin (2021) that examined the microeconomic effect of migration on women empowerment in rural areas of Bangladesh using the 2011-2012 Bangladesh Integrated Household Survey (BIHS). Two econometric techniques were utilized to control for selectivity and endogeneity: Propensity score matching (PSM) and IV estimation. The PSM compared the empowerment status of women in migrant households using observed values of indicators with estimated counterfactual values in a hypothetical without migration scenario. The analysis led to mixed findings. While women enjoy greater ownership of assets, a better status within the household, freedom of physical mobility, and lower domestic abuse, they do not benefit from an improvement in their decision-making authority over the productive utilization of the resources.

In the same vein, the study conducted by Sinha et al. (2012) in rural India showed mixed results. Using data from India's 2005-2006 National Family Health Survey-3 (NFHS-3), the authors measured women empowerment with three indicators, namely the decision-making power, the restrictions placed on women, and their mobility. They employed multinomial logistic regression models. The findings revealed no significant impact of migration on women's emancipation. Rather, the authors found that sociodemographic variables such as age, educational attainment, marital duration, and residence in urban areas play a significant empowering effect.

An important series of studies focused on Nepal (Maharjan et al., 2012; Doss et al., 2022; Kaspar, 2005; Sijapati et al., 2017). The findings of Kaspar (2005) and Sijapati et al. (2017) indicated that male migration led to an increase in women's mobility and decision-making roles. However, they also showed that this empowerment implied

stress and additional workload, both domestic/care and productive non-domestic work. Mixed findings were also obtained by Maharjan et al. (2012). Using a mixed-based approach, the authors administered a household survey to 509 migrant and non-migrant households in rural Nepal. They examined the changes in women's roles and responsibilities in the absence of male household heads. The analysis showed that the nature and extent of the impact varied with the pattern of migration. In particular, the influence of male migration on the family members left behind depended on the ability to hire labor from remittances earned. Thus, when remittances were high, the workload of the ones left behind decreased, and when remittances were low, the workload of the ones left behind tended to increase. Besides, the findings indicated a growing gender gap in workload following the migration. More specifically, migrant households experienced a wider gender gap than non-migrant households. On another note, the findings did not corroborate the impact of migration on ownership of assets by women but revealed that women in migrant households had a greater role in household decision-making than those in non-migrant households.

When examining the impact of men migration on women empowerment in Nepal, Doss et al. (2022) introduced additional factors to the analysis such as caste, ethnicity, and the husband's status as a migrant. The authors used the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI) to measure empowerment and confirmed that the patterns of empowerment differed across its indicators. Moreover, the findings showed that WLB in nuclear households increased their control over agriculture production and income more than women in non-migrant households. Finally, the analysis corroborated the literature on the role of remittances on women's empowerment: in low remittance-receiving households, WLB tended to be worse off (see the scoping review of Fernández-Sánchez et al., 2020).

The study of Luna and Ruhman (2019) produced positive impacts. Drawing on fieldwork in rural Bangladesh, the study evaluated the impact of men migration on the empowerment of spouses left behind compared to household with no migrant. Four areas of gender norms were considered, namely the access to economic resources, physical mobility, residential independence, and decision-making role in key family

affairs. The main findings indicated that WLB were exposed to processes of greater empowerment compared to women in non-migrant households.

A growing stream of literature examined the impact of migration on economic empowerment in relation to the labor market, especially in rural settings (de Brauw et al., 2021; Slavchevska et al., 2019; Kan and Aytimur, 2019; Lokshin and Glinskaya, 2009). Generally, the findings suggested that the migration of men led to an increase in the workload or participation of women in agricultural production. Because of their additional workload, researchers disagreed upon whether this result empowered women and enhance their well-being (Pattnaik et al., 2017). The study by de Brauw et al. (2021) assessed the impact of the migration of men on women labor participation and empowerment outcomes in rural Bangladesh. The project-level Women's Empowerment in Agriculture Index (pro-WEAI) (Malapit et al., 2019) was used as the empowerment indicator. The findings were based on a panel dataset on jute producers. They suggested that male migration was not associated with women empowerment in the short term and with increased use of female household labor. Besides, they showed no significant decreases in gender wage gaps. The authors interpreted these findings by referring to the lack of perfect substitutability between male and female labor.

2.2.4 Empirical evidence in the Middle East and North Africa (MENA) and Egypt: Focus on return migration-induced transfer of norms

Current relevant literature on the Middle East and Egypt is scarce. To the best of our knowledge, only Binzel and Assaad (2011), Tuccio and Wahba (2018) and Samari (2021) conducted comparable studies. Binzel and Assaad (2011) examined the impact of male international migration on female labor supply in Egypt using cross-sectional data from the 2006 wave of the ELMPS. The authors used both parametric (probit and tobit) and non-parametric (matching) techniques to estimate the local average treatment effect and addressed the endogeneity of living in a migrant household through an instrumental variable approach. The results showed a decrease in wage work for both the rural and the urban samples suggesting that women who live in a household with a current international migrant are more likely to engage in non-wage work and in subsistence work. Such findings conform with established gender norms in Egypt.

Among households where the migrant is not remitting, the results indicated that the increase in non-wage employment is guided by the household's need to replace the migrant's labour. Overall, the authors concluded that women's status does not necessarily improve in the household as neither working for the family nor subsistence work is associated with own income.

Tuccio and Wahba (2018) and Samari (2021) examined the impact of migration on women empowerment from another perspective The authors considered return migration rather than migration and focused on changes in gender norms in Jordan and Egypt, respectively. For instance, Tuccio and Wahba (2018) drew attention on the impact of international return migration on the transfer of norms in Jordan. Using three different measures of gender norms, namely the role of women, female freedom of mobility, and female decision-making power, the study relied on a multi-equation mixed system in a Conditional Mixed Process framework to control for emigration and return migration selectivity. The findings revealed women who live with a return family member were more likely to bear traditional gender norms, less likely to enjoy the freedom of mobility, and less likely to make decisions on their own than women in households with no migration experience. Interestingly, the analysis showed that the choice of the country of destination had a significant influence on the outcome. Indeed, having lived in a conservative Arab country made the returnee develop more conservative norms once back than before migrating.

On another note, Samari (2021) explored for the first time the impact of male return migration from other Arab countries on gender norms and household gender dynamics in Egypt. The author used data from the 2006 and 2012 ELMPS and employed various multivariate models to examine the associations between return migration and gender norms and decision-making while accounting for individual and household characteristics in 2006 and 2012. To address endogeneity of migration and gender norms, the author included in the analysis treatment effects regression models. The findings showed that return migration from Arab countries was linked to less egalitarian beliefs and more restrictive gender norms for women. Besides, they indicated that women's roles within the household were limited with return migration as women in

migrant households had less decision-making capacities in both 2006 and 2012. Given the contexts in Arab destination countries, Samari (2021) explained that return migration to Egypt may import worse attitudes about women and conservative patriarchal ideals.

The present study aims to extend from the findings of Binzel and Assaad (2011) and Samari (2021) in several ways: first, it uses data from three waves of the ELMPS, 2006, 2012, and 2018; second, it defines women empowerment in a comprehensive way including both labour market and social norms dimensions; and third the study focuses on current male migrants rather than return migrants.

3 Data and methods

We rely on data from the 2006, 2012 and 2018 Egyptian Labor Market Panel Survey (ELMPS). The ELMPS is carried out by the Economic Research Forum (ERF) in cooperation with Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS) since 1998. The ELMPS is a longitudinal and nationally representative survey. This survey is collected at the household level but provides information on household members in terms of their socio-demographic information, education level, employment outcomes and income status. This survey is well suited for the purpose of our research because it provides detailed information on whether the household has any of its member living abroad and whether this migrant is sending remittances to those left behind. The survey also contains rich modules on respondents' opinion over gender norms.

Specifically, we will address the following research questions:

1. How migration of male members affects the gender role of WLB within the household and on the labour market?

2. How remittances sent to the family affect women's labour market outcomes?

3. How are women empowerment patterns are affected due to the migration of a male migrant?

3.1 Data and Descriptive statistics

3.1.1 Working sample

Our sample consists only of women between 20 to 60 years old who have been interviewed in 2006, 2012, or 2018. Table 1 shows the working sample for each of the three waves of the ELMPS.

Table 1: Number of observations per wave of the ELMPS

Round	Number of observations	Number of households
2006	9,551	7,485
2012	12,618	10,609
2018	15,090	13,293

Source: Authors calculations from ELMPS dataset

3.1.2 Dependent Variables

3.1.2.1 WLB labor market participation

For the first battery of outcomes, we compare three labor market variables: Wage work, subsistence work, and non-paid family work. We are particularly interested in understanding whether the migration of a male member would affect women's overall labor market participation. Women, particularly in rural areas, may substitute wage work for subsistence work or non-wage family work to fill the place of the migrant. In the absence of a family member, women may also leave their jobs or may decide not to participate in the labor force to play a greater role in taking care of their children. In addition, remittances can increase women's reservation wage in the labor market, and it can also increase their supply of unpaid family work to make use of remittance flows.

In our analysis, we observe changes in three types of labor activities undertaken in the last three months of the interview: Wage work, subsistence work and non-paid family work. A woman is considered to be working for a wage if she has been self-employed, an employer or an employee. Subsistence work is defined as engaging in agriculture activities, raising livestock, and or ghee/butter/cheese production for domestic

consumption Non-paid family work refers to working for in a family business (ex. In an agriculture land) without being paid.

We differentiate in our analysis between urban and rural areas. Table shows that in urban areas, 23% of all women in our sample work for a wage, compared to only 13.5% in rural areas. Likewise, 25% and 33.7% engage in subsistence work and unpaid work respectively in rural areas, compared to only 4% and 5% in urban areas., Our t-test results in **Error! Reference source not found.** shows that the labor market outcomes of women residing in a household with a migrant are not significantly different from those living in a household without a migrant in urban areas. However, a slight significant difference is observed between the two groups in rural areas.

3.1.2.2 Gender Role Attitudes and Gendered Behavior

The second battery of outcome variables include measures on women empowerment. As a proxy for gender norms, we use three dependent variables: women's decision making in the household (hereafter WDMH), women's mobility (hereafter WM) and having personal savings (hereafter PS). To construct the WDMH variable, we use eight questions from the ELMPS that ask interviewed women about their role in decisions taken within the household over the following aspects of day-to-day life: large household purchases, daily household purchases, visiting family, friend and relatives, food cooked every day, medical treatment, buying clothes, taking children to doctors, and sending children to schools. The responses on these questions are recorded into a categorical scale (1=the respondent, 2=respondent and husband, 3=respondent, husband, in-law, 4=husband, 5=in laws,6=others). We rescale these variables to take the value of 1 if a woman takes her decision interpedently, 2 if she must take it with someone else (ex. Spouse and parents), and 3 if she is not part of the decision. After rescaling and from these eight questions we created an index that increases by one point if a woman states that she takes the decision independently or along with another family member for each of these life aspects. In that sense, a woman that engages in all day-to-day life decisions receives a score of 8 and a woman that does not engage in any receives a score of 0.

Likewise, to construct the WM variable, we create a four points index using questions that inquire about whom a woman needs permission from when she goes to the following

locations: the local market, to the doctor alone, to the doctor accompanied with children, to visit friends or relatives. The responses for these questions were also similar to the VDMH questions, and they were also rescaled and indexed as explained for the WDMH index.Table 5 shows that Women in both urban and rural areas receive a score of five out of eight for the WDMH index, and two out of four for the WM index. However, we can see greater variations for women in rural areas, because of the wider standard deviation. The t-test results show a negative impact of migration on all women empowerment indices in both urban and rural areas.

3.1.3 Independent Variables

A migrant household is defined as a household where one or more of its members are living abroad for more than 6 months by the time of the interview. While the questionnaire collects information on more than one migrant per household, instances of having more than one migrant are rare. We therefore settle for creating a binary variable that takes the value of one if the women live in a household with at least one male migrant. Male migrants[1] in the sample reached 5.10% in 2006, 6.84% in 2012 and 5.34% in 2018. The distribution by region in **Error! Reference source not found.** shows that households in rural areas are more likely to have migrants among their family members than urban households. The share of migrant households in rural areas is 4.3% and 3.2% of migrant households in urban areas. Descriptive statistics for migrant and non-migrant households are provided in Table 2.

Figure 1: Share of migrants by region

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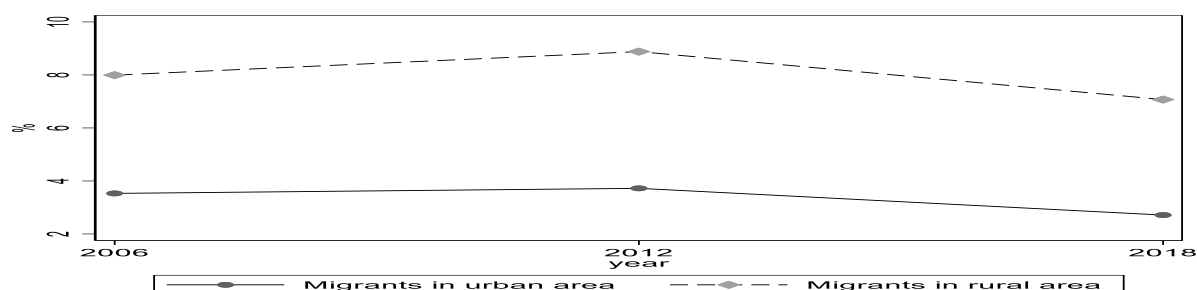
[1] Information on the gender of the migrant is provided only in the 2012 and 2018 waves, but not in the 2006 wave. However, migration in Egypt is known to be male dominated. In the 2018 wave, female migrants constituted only 2% of all migrants.

Table 2: Descriptive Statistics by Region

	Urban areas		Rural areas	
	Mean (sd)	N	Mean (sd)	N
Personal Savings	0.356	15683	0.292	19291
	(0.479)		(0.455)	
WDMH	5.535	14520	5.119	18359
	(2.227)		(2.433)	
WM	2.310	15652	2.212	19265
	(0.96)		(1.078)	
Wage Worker	0.230	16827	0.135	20342
	(0.421)		(0.341)	
Subsistence Worker	0.042	15454	0.246	19361
	(0.201)		(0.431)	
Unpaid Worker	0.057	16827	0.337	20342
	(0.232)		(0.473)	
Female Head	0.119	16827	0.118	20342
	(0.324)		(0.322)	
Education attainment	0.286	16827	0.102	20342
	(0.452)		(0.303)	
Wealth Quintile 1	0.069	16827	0.273	20340
	(0.254)		(0.445)	
Wealth Quintile 2	0.125	16827	0.261	20340
	(0.331)		(0.439)	
Wealth Quintile 3	0.179	16827	0.221	20340
	(0.384)		(0.415)	
Wealth Quintile 4	0.259	16827	0.157	20340
	(0.439)		(0.364)	
Wealth Quintile 5	0.37	16827	0.089	20340
	(0.482)		(0.284)	
Age	37.243	16827	35.630	20342
	(11.662)		(11.349)	
Number of children under six years	0.426	16827	0.601	20342
	(0.702)		(0.807)	
Number of children above six years	1.294	16827	1.754	20342
	(1.645)		(2.034)	
Remittances	0.021	16827	0.053	20342
	(0.143)		(0.224)	
Share of men with secondary education	0.377	16827	0.354	20342

Table 2 (continued): Descriptive Statistics by Region

|	Urban areas		Rural areas	
	Mean(sd)	N	Mean(sd)	N
Share of men with secondary education	0.377	16827	0.354	20342
	(0.074)		(0.032)	
Share of men in the private sector	0.343	16827	0.356	20342
	(0.039)		(0.031)	
share of men in the agriculture sector	0.072	16827	0.127	20342
	(0.062)		(0.042)	
Share of unemployed men	0.025	16827	0.020	20342
	(0.017)		(0.006)	
Share of hh with a mig	0.032	16582	0.043	20342
	(0.032)		(0.036)	

Error! Reference source not found. shows that male migrants within the households are most likely to be the husbands of WLB. They are also most likely to migrate to Arab countries as shown in **Error! Reference source not found.**.

Figure 2: Relationship to the migrant
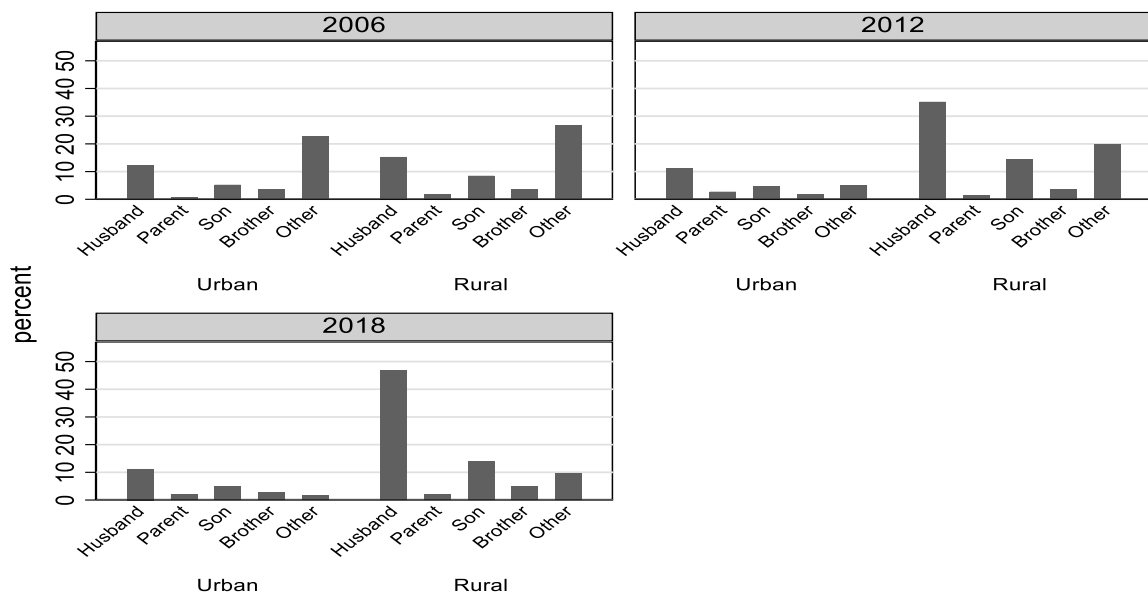
Graphs by round

Figure 3: Country of destination
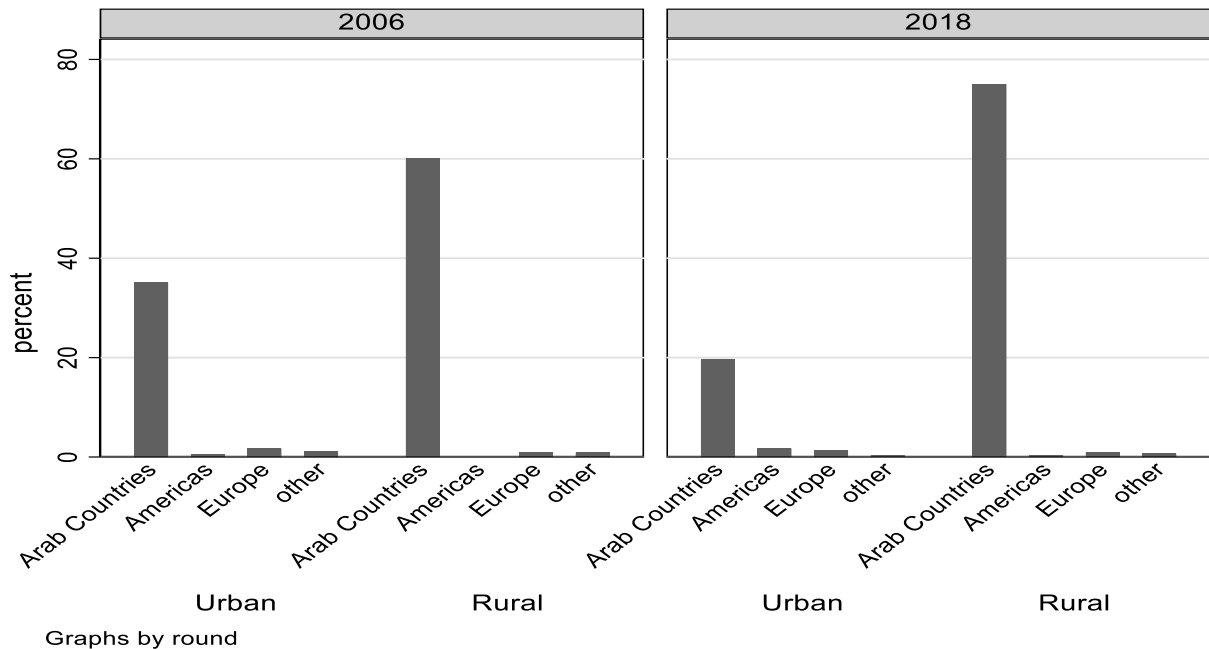
In an alternative specification, we limit the sample to households who have received remittances in the last 12 months priori the survey and households without a migrant. This allows us to examine how labor market decision and opinions of WLF on gender norms may change with money flowing in the household.

3.1.4 Covariates

The model includes individual-level variables that have been identified in the literature as potential determinants of women's status and migration: age, age at marriage, education, wealth quintiles, and count of children under six. Women's age is a continuous variable expressed in years. Education is a dummy variable grouping those who reached tertiary education and those who stopped before reaching it. Wealth quintiles are estimated using principal component analysis capturing the variability in the assets ownership and grouping households into the five groups: the poorest, poor, middle, rich and richest. We also include some community characteristics such as the number of men with secondary education, the share of men working in the private sector,

the share of men working in the agriculture sector and the share of unemployed men at the community level.

3.2 Identification strategy

A well-documented problem in the literature of migration, remittances and labor market outcomes is the endogeneity arising from self-selection bias and reverse causality (Kandel and Kao 2001; Adams and Page 2005; Mueller and Shariff 2011;Jimenez-Soto and Brown 2012). Risk taking is one of the most important unobservable characteristics that has repeatedly been mentioned as trait that migrants self-select upon. Reverse causality also plays a role in this context. For instance, the migrants' households may be wealthier than non-migrants and this could be a main reason why they are able to finance migration. At the same time, this wealth can allow the migrant's household members to hire someone for household work, and this could enable women in the household to supply their labor in the market. Furthermore, a migrant may decide to send remittances because a female family member became unemployed or because she decided not to participate in the labor force. In this case, the effect of migration on female labor market outcomes cannot be determined by simply comparing females belonging to households with a migrant to females belonging to households without. In other words, running an ordinary least square regression will yield biased estimates. The ideal method to account for this self-selection and reverse causality is by randomly allocating individuals into migration. When such an allotment is not available, we must rely on quasi-experimental techniques.

recognizing that the migrant population is not a random sample of the total population (McKenzie and Sasin, 2007), we employ an instrumental variable (IV) approach using three waves (2006, 2012 and 2018) of the ELMPS. Accordingly, we estimate the following IV model:

First Stage: $\qquad M_{ijt} = X_{ijt}\alpha + Z_{ijt}\beta + v_{ijt}$ (1)

Second Stage: $\qquad Y_{ijt} = X_{ijt}\vartheta + \widehat{M_{ijt}}\delta + e_{ijt}$ (2)

Where Y_{ijt} reflects a battery of labour market outcomes, including working in a paid job, working for an unpaid job as part of family business and doing subsistence work. X_{ijt} is a vector of other, individual, and community characteristics. To understand how the migration of a male member affects labor market outcomes of WLB, the main independent variable M_{ijt} will turn on (=1) if a woman lives in a household with a male migrant. In another specification, we restrict the sample to the migration population and M_{ijt} will turn on (=1) if the household has a migrant that sent remittances in the last 12 months. By interacting the M_{ijt} with the years since departure, we also track how the labour market outcomes of WLB evolved over the years. To keep only the exogenous variations going from migration to labor market outcomes, we instrument migration(M_{ijt}) with the migration network (Z_{ijt}). The instrument is defined as the percentage of households that have international migrants in the household's region of residence six years before the corresponding analysis date. Migrants tend to establish an extensive information network to help relatives and friends to migrate. This makes the average number of migrants in a district a good proxy for regional migration network that is likely to be correlated with the migration decision of male migrants residing in the same region. To construct this instrument, we use the panel data of the ELMPS survey, which we also use for our main outcome variables. For example, to estimate the effect of migration on labor market outcomes in 2018, we use the weighted share of household with a male migrant at the qism[2] level from the 2012 wave as an instrument. Controlling the community characteristics makes sure that our instrument does not capture the effect of unobserved effects that may also be directly related to women's labor supply behaviors.

The IV approach requires the existence of an instrumental variable that affects the migration decision but does not affect the women's labor supply directly, other than through migration. Specifically, the instrument must meet two important conditions: The relevance condition and the exclusion restriction assumption. We tested the relevance condition in the empirical analysis section. Regarding the exclusion restriction, we argue

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[2] The ELMPS data provides geographic disaggregation at the governorate (22 governorates), qism (40 qism) and shyakha level (63 shyakhas). We chose to work at the qism level rather than the shyakha level because in some shyakhas only one respondent has been interviewed.

that taking lagged values of the share of migrants in the community reduces the possibility of reverse causality. It is unlikely that the decision to supply labor in the present affects the decision to migrate of household members from the community six years before. Hence, the migration network formed six years earlier should impact the decision to participate in the labor market only through the male migrant within the household. This lag allows to minimize potential contemporaneous correlation between migration and employment outcomes.

To avoid forbidden regressions, that crops up when researchers apply 2SLS directly to non-linear models, we run a probit model to predict the probability of being a male migrant (Angrist, 2014). By turning male migration from a dummy variable to a continuous variable, we can run the IV linear probability model (LPM) without encountering the standard LPM problem where predicted probabilities may exceed 1.

We also detect the channels through which migration may affect labor market outcomes. WLB may decide to change their market labor supply for two reasons. The first reason is related to the income and substitution effects due to the migration of the male migrant. Women may either want to substitute labor work for non-paid family or subsistence work, to replace the absent family member. The second reason is that they may be affected by the new norms that her family and herself adopt from the country of destination. This is the so-called "transfer of norms" which assumes that international migration drives norms changes in the origin countries. These norms can be progressive or regressive in terms of gender equality. In the Egyptian context, researchers have argued that migrants and return migrants from Arab countries seem to have brought back regressive ideas. For example, Bertoli and Marchetta (2015) show that Egyptian married couples where the husband has past migration experience in Arab countries have a significantly larger number of children than stayers.

Although the two reasons mentioned are considered a step down of women's role in the society, we argue that the second case where the family's norms adopt female disempowering ideas is much more problematic. In the first case, women may leave the labor market only temporarily or decide to postpone entering until the migrant returns. The only difficulty that a women may face is that she may not easily find a paid job in the

labor market. However, she may have the freedom to start her own business once the family accumulates some capital from migration. In the second case, migration may change the role of a women in society and reduces the probability that she participates in the labor market over the long-term and even across generations.

When detecting the channels, we look at women empowerment indicators reflecting whether a woman has mobility of freedom, contributes, or takes decisions independently within the household, and has her own financial independence. We use the propensity matching technique to create a hypothetical control group with the same observable characteristics as the treatment household. The propensity score matching is a type of balancing score that represents the probability of being a treatment household, given the observed characteristics X, that potentially affect the decision to migrate. The households with a migrant are then matched with a similar stayers' household based on those scores.

We use three matching techniques to generate the average treatment effect on the treated (ATT): (i) The nearest neighbor matching, (ii) kernel density matching, (iii) bias corrected NNM. These methods are usually recommended when the data has a lot of comparable untreated individuals to gain precision in the estimates. The nearest neighbor matching uses the distance between covariates patterns to match observations from the comparison group to the treatment group and it can be done with or without replacement. An important drawback of the nearest neighbor matching without replacement is that we can get bad matches as some of the high score participants can get matched to low score non-participants. This can be overcome by allowing for replacement, but in turn increases the variance of the estimator (Smith and Todd, 2005).

The Kernel matching uses the weighted average of all individuals on the control group to construct the counterfactual outcome. This approach overcome the high variance problem found with the nearest neighbor matching, but at the same time does not guarantee that no bad matches will take place. The bias corrected matching estimator is root-N consistent for any dimension of covariates, k. Generally, if the different approaches give similar results, looking for the correct specification may be unimportant.

Only in case the results are drastically different, further investigations should be made to reveal the source of disparity (Bryson, Dorsett, and Purdon, 2002).

An important condition for choosing the variables to be matched upon, is that they must satisfy the conditional independence assumption (CIA). This condition requires that the outcome variable is independent of the treatment conditional on the propensity score. Hence, only variables that are unaffected by participation, or the anticipation of it, should be included in the model. We therefore match upon variables that are fixed over time and are not even characteristics for the migrant himself. Data is matched over five variables: the age of the female, the governorate where she is residing, her education level, her marital status, and the number of individuals living with her in the household.

4 Empirical results

4.1 **The impact of migration and remittances on labour market outcomes**

Table presents the regression results for both rural and urban areas. For comparison, the first column presents the probit model that does not account for self-selection and the second column presents the results for the IV2SLS estimators. For most of the estimates are consistent for both the probit and the 2SLS IV models in table. However, the IV method estimates the local average treatment effect (LATE), rather than the average treatment effect (ATE) with the probit model. We prefer to rely on the IV results since the Wald test of exogeneity is statistically significant. This implies that we should treat migration as an exogenous regressor for all estimations. In general, instrumenting for male migrant show a stronger effect on women's labor outcomes.

Table suggests that in rural areas women decrease their wage work and increase their subsistence work and unpaid family work. This increase in non-labor market work more than offset the decrease in wage work. On average, women who live in a migrant's households are 31 pp. less likely to engage in wage work than women of non-migrants' households, but 48 pp. and 76 pp. more likely to engage in subsistence and unpaid work, respectively. In urban areas, the IV 2SLS estimator indicates that as response to male migration women left behind are 42 p.p. more likely to engage in unpaid work than non-migrant households. They are also more likely to engage in subsistence work. However,

the coefficients are only weakly significant. In both the probit and IV 2SLS models, no significant difference is observed between migrant and non-migrant households in terms of market work. For the IV2SLS estimators, the first stage F-statistic results, reported in Table in the appendix, suggest that the IV strongly predicts the migration status. In the rural sample, the F-statistic is 69.69 in rural areas and 14.51 in urban areas for the overall sample, and 246.84 in rural areas and 64.941 in urban areas when the sample is restricted to households receiving remittances. These results suggest that our instrument may be less relevant in urban areas where the household's social network is less likely to be defined locally.

When comparing households with a migrant who sends remittances to households without a migrant in Panel B of Table , we can see that woman in general engage less in wage work and increase their subsistence and unpaid work. We notice however that there is a difference between women in rural and urban areas. In urban areas, remittances have a statistically significant negative impact on wage work, and positive but small impact on subsistence work. In rural areas, the impact of remittances on wage work is much smaller than in urban areas. In rural areas only 18.8 pp. of women do not engage in wage work as compared 33.7 pp. in urban areas. In addition, remittances have a stronger impact on subsistence and unpaid work in rural areas as compared to urban areas. For example, only 9.3 pp. of women increase their subsistence work as compared to 21.1 pp. of their rural counterparts. The effect on unpaid work is insignificant in urban areas but reaches 23.7 pp and is highly significant. This could entail that income effect is more prevalent in urban areas, while substitution effect is more dominant in rural areas.

Table 3: The impact of migration and remittances on labour market outcomes

	Urban		Rural	
	(1)	(2)	(3)	(4)
Panel A: Migration				
	Probit	2SLS IV	Probit	2SLS IV
Wage work	-0.189	-0.239	-0.253**	-0.312**
	(0.132)	(0.397)	(0.107)	(0.137)
Subsistence work	0.460***	0.184*	0.356***	0.485***
	(0.171)	(0.109)	(0.088)	(0.171)
Unpaid work	0.459***	0.424***	0.482***	0.762***
	(0.159)	(0.152)	(0.080)	(0.188)
Panel B: Remittances (migrants sending remittances versus non-migrants)				
Wage work	-0.608***	-0.337***	-0.467***	-0.188***
	(0.121)	(0.118)	(0.080)	(0.050)
Subsistence work	0.183	0.093**	0.166**	0.211***
	(0.147)	(0.042)	(0.068)	(0.062)
Unpaid work	0.222	0.051	0.288***	0.237***
	(0.136)	(0.035)	(0.058)	(0.066)
Controls	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Cluster at HH level	Yes	Yes	Yes	Yes

Table 4: Impact of migration and remittances on women empowerment.

Panel A: Migration as an independent variable

	Propensity score		Kernel Matching		Bias corrected	
	Urban	Rural	Urban	Rural	Urban	Rural
Permission	0.073**	0.190***	0.075	0.184***	0.124***	0.228***
	(0.050)	(0.034)	(0.049)	(0.033)	(0.048)	(0.031)
Women att	0.323***	0.091	0.336***	0.096	0.429***	0.167*
	(0.111)	(0.079)	(0.115)	(0.081)	(0.095)	(0.071)
Personal saving	0.122***	0.162***	0.127***	0.162***	0.130***	0.166***
	(0.024)	(0.014)	(0.025)	(0.015)	(0.022)	(0.014)

Panel B: Remittances as an independent variable

	Propensity score		Kernel Matching		Bias corrected	
	Urban	Rural	Urban	Rural	Urban	Rural
Permission	0.219***	0.254***	0.180***	0.259***	0.196***	0.312***
	(0.059)	(0.040)	(0.061)	(0.041)	(0.058)	(0.039)
Women att	0.506***	0.247**	0.571***	0.270***	0.496***	0.301***
	(0.139)	(0.096)	(0.143)	(0.095)	(0.111)	(0.091)
Personal saving	0.126***	0.213***	0.153***	0.204***	0.165***	0.207***
	(0.031)	(0.018)	(0.031)	(0.018)	(0.028)	(0.018)

4.2 *Patterns of Gender Role Attitudes and Gendered Behaviors*

Overall, it seems that the migration of a male member in the household is associated with a higher level of empowerment for the WLB in urban areas. Both women living in rural and urban areas are less likely to ask for permission from her husband or other family member when going out and are more likely to have personal savings than women living in a non-migrant household. While the migration of the male member makes the left behind women in urban areas significantly more likely to adopt empowering ideas and attitudes towards women, it does not have a similar significant effect on women in rural areas. Remittances amplify all coefficients on women empowerment in both urban and rural areas, as compared to non-migrant households.

5 Discussion and conclusion:

5.1 Discussion of Findings

This study demonstrates the effect of the migration of a male member on the labor market outcomes and the empowerment of women left behind. We are particularly interested to see if migration of a male member would provide a leeway for women left behind to participate in the labor market. Women in the MENA region are primarily expected to join the labor market to raise household income if the wealth or income of the breadwinner is not sufficient or the household has no male breadwinner (Hoodfar 1997; Amin and Al-Bassusi 2004). Countering these needs is that women remain the primary caregivers in the household for children and the elderly (Assaad, Krafft and Selwaness 2017a; Diprete et al. 2003; Hofferth and Collins 2000; Selwaness and Krafft 2021). They also engage in subsistence work activities, non-wage work or unpaid family work, which is typically home-based and does not require commuting, in order to easily cope with marital or caretaking responsibilities (Hendy, 2015; Krafft et al., 2019).

The international literature shows that with the migration of a male migrant, particularly when he is the head of the household, women left behind may be affected in three ways. The first is through the substitution effect: Women may want to substitute labor work for non-paid family or subsistence work, to replace the absent family member. The second is through the income effect: Women may supply more of their labor in the market to increase the family's resources. This mostly happens if the migrant was a breadwinner to the family but was not able to send any or enough remittances after migrating. Women may also participate in the labor market because they are able to outsource household chores to domestic servants as their financial situation improves from the remittances. The third is through the new norms that the woman and her family adopt from the country of destination: This is the so-called "transfer of norms" which assumes that international migration drives norms changes in the origin countries. These norms can be progressive or regressive in terms of gender equality.

Taking into consideration the endogeneity between migration, labor market outcomes, and gender norms, we try in this study to estimate the effect of male migration on the women left behind using three waves from the ELMPS 2006-2018. In this study we

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consider the endogeneity between migration, labor market outcomes and gender norms. Our findings indicate the dominance of the substitution effect over the income effect for women in rural areas when we consider the whole sample of migrants and only those who send remittances. This confirms the hypothesis that women in rural areas are more likely to replace the role played by the male migrant in subsistence work and unpaid family work. In urban areas, the income effect is more dominant over the substitution effect only when we consider the sample of all the migrants. However, when the migrant sends remittances, women in urban areas are less likely to engage in wage work and work more in subsistence. These findings are inconsistent with Binzel and Assaad (2011)'s findings that remittances allowed women to participate more in the labor market when their financial situation improves as they are more able to outsource households to domestic servants. We argue that this inconsistency is mainly related to the fact that our study covers a more recent epoque that saw important changes in the economics conditions in both the sending and the receiving countries. In the last decade, the Egyptian labor market has become tighter for women, particularly those who have to take care of children in the absence of the male head of the household. This could explain why many women who were receiving remittances were less likely than their counterparts to work, since in all cases structural changes in the Egyptian labour market were not in favor of women with shrinking of public jobs and the inability of the private sector to create suitable jobs for women (Assaad et al., 2017a, 2020; Krafft & Kettle, 2019)

We also found that migration has a positive effect on women's empowerment. Women who live in the household of a male migrant have greater freedom to move, have more personal savings and have more women empowering views and ideas than their counterparts. Our analysis will be the first that explores the effect of migration on women empowerment when men are still away using a panel dataset. Only recently Samari (2019) has explored the same topic but for return migrants and she found that return migrants from Arab countries bring back more regressive and conservative patriarchal ideas. For example, Egyptian married couples where the husband has past migration experience in Arab countries have a significantly larger number of children than stayers (Bertoli and Marchetta, 2015). We can consider that our analysis is complementary to

hers in that is shows that women while alone feel more empowered as they take a bigger role in decision making in the household and are able to manage the house's resources. However, this effect might not be a long lasting one as it diminishes when men come back. It could be also that our results are driven by the fact that we cover a more recent dataset (ELMPS 2018) where many Arab countries have started to adopt more women empowerment norms. For example, allowing women to drive in Saudi Arabia reflect an important change in the Saudi community and marks a more freedom granting agenda pushed by policy makers. In that sense, new Egyptian migrants to the Arab countries are less likely to adopt regressive ideas.

5.2 Limitations:

Despite our efforts to control for the endogeneity problem in the relationship between migration and our outcomes of interest, the instrument we used was not strong enough in many other specifications we have tried, particularly for the urban area sample, and this limited our ability to elaborate further on our analysis. For example, we could not compare women of male migrants receiving remittances to those not receiving it. Likewise, we could not estimate the effect of the time elapsed since migration of the male member on the labor market outcomes of women left behind. Our instrument was not strong enough also when we attempted to have a cross-sectional analysis to observe changes over the years.

We also do not have information about whether the migrant has returned between the waves. Conducting a panel regression without accounting for whether the migrant has returned in the following years can yield biased results.

5.3 Policy implications:

Promoting gender equality is a global development priority. Understanding the changes of the household dynamics that can affect the labor market outcomes of women affected by migration, particularly to Arab countries, is an important for policy makers. In previous years, migration may have a harmful aspect as it contributed directly to reducing women's labor force participation and empowerment, although it improved the lives of many Egyptian. In recent years, this harmful aspect may have started to diminish, and

offering adequate labor market opportunities for women living in the house of a male migrant may encourage their labor force participation.

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Table 5: T-test for females within migrants and non-migrants' households in rural and urban areas

	Urban					Rural				
	Mean (sd)				t-test	Mean (sd)				t-test
	(1) Non-migrant	N	(2) Migrant	N	(1)-(2)	(1) Non-migrant	N	(2) Migrant	N	(1)-(2)
Personal Saving	0.342 (0.474)	15168	0.462 (0.499)	515	-0.120***	0.265 (0.441)	17808	0.424 (0.494)	1483	-0.160***
WDMH	5.444 (2.259)	14048	5.833 (2.193)	472	-0.389***	5.149 (2.450)	16941	5.171 (2.599)	1418	-0.023
WM	2.236 (1.017)	15137	2.332 (0.996)	515	-0.096*	2.176 (1.120)	17783	2.308 (1.074)	1482	-0.132***
Wage Worker	0.22 (0.414)	16288	0.215 (0.411)	576	0.005	0.127 (0.332)	18815	0.092 (0.289)	1580	0.034***
Subsistence Worker	0.055 (0.228)	14914	0.067 (0.249)	540	-0.011	0.262 (0.439)	17861	0.302 (0.459)	1500	-0.040***
Unpaid worker	0.075 (0.263)	16288	0.087 (0.281)	576	-0.012	0.317 (0.465)	18815	0.364 (0.481)	1580	-0.047***
Female Head	0.088 (0.284)	16288	0.535 (0.499)	576	-0.446***	0.077 (0.267)	18815	0.528 (0.499)	1580	-0.451***
Education attainment	0.278 (0.447)	16288	0.38 (0.486)	576	-0.103***	0.109 (0.311)	18815	0.113 (0.317)	1580	-0.005
Wealth Quintile 1	0.087 (0.282)	16288	0.05 (0.219)	576	0.037**	0.288 (0.453)	18813	0.184 (0.387)	1580	0.105***
Wealth Quintile 2	0.147	16288	0.071	576	0.076***	0.263	18813	0.23	1580	0.033**

	(0.354)		(0.257)			(0.440)		(0.420)		
Wealth Quintile 3	0.187	16288	0.139	576	0.048**	0.216	18813	0.22	1580	-0.004
	(0.390)		(0.346)			(0.412)		(0.415)		
Wealth Quintile 4	0.248	16288	0.203	576	0.045*	0.152	18813	0.223	1580	-0.071***
	(0.432)		(0.403)			(0.359)		(0.416)		
Wealth Quintile 5	0.332	16288	0.536	576	-0.205***	0.081	18813	0.143	1580	-0.062***
	(0.471)		(0.499)			(0.272)		(0.350)		
Age	36.295	16288	36.811	576	-0.516	34.948	18815	34.426	1580	0.522
	-11.654		-12.32			-11.306		-11.41		
Number of children under six years	0.492	16288	0.425	576	0.067*	0.656	18815	0.673	1580	-0.017
	-0.751		-0.714			-0.834		-0.842		
Number of children above six years	1.255	16288	1.165	576	0.09	1.673	18815	1.634	1580	0.039
	-1.691		-1.779			-2.041		-2.06		
%men with secondary education	0.373	16288	0.385	576	-0.013***	0.358	18815	0.358	1580	0
	-0.068		-0.097			-0.03		-0.03		
%men in the private sector	0.342	16288	0.344	576	-0.003	0.352	18815	0.356	1580	-0.003***
	-0.038		-0.03			-0.023		-0.031		
%men in the agriculture sector	0.079	16288	0.088	576	-0.01***	0.123	18815	0.128	1580	-0.005***
	-0.06		-0.059			-0.04		-0.041		
% of unemployed men	0.025	16288	0.024	576	0.001	0.02	18815	0.019	1580	0.000*
	-0.014		-0.012			-0.006		-0.006		
%of hh with a mig	0.033	16288	0.036	576	-0.003	0.048	18815	0.054	1580	-0.006***
	-0.032		-0.034			-0.04		-0.036		

Table 6: First stage regression

	Migration		Remittances (Mig vs. Non-Mig)	
	(1)	(2)	(3)	(4)
	Rural	Urban	Rural	Urban
%of hh with a mig (instrument)	2.019***	1.612***	1.812***	1.949***
	(0.272)	(0.423)	(0.092)	(0.227)
Female Head	-0.097***	-0.025	-0.147***	-0.080***
	(0.024)	(0.016)	(0.018)	(0.017)
Education attainment	0.0027	-0.005	0.016**	-0.005
	(0.006)	(0.004)	(0.007)	(0.003)
Wealth Quintile 1	0.048***	0.009	0.044***	0.024***
	(0.012)	(0.006)	(0.01)	(0.005)
Wealth Quintile 2	0.038***	0.009	0.029***	0.026***
	(0.011)	(0.055)	(0.010)	(0.005)
Wealth Quintile 3	0.040***	0.007	0.027***	0.016***
	(0.011)	(0.005)	(0.010)	(0.004)
Wealth Quintile 4	0.033***	0.006	-0.004	0.015***
	(0.010)	(0.004)	(0.010)	(0.004)
Age	0.002	0.001	0.002	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Age squared	-1.82e-05	-1.15e-05	-1.31e-05	-1.41e-05
	(1.35e-05)	(1.11e-05)	(1.60e-05)	(1.24e-05)
Number of children under six years	0.005**	0.002	-0.002	0.000
	(0.002)	(0.002)	(0.002)	(0.002)

Number of children above six years	8.25e-06	0.000257	0.000928	0.000747
	(0.001)	(0.001)	(0.001)	(0.001)
%men with secondary education	-0.144**	0.001	0.036	-0.029
	(0.068)	(0.011)	(0.083)	(0.026)
%men in the private sector	0.108	0.042	0.070	0.038
	(0.068)	(0.033)	(0.087)	(0.035)
%men in the agriculture sector	-0.157***	-0.024	-0.207***	-0.111***
	(0.058)	(0.022)	(0.067)	(0.028)
% of unemployed men	0.422*	-0.0154	-0.100	0.040
	(0.244)	(0.062)	(0.342)	(0.078)
	(0.004)	(0.003)	(0.006)	(0.005)
Constant	-0.072*	-0.044	-0.102*	-0.049**
	(0.043)	(0.030)	(0.054)	(0.024)
Observations	19,301	16,227	19,800	16,368
F-statistic on the excluded instrument	69.685	14.505	246.838	64.941
P-values	0.000	0.000	0.000	0.000