ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية
2015

working paper series

EMPOWERMENT IS A COMMUNITY AFFAIR: COMMUNITY LEVEL DETERMINANTS OF MARRIED WOMEN'S EMPOWERMENT IN EGYPT

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Working Paper No. 959

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Working Paper 959

October 2015

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First published in 2015 by
The Economic Research Forum (ERF)
21 Al-Sad Al-Aaly Street
Dokki, Giza
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Abstract

This paper examines the contextual and community-level determinants of multidimensional women's empowerment in Egypt, while accounting for the usual individual and household level factors typically included in studies of women's empowerment. The paper analyzes two dimensions of women's empowerment: the decision-making and the mobility dimensions by means of two indices constructed from various survey questions relating to these dimensions. We use data from the Population Census of 2006 and the Demographic Health Survey of 2008 to construct community and governorate-level contextual variables to complement the individual-level data we obtain from the Egypt Labor Market Panel Survey of 2012 (ELMPS 2012). In line with the literature, the determinants that are relevant to the decision-making and mobility dimensions of women's empowerment turned out to be quite different, confirming that "empowerment" is a multi- dimensional phenomenon, with women relatively empowered in some aspects of their lives but not in others. Moreover, our results show that context plays an important role in determining women's empowerment in Egypt after controlling for a variety of individual and household-level characteristics. These results highlight the importance of viewing women's empowerment, and hence development as social and normative transformations rather than as just resulting from shifts in individual conditions, attitudes and behaviors. Thus, empowering Egyptian women will require changing community norms and values about gender relations rather than simply providing greater educational and employment opportunities for women.

***JEL Classifications**:* C22, J16, J12, J60

Keywords: women's empowerment, agency empowerment, decision- making, mobility, community-level determinants, social context, Egypt.

ملخص

تبحث هذه الورقة محددات السياقية متعددة الأبعاد على مستوى المجتمع المحلي لتمكين المرأة في مصر، في حين تمثل العوامل المعتادة المستوى الفردي والأسري وعادة ما تدرج في الدراسات تمكين المرأة. تحلل الورقة بعدين لتمكين المرأة: أولا: عملية صنع القرار وأبعاد التنقل عن طريق اثنين من المؤشرات التي شيدت من أسئلة الاستطلاع المختلفة والتي تتعلق بهذه الأبعاد. نستخدم بيانات التعداد السكاني لعام 2006 والمسح الديمغرافي الصحي لعام 2008 لبناء المجتمع وعلى مستوى المحافظات ولاستكمال البيانات على المستوى الفردي نحصل عليها من المسح التتبعى لسوق العمل في مصر لعام 2012 (ELMPS 2012). وتمشيا مع الأدب، تحولت المحددات التي لها صلة بصنع القرار والتنقل وأبعاد تمكين المرأة إلى أن تكون مختلفة تماما، مؤكدا أن "التمكين" هو ظاهرة متعددة الأبعاد، مع تمكين المرأة نسبيا في بعض جوانب معيشتهم. وعلاوة على ذلك، تظهر نتائجنا أن هذا السياق يلعب دورا هاما في تحديد تمكين المرأة في مصر بعد السيطرة على مجموعة متنوعة من الخصائص الفردية على مستوى الأسرة. هذه النتائج تسلط الضوء على أهمية النظر إلى تمكين المرأة، وبالتالي التنمية باعتبارها تحولات اجتماعية ومعيارية بدلا من أن تكون مجرد ناتجة عن التغيرات في الظروف الفردية والمواقف والسلوكيات. وهكذا، فان تمكين المرأة المصرية يتطلب تغيير المعايير والقيم المجتمعية حول العلاقات بين الجنسين بدلا من مجرد توفير قدر أكبر من فرص التعليم والعمل للنساء.

1. Introduction

Power is the ability to make choices. Therefore, "Empowerment is the process by which those who have been denied the ability to make choice acquire such ability" (SIDA Studies- Discussion Women's Empowerment). Although empowerment as a concept is relevant to women as well as to other disadvantaged or socially excluded groups, we focus on women due to the fact that women are a category of individuals that overlap with virtually all other social groups and women's empowerment is the basis of intra-household relations and decision-making and is thus critical to many, if not most, development outcomes. Women empowerment determines the extent to which children gain access to education and healthcare, whether women are able to seek employment outside of the home, whether they can acquire contraceptive information and have the freedom to act on their fertility preferences, among many other actions that are central to achieving desirable development outcomes (Dyson and Moore 1983; World Bank 2001; Mason and Smith 2003).

The concern about women's economic and social empowerment has been at the top of development priorities from many years as demonstrated by the fact that "promoting gender equality and empowering women" is the third goal of the Millennium Development Goals (MDGs). Its importance is further emphasized given the two-way relationship between poverty and disempowerment. The inability to meet one's basic needs often rules out the ability of exercising meaningful choices over one's life and women's inability to act purposively on their own and their children's lives perpetuates their poverty and deprivation (Malhotra et al, 2002, Abdel Mowla, 2009 and SIDA Studies- Discussion Women's Empowerment). The concern with women's empowerment has also been rising in Egypt, especially after the revolution of the 25th of January and its second wave in the 30th of June 2013. These events have heightened societal concerns about women's role in the public sphere and in economic life, as well as her critical role inside her own household.

Women face serious challenges in terms of participation in economic life in Egypt. Women make up only a quarter of the labor force, with almost a quarter of those who are economically active being unemployed rather than employed - an unemployment rate that is approximately four times higher than that of men. Unemployment is heavily concentrated among young women: approximately 11% of all young women are unemployed, a share higher than among young men, despite lower labor force participation. Most young women are not in the labor force, as 75% of young women are inactive (Krafft and Assaad, 2014).

Although there were traditionally large gaps in educational attainment by gender, these gaps have narrowed significantly in recent years. According to the MDGs report for Egypt, the primary net enrollment ratio in Egypt reached 96% in 2008/2009, with no significant gap between boys and girls (UNDP and Ministry of Economic development 2010).

According to the Central Agency for Public Mobilization and Statistics (CAPMAS), in 2012/2013 26% of the Egyptian population lived under the national poverty line (327 EGP per person per month). The poor in Egypt are concentrated in rural areas, with female-headed households having a higher probability of being in poverty. The MDGs report sheds light on the stronger negative association between school attendance and poverty for girls relative to boys. Only 80% of female children (6-12) in the poorest households have ever attended school compared with 88% of male children in the same age group (UNDP and Ministry of Economic development 2010). Illiteracy is also strongly associated with gender in Egypt. According to the 2006 population census, among the 2.5 million illiterates between the ages of 15 to 24 in Egypt, 60% were female (Population census, 2006).

The aforementioned gender disparities in Egyptian society highlight the need for studies that analyze women's status and its determinants in an attempt to identify the main factors that affect women's empowerment. Theoretically, it has been hypothesized that determinants of

empowerment include individual-level measures, which include control over material resources (such as land, livestock, and having labor earnings), human assets (such as education and health), socio-demographic characteristics (age, family size, and family structure, etc.) and psychological characteristics (beliefs about self-efficacy). More recently, there has been an emerging interest in social context as a main factor affecting women's empowerment. Women's position and their degree of empowerment are believed to be defined by gender and gender relations in society. Gender represents not just the biological sex of an individual, but also the ideological or normative systems that define different roles, rights, and obligations that are attached by society to individuals born with male or female sex characteristics. In this sense, women are a "class" in the (two-class) gender stratification system - a system that is governed by shared norms and values (Smith 1989). These ideological systems set prescriptions about many fundamental principles of social life, which define the social context: for example, how to organize families, how to allocate wealth among different groups or individuals, and how to organize relations between males and females. In this view, the perceptions, tastes, and choices of individual decision- makers are strongly influenced by the nature of the ideological or normative systems to which they belong (Mason and Smith 2003).

Hence, individual behavior is strongly influenced by norms at the household and community levels, and this social context has important consequences for the actions of women and hence their empowerment. For example, individual mobility in a community where few women can freely leave the house has different implications than woman‘s movement in a community where many women can move freely (Folaranmi 2013). Accordingly, understanding the social context — not just the situation of individual women — is critical for analyzing women's empowerment. This highlights the need to focus on the rights; obligations and resources granted to women versus men under different social contexts rather than on the only characteristics of individual women when analyzing women's empowerment (Mason and Smith 2003).

Moreover, Women's empowerment is a dynamic process of different dimensions; economic, socio-cultural, familial/interpersonal, legal, political and psychological. Different dimensions can vary independently of one another. There is nothing to guarantee that when women have high levels of empowerment in one dimension, they will also have high levels in other dimensions (Mason and Smith 2003). Dimensions including, but not limited to, freedom of movement, access to financial and non-financial resources, decision making autonomy, gender attitudes, freedom from fear and oppression, and equality in her relationship with her partner are arguably important and distinct aspects of a woman‘s position in relation to men, other family members, and other women within her household (Ghuman et al 2004). It is important to recognize this multidimensional aspect of women's empowerment because it renders many generalizations, as it is impossible to understand and capture the influence of women‘s status through one single measure. This highlights the importance of studies distinguishing different dimensions for those who wish to understand possible causes of social or economic change (Mason and Smith 2003).

A common shortcoming of most of the previous studies on women empowerment in Egypt is ignoring the social context and its effect on women's empowerment (Durrant & Sathar 2000 and Roushdy 2004). Another issue is that most of the studies tackled only one dimension of empowerment, namely economic empowerment. Hence, this research is an attempt to overcome these gaps.

In this context, this paper is concerned with studying determinants of women's empowerment in Egypt, with a special interest in the context and community level measures. Using data on individual women from the Egypt Labor Market Panel Survey of 2012, and contextual variables from the Egyptian Population Census of 2006 and the Demographic and Health

Survey of 2008, the paper analyzes the community characteristics and contextual variables that determine the empowerment of Egyptian women along the two dimensions of decision-making and mobility.

We have two goals in studying women's empowerment. First, we want to illustrate the degree to which women's empowerment in Egypt differs by social context with different gender systems and the extent to which these contextual differences remain after we control for personal and household-level characteristics. Second, we want to illustrate the multi-dimensional nature of women's empowerment and show how interrelationships between different aspects of empowerment are themselves affected by social context. In other words, women with a high degree of economic decision-making power inside their households, do not necessarily have a strong say in family size decisions, a high level of freedom of movement or a low level of coercive control by the husband. Because social context may allocate power to women in some domains while denying them power in others, different aspects of women's empowerment do not always move together.

The paper is organized as follows; the first section reviews the related literature. Section 2 describes the methodology. Section 3 presents the data used in the regression. The estimated results are presented in section 4 and finally section 5 concludes.

2. Literature Review

There is a growing body of literature that attempts to define the concept of empowerment. In this literature, different terms are often used interchangeably to encompass the empowerment concept, including autonomy, status, agency, power, patriarchy and gender equality (Malhotra, Schuler and Boender 2002 and Upadhayay and Karasek 2007). In addition, this literature conceptualizes and defines empowerment in various ways (Ibrahim and Alkire 2007)[1]. In brief, there is agreement that the concept of empowerment includes some key overlapping notions that are common in defining empowerment, these are: options, choice, control, and power. These terms mainly refers to women's ability to make decisions and affect outcomes of importance to themselves and their families (Malhotra, Schuler and Boender 2002). Moreover, it contains the idea of human agency — self-efficacy, referring to the fundamental shift in perceptions, or "inner transformation," as it is essential to the formulation of the choices made. Meaning that, women should be able to identify self-interest and choice, and consider themselves as able and entitled to make choices (A. Sen 1999; G. Sen 1993; Kabeer 2001; Rowlands 1995; Nussbaum 2000; Chen 1992).

Kabeer (2001a) defines empowerment as "the process by which those who have been denied the ability to make strategic life choices acquire such ability." This definition is considered a useful and widely accepted definition of empowerment as it captures what is common in other available definitions and can be applied across the range of issues that development efforts are concerned with. In addition, this definition is precise enough to be distinguished from the general concept of "power," as exercised by dominant individuals or groups, since it makes clear that only those previously denied such abilities can be considered to be empowered. Besides, Kabeer (2001a)'s definition distinguishes empowerment from other closely related concepts through the idea of process, or change from a condition of disempowerment (Upadhyay and Karasek 2010; Malhotra, Schuler and Boender 2002 and Mosedale 2005).

The empirical literature concerned with women empowerment can be divided into two main groups. The first group examines determinants of empowerment (i.e., empowerment in itself is the outcome of interest, which is the focus of this study). The second group of studies considers

[1] For a detailed survey on different definition of the concept, see Malhotra, Schuler and Boender (2002) and Ibrahim and Alkire (2007).

empowerment as an intermediary factor to examine its effects on other developmental outcomes of interest.

Because empowerment is a multidimensional concept (economic, socio-cultural, familial/interpersonal, legal, political, and psychological), studies differ in terms of how they measure empowerment. Some use indirect measures using a single observable characteristic, such as women's education, labor force participation or earnings, as a proxy for empowerment. Others use direct measures, which are often a combination of observable indicators that are grouped into indices that represent different dimensions of empowerment, including economic decision-making, child-related decision-making, marriage-related decision-making, freedom of movement, relations with husband, access to resources, self-esteem and control over resources, among others. Studies also differ with regard to level of analysis; with the majority of them heavily concentrated at the individual and household level compared to the aggregate levels.

The indirect measures of empowerment, such as education and labor force participation, are often criticized, particularly when used to analyze the effects of empowerment (Balk 1994; Jejeebhoy 1991; Vlassoff 1994). First, these proxies are context-specific, which renders comparative research less reliable. Second, proxy measures do not afford adequate evidence for how well they capture various dimensions of empowerment. Third, proxy measures alter the channels through which empowerment works. Finally, since empowerment comprises multiple dimensions, proxies generally obscure which dimension is being measured (Whyte 1978 and Agrwala and Lynch 2006). Direct measures tackle many of the inadequacies of the indirect-measure approach. They explicitly quantify the mutli-dimensionality of empowerment, thus clarifying the determinants and consequences of each dimension. In addition, direct-measures illuminate the channels through which economic and social factors such as education and labor force participation affect empowerment, rather than confusing causes and effects (Goetz and Sen Gupta 1996; Kritz and Makinwa-Adebusoye 1999; Mason 1997 and Agrwala and Lynch 2006).

Most of the empirical analyses of the determinants of women's empowerment are focused at the individual and household level. This concentration at the individual/household level could be due to the importance of the household to gender relations and hence empowerment. In addition, operationalizing different components of women's empowerment in a concrete manner is more feasible at the household level rather than at larger levels of aggregation (Malhotra, Schuler and Boender 2002). The majority of these studies used direct measures of empowerment and studies of South Asian countries are heavily represented in this literature. They study the impact of different individual and socio demographic variables, such as age, marital status, education, employment, asset ownership, ethnicity, position within the household and number of children, on different aspects of women's empowerment (Hashemi *et al.* (1996); Malhotra and Mather (1997); Mason (1998); Zaman (1999); Jejeebhoy (2000); Mason and Smith (2000); Jejeebhoy and Sathra (2001); Parveen and Leonhauser (2004); Kamal and Zunaid (2006); Gupta and Yesudian (2006); Allendorf (2007); Anderson and Eswaran (2009); Khan and Awan (2011); Vanghese (2011)).

Only a few recent studies tried to take social context into consideration by combining community and individual level variation in a single analysis. Indeed, these studies have found strong evidence of powerful effects of social context on women's empowerment. In general, evidence showed that all these factors have significant associations with many direct measures of empowerment. However, the relative importance of each contextual factor differs for different dimensions of empowerment and social contexts (Samman and Santos 2009). Moreover, it has been shown that social context has indirect and direct effects on women's

empowerment. Country and community of residence predict women's domestic empowerment better than their personal socioeconomic and demographic traits (Mason and Smith, 2000).

Theoretically, relevant social contexts can be distinguished through three levels: the nation-state, which enforces the gender regimes embodied in legal systems, judicial precedent, religious discourse and public policy; the local geographic community, which is the context where much of the day-to-day interpretation of social norms and informal sanctioning of those who violate them occurs; and communities of identity, for example, religious or ethnic communities (Mason and Smith 2003) (no 42). Accordingly, social context as a determinant of women's empowerment is analyzed in the empirical literature on three levels; at the macro level by comparing different nations, at the community level inside a single country by analyzing determinants of women's empowerment in more than one geographical area inside a single country and finally by analyzing determinants of women's empowerment depending on the religious or ethnic group they belong to. Generally there are two ways through which social context was operationalized: first by using dummy variables for the various geographic or identity group being investigated and second, by using community-level characteristics measured at the geographic level being analyzed.

Mason and Smith (1999), use data for 56 communities in five Asian countries (Pakistan, India, Malaysia, Thailand and the Philippines) to measure the effect of social context proxied by dummies for religion, region on women's empowerment, controlling for women's individual and household characteristics, such as land assets, participation in waged work, and wife's rank relative to husband. They operationalized women's empowerment as their say in household expenditure decision-making. The results revealed that country and community of residence predict women's domestic empowerment better than their personal socioeconomic and demographic traits.[2]

Mason and Smith (2003) try to answer two main questions: whether community or individual characteristics are better predictors of women's empowerment, and whether different dimensions of empowerment are similarly related to community or individual traits. They analyze four measures of married women's empowerment in the domestic sphere in 56 communities from the same five Asian countries as in the previous study (India, Malaysia, Pakistan, the Philippines, and Thailand), however using different proxies for social context. First they examine variation in women's empowerment according to country and community dummies together with personal and household characteristics in multivariate models. Second they capture context by five community-level measures computed as the mean of response to each of five gender-role attitude questions across women in each community. The analysis shows that community is a far stronger predictor of women's empowerment than are individual traits. The relationship of both community and individual traits to different measures of empowerment varies, suggesting that "empowerment" is inherently a multi- dimensional phenomenon, with women relatively empowered in some spheres but not in others.

The studies by Jejeebhoy (2000) for Uttar Pradesh (UP) and Tamil Nadu India and Jejeebhoy and Sathar (2001) for the same two areas in India and Punjab Pakistan use dummy variables to account for social context, namely nationality, religion and region. They find that traditional sources of empowerment, namely, co-residence with mother in law, size of dowry, age, and number/gender of children, to be more important determinants of autonomy in Punjab and Uttar Pradesh than in Tamil Nadu. In Tamil Nadu, the only traditional factor that mattered was age. Education and work status predicted empowerment in all three sites but far more in Tamil Nadu than in UP and Punjab, where only secondary education mattered. For variables reflecting

[2] Similar results were reached in a previous study, Mason (1998), for the same 5 countries.

context only region was important; they consider region to proxy the cultural context, specifically prevailing social institutions that condition gender.

In Bangladesh, Parveen and Leonhäuser (2004) find that traditional socio-cultural norms have a strong negative effect on women's empowerment, while formal and non-formal education have strong positive effects, in addition to information and media exposure and mobility. Kishor and Gupta (2004) document women's empowerment as a whole and in each of 26 states in India. In general, they find that the average woman in India is disempowered absolutely as well as relatively to men, and that there has been little change in her empowerment over time. However, there is great variation in the level of women's empowerment across the different states and across indicators, confirming the importance of context and the multidimensional nature of women's empowerment.

Ghuman et al. (2004) compared couple responses to survey items on the wife's autonomy in various domains using data from 23 communities in India, Pakistan, Malaysia, Philippines and Thailand. They showed that the level of women's autonomy depends on whether wives or husbands are respondents and that the response categories do not have the same cognitive or semantic meanings to men and women. Moreover, the disagreement between men and women varies across communities highlighting the role of social context.

As for the empirical literature, tackling determinants of women Empowerment in Egypt, most of the existing studies focus on the individual-level measures as determinants of empowerment. Kishor (1995), Khatab and Sakr (2009) and Abdel Mowla (2009) tried to assess factors affecting women empowerment in the Egyptian case. Kishor (1995) used the 1988 Egypt Demographic and Health Survey (EDHS) to examine the effect of several modernization, economic, and cultural factors on three different direct measures of empowerment. First, the customary autonomy index used to measures the extent to which women believe they should have a say in decision related to matters women traditionally would have control over -- mainly family planning, children's education and marriage. Second, the non-customary autonomy index that measures the extent to which women believe they should have decision-making power in general, and in areas outside their traditional roles, such as visits to relatives and the household budget. Finally, the realized autonomy index measuring the extent to which women perceive that they have decision-making power and freedom of movement. The determinants of empowerment used by this study included household characteristics (region and socio-economic index), individual characteristics (age, education, exposure to media, migration history, and employment status), husband characteristics (education and occupation) and cultural variables (religion, marriage pattern, post marital residential arrangement and number of children by gender). Using ordered logit regression, the results showed that while most factors have a similar impact on the indices of customary autonomy and non-customary autonomy, they do not always have the same impact on the realized autonomy index. Modernization efforts that affect women's individual characteristics, like women's own education, affected women mostly by altering their views about women's role in decision-making. While modernization efforts that affect the circumstances in which women live, such as the level of education of her husband, affect her realized level of autonomy most. The impact of employment on empowerment differed for each dimension. Realized autonomy is the only aspect that is significantly affected by women's work, irrespective of whether they control their earnings or not and whether they earn cash or not for the work they do. The other two dimensions as measures of perceptions about women's roles is not affected by employment per se, but by access to, and control over, earnings derived from employment. Finally, only a few cultural variables affected any of the aspects of empowerment directly. Realized autonomy is lower among women who are Muslim, who live in large households, who are remarried and who have greater number of children irrespective of the children's gender.

Khattab and Sakr (2009) use data from the Egypt Labor Market Survey of 2006 to investigate the determinants of women's empowerment in Egypt. This study focused on the economic dimension of women's empowerment as measured indirectly by female participation in the labor market. It utilized a comparative description approach to analyze the effect on women's economic empowerment of four different factors: women's point of view on participating in the labor market, social values (husband and wife view of whether women should be allowed to work), work conditions (stability, duration, right to occupy leadership position) and women's financial autonomy. The study found that higher unemployment rates, the longer duration of unemployment facing women, the lack of access to education, and social norms are the major factors that hamper economic empowerment of women in Egypt. Social norms were especially important and reflected in a separation and conflict between accepting women's work while refusing their financial autonomy. Such results highlight the shortcomings of indirect measures, like labor force participation, as a true reflection of empowerment.

Abdel Mowla (2009) also uses the ELMPS 2006 to examine the effect of the level and type of education on women economic empowerment in Egypt. Women economic empowerment was proxied by two indirect measures: (1) economic participation; measured as female labor force participation, probability of exiting employment and the extent of job search behavior; (2) economic opportunity; measured by wage work and escaping vulnerable employment, escaping low quality work and overcoming occupational segregation. It was found that education has a powerful impact on both measures of women's economic empowerment in Egypt. Women are found to benefit more than men from higher education in terms of improving their labor market outcomes.

Finally, Assaad, Nazier and Ramadan (2014a) analyze the different individual and socio-demographic determinants that affect women empowerment in Egypt. The paper analyzed two dimensions of women empowerment, namely decision-making and mobility. The findings are in line with the literature: age, education, employment, poverty status, number of children, and having an adult son appear as significant determinants of empowerment. Women's empowerment was also significantly affected by their husbands' and their father's characteristics. All of these determinants, except for own education, showed varying impact depending on the dimension of empowerment studied. Social context as measured by regional and governorate dummy variables was found to be very important in explaining Egyptian women's empowerment. Context was not only found to be an important determinant of women's empowerment as measured by the two indices, but it was also found to affect the impact of the other individual and socio-demographic determinants on women's empowerment.

Most of the previous studies on women's empowerment in Egypt focus mainly on individual and socio-demographic characteristics ignoring the social context and its effect on women empowerment (Durrant & Sathar, 2000 and Roushdy, 2004). Moreover, the few studies that have considered the social context, included only cultural or community dummies rather than attempting to determine what it is about these groupings that affect empowerment (Kishor 1995 and Assaad et al 2014a). Another issue is that most of the studies tackled only one dimension of empowerment, namely economic empowerment. Hence, this research is an attempt to overcome these gaps. We focused on the community-level determinants of married women's empowerment in Egyptian households to capture the effect of social context, in addition to individual and socio-demographic characteristics. Social context is captured using contextual variables measured at the governorate and district levels.

2. Methodology

Following Assaad et al. (2014a), this paper measures the empowerment of married women in Egypt using two indicators, namely decision-making and mobility. The decision-making index

is created by combining information from several questions about participation in the family's major economic decisions as well as their ability to make minor economic decisions on their own, in addition to decisions related to children health and schooling. The mobility index is derived from questions relating to women's ability to visit sites such as the local market, health center or fields outside the village without obtaining permission from other family members. The specific methodology of computing the decision-making index (DI) and the mobility index (MI) is described in detail in appendix 1.

Utilizing ordinary least square regressions, the decision making index (DI) and the mobility index (MI) are regressed on a variety of individual, household and contextual characteristics as follows:

(1) For decision index: $\mathrm{DI} = \mathrm{X}\beta + \varepsilon$

(2) For mobility index: $\mathrm{MI} = \mathrm{X}\alpha + \mu$

where X is the vector of regressors, ε and μ are the error terms, β and α are the two sets of parameters to be estimated from the two models.

The individual characteristics we include in the regression are the woman's age in years (*age*) and its square (*age2)* in order to take into consideration the non-linear effect of age. Her age at marriage in addition to the difference between her age and her husband's age (*age gap*) are included as well. Following the literature, education status is included in the regression as an important determinant of women empowerment while her employment status as not included to avoid endogeniety problems. (Assaad, Nazier and Ramadan, 2014a).

To account for the effect of the position of the woman in the household on her decision making and her mobility we include variables indicating the status of the respondent as a daughter in law in the household (*Daughter in law)* in addition to her status as the head of the household (*Permhead)* if her husband is absent and she is the head of the household.

The socio-economic status and background of both the woman and her family is also expected to affect her decision making power. This is captured in our model by using the woman's contribution to the costs associated with her marriage measured by her share and her family's share in the marriage costs (*Share marriage cost).* Moreover, to capture the level of education of both mother and father, a scale variable is created based on the education level of both parents. The individual education level of both father and mother may take any of the following three values: 1 if they have no education, 2 if basic education and 3 for secondary education or above. Hence our aggregate parents variable - which is the sum of the two parents education variables - may take values from 2 (both parents have no education) to 6 (both have secondary education level or above)

The poverty status of the respondent is one factor that is expected to affect her decision-making power and mobility. Therefore, the model included 5 income quintiles based on wealth score. This later takes into consideration the durable goods available to the household. The poorest quintiles are considered as the reference category.

To tackle the social context and community effects on women empowerment, both the DI and MI regressions included different context variables reflecting education, employment, development level of the community where the respondents live in addition to variables capturing women's self-esteem.

The education level of the district where the women live is captured by the share of males with secondary education or higher among the governorate's adult males.

The overall community employment level, not only the respondent's employment status, is expected to affect female's empowerment. Therefore, the share of female wageworkers among

all wageworkers at the governorate level is included in the regression as a proxy for the employment status of other females within the district where the respondent lives.

The development level of the districts where the women live, is measured by the share of the population who have access to public sewerage network.

Finally, women's self-esteem was captured through two variables. The first one reflected females' perception of violence, as measured by the share of females at the governorate level who accepted that a man beat his wife whatever the reason is. The second variable is the share of women, at the governorate level, thinking that circumcision should continue.

3. Data

The data for the individual and household characteristics used in this paper is drawn from the Egyptian labor Market Panel Survey (ELMPS) for 2012. 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 (2012) is the third round of this periodic longitudinal survey that tracks the labor market and the demographic characteristics of households and individuals interviewed in 2006, both individuals included in the ELMS (1998) and individuals added in 2006, as well as a refresher sample of 2,000 new households to ensure that the data continues to be nationally representative, a total sample of 12,060 households and 49,186 individuals. The ELMPS is considered a wide-ranging, nationally representative panel survey that covers topics such as parental background, education, housing, access to services, residential mobility, migration and remittances, time use, marriage patterns and costs, fertility, women's decision making and empowerment, job dynamics, savings and borrowing behavior, the operation of household enterprises and farms, besides the usual focus on employment, unemployment and earnings in typical labor force surveys.

Our research focuses on 8,837 married women, in 8,568 households, aged between 15 and 49 years old, with an average age of 31 years old. Concerning the distribution of the sample over the six Egyptian regions: 16.77% of the sample lives in Great Cairo, Alexandria and Suez Canal; and 10.99%, 13.50%, 30.45% and 28.29% lives in Urban Lower, Urban Upper, Rural Lower and Rural Upper Egypt respectively. Finally, 58.74% of the sample lives in the rural areas.

Table 1 displays the distribution of our sample according to the different quartiles of both DI and MI. It shows that the distribution of the sample is pretty similar for the top and bottom quintiles of both our indices: about 20.98% and 21.33% of our sample falls in the top quartile of the DI and MI respectively. And, 27.9% and 26.63% of the respondents fall in the first quartile according to the DI and MI, respectively. On the contrary, the second and the third quartiles show different figures 24.73 % of the sample falls in the third quartile of the DI while 39.65 % of it falls in the third quartile of the MI. This suggests that women in Egypt are more empowered when empowerment is measured by the decision-making index as compared to the mobility index.

The social context and community level variables are drawn from two main sources. First, education, employment, fertility rate and access to water and sanitation services at the governorate urban/rural levels were drawn from the IPUMS International, based on the Egyptian Population, Housing and Establishment Census for 2006 conducted by CAPMAS and including 7,282,434 persons.

Concerning the community education variables. At the governorate level, Port Said governorate had the highest average share of male with secondary or higher education (70% in average) and the lowest share of illiterate men (13% in average), while Beni-Suef had the

lowest average share of males with secondary education or higher (48% on average) and the highest share of illiterate men (47%) same as Fayoum and Menia. [3]

Table 2 displays the distribution of Share of Male with secondary or higher education at the governorate level among the 4 quartiles of the decision-making power index. Accordingly, the higher the average share of males with secondary and higher education, the higher the empowerment as measured by the decision-making power index.

Our employment community variable is the average shares of female employed, among the labor force at the governorate levels. This variable varies among the different governorates. The highest share is reached in Beni-Suef, with 22% of the labor force being employed females, while Qena witnessed the lowest share of 8% (Appendix 3). Table 3 shows that the share of employed females at the governorate level is positively related to the DI quartiles. Women who fall in the third and fourth DI quartiles live in governorates where an average of 14% and 15% of the labor force are employed females, respectively, compared with only 12% for the first quintile.

It worth noting that, compared to the DI quintiles, we found that the education and employment community variables showed very little variations, on average, among the different MI quartiles (for more details see Appendix 4).

Access to improved source of water supply and sanitation facilities are other important measures for development level. In Egypt, only 37% had access to public sewerage network (Figure 1). This low average share of access to public sewerage network hides significant variations among the different governorates. For some poor governorates such as Menia, Assiut and Qena, this share is lower than 10% of the households. While this share exceeds the 80% for the metropolitan governorates (Cairo, Alexandria, Port Said and Suez)

Second, variables reflecting women's self-esteem are drawn from the 2008 Egypt Demographic and Health Survey (EDHS)[4]. The 2008 EDHS is a nationally representative sample of 16, 527 ever-married women aged 15-49. It was undertaken to provide estimates for key population indicators including fertility, contraceptive use, infant and child mortality, immunization levels, maternal and child health, and nutrition. Moreover, it covered other health topics such as knowledge and awareness of avian influenza, HIV/AIDS and hepatitis C; previous history of hypertension, cardiovascular illness diabetes and liver disease; attitudes and behavior with respect to female circumcision; health care cost and health insurance coverage (El Zanaty and Way, 2009).

Women were asked about if they think that a man should beat his wife for any of the following reasons: if she went outside without his permission, neglected her kids, argued with him, refused to have sex with him, or burned food. Figure 2 shows the average share of females, who think that women should be beaten for these reasons, by their husbands. Going out without his permission, came as first reason with 34% of women thinking that a woman should be beaten for this. Neglecting her kids came at the second level with 32%, while only 10% think that a woman should be beaten if she burned food. On average, 42% of women think that a man should beat his wife whatever the reason is.

Female Genital Cutting, traditionally known as "*circumcision,*" is a fundamental violation of women and girls' rights (WHO, 2008). Surprisingly, according to the EDHS (2008), an average of 60% and 66% of women in Egypt thought that this practice should continue, in urban and

[3] For the average share of men with secondary education or higher and share of illiterate men at the governorate level, see Appendix 2.

[4] The EDHS was conducted on behalf of the Ministry of Health by El-Zanaty and Associates. It is the ninth in a series of Demographic and Health Surveys conducted in Egypt as a part of the worldwide MEASURE DHS project, which is funded by the United States Agency for International Development (USAID).

rural areas, respectively. This average rate is 64% all over Egypt. This share reached its maximum of 82% in Aswan as compared to a minimum of 28% in Port Said.

4. Empirical Results

As described above, two models were estimated one for the DI and the other for the MI. Both regressions include individual characteristics, household's characteristics, parents' characteristics and community variables. The estimated parameters for the two regressions are available in appendix 5.

Before presenting the results of these two regressions we would like to emphasis the relative explanatory power of our community variables. Table 4 compares the adjusted R^2 for 5 regression models. The first of them included only individual and household regressors. The second included, in addition to the individual and household regressors, region dummies. While the third one included governorates and urban/rural interaction terms, in addition to individual and household's characteristics. Moving from model (2) to (3) we are including variation between governorates within a particular region. The forth regression included qism fixed effects. Moving from model (3) to (4) we are adding variation between districts within a governorate. Finally, the fifth regression is the one with community variables as studied in the current paper through which we are trying to capture as much of the observed community characteristics as possible.

As expected when comparing the adjusted R^2 it is obvious that the explanatory power of the model increases the more detailed our location variables are. Moving from model (1) with no location effects to model (4) with the qism fixed effects increased the explanatory power by 12.2 and 12.3 percentage points for the DI and the MI respectively. This accounts for the variation in DI and MI due to observed and unobserved community characteristics at the qism level, which is the most disaggregated level available. On the other hand, moving from model (1) with no location effects to model (3) increased the explanatory power by 10.6 and 8.2 percentage points for the DI and the MI respectively. This accounts for the variation in DI and MI due to observed and unobserved community characteristics at the governorate urban/rural level. Of this variation, our observed community variables included in model (5) managed to explain 6.9 and 4.4 percentage points for DI and MI respectively. In other words, 3.7 percentage points and 3.8 percentage points of the variation in DI and MI explained by the community in model (3) are due to unobserved community characteristics not captured by our community level variables included in model (5).

Turning to the results of our main model (5), it was evidence that Egyptian female's empowerment, measured by both the decision and the mobility indices, is increasing with age then her empowerment start decreasing at age of 39 and 47 for the decision-making and the mobility respectively. Moreover, late marriage decreased Egyptian female's decision-making empowerment no matter the dimension studied.

Education had a very different effect on our two indices. For the decision making index, as expected, higher education levels had positive impact. Secondary and university and above education as compared to illiterate had a significant positive effect on women's empowerment. While for the mobility index, the effect of education was insignificant for all education levels.

As expected, women's empowerment as measured by our two indices is positively affected by being the head of the household as compared to not head. The share of sons in her kids increases empowerment as measured by the decision making power but was insignificant for women's' mobility. Being a daughter in law and the more the numbers of adult living in the same household affect the decision making power negatively and have no significant effect on mobility.

Women's economic status and background as measured by her share in marriage cost have no effect on women's empowerment no matter the dimension. Surprisingly, respondents' parents' education had no effect on her empowerment.

Interestingly, for the poverty status, when the social context is taken into consideration, woman poverty status is insignificant for the decision making power of women as compared to those in the first wealth quintile. Surprisingly, for the mobility being in fourth or the fifth quintile as compared to the first poor quintile decreased her mobility. Hence, richer women in Egypt are less mobile.

Generally, our community characteristics are found to have significant impact on women's empowerment for both dimensions tackled. As expected, governorates with higher share of employed females in the labor force increase the decision-making power and mobility of Egyptian women. Egyptian females living in more developed districts, characterized by higher access to water supply and sanitation services, are more empowered when empowerment is measured by both our indices.

However, average educational level at the governorate level where the respondents live, as measured by the share of males with secondary education or higher among males of 18 years and above at the governorate level, was statistically insignificant for both empowerment dimensions.

Female's perception of unequal gender roles, as reflected in her acceptance of violence is another important determinant of her decision making power. Results showed that the higher the share of women at the governorate level who approve violence, the less her decision making power. While for mobility it was insignificant.

Finally living in a rural area as compared to an urban one was found to have a positive effect on empowerment as measured by our two indices. Although this might seem counterintuitive, it is justified. Including the variables capturing the availability of services, mainly the share of households with access to a sewerage system in our model, captured the effect of being in developed urban areas. Hence our dummy variable for rural/urban areas captured the effect of rural areas versus the less developed urban areas deprived from infrastructure and services, which is expected to be even worse than the rural areas.

6. Concluding Remarks

The present study focused on the social context as a main determinant of women empowerment in Egypt. It analyzed the impact of social context in addition to individual, socio demographic characteristics, on two dimension of Egyptian women's empowerment. This later was measured by decision-making power index and mobility index. In line with the literature, most of our determinants had different impacts on women's empowerment based on which dimension is under investigation: decision-making index or mobility index. The relationship between both community and individual characteristics and different dimensions of empowerment varies depending on the dimension investigated, confirming that "empowerment" is a multi- dimensional phenomenon, with women relatively empowered in some aspects but not in others.

Our results showed that local context plays an important role in determining Egyptian female's empowerment, in addition to the traditional individual and socio demographic characteristics. Although some of our community level variables were statistically insignificant[5], including them in the analysis managed to explain 6.9 and 4.4 percentage points of the variation in DI and MI respectively, due to observed and unobserved community characteristics at the governorate urban/rural level.

[5] Performing a joint significance test to these variables proved that they are jointly significant.

It is evident that the most important community level characteristics that determine Egyptian women's empowerment are the shares of employed women at the community level, the level of development of the community as reflected in the availability of infrastructure and services and women's self-esteem as reflected in higher share of women rejecting violence. While, the level of education of the community was not found to be significant.

Accordingly, and in line with the theoretical approach used in this study - which considers gender relations as greatly affected by community norms and values - and confirming Assaad et al. (2014a)'s results, our results showed that social context is a strong predictor of women's empowerment. This highlights the importance of viewing women's empowerment, and hence development, as social and normative transformations rather than just a shifts in individual actions.

These results have important implications for policies targeting Egyptian women's empowerment. First, policies must pay more attention to changing the gender stratification system and its normative foundations at the local level. Second, the results also suggest that policies to enhance females' education and open greater employment opportunities may definitely contribute to women's empowerment at least in some respects.

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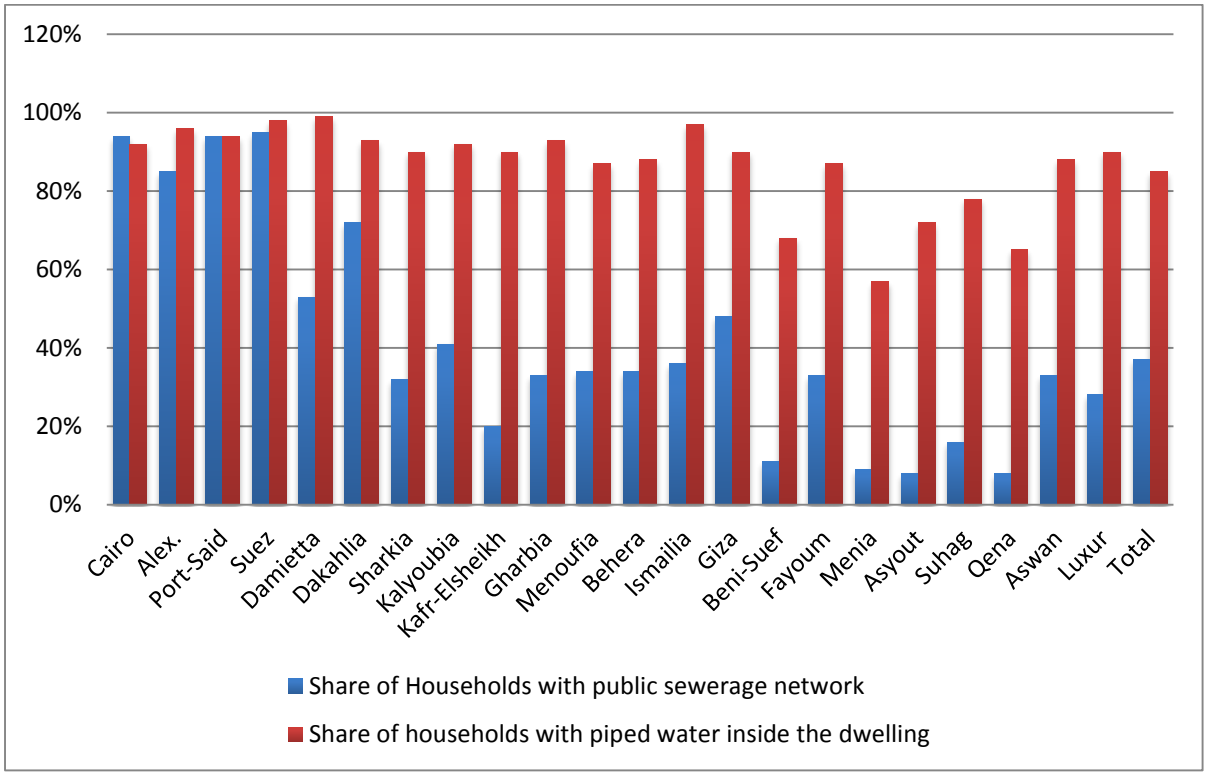
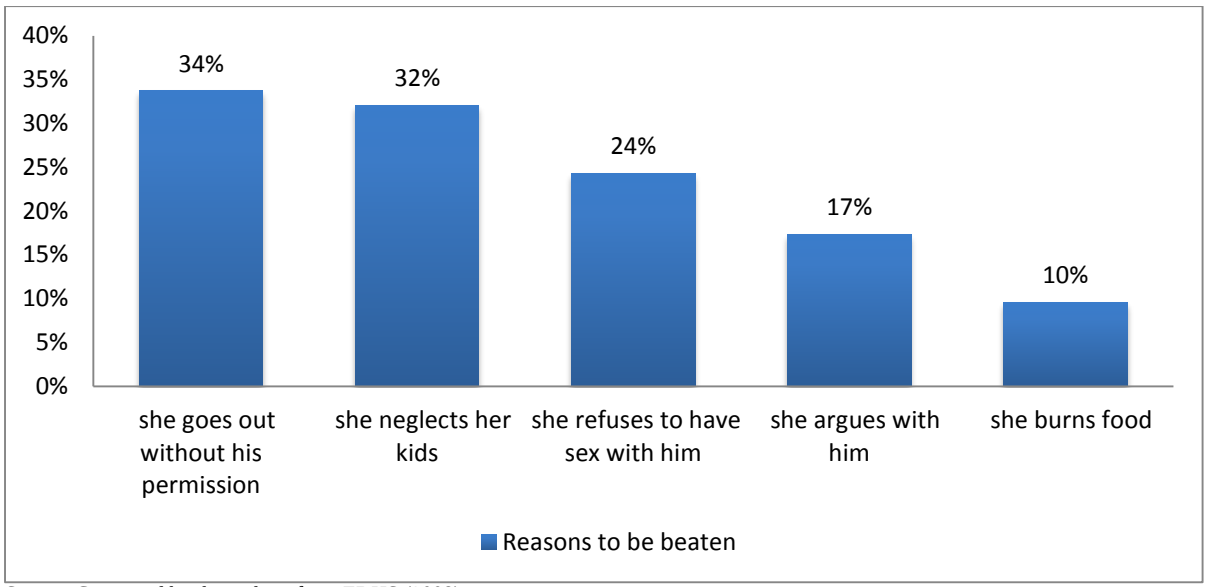
Figure 1: Average Shares of Households With Access to Improved Water Supply and Sanitation Facilities



Source: Computed by the authors from Census 2006 (IPUMS).

Figure 2: The Average Share of Women Who Think That Women Should Be Beaten by Their Husbands for Different Reasons



Source: Computed by the authors from EDHS (2008).

Table 1: Distribution of the Sample According To the 4 Quartiles of the DI and MI (%)

	DI %	MI %
1	27.93	26.63
2	26.37	39.65
3	24.73	12,39
4	20.98	21.33
Total	100	100

Source: Computed by the authors from ELMPS 2012.

Table 2: The Average Shares of Male With Secondary and Higher Education of Illiterate Male According to The Different Quartiles of DI.

DI Quartile	Share of Male with secondary or higher education
1	52%
2	55%
3	55%
4	56%
Total	54%

Source: Computed by the authors from Census 2006 (IPUMS).

Table 3: Average of the Employment Level Variables According to the DI Quartiles

DI Quartiles	Share of employed female (%)
1	12
2	14
3	14
4	15
Total	14

Source: Computed by the authors from Census 2006 (IPUMS)

Table 4: Adjusted R^2 for Different Regressions

Adjusted R^2	(1)	(2)	(3)	(4)	(5)
DI	0.164	0.202	0.270	0.286	0.233
MI	0.079	0.095	0.161	0.202	0.123

Source: Computed by the authors based on regression results.

Appendix 1: Technical note for the Construction of the Decision and Mobility Index

For the decision making power inside the household, women are asked the following questions:

1. Who take the decision for making large household purchases?
2. Who take the decision for making household purchases for daily needs?
3. Who take the decision concerning your visits to family, friends or relatives?
4. Who take the decision concerning what food should be cooked each day?
5. Who take the decision concerning getting medical treatment or advice for yourself?
6. Who take the decision concerning buying clothes for yourself?
7. Who take the decision concerning taking child to the doctor?
8. Who take the decision when dealing with children's school and teachers?
9. Who take the decision concerning sending children to school on daily basis?
10. Who take the decision concerning buying clothes and other needs for children?
11. Do you keep the household's money with you?

Answers For the first 10 questions, D_k, takes the following values:

- D_k=*4*: if the respondent takes the decision alone.
- D_k=*3*: if the respondent takes the decision with her husband.
- D_k=*2*: if the respondent takes the decision with her husband and her in laws.
- D_k=*1*: if the respondent does not participate in the decision at all.
- D_k=*Not Applicable*.

For the *not applicable* answer it is replaced by the weighted mean of the other answers. A dummy variable is created, for each of the 10 questions, equals 1 if the answer of the question is *not applicable*, 0 otherwise

The 11th question, D_{11} takes the values 1 if she keeps the household's money with her, 0 otherwise. More precisely, the DI takes the following form:

$$DI = \sum_{k=1}^{10} w_{Dk} * (D_k * NA_{Dk}) + (w_{11} * D_{11}) \qquad k=1,2,3,...10 \qquad (1)$$

Where w_{Dk} is the factor analysis weight, D_k is the value of the answer of the 10 questions of decisions. NA_{Dk} is the dummy variable of the not applicable answer. And w_{11}, D_{11} are the factor analysis weight and the answer for the 11th question.

For mobility, women are asked if they need no permission (M_k=4),), have to just inform them (M_k=3), need permission (M_k=2) or cannot go alone (M_k=1) when going to:

1. Local market
2. Local health center.
3. Health center for the children.
4. Friends or relative house

The *not applicable* answer for the mobility questions; it is treated the same way as for the decision index. More precisely, the MI takes the following form:

$$MI = \sum_{k=1}^{4} w_{Mk} * (M_k * NA_{Mk}) \qquad k=1,2,3,4 \qquad (2)$$

Where w_{Mk} is the factor analysis weight, M_k is the value of the answer of the 4 questions of mobility. NA_{Mk} is the dummy variable of the not applicable answer.

Appendix 2: Average Share of Male with Secondary Education or Higher and Share of Illiterate Men at the Governorates Level

Governorates	Share of male with secondary or higher education (%)	Share of illiterate male (%)
Cairo	68	24
Alex.	61	28
Port-Said	70	23
Suez	66	24
Damietta	45	45
Dakahlia	55	39
Sharkia	54	40
Kalyoubia	54	35
Kafr-Elsheikh	53	44
Gharbia	58	34
Menoufia	60	32
Behera	49	44
Ismailia	54	34
Giza	55	37
Beni-Suef	48	47
Fayoum	49	47
Menia	49	47
Asyout	52	43
Suhag	48	46
Qena	56	38
Aswan	63	28
Luxor	58	33
Total	47	27

Source: computed by the authors from Census (2006)-IPUMS.

Appendix 3: Average Share of Employed Females among the Labor Force at the Governorates Level

Governorate	Share of employed Female (%)
Cairo	21
Alex.	16
Port-Said	21
Suez	16
Damietta	12
Dakahlia	12
Sharkia	13
Kalyoubia	12
Kafr-Elsheikh	11
Gharbia	14
Menoufia	17
Behera	10
Ismailia	14
Giza	14
Beni-Suef	22
Fayoum	10
Menia	16
Asyout	13
Suhag	11
Qena	8
Aswan	13
Luxor	14
Total	14

Source: computed by the authors from Census (2006)-IPUMS.

Appendix 4: Distribution of the Education and Employment Community Variables among the MI Quintiles:

Table 4-1: Average of the Education Level Variables According to the DI Quintiles

MI Quartiles	Share of male with secondary or higher education (%)	Share of Illiterate male (%)
1	41	38
2	42	39
3	43	38
4	43	38
Total	49	39

Source: Computed by the authors from census 2006 (IPUMS).

Table 4-2: Average of the Employment Level Variables According to the DI Quintiles

MI Quartiles	Share of employed female (%)
1	13
2	14
3	14
4	14
Total	14

Source: Computed by the authors from ELMPS (2006) and Census 2006 (IPUMS).

Appendix 5: Estimated Parameters for the DI and MI regressions with Community Variables

Dependent Variable	DI	MI
age	0.186***	0.0504***
	(0.0127)	(0.0125)
age squared	-0.00241***	-0.000536**
	(0.000181)	(0.000202)
Age at first marriage	-0.0222***	-0.00813***
	(0.00281)	(0.00269)
Education Status (reference category: illiterate)		
literate but no basic education	-0.0498	0.00893
	(0.0652)	(0.0590)
Basic Education: (prim and prep)	0.0696	0.0263
	(0.0467)	(0.0314)
Secondary	0.161***	0.0381
	(0.0321)	(0.0303)
Post Secondary: Middle Institute	0.112**	-0.0362
	(0.0541)	(0.0465)
University & post University	0.124***	0.0201
	-0.0498	0.00893
Household Composition		
Are you a permanent head?	0.687***	0.959***
	(0.0669)	(0.0670)
Share of sons in her kids	0.170***	0.0362
	(0.0260)	(0.0288)
Are you daughter in law?	-0.162***	0.0104
	(0.0506)	(0.0521)
Number of adults within the household	-0.0245**	-0.00793
	(0.0116)	(0.00971)
Marriage Cost		
Her share in the marriage cost	0.114	0.111
	(0.0891)	(0.0946)
Scale for Parents' education	0.00129	-0.0157
	(0.00921)	(0.0136)
Wealth Quintiles (Reference Category: First quintile)		
Quintile 2	0.00357	-0.0287
	(0.0332)	(0.0315)
Quintile 3	0.0103	-0.0255
	(0.0376)	(0.0336)
Quintile 4	0.0121	-0.0785*
	(0.0481)	(0.0407)
Quintile 5	0.0536	-0.115**
	(0.0462)	(0.0487)
Do you live in rural areas?	0.581***	0.516***
	(0.123)	(0.103)
Community Variables: All variables are at the governorate level		
Share of male with secondary education or higher among males of 18 years and plus	0.241	0.519
	(0.408)	(0.362)
Share of employed women among labor force	2.906***	3.779***
	(0.681)	(0.893)
Share of households with access to public sewerage system	0.599***	0.436**
	(0.143)	(0.161)
Share of female accepting violence whatever the reason is	-0.757***	-0.0719
	(0.224)	(0.208)
Share of female thinking that circumcision practice should continue	-0.114	0.650***
	(0.259)	(0.202)
Constant	-3.786***	-2.622***
	(0.407)	(0.470)
Observations	8,836	8,836
R-squared	0.233	0.123

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1