Labor Force Participation for Educated Females and Gender Wage Gap in Palestine

RESEARCH PROPOSAL

Presented to

Partnership for Economic Policy (PEP)

By

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&

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Occupied Palestinian Territories

14/9/2016
There are three main areas/dimensions to all PEP-supported projects: research, capacity building and policy engagement/impact. The PEP proposal template is structured around these three dimensions. Each section must be completed with due care and attention, as they are reviewed individually and concurrently to assess the overall quality of a proposal.

**SECTION I – RESEARCH**

1.1. **Abstract (100 to 250 words)**

The abstract should state the main research question, the context and its relevance in terms of policy issues/needs in relation to PAGE thematic foci, complete with a brief description of the methodology(ies) and the data that will be used.

Two interesting stylized facts emerges from the Palestinian labor market. Firstly, While share of educated females has swiftly expanded during the 1999-2014 period, their labor participation rate has stagnated. Secondly, gender equity has deteriorated during the same period, such that wage gap between educated males and educated females has widened amounting to more than 0.4 by the end of 2014. This research aims at exploring why education has contributed little to boost female labor force participation and bridge gender wage gap in Palestine. Crude evidence suggests that limited job opportunity for educated females may be a contributing factor. Unlike the case of educated females, unemployment rate for educated females has doubled during the same period, rising to about 0.4 in 2014. This research investigates the extent to which limited job opportunity for educated females contributes to their stagnated labor force participation and gender wage gap in Palestine. The empirical analysis of this research utilizes quarterly labor force data, published by Palestine Census Bureau of Statistics during the 1999-2014 period. To explore the causal effect of limited job opportunity for educated females, we employ a fixed effects model using the Instrumental variable approach. The outcome of this research is

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Before you begin

Please consult the following webpages/documents regarding PEP’s expectations in terms of:

- Specific policy issues to be addressed (and conditions to be met) by projects supported under this call
- Scientific content of eligible research project proposals
- PEP requirements in terms of policy engagement and research communication

Please note that:

- This template is mandatory for proposals of projects submitted under the PMMA and MPIA groups, i.e. that do not involve data collection
- Plagiarism is strictly forbidden – see note on “references and plagiarism” at the end of this document/template. PEP will be using a software program to detect cases of plagiarism.
- PEP encourages applicant research teams to submit proposals in English, but content (in text boxes below) may also be written in French or Spanish (and will be accepted given proper justification of language barrier).
expected to have important policy implications regarding the economic empowerment of educated females in Palestine. In particular, the findings would represent an evidence based guidance to identify policies that focus on boosting labor demand for educated females.

1.2. Main research questions and contributions

Explain the focus (or key questions) of your research and its policy relevance.

Explain why you think this is an interesting research question and what the potential value added of your work might be (knowledge gaps). You might want to explain whether or not this question has been addressed before in this context (including key references), and if so, what do you wish to achieve (in addition) by examining the question again?

Similar to many developing countries, the share of female labor force Participation (FLFP) in Palestine is substantially lower than the male’s. In 2014, the FLFP was 0.2 as oppose to 0.71 for males.1 Interestingly, classifying females based on level of education unfolds distinct pattern. In specific, the LFP for educated females (those with more than 12 years of education) summed to about 0.46 relative to 0.11 for the low educated.2

To explain the relatively high LFP rate for educated females, researchers often argue, supported with plausible empirical evidence, that higher returns to education induce more educated females to join the labor force (see Klasen and Pinters 2012). In this vein, labor economists have often utilized increases in level of education to explain the overtime rise in FLFP (see Thévenon 2013 and Greenwood et al 2012).

The pattern in Palestine is starkly different. While share of educated females has expanded from 0.11 in 1999 to 0.21 in 2014, their labor participation rate has stagnated, declining with a volatile rate from 0.52 to 0.46. On the other hand, the trend for educated males posits a different picture. While their participation

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1 All figures are presented in the appendix.
2 The trend for LFP for males depicts a U-shape over 1999-2014 period. In particular, their participation rate in 1999 amounted to 0.7. As the Second Intifada broke out in end of 2000, Israel placed a system of internal and external closure across West Bank areas and severely restricted the access of Palestinian workers to commute to the Israeli labor market. This has substantially harmed the Palestinian economy and according driving section of males workers out of the labor market. During this period, the participation rate for males decreased to about 0.66 before it started to pick up after 2006. This is unlike the case for females’ in which their LFP has steadily but slightly improved, rising from 0.14 in 1999.
rate has declined during the Second Intifada period, it picked up following the year of 2006 and reached a level close to the initial period of 1999 (see Figure 1).  

Furthermore, the wage gap between educated males and educated females has widened during this period, favouring the latter. By 2014, the wage premium for educated males amounted to more than 40%, rising from 30% in 1999.  

If this pattern of stagnated rate of labor force participation and widening gender wage gap persists, it is less likely that the Palestinian economy would reasonably reap the benefits of the rising share of educated females. This, accordingly calls up on policy makers to set policies aiming at reversing this trend.

1.2.1 Research Objective

To help inform policy makers, the objective of this research is to explore why education has contributed little to boost FLFP and bridge gender wage gap in the West Bank of occupied Palestine. To explore this research question, we highlight the impact of labor market conditions. In particular:

We estimate the extent to which changes in job opportunities affect changes in labor force participation for educated females. We also estimate the effect of excess labor supply of educated females, which is generated by limited job opportunities, on widening gender wage gap. The remaining of this section discusses the motivation of these research questions.

Examining data on labor demand pattern between 1999-2014, we provides crude evidence that decreasing demand for female workers may be a main contributing factor. Figure (2), in the appendix, exhibits the changes in the female unemployment rate. Following the break out of the Second Intifada of 2000, when the Palestinian economy slipped into deep recession, unemployment rate for educated females has doubled rising to about 0.4 by the end of the period. Consistent with the gender differences in the evolution of LFP rate, the rise in unemployment rate applies only to females. Figure (2) also shows that unemployment.

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3 We also looked up the LFP for educated males and females in 2015. The data show that the gender gap has further widened. The LFP for females decreases to 0.42 while it increases for the males to 0.75. The reason we did not extend the study period to 2015 is that the data is not readily available at the district level.

4 To obtain the estimates in Figure (2) we estimate a Mincer (1974) wage model in which the logarithmic daily wage is regressed against workers’ socioeconomic characteristics and gender see model (4) below. We estimated this model for educated workers and for each year separately over the 1999-2014 period. The coefficient of the gender dummy represents the wage gap between educated males and females.

5 See below discussion about the type of data and its sources.
rate for educated males started to decrease as the Second Intifada ended in 2004 and the economic conditions started to improve.

Similar to many other countries, service sector in Palestine continues to be the main employer with an expanding trend. During the study period, the share of service employment rose from 0.53 to 0.6. On the other hand, the employment share of the manufacturing sector, was relatively stable around 0.16 over this period. Relative to total workers in the service sector the share of female workers has risen from 0.18 to 0.23. The relative employment contribution of the service sector is also dominating during the study period. It accounted for 0.69 of the total employment relative to 0.14 for the manufacturing sector. At the skill level, the data shows that the relative contribution of skilled employment in the service sector (0.33) is similar to that of the unskilled (0.36). On the other hand, unskilled employment in the manufacturing sector is the main contributor (0.1 for the unskilled versus 0.04 for the skilled).

The service sector is particularly vital to employ females. During the study period, the share of female employment in this sector, relative to the total female employment, has risen from 0.50 to 0.60. On the other hand, their corresponding share in the manufacturing sector decreases from 0.16 to 0.10. Markedly, the service sector is the main employer of educated females, hiring more than 90% of them. It seems that stigma from working in manufacturing sector explains the disproportionate concentration in the service sector (see Klasen and Piter 2012). Then it is plausible to infer that rising unemployment rate for educated females is likely related to limited job opportunities in this sector. In fact, the growth rate of educated females has sharply outpaced their labor market demand. In specific, the share of the educated females has risen at an annual rate of 0.26% as oppose to 0.14% in the service sector.

Accordingly, it is expected that lack of job opportunity for educated females may induce many of them to remain outside the labor market. In the same vein, it is also expected that lack of job opportunity and excess labor supply of educated females (expansion in the share of educated females) have widened the gender wage gap. Evidently, as depicted in Figure (3), the gender wage gap in the service sector swiftly expanded during the study period.

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6 The share of service employment for males, relative to total males employment, slightly rose from 0.54 to 0.58, while the corresponding share for manufacturing decreases from 0.17 to 0.15.

7 Figure (3) also exhibits gender wage differential for low educated workers in the service sector as well as for the educated and low educated in the manufacturing sector. While females earn less across the board, the expansion trend of the wage gap pertains only to educated workers in the service sector. The wage gap for the other sections of workers takes more of a volatile trend.
1.3 Literature Review

This research naturally belongs to a literature that explores the labor market outcome of the Palestinian economy. For example, Angrist (1996) estimate a structural model that links wages in the West Bank and Gaza (WBG) and migration flow to the Israeli labor market. Angrist (1995) links the decline in returns to schooling during the 1980’s to increases in labor supply of educated workers. In a more recent study, Mansour (2010) links the decrease (increase) in wages (unemployment rate) for males during the Second Intifada period to decreases in share of migrants to the Israeli labor market.\(^8\)

This is, however, not the first research to examine the decline of female labor force participation in the context of developing countries. A number of studies highlight the importance of labor supply mechanisms including societal and cultural barriers (see Olsen et al 2006 and Neff et al 2012). Others have pointed to lack of crèches and institutional child support for female workers (see for example Lokshin 2000, Bick 2010). Furthermore, several researchers have focused on the effects of spouse’s level of income, expected market wage, and fertility (See klasen and Pieters 2012). In the same vein, Klasen and Pieters (2015) emphasize rising returns to education in the marriage market as a possible mechanism to explain the negative association between level of education and labor market participation.

Closer to the intention of this research, Goldin (1994) suggests that the relationship between economic development and FLFP is U-shaped. Goldin’s hypothesis states that FLFP initially declines with economic development due to factors such as rise of husband income and relative increase of male education. However, at a later stage of development women’s level of education rises and their earning capacity increases with the expansion of the services sector (see also Boserup 1970; Mammen and Paxson 2000; Gaddis and Klasen 2014).

Still, in the context of developing countries, the linkages between education attainment and FLFP seems to be weak. Generally, FLFP is stagnant in developing countries with high female education like in some East Asian countries and many Arab states.\(^9\) For instance, Andrabì et al (2013) show that increases in female education in Pakistan did not translate into higher labor force participation. In this regard, several researchers have emphasized the role of job opportunity to explain the weak linkages between education and FLFP. For example, Kapsos et al (2014) show that decline in FLFP in India over the past two decades is largely related to lack of labor demand for females due to factors such as occupational segregation. In the same vein, Klasen and Pieters (2015) show that sectors that mainly attract female

\(^8\) See also Daoud (2005) and Cali and Miari (2013)

\(^9\) See Verick 2014 for a review.
employment has grown least, leading to their declining participation rate (see also Verick 2014 Kapsos et al 2014). Though, one drawback of these studies is that their findings are based on correlation analysis. A main contribution of this research is to investigate the causal impact of limited job opportunity on labor force participation for educated females. Unlike correlational analysis, causal inferences are essential to unfold policies that causes a change in the targeted outcome, which in our case is economically empowering educated females.

As for the gender wage gap literature, a great deal of past research has focused on human capital development, market institution, and gender discrimination (see for a review Weichselbaumer & Winter Ebmer, 2003). An emerging literature has highlighted the effect of structural changes in service sector as a potential candidate to explain the gender wage gap. For example, Olivitte and Petrongolo (2011) examine variation in gender wage gap across several developed countries focusing on excess labor supply in the service sector and rising wage gap. Nagi and Petrongolo (2013) investigate the role of expanding service activities in bridging the gender wage gap over the past decades in the U.S. To our knowledge, our research is the first, in a context of developing countries, to focus on gender wage gap among educated workers. As explained in the methodology section, we hypothesize that excess labor supply generated from limited job opportunity in the service sector (the largest employing sector for females) contributes to the gender wage gap in Palestine.

1.4 Methodology

Presentation of the specific techniques that will be used to answer the research questions and how exactly they will be used to do so. Explain whether you will use a particular technique normally used in other contexts or whether you intend to extend a particular method and how you will do so. Explain if these methods have already been used in the context you are interested in (including key references).

1.4.1 Empirical Methodology:

1.4.1.1 Effect of Limited Job opportunity on Labor Supply of Educated Females.
To examine the effect of changes in job opportunity for educated females on their LFP rate, we utilize the following probit model:

$$\text{LogLFP}_{jq} = B_0 + B_1 \text{LogServ}_{jq} + B_2 X_{ijq} + \mu_j + \pi_q + e_{ijq} \ldots \ldots (1)$$

The dependent variable is the logarithmic number of educated females who are labor force participants in district \( j \) and observed in quarter \( q \). As indicated above, educated females are defined as those with more than 12 years of education. To measure changes in females’ job opportunity we use district’s logarithmic number of educated female employed in the service sector in quarter “\( q \)” (\( \text{LogServ}_{jq} \)). The identification assumption of utilizing this variable is that increases in the demand for skilled workers in this sector will induce more educated females to join the labor market, increasing their labor market participation. In this respect, the estimated coefficient “\( B_1 \)” is an elasticity, measuring the effect of the percentage change in the number of educated females employed in the services sector on the percentage change in the number of educated females participating in the labor market at the district level.

The vector \( X_{ijq} \) controls for determinants of labor force participation at the district level. These include share of population living in urban and rural areas in which the effect is measured relative to the share of population living in refugee camps (the reference group). It also includes age structure using the share of labor force that belong to the following age categories: 21-25, 26-35, 36-45, 46-50, 50-65, and older than 65. The omitted category of the age variables is young individuals (younger than 21). The control variables also include share of educated females who are reportedly married as well as average household size and average income for the household head. Amounting literature has emphasized the significance of these variables (see Cahmlou et al 2010). For example, it is expected that high income level for household head would increase the opportunity cost for females to seek employment and thus decline their likelihood to join the labor market. Marital status is also expected to play an important role. It might be the case that returns to marriage market increase with higher level of education, regardless the employment opportunity in the market. As explained in the data section, we will utilize PCBS’s labor force data to measure the variables of model (1). In this respect, the data for each variable will be aggregated at the district level using PCBS’s sampling weight.

The vector \( \mu_j \) include district dummy variables (district fixed effects) to control for factors that are common to all educated females in a given district and vary little over time. These factors include cultural barriers that are particular to certain communities. The vector \( \pi_q \) includes quarter (time) dummy variables to control time varying national shocks that affect all educated females alike.
4.12 Estimation Concerns

a) Endogeneity Problem

A main concern of model (1) is the simultaneity between the LogLFPR\(_{iq}\) and Logserv\(_{iq}\), biasing the estimate of \(B_2\). To address this issue, we estimate the model using the Instrumental variable approach. In spirit of Bartik (1991), Katz and Murphy (1992), and Blanchard and Katz (1992) we use a shift share (predicted employment growth) instrument to isolate exogenous service demand shocks for educated females.\(^{10}\) To construct the instrument, we divide service employment into eight distinct sub-sector (\(S_i\)), including: 1) retail; 2) sales, wholesales, and hotels; 3) transportation; 4) computer, research, and other businesses; 5) public administration; 6) education; 7) health and social services; and 8) other services. The instrument is specified as follows:

\[
IV_{ij} = \sum G_{ij}^* (S_{ij0}/Serv_{ij0}) \ldots \ldots \ldots (2)
\]

Where the first term \((G_{ij}^*)\) is the West Bank’s employment growth for educated workers employed in subsector \(i\) and observed in quarter \((q_t-q_{t-1})\). To ensure exogeneity, the first term excludes those working in own district. The distribution weight is the initial (measured in 1999) employment share of subsector \(i\) in own district. The weight is constant over the 1999-2014 period so that changes labor force participation is not correlated with changes in industry composition over this period.\(^{11}\)

The identification assumption of the IV is that increases in the overall demand for educated workers in a given service sub-sector would disproportionately affect the demand in districts, where affected subsector constitutes a greater initial share. Since the employment variation of the IV is driven by the regional employment growth, it will be uncorrelated with demand shocks at the district level given that no subsector is concentrated in a single district (Katz and Murphy 1992). This is the rational why we use data from eight sub-service sector to construct the IV.

b) Endogenous Migration

Another concern that might affect the estimation of model (1) is endogenous migration of educated females. In specific, it could be the case that educated females may migrate to districts with greater demands of their skills. This may generate possible threat to the instrumental variable we utilize in this study as the source of industry variation at the district level might be driven by supply shocks.

\(^{10}\) The shift share instrument has been widely used in the literature. See Moretti (2010), Cali et al (2015), Schaller (2016), and Page et al (2016).

\(^{11}\) See Aizer (2010).
Nonetheless, it is less likely that it would be the case in the Palestinian market. The reason hinges on limited rate of migration across districts. Data from PCBS’s migration survey shows that in 2010 about 95% of population in the West Bank work in the same area of birth. This conclusion also holds when checking migration rate at the district level (see Zimring 2015).

1.3.2 The Effect of Limited Job opportunity on Unemployment duration and Discourages Workers

The main contribution of Model (1) is that it explains the extent to which changes in females’ job opportunity affect female labor force participation. Still, it says little about two basic transitions that greatly govern LFP. The first is school to work transition (STWT), while the second is unemployment to No participation Transition-UTNPT. Upon graduation, individuals often spend a period of time searching for employment. With an extended time of job search (unemployment duration), labor force participation rate is expected to increase. To better understand the effect of job opportunity on educated female’s decision to stay in the market, we estimate the following model:

$$\text{LogUn\_dur}_{ijq} = c + B_2 \text{LogServ}_{ijq} + BZ_{ijq} + D_j + Q_q + e_{ijq}$$ \ldots.. (3)$$

The dependent variable is the logarithmic value of unemployment duration, measured in number of months, for an educated female $i$ in district $j$ and observed in quarter $q$. The main independent variable is $\text{LogServ}_{ijq}$ which is defined as specified in model (1). Vector $Z$ accounts for individual socioeconomic factors, such as age, age squared, years of education, place of residence (urban versus rural). The vectors $D$ and $Q_q$ accounts for the district and quarter fixed effects.

To ensure that the model captures the STWT effect, we limit the sample to young educated females, aging between 20 and 29, who finished their high education and were not employed in the previous period. Identifying these individual is made possible due to the retention nature of the PCBS’s labor force data. In particular, each household is interviewed twice, over the two consecutive quarters, dropped from the sample for two quarters, and then represented again for another, and last, two consecutive quarters (see more discussion in the data section).

The estimation of model (2) is based on individual level data, but the main regressor of interest ($\text{LogServ}_{ijq}$) varies only across district and time. Moulton (1990) shows that failing to account for common group errors can downwardly bias standard errors and accordingly invalidate post estimation tests. The usual approach in such setting is to cluster standard errors on the area level. Though utilizing
only 11 districts, standard estimators may not perform well (Cameron and Miller (2013). Following Mansour and Rees (2012), we correct for the bias in the standard errors using alternative critical values from $t_{G,k-1}$ distribution in which $G$ is number of districts and $k$ is number of variables measured at the district level, which is one in our case.

The paper will also estimate the extent to which limited job opportunity affect the decision of educated females’ to leave labor market (UTNPT effect). To model this case, we estimate similar regression to model (1), except that the dependent variable is measured as logarithmic number of educated females who dropped off the labor market. This variable will be constructed by identifying educated females who were reportedly unemployed in the previous period and left the labor market (non-participant) in the current period.

In the same vein, we can also examine the effect of change in job opportunity on the decision of educated females to join the labor market. In this case, we will use regression similar to model (1) in which the dependent variable will be specified as logarithmic number of educated females who newly join the labor market. This variable is measured by identifying the educated females who did not enter the labor market in the previous worker but currently seeking employment. The aforementioned three models will be estimated using the IV approach as identified above. In addition, we will estimate model (3) using PCBS’ sampling weight since the model is measured at the individual level.

The aforementioned analysis generically focuses on how labor force participation for educated females responds to changes in job opportunities. To better inform policy makers, we will also shed light on the heterogeneous effect of the latter. In particular, we will estimate separate regressions for different samples according to age and marital status, and household income.

1.4.3 Empirical Methodology-Effect of Female Labor Demand on Gender Wage Gap.

We will utilize the following regression model to examine how limited labor demand for educated females affect gender wage gap:

$$\text{GWG}_{jq} = a + \alpha \log \text{Serv}_{jq} + \delta \text{Edu}_{jq} + BX_{jq} + D_j + Q_q + e_{jq} \ldots \ldots(4)$$

The dependent variable is defined as the difference in logarithmic average wages between educated males and educated females in district "$j$" and in quarter "$q$". The main variable of interest is $\log \text{Serv}_q$ and $\text{Edu}_{jq}$.

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12 See also Cameron and Miller (2010) and Cohen and Dupas (2010).
which measures the effect of excess labor supply for educated females. Similar to model (1), vector X controls variables, including share of population living in urban and rural areas and age structure.

One difficulty of estimating model (5) is that the estimated effect of the share of educated females is biased due to endogeneity concern. Following Moretti (2004), we use district’s age structure to isolate the exogenous shock of increases in education attainment. The instrument is specified as follows:

\[ IV_{\text{age}_{jq}} = \sum w_{mcjq} \Delta P_{mq} \]  

(5)

where \( m \) refers to female age groups (16-25, 26-45, 46-60, and 61-70). \( \Delta P_m \) is the national change in college share for group \( m \) in a given quarter \( (q_t - q_{t-1}) \), while \( w_{mc} \) is the share of group \( m \) relative to total population in district \( j \) measured in the initial period. The identification assumption behinds the age structure instrument comes from cross district differences in the magnitude of cohorts who enter and leave the labor market during the study period. With an increasing trend of education attainment, it is expected that a district with a larger initial share of young cohort would have a higher share of education. In this respect, the increase in share of education is driven by the district’s demographic structure, assuming it is exogenous to demand shocks for skilled female workers. According to Moretti (2004) suggest that this assumption will not hold if areas with greater economic growth may disproportionately attract young cohort as they are mobile than older cohort. To account for this concern he uses lagged age structure. In our case, we believe that this issue is not a main concern in our case since, as we discussed above, female mobility rate is very minimal.
Reference


World Bank (2007) “Movement and access restrictions in the West Bank: uncertainty and inefficiency in the Palestinian economy”.

World Bank (2010) "Checkpoints and barriers: Searching for livelihoods in the West Bank and Gaza Gender and economic collapse".

Appendix

Figure (1): Labor Force Participation Rate for Educated Females- 1999-2014

Figure (2): Unemployment Rate for Educated Males and Females- 1999-2014
Figure (3): Male Wage Premium by Skill for Services and Manufacturing 1999-2014
1.5 Data requirements and sources

This is a critical part of the proposal. The key issue is to explain the reason for the use of the particular data. You must establish that they are ideal for the question you wish to address and that you have or will have access to these data before your project begins. Please consult the “Guide for designing a research project proposals” for more detail.

We will utilize labor force data that is collected and published by Palestine Census Bureau of Statistics (PCBS). The PCBS publishes quarterly labor force data covering employment and socioeconomic characteristics of individual household members. The sample includes individuals aging between 15-6, who live and work in West Bank’s eleven districts over the 64 quarters, covering the 1999-2014 period. The sample excludes data from Gaza strip, which has encountered a number of shocks that might be difficult to control for. In 2007 Hamas militarily controlled Gaza, leading to forming a separate government. Since then Israel has imposed a blockade and waged three wars against the Palestinians in Gaza, slipping its economy into a deep recession (see World Bank 2007, 2010).

The sampling frame of the labor force survey consists of two-stage stratified cluster random sample,
SECTION II – CAPACITY BUILDING

2.1. List of team members

For all team members, please indicate the age sex, as well as relevant/prior training and experience in the issues and research techniques involved (start with team/project leader).

Note that PEP favors gender-balanced teams, composed of one senior (or experienced) researcher supervising a group of junior researchers, including at least 50% female researchers, all contributing substantively to the research project. PEP also seeks gender balance in team leaders and thus positively encourages female-led research teams. (Each listed member must post an up-to-date CV in their profile on the PEP website – refer to “How to submit a proposal”)

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex (M,F)</th>
<th>Training and experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belal Fallah</td>
<td>38</td>
<td>M</td>
<td>PhD in Economics, 8 years of research experience</td>
</tr>
<tr>
<td>Mohammad Hattawy</td>
<td>28</td>
<td>M</td>
<td>Master in Economics, 4 years of research experience</td>
</tr>
<tr>
<td>Arwa Abu Hashhash</td>
<td>29</td>
<td>F</td>
<td>BA in Mathematical Economics and MA in</td>
</tr>
</tbody>
</table>

2.2. **Expected capacity building**

Describe the research capacities that team members (and potentially their affiliated institutions) are expected to build through their participation in this project.

This is an important aspect in the evaluation of proposals and should be presented with detail. What techniques, literature, theories, tools, etc. will the team and their institutions learn (acquire in practice) or deepen their knowledge of? How will these skills help team members in their **career development**? What are the current state of knowledge of each team members in regard to the project you are proposing?

<table>
<thead>
<tr>
<th>Name</th>
<th>Benchmark and expected capacity building</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Belal Fallah</strong></td>
<td>As a team leader, conducting this research will improve my understanding of the labor market outcome of educated female workers. It will also improve my skills in devising labor market policies.</td>
</tr>
<tr>
<td><strong>Mohammad Hattawy</strong></td>
<td>Conducting this research will improve Mohammad’s empirical analysis skills, mainly with respect to regression analysis. This will be positively reflected in improving his teaching and research supervising skills at Birzeit university, where he is currently working as a lecturer. Being part of this research will also help him to individually conduct research. This will surely enhance research capacity in his university. Mohammad is planning to apply for PhD in Economics. So, this assignment will open up for him new venues of PhD research. Mohammad worked as a research assistant for the 4 years at a leading think tank-research institute (Palestine Economic Policy Research Institute-MAS). He has been part of a number of research topics, including labor economics. Closely related to this research, he coauthored a paper discussing female entrepreneurship in Palestine. He has also developed a strong skills in statistical and descriptive analysis. We have worked together on a past research project; He is smart and a hard worker.</td>
</tr>
</tbody>
</table>
| **Arwa Abu Hashhash** | Arwa has been working for 5 years as a research assistant at Palestine Economic Policy Research Institute (MAS). She has developed excellent skills in assisting researchers in many aspects, including combining and analyzing literature review and conducting descriptive analysis. Interestingly, economic empowerment and female employment is not a stranger topic for her. She participated in a research project related to role of women in the Palestinian agricultural sector. Arwa is a hard worker and fit easily in a team work environment.

Being part of this research team will help her improve and deepen her knowledge on women and labor market. In several occasions, she showed interest in this field of research. Being part of my research team will also improve her analytical and statistical skills and help pave her own way to be independent researcher.

It is worth noting that labor economics and mainly women empowerment is at the central interest of her research institute (MAS). So, participating in this research will help enhance the capacity of MAS’s research staff to focus on this research topic. I trust that this assignment will open new research venues for Arwa and her colleagues at MAS. |
| **Iman Saadeh** | Iman is currently working as a research assistant at Palestine Economic Policy Research Institute (MAS) with four years of experience. She has gained solid experience in combining and analyzing literature review, conducting qualitative analysis. She is currently a master student of Sociology and Development at Birzeit University in West Bank. As a research assistant, Iman has engaged in several research projects, including female employment in the Palestinian agricultural sector as well as evaluating the effectiveness of employing institutes to reduce youth unemployment. Iman’s research experience will be an asset to our research mainly in devising policies to enhance job opportunities for females.

Participating in this research will also be advantageous to Iman. She will further improve her research capacity mainly in aspects related to descriptive analysis and econometric modeling. This will be so helpful to her in conducting high quality research papers. Needless to say, this will add solid research capacity to her affiliated institute. |

Add comments and describe institutional capacity building if applicable.

Furthermore, not only the team members will have their direct research input as junior researchers, this research assignment will be a learning experience for them. They will have the chance to learn closely about applying advanced econometrics models and use the outcome as a basis to devise economic policies to specialists and general audience. This, I believe, would surely be reflected in enhancing the research capacity of their affiliated institutes.
Indicate which specific tasks each team member would carry out in executing the project.

- Note that one of the team members must be clearly identified as responsible for coordinating and reporting on the design/implementation of the projects’ policy engagement and communication strategy (see section III below). To achieve a more balanced task distribution, PEP advises to select a member other than the project leader.

<table>
<thead>
<tr>
<th>Name</th>
<th>Task and contribution to the project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belal Fallah (team leader)</td>
<td>Set up regression models, estimate regressions, as well as writing research motivation, main results, conclusion, and policy implications and policy brief.</td>
</tr>
<tr>
<td>Mohammad Hattawy</td>
<td>Coordinate and communicate with project’s policy stakeholders. Arrange for workshops to disseminate main findings. In addition, he will be constructing variables for the regression models, and conduct preliminary analysis of the main variables</td>
</tr>
<tr>
<td>Arwa Abu Hashhash</td>
<td>Combine and write literature review within the context of the research objectives, prepare graphs and tables, as well as ensure proper citation.</td>
</tr>
<tr>
<td>Iman Saadeh</td>
<td>Combining literature for the introduction section of the paper. Assist devising policies based on the research outcome, as well as conduct descriptive analysis.</td>
</tr>
</tbody>
</table>

2.3. List of past, current or pending projects in related areas involving team members

Name of funding institution, title of project, list of team members involved

<table>
<thead>
<tr>
<th>Name of funding institution</th>
<th>Title of project</th>
<th>Team members involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Research Forum (ERF)</td>
<td>ERF –GDN Thirteenth Round Research Competition on The Agricultural and Rural Development-2013</td>
<td>Mohammad Hattawy</td>
</tr>
</tbody>
</table>

SECTION III – POLICY ENGAGEMENT

3.1. Policy context and needs
Describe the specific policy issues or needs that your research aims to address; how your potential outcomes and findings may be used in policy making? Please be as precise as possible, indicating specific current or prospective policies and the specific contributions your research would make.

Also, justify timing of your research in terms of policy and socioeconomic needs and context – e.g. reference to existing, planned or potential policies at the national, regional or local level; specific political context; international examples of similar policy problem or solution, etc.

As stated in the national development plan of 2014-2016, the Palestinian government asserts to empower women in different aspects, including the assurance of equal economic opportunities. Nonetheless, as indicated in research objective section, the current trend of wage inequality and declining female labor force participation is worrisome. If it persists, it is less likely that the government objective will be achieved nor would the Palestinian economy reasonably reap the economic benefits of rising female education.

The outcome of this research provide important policy implications to boost economic empowerment of educated females in Palestine. In particular, it would inform policy makers about what can be done to enhance labor force participation and reduce gender wage inequality for educated females. In particular, the findings would represent an evidence based guidance as whether the government must use policies that focus on boosting labor demand for educated females. If it turns out that limited demand is indeed an important contributor, the Palestinian government can then empower women via applying various policies including wage and employment subsidy and public work.

Conditional on the research findings, we will explore a number of job creating policies, including wage and employment subsidy as well as public work. Drawing up on international experiences, we will investigate the extent to which these policies would reasonably fit the Palestinian economics and social environment.

3.2. Consultations to date

List all (past) consultations with potential research users (e.g. policy makers or stakeholders) that have helped define your research question, and/or informed you of the specific policy context described above. Include a list of names, institutions and email addresses (add rows when needed).

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naser Qatami</td>
<td>Deputy Minister of Labor</td>
<td>Ministry of Labor</td>
<td><a href="mailto:info@mol.gov.ps">info@mol.gov.ps</a></td>
</tr>
<tr>
<td>Nabil Qasis</td>
<td>General Director</td>
<td>Palestine Policy Research Institute</td>
<td><a href="mailto:info@mas.ps">info@mas.ps</a></td>
</tr>
</tbody>
</table>

I have not directly approached these stakeholders to identify my research question. I have, though, benefited from the strategies identified by ministry of labor and publications as well as the proceedings of a recent national conference organized by MAS.

3.3. Identify target audiences

Identify potential users of your research findings, including policy makers, advisors and other key stakeholders. Provide a list of institutions and, whenever possible, specific individuals to be targeted for effective policy influence. Please also indicate whether you have already made contacts within the institutions (add rows when needed).

<table>
<thead>
<tr>
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<tr>
<td></td>
<td></td>
<td>Ministry of National Economy</td>
<td><a href="mailto:info@met.gov.ps">info@met.gov.ps</a></td>
</tr>
<tr>
<td>Dr. Nabil Qasis</td>
<td>General Director of Palestine Economic Research Institute (MAS)</td>
<td>Palestine Economic Research Institute (MAS)</td>
<td><a href="mailto:info@mas.ps">info@mas.ps</a></td>
</tr>
<tr>
<td>Dr. Mohammad Mustafa</td>
<td>Chairman of Palestine Investment Fund</td>
<td>Palestine Investment Fund</td>
<td><a href="mailto:info@pif.ps">info@pif.ps</a></td>
</tr>
</tbody>
</table>

Note: I have not directly approached these stakeholders to identify my research question.

Define outreach and engagement strategy

How, from proposal design to the dissemination of your research results, will you consult and communicate with these users to both gather their inputs and keep them informed of your project, in order to increase chances of research uptake? You can refer to PEP requirements in terms of policy engagement and research communication to have a better idea of what is expected in terms of grantees’ initiatives in this area.

We would will consult the aforementioned stakeholder for a feedback on the research proposal. Hopefully, we will get some hints on other issues that we might need to emphasize. Upon finishing up the empirical analysis, we will also arrange for a workshop to present the main findings for these
stakeholders and others. Incorporating the research stakeholder feedback, we will disseminate a first draft of the paper. In this fashion of outreach activity, we ensure that their relevant input is incorporated in the final draft of the study.

3.4. **Outline your preliminary dissemination strategy**

Identify potential and relevant communication channels (e.g. direct stakeholder meetings, conferences, media/press, web platforms, etc.) through which you will be able, or attempt, to communicate and disseminate your research and research findings.

<table>
<thead>
<tr>
<th>Name</th>
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<th>Institution</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>See below</td>
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</table>

Outline your preliminary dissemination strategy. Note that PEP expects grantees to disseminate information about their research work and (expected) outcomes throughout the project cycle, and not only after publication.

**Our dissemination strategy consists of a number of steps:**

- Holding a central workshop at MAS premises to present the main findings to several stakeholders including officials from ministry of labor and ministry of national economy, members of Palestinian legislative council, academic, women empowering NGOs, and representatives from private sector institutions. We will make sure that local media covers this event.
- Holding workshops in various universities to inform economists and researchers from other social disciplines and receive their feedback.
- Issuing policy brief and disseminate it among the aforementioned stakeholders.
- Present the findings at a national conference. One option is to present at MAS’s annual national conference. This conference often discusses pressing economic issues and attract a wide spectrum of policy makers, policy influencers, academics, private sector, NGOs, and extensive media coverage.
- The final draft of the research will be submitted journal referenced in the SSCI. Potential Journals include Journal of Development Economics, Labor Economics, or Journal of Public Policy.

**SECTION IV – OTHER CONSIDERATIONS**

4.1. **Describe any ethical, social, gender or environmental issues or risks that should be noted in relation to your proposed research project.**
4.2. References and plagiarism:

Applicants should be very careful to avoid any appearance of plagiarism. Any text of three or more consecutive words that is borrowed from another source should be carefully contained between quotation marks with a reference to the source (including page number) immediately following the quotation. It is essential that we be able to distinguish what you have written yourself from what you have borrowed from elsewhere.

Note also that copying large extracts (such as several paragraphs) from other texts is not a good practice, and is usually unacceptable. For a fuller description of plagiarism, please refer, for example, to the following website:

- [http://writing.yalecollege.yale.edu/advice-students/using-sources/understanding-and-avoiding-plagiarism](http://writing.yalecollege.yale.edu/advice-students/using-sources/understanding-and-avoiding-plagiarism)

PEP will be using a software program to detect cases of plagiarism.