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ABSTRACT

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With only 32% of active age women in the labor market, Guatemala is an upper middle-income country with one of the lowest rates of female labor force participation in the Latin America and the Caribbean region, and in the world. The rate of female labor participation is especially low in the poor regions of the North and the Northwest. We explore information from different micro data sets, including the most recent Population Census (2002 and 2018) to assess the drivers of the recent progress. Between 2002 and 2018, FLFP increased 5.7 percentage points, from an average of 26% to 32% nationwide. This increase was partly explained by the drastic increases in the school attainment of women, the reduction in fertility and the country's structural transformation towards services. However, a large component remains unexplained. Exploring 2018 data, we show that social norms, attitudes towards women in the society and public policies are important determinants of these changes. The analysis suggests that, taken together, these factors can all become an important source of increased female labor force participation moving forward.

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1. Introduction

During most of the 2000's Guatemala grew at a relatively high rate, fertility rates declined and educational attainment of women rose without precedent.[1] However, female labor force participation (FLFP, henceforth) remained the lowest in the Latin America and the Caribbean region (LCR, henceforth) with a rate of only 32% in 2018 according to the population census. Despite its high-middle income status, Guatemala is today one of the countries in the world with the lowest rates of FLFP (World Bank, 2021).[2]

This under-utilization of female labor poses a large cost to the country's growth rate. Most women are not engaged in paid jobs outside the house, which generally remain low paid, and tend to be the main caregivers for children or the elderly in the household. There is also wide dispersion in FLFP rates within the country with municipalities where not even one out of ten women aged 15 to 64 years old participate in the labor market and some others where more than half of women participate.

This paper investigates the role of different factors in influencing women's decision to participate in paid employment in Guatemala to understand the forces behind its trend between 2002 and 2018 and the wide within country dispersion. We assess the role of: (i) individual and household socioeconomic characteristics (such as the level of education or the number of children), (ii) local social norms and attitudes towards women (at home and in the community), (iii) social public policies (such as investments in pre-schools), and (iv) local labor market characteristics (such as the ratio of male to female employment or the composition of employment across sectors of activity). We conjecture that regional differences in these factors influence women's willingness and ability to participate in paid employment as they all shape incentives and ultimately individual behaviors. Take the case, for instance, of the local labor markets. Municipalities with lower levels of gender discrimination in the labor market or those with higher shares of women in public service may be more attractive to women to participate.

We contribute to a large literature on this topic in developing countries. Goldin (1995) and Mammen and Paxon (2000) argue that at early stages of development, women participate in the labor market doing unpaid work in family businesses or farms. With development, there is a sectoral shift from primary activities to manufacturing and an exit of women from the labor force. This is driven by the income effect of men moving to blue-collar jobs. With higher levels of development, FLFP increases due to a new sectoral shift, now towards services making more

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[1] Between 2000 and 2018, Guatemala grew at an average growth rate of 3.5% compared with 2.7% in Latin America and the Caribbean region. The lower secondary completion rate of women increased from 28.2% in 2000 to 55.2% in 2018, while the number of births per woman declined from 4.6 in 2000 to 2.9 in 2018 (World Bank, 2021).
[2] Guatemala per capita GDP was approx. $US 9,000 in 2019.

white-collar jobs available to women. Figure 1 reports the level of FLFP for women aged 15 to 64 years old and GDP per capita across countries in 2018. Guatemala ranks position 146 (out of 173 countries) and is among the bottom half of the distribution faring poorly relatively to country peers.[3] In the same GDP range, countries such as Lao PDR and Vietnam stand at the top of the distribution. Figure 2 reports a similar graph but now across 333 Guatemalan municipalities. The figure reports a strong positive correlation within the country and suggests that increased growth and productivity will, all else constant, increase average FLFP.

Klasen (2019) discusses alternative hypotheses to a "U-shaped" pattern between FLFP and development in developing countries. Differences across countries in FLFP are affected by historical differences in the country's economic structure impacting economic opportunities. Changes in FLFP (or trends), in turn, are affected by how much FLFP depends on household's economic conditions, how jobs deemed appropriate for more educated women are growing relative to the supply of educated women, whether growth strategies are promoting female employment, and to what extent women could break down occupational barriers within the sectors where women predominantly work.

The literature also looked at drivers of cross-country differences in FLFP (Goldin, 1995; Gaddis and Klasen, 2014; Jayachandran, 2020). This evidence suggests that socio economic characteristics of households, such as the level of education or the presence of children are important drivers of participation (see Gasparini et al. (2015) for 18 Latin American countries and Berniell et al. (2021) for Chile). Social norms and attitudes towards women in the society also mediate women's decisions. Social attitudes towards working women, including societal beliefs, can have an impact on FLFP (see Bursztyn et al. (2018) for Saudi Arabia). There is also evidence of the positive impacts on FLFP of policies that subsidize childcare or that expand the public network of centers (see Berlinski and Galiani, 2007, for Argentina and Padilla-Romo and Cabrera-Hernández, 2019, for Mexico).

We contribute to the literature in developing countries in at least three ways. First, we explore simultaneously the role of several factors as drivers of FLFP: individual and household level socioeconomic characteristics, the role of social norms and attitudes towards women, the role of public policies and that of local labor market factors. Most of the literature to date typically reports the influence of few factors, either individual and household characteristics alone, or accompanied by one institutional or policy observable variable (see Klasen and Pieters, 2012; Busso and Romero

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[3] Figure 1 reports FLFP in aspirational country peers as defined by the WBG's Systematic Country Diagnostic (2021) (Peru, Dominican Republic, Serbia, and Georgia) and the structural peers (Honduras, Paraguay, Sri Lanka, and Senegal). FLFP in aspirational country peers is well above Guatemala's, ranging from 61% in Serbia to 74% in Peru. The FLFP in structural peers ranges between 36% in Senegal, to 63% in Paraguay.

Fonseca, 2015; Sorsa et al., 2015; Klasen et al., 2021; Lopez-Acevedo et al., 2021a; Lopez-Acevedo et al., 2021b). In contrast, our paper explores different data sets for Guatemala and is thus able to differentiate the impact of a wide set of factors.

Second, we explore nationwide data and within country dispersion by relying in the two most recent population census collected by the Guatemala National Institute of Statistics (INE, in its Spanish acronym). Differences across more than 1.5 million female household heads or spouses in active age in 333 municipalities and 22 departments in Guatemala, between 2002 and 2018 are empirically explored. Furthermore, the 2018 census is combined with unique survey and administrative data at the subnational level. In contrast, most studies exploring within country variation in FLFP typically rely on household or labor force surveys alone.

Third, our empirical specification accounts for differences across the country in migration and rates of crime and violence. These are well known drivers of FLFP and development more broadly in the Central America region. On the one hand, the number of Guatemalan who live abroad in 2019 reached 6.9% of the overall population (Instituto Guatemalteco de Migración, 2021). Remittances are, therefore, a very important driver of consumption and growth in the country and likely impact the women's decision to participate in the labor market (Amuedo-Dorantes and Pozo, 2006; Antman, 2015). On the other hand, Guatemala is a country with high levels of crime and violence, and particularly of gender-based violence. In 2015, female homicides reached 7.6 per 100,000 females, well above the averages of 2.2 worldwide, 3.8 in Mexico or 4.4 in Colombia (World Bank, 2021). On the other hand, the percentage of women aged 15-49 years old subject to physical or sexual violence in the last 12 months in Guatemala was 8.9 in 2015, below the rates of countries such as Mexico (9.5 in 2016) and Honduras (11 in 2012), but well above the rates of El Salvador (6.7 in 2014), and some European countries such as France (7 in 2012) and Germany (5 in 2012) (World Bank, 2021).

We closely relate to Bhalotra and Fernandez (2021). Exploring Mexican census data, they assess the role of different drivers of FLFP between 1960 and 2015.[4] During this period Mexico's FLFP rose from 13% to 47%. Changes in women's education and in the occupational structure of employment account for the change. But the increase in FLFP of the 90s is an exception as it remains largely unexplained. The authors conjecture that unobservable factors such as changes in social norms regarding marriage or fertility could be driving these changes. In our paper we can observe proxies of social norms, attitudes towards women and of social policies and we explore their role to explain the within country variation in FLFP.

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[4] Bhalotra and Fernandez's (2021) propose as supply side drivers of FLFP: education, marital status, and fertility. Demand-side drivers include sector and occupational structure of employment at the municipality level.

We combine several nationwide micro data sets. First, we rely on the 2002 and 2018 national censuses to quantify and analyze changes in FLFP over this period. The censuses capture information on FLFP together with individual and household socioeconomic characteristics and local labor markets including age, education, ethnicity, marital status, household composition, labor market status of household members, and household infrastructure characteristics. Second, we compute municipality and department level variables from the 2017-2018 Census of Human Resources of the Central Government (INE), 2017 Crime statistics (INE), and 2017 Latinobarómetro survey to create measures of social norms and attitudes towards women. These variables capture the extent to which women participate in household decision making, the share of females among high-wage public sector employees (as a proxy of public visibility), rates of intrafamily violence against women, and the share of individuals endorsing gender parity in parliament or in the judicial system. Finally, we rely on subnational information on social public policy produced by INE, the Foundation for the Development of Guatemala (FUNDESA in its Spanish acronym), and the Central American Institute of Fiscal Studies (ICEFI in its Spanish acronym) to assess its impact on the women's incentives to participate in the labor market. These policy variables include the number of preprimary centers in each municipality, public spending in education and health at the department level, and a measure of municipal road accessibility (all measured in 2017).

Our main sample is composed of women in the active age of 25 to 49 years-old living in households where they or their spouses are household heads (see Berlinski and Galiani, 2007). We start by assessing changes in FLFP between 2002 and 2018. We assume the probability of FLFP in each year can be represented by a linear probability model. We explore the Oaxaca-Blinder decomposition (Blinder, 1973; Oaxaca, 1973) using individual and household characteristics and local labor market variables as possible drivers of this change. Our decomposition results point to significant unexplained differences in FLFP over time.

We consider a simple reduced-form model to estimate the impact of a more extended set of local drivers on FLFP in 2018. We follow the literature and measure FLFP with the ILO definition.[5] This reduced form model faces at least two challenges. First, despite our efforts, there could be still non-observable drivers of FLFP that are simultaneously correlated with the individual, household, or municipality-level variables that we include in the reduced-form model. This could bias the least squares estimates for the impacts of the variables considered or their power to explain within country differences. Take for instance the role of women's unobserved personality traits, such as individual self-confidence. This could be correlated both with the participation of women in household decision making and with their decision to participate in the labor market. Second, it

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[5] The ILO definition of FLFP does not differentiate between formal or informal work.

is possible that FLFP rates drive some of the correlations and not necessarily the other way around, making it very difficult to exclude "reverse-causality" biases. This would make it difficult to interpret the estimated coefficient as a causal impact. Take for instance the fact that certain locations have a larger number of jobs suitable to women's competencies and skills. This could raise women's bargaining power within the household and thus impact their degree of participation in household decision making (Majlesi, 2015). We mitigate these concerns by controlling for a wide set of observable variables at the individual, household, and municipality level. We also show the robustness of our findings to the inclusion of department fixed effect. We minimize concerns of reverse causality by exploring lagged values when data is available. Despite all efforts, our findings should be interpreted cautiously. Ultimately, the analysis makes a strong case for the simultaneous importance of the four set of proposed factors –individual and household characteristics, social norms and attitudes towards women, social policies, and local labor market factors-- as drivers of the current levels of FLFP in Guatemala.

Our results show that, between 2002 and 2018, FLFP increased 5.7 percentage points, from an average of 26% to 32% nationwide. At the same time, we observe an increase in women's level of education, a reduction in fertility (as proxied by the number of children ages 0-12 living in the household), and an increase in the share of services in total employment. These changes explain part of the increase in FLFP over time. However, a large component remains unexplained. This suggests that factors not included in the model, such as social norms or attitudes towards women in the society or public policies, could be important drivers of changes in FLFP over time. Our analysis for the within country variation exploring 2018 data is fully aligned with this conclusion.

The cross-section findings show very interesting, strong correlations across local social norms and FLFP. FLFP is higher when women participate in household decision making, and is smaller when the rate of intrafamily violence against women is higher. We also find a positive association between FLFP and aspirations on local gender parity. There is also strong evidence that public policy shapes women's incentives to work: a larger number of local preprimary centers per child or local public investments in education or health are positively associated with FLFP for mothers and women living with elderly. Road accessibility is positively correlated with FLFP, although not statistically significant, after accounting for other differences.

In alignment with the findings in the Oaxaca-Blinder decomposition, the results exploring the within country variation in FLFP reinforce the importance of individual and household characteristics and local labor markets. While there is a strong positive within country relation between FLFP and education, marriage is negatively associated. FLFP is also smaller among mothers, with larger impacts for those with younger children. Presence of the mother or mother-in-law in the same household, increases FLFP suggesting that additional help with domestic tasks,

all else constant, increases time to work outside the house. There is a negative association with having a working spouse and a positive relation with proxies of household income stability. The former likely captures an income effect, as it is robust to controlling for the role of social norms. Access and use of labor-saving technology are positively associated to FLFP.

The paper is organized as follows. Section 2 describes the data used in the paper and shows descriptive statistics. Section 3 presents the empirical model, while Sections 4 and 5 sets out our main findings. Section 6 concludes.

2.   Data and Descriptive Statistics

We combine different sources of data. For the decomposition of the change in FLFP between 2002 and 2018, we exploit data from the 2002 and 2018 National Censuses. The censuses were collected by INE and are representative at the municipality level. This allows the measurement of within country variation in FLFP, and several of its drivers at the municipal level.[6] FLFP is defined as the number of women ages 25 to 49 who report working or seeking work during the previous week divided by the total number of women in the same age range. We do not consider women of younger ages to avoid selection problems due to educational decisions. We consider all women below 50 years old as we are interested in analyzing the association between FLFP and motherhood, among other factors.[7] We restrict the sample to woman living in households where they or their partner is the household head.[8] We align with ILO definition and include work across all sectors of activity (primary, construction, manufacturing, white collar services and other services), and the informal economy. We explore information on individual characteristics (age, level of education, race, marital status), household structure (number of children younger than 13 years old, number of household members 12 years old or more, presence of mother or mother-in-law), whether female is the household head, whether the spouse works, type of employment of other household members, dwelling characteristics, location, and sectoral structure of municipal employment.

Next, we assess the importance of a wide set of drivers of FLFP within Guatemala in 2018, relying on the variables defined above and adding characteristics that are not available in the 2002 census. These include the use of internet, availability of home appliances (washing machine), remittances,

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[6] In Section I of the supplementary materials, we present a brief conceptual framework and a review of the literature on the factors driving FLFP.

[7] We follow Berlinski and Galiani (2007) and others and use 49 years old as an upper- bound. They use this age threshold to analyze the relationship between FLFP or other labor market outcomes and having children of young age and public policies such as the construction of preprimary schools.

[8] The Census data can identify mothers and children only in households where women are household heads or when their spouses are.

and women's participation in household decision making. We explore the Census of Human Resources of the Guatemala Central Government (collected by INE in 2017-2018), 2017 and 2018 municipal statistics (published by INE and by FUNDESA), 2017 social spending data (from ICEFI), and 2017 data assessing the degree of societal agreement with broad gender-parity statements (collected by Latinobarómetro in 2017). Based on these data sets we define variables that capture social norms and the role of public policy at the local level with: (i) share of women in high-paying public sector jobs (in the central administration) at the department level (based on data from the Census of Human Resources, 2017-2018), (ii) intrafamily violence at the municipality level (based on data collected by 2017 INE); and (iii) share of males agreeing with gender parity in congress and in the judicial system relatively to the entire population (based on 2017 Latinobarómetro). We proxy the influence of social public policies with: (i) 2017 municipal number of preprimary centers (collected by INE), (ii) 2017 per capita spending in education and health at the department level (collected by ICEFI), and (iii) the municipal road accessibility in 2018 (collected by FUNDESA). See Table A1 for details on these variables.

The set of local labor market characteristics include the per capita GDP at the municipality level in 2017 (collected by FUNDESA), the ratio of male-to-female employment in each municipality based on 2018 Population Census,[9] sectoral structure of (male) employment from the 2018 Population Census, and the municipality crimes rate in 2018 (collected by INE).

The main 2018 census sample includes 1,696,260 women of working age (25 to 49 years old) living in households were they or their partner is the household head. Our final sample covers a total of 333 municipalities (out of 340 total) and 22 departments (out of 22). FLFP increased from 26% to 32% between 2002 and 2018. Women in the 2018 sample are, on average, middle-aged, married, and low educated; most of married women have an employed husband, while women having children younger than 13 have more than one child on average. Access and use of technology is low. When looking at subnational variables, we find an average of 6 reported cases of intrafamily violence against women per 1,000 women in the municipality and an average of 9 men agreeing with having gender parity in Congress or in the Judicial system per 10 people agreeing in the department population. The average number of preprimary centers is 1.5 per 100 children ages 4 to 6. Section II in the supplementary materials present and discuss descriptive statistics in detail for all the variables we use in our analysis.

In Figure 3 we illustrate simple municipal-level correlations across FLFP, and several of FLFP drivers. The strong and positive association with the per capita GDP (Panel A) suggests that Guatemala municipalities are in the upward "U-shaped" curve with development. There is also a

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[9] The gender wage ratio would be a better measure of the level of discrimination in local labor markets, but the 2018 National Census does not provide information on income variables.

positive association with the share of households owning a washing machine (Panel B) suggesting that this type of home technology can free-up time that can be re-allocated to work outside the home. The positive correlation of FLFP with the share of women participating in main household decisions (Panel C) suggests that more gender-balanced societal norms within the household can be an important driver of FLFP. There is a positive relationship with the municipality road accessibility measure (Panel D) suggesting that access to better infrastructure can boost FLFP through reductions in commuting time. A strong negative association with the number of children in the household (12 years or less) suggests that mothers are less likely to work than other women. Finally, municipalities with higher shares of employment in the primary sector tend to have lower FLFP rates as well (Panel F).

These patterns are in line with expectations and suggest that individual and household characteristics, social norms, social policy, and local labor market variables can have a role in explaining the changes over time and within country dispersion in FLFP. We explore these associations more formally in the next section.

3. Empirical Model

3.1 Explaining the FLFP change between 2002 and 2018

To analyze the role of individual and household characteristics and local labor market drivers in explaining the change in FLFP between 2002 and 2018, we estimate an Oaxaca-Blinder decomposition (Blinder, 1973; Oaxaca, 1973). We start by proposing a linear model of the probability to participate in the labor market for woman i, in municipality m and year t:

$$Y_{imt} = \alpha + \beta_t X_{imt} + \delta_t W_{mt} + \gamma_t I_d + \varepsilon_{imt}. \qquad (1)$$

The dependent variable Y_{imt} takes the value 1 when woman i in municipality m and year t (t=2002, 2018) participates in the labor market and 0 otherwise. X_{imt} contains individual and household characteristics including age, education, ethnicity, marital status, household head, number of children in different age ranges, number of persons older than 12, presence of mother or mother-in-law, whether the spouse works, an income stability measure, a Home and WASH index,[10] and a dummy of urban location. W_{mt} captures local labor market drivers at the municipality level and includes the structure of male employment and I_d are department fixed effects.

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[10] House and WASH Index captures the type of dwelling, dwelling property, wall and roof materials, access to water and type of toilet (equal to 1 if connected to a sewerage system or to a septic tank). Table A1 in the Appendix provides details.

Let *t* be 2002 and *t'* be 2018, the decomposition of equation (1) between *t* and *t'* takes the following form:

$$\Delta_t \bar{Y} = \hat{\beta}_t(\bar{X}_{t'} - \bar{X}_t) + \hat{\delta}_t(\bar{W}_{t'} - \bar{W}_t) + \bar{X}_{t'}(\hat{\beta}_{t'} - \hat{\beta}_t) + \bar{W}_{t'}(\hat{\delta}_{t'} - \hat{\delta}_t) + (\hat{\gamma}_{t'} - \hat{\gamma}_t) + Residual \qquad (2)$$

The overbars in equation (2) denote averages and $\hat{\beta}$, $\hat{\delta}$ and $\hat{\gamma}$ are estimated coefficients. The first two terms on the right-hand-side of equation (2) are the part of the overtime change in FLFP that is explained by changes in observed characteristics ("explained component"). The following terms capture the part that is explained by changes in returns to those characteristics and by changes in the returns to department fixed effects, while the last term is a residual or part of the overtime change in FLFP that cannot be explained by the change in characteristics or the change in returns. The last four terms together are the "unexplained" component of the change in FLFP.

3.2 Explaining the within-country variation in FLFP in 2018

To analyze the drivers behind the within country dispersion in FLFP in Guatemala in 2018, we estimate model (1) using an expanded set of explanatory variables taking advantage of the richer information available for 2018:

$$Y_{im} = \alpha + \beta X_{im} + \delta W_m + \gamma I_d + \varepsilon_{im} \qquad (3)$$

X_{im} includes the set of drivers related to individual and household characteristics and a variable that captures social norms and attitudes towards women within the household (whether the women participate in main household decisions). W_m includes drivers with variation at the subnational level (municipality or department). They include social norms measures, public policy related variables and local labor market factors. We estimate different models. All models include the set of variables in X_{im} and the set of local labor market drivers at the subnational level. Variables capturing social norms and attitudes towards women and public policy variables at the municipality or department level are included one at a time.

Variables in X_{im} are the same set of individual and household characteristics mentioned in previous subsection. We also include remittances, use of internet and household appliances (washing machine), and a variable capturing the role of social norms and attitudes towards women within the household (whether women participate in main household decisions). The local labor market factors included in W_m are the logarithm of the per capita GDP level, the male-to-female employment ratio, the structure of male employment and the crime rate. All these variables vary at the municipality level.

The set of social norms variables at the subnational level include the share of women among high-paying employees in the Central Government at the department level. We interact this variable with the dummy variable of university level of education. We expect high paying public sector jobs to be more attractive for higher educated individuals. The other variables capturing social norms and attitudes towards women are the intrafamily violence against women in each municipality, and the share of males (compared to all) agreeing with gender parity statements at the department level.

The set public policy variables include the number of public preprimary centers in each municipality interacted with a dummy of having a child in 4 to 6 age range, the logarithm of the per capita spending in education in each department interacted with a dummy of having a child 0 to 12 years old, the logarithm of the per capita spending in health in each department interacted with a dummy of living with a person 60 years of age or older, and the municipality road accessibility at the municipality level.

I_d are department fixed effects that capture supply and demand conditions of local labor markets not controlled for with the set of FLFP drivers included in the model. We include I_d except when the driver of FLFP is defined at the department level. ε_{im} is an error term.

Model (3) is estimated by ordinary least squares and standard errors clustered at either the municipality or department level depending on the level of variation of the FLFP driver that is analyzed. All variables are defined as in Section 3 and Table A1 in the Appendix provides details on their construction and data sources.

4. Main Findings

4.1 Decomposition of the change FLFP: 2002-2018

We start by decomposing the observed change in FLFP between 2002 and 2018 using census data and following an Oaxaca-Blinder decomposition approach described in previous section. Table 1 reports the results of the Oaxaca-Blinder decomposition between 2002 and 2018 when FLFP increased 5.69 percentage points. Column (1) reports the FLFP in each year and their difference, column (2) shows the explained component of the decomposition, and column (3) presents the unexplained component. We group the variables in individual characteristics, household characteristics, variables capturing the economic situation of the household, local labor market factors, and geography variables.[11]

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[11] Individual characteristics include age and its squared, dummies of educational level and an indicator variable of belonging to an indigenous group. Household characteristics include a dummy of being married, number of children

The overall explained variation by the observable drivers (or the explained component) more than explain the observed increase in FLFP. Accounting only for changes in the mean value of observable characteristics would have led to an increase in the FLFP rate of 15 percentage points. On the other hand, the variation in the returns of these characteristics together with any other unobserved factors (as captured by the unexplained component) would have led to a decrease in the FLFP rate.

Among the explained component, changes in the employment composition over time is the largest contributor. The descriptive statistics (in the supplementary materials) documented a strong reduction in agricultural employment and an increase in the share of services between 2002 and 2018. Together these changes are positively associated with higher FLFP. In addition, a higher educational attainment and the fall in fertility also contributed to the increase in FLFP.

The large unexplained component in the change of the FLFP between 2002 and 2018 suggests that, without accounting for changes in characteristics, changes in their returns or other factors not included in the model would have led to a reduction of FLFP of 9.6 percentage points.[12] The large size of the unexplained component suggests that other (unobservable) factors were likely important during this period. Candidates of omitted factors are social norms regarding the role of women at home and in society and public policies. The next subsection assesses the drivers of within country variation in the FLFP in 2018, considering observable proxies for these variables with significant subnational variation.

4.2 Drivers of within country variation in FLFP in 2018

Figures 4 to 7 and Tables A2 to A4 in the Appendix present the results of model (1). Figures 4 and 5 report the simplest model of within country differences for FLFP accounting only for individual and household characteristics and local labor market variables as explanatory factors. Figure 6 adds to the previous model the set of variables proxying social norms and attitudes towards women, and Figure 7 adds to the first model the set of variables capturing public policies. We control for department fixed effect except when the variable of interest also varies at that level. Acknowledging the challenges posed by the proposed reduced form equation, we refrain from making causal statements through the remaining of the paper.

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ages 0 to 3, ages 4 to 6 and ages 7 to 12, number of household members 13 years old or older, presence of mother or mother-in-law, household headship. Economic situation includes an indicator of whether the spouse works, an indicator of income stability, and a Home and WASH index. Local labor market factors include the share of male employment by economic sector. Geography factors include an indicator of urban area and department fixed effects.
[12] Because the results of the unexplained component are not invariant to the choice of the excluded categories, we only analyze the total but not the results variable by variable (Fortin et al. 2011).

4.2.1   Individual and Household Characteristics

Data shows a strong relation between FLFP and education. Figure 4 shows that a woman with primary level of education is 2.1 percentage points more likely to participate than a woman with no education. The gradient for a woman with secondary education is 11.2 percentage points and for a woman with university level it is 30.1 percentage points. This is in line with evidence for other developing countries, such as Brazil and South Africa (Klasen et al., 2021) and a set of 15 LCR countries (Busso and Fonseca, 2015). FLFP increases with age, at a decreasing rate. This is consistent with evidence for LCR countries (Gasparini et al., 2015). Indigenous women are more likely to participate in the labor market than non-indigenous women. This result is aligned with Marchionni et al. (2019) for the LCR. Married women are 17.4 percentage points less likely to participate in the labor market than not married women. This result is also in line with expectations and with previous evidence (see Gasparini et al., 2015 for evidence on LCR countries).

Fertility penalizes labor participation and the age of the children matters: mothers of younger children are less likely to participate in the labor market. The negative relation is particularly large for children 0 to 3 years of age. Women having an additional child in this age range are 4 percentage points less likely to participate in the labor market. The work penalty for additional children aged 4 to 6 is 2 percentage points, and for children 7 to 12 years old is less than one percentage point.

The presence of additional household members (older than 12 years) is associated with lower FLFP, while the presence of the mother or mother-in-law is positively related to the women's LFP. A larger family size could decrease FLFP due to larger care needs and household chores and if some household members work and earn an income, this could contribute negatively to FLFP through an "income effect". Since the model accounts for a working spouse and a measure of income stability, it is likely that the first effect explains the negative result. In fact, the positive coefficient of the variable capturing the presence of a woman's mother or mother-in-law could reinforces this finding. When a women's mother or mother-in-law lives in the same household, FLFP is 3 percentage points larger.

Households' economic conditions are strongly corelated with FLFP. First, there is a negative association with a working spouse. This could be explain both by an "income effect" or could be the result of social norms.[13] Second, income stability (at least one household member is a wage employee), is associated with larger FLFP. A possible reason is that the regular employment of other household members could mean access to information and networks for women to find a job

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[13] A working wife could be less socially accepted when the husband works.

outside the home (Klasen and Pieters, 2012). Third, there is a negative association between FLFP and household remittances, possibly capturing an "income effect". Fourth, the Home and WASH index, capturing the quality of infrastructure of the dwelling, is positively associated with FLFP. This positive coefficient could be capturing that working women have higher income and can this improve their living conditions at home.

Female LFP is larger in urban than in rural areas. Specifically, the LFP rate of women in urban areas surpasses the rate of women in rural locations by 7.5 percentage points. This result could be an indication of the availability of more employment opportunities and services in cities, such as childcare facilities, that can promote FLFP.

Access to and use of technology are also positively linked to FLFP. The participation rate of internet users surpasses that of not users by 11.5 percentage points, probably reflecting better access to information about employment opportunities and endowment of skills that are demanded in the labor market. On the other hand, the LFP rate of women having a washing machine is 3.5 percentage points larger than the rate for women not having one.

4.2.2   *Local Labor Market Factors*

Figure 5 shows that municipalities with higher GDP per capita levels have higher FLFP rates, although the association is not significant statistically. The estimations corresponding to the variables capturing the sectoral structure of male employment have the expected sign –e.g., larger FLFP when the share of the services sectors is larger with respect to the share of manufacturing-- but are not significant. The measure of gender-based discrimination in the labor market is associated to lower rates of FLFP, while the rate of crime is negative associated to FLFP although the estimation does not differ from zero statistically.

4.2.3   *Social Norms and Attitudes*

Figure 6 presents the results of a set of variables capturing social norms and attitudes toward women (relying on our basic specification). We first add variables one at a time and, then include them all together. Models control for department fixed effects except when the social norms' measure has variation at that same level. The first panel of the figure shows that when female family members have participation in main household decisions, FLFP is higher. This could reflect female empowerment and social attitudes within the household that favor women's participation in the labor market. Then, we include as control the share of educated women among high-paying public employees. A higher share of women in these jobs is negatively associated with FLFP of

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low educated women (i.e., those with less than tertiary education). For high educated women the correlation is positive although not statistically significant.

When controlling for intrafamily violence against women there is a negative association with FLFP. This is aligned with hypothesis of male dominance, and physical and psychological costs of working outside the home when working is the violence trigger (Chakraborty et al., 2017). We find a positive and strong correlation for the measure capturing gender parity in parliament, while the effect for the variable of gender parity among judges is not significant statistically.

The last panel controls for all the measures capturing social norms and attitudes towards women. We confirm the positive and statistically significant association with women participating in household decisions and with gender parity in parliament.

4.2.4   Social Policy

Figure 7 presents the results including variables capturing the impacts of social policy at the subnational level. The first panel controls for public preprimary centers in each municipality per 100 children in the 4-6 age range. This is interacted with a dummy variable that indicates if the woman has a child in the pre-primary education age range. We find that there is a differential association between the number of pre-primary centers and FLFP depending on whether women have a child in the relevant age range or not. For each additional preprimary center, we estimate an addition of 1.3 percentage points to the LFP of mothers of children aged 4 to 6 years relatively to women without children in that age range.

In the next panel, results suggest a differential relation with public spending depending on whether women have children. More public spending in education is associated with higher LFP of mothers of children ages 0 to 12 with respect to non-mothers, although the correlation is small. When considering the per capita spending on health interacted with having at least one family member 60 years old or more, there is a positive association with the FLFP of women that live with older adults. This suggests that with higher health spending the care needs are reduced. However, the size of the coefficient is small.

The next panel controls for road accessibility. Although not significant statistically, there is a positive correlation suggesting that road accessibility facilitates commute to and from work. Finally, we include all the social policy variables and confirm the positive associations mentioned above.

Table A5 considers male LFP as the main outcome. Results show that the number of children does not have a relationship with male LFP nor the presence of the mother or mother-in-law. We do not

find an association between male LFP and having a washing machine. The variables capturing social norms and attitudes towards women and public policies are, in general, not statistically significant. Exceptions include the share of women in high-paying positions in Central Government, the logarithm of public spending in health interacted with having a family member 60 years old or more, and the municipality road accessibility measure.

5. Robustness Checks

Our results are robust to different samples. First, we expand the sample to include women aged 25 through 55 years old. Table 2 presents results when controlling for individual and household characteristics, local labor market drivers, and the model that interacts the normalized number of public preprimary centers with having kids in the 4-6 age range, respectively. Findings are aligned with previous estimates: (i) there is a negative association between having children and FLFP and the penalization is larger the younger the kids, and (ii) a larger number of public preprimary centers in the municipality where a woman lives is positively related to FLFP of women having children in the 4-6 age range.

Our second robustness explores alternative measures of access to preprimary centers using information from the census. Using census data, we compute a measure for each woman in our sample indicating whether at least one of her children ages 4 to 6 assists to a preprimary center. Column 3 in Table 2 presents the results of our main specification when including this variable and restricting the sample to women that are mothers of children aged 4 to 6 years old. Results indicate that assistance to a preprimary center is still strongly and positively associated with FLFP. Considering that most preprimary centers are public, we interpret this finding as reinforcing our previous results. It also suggests the importance of public infrastructure to facilitate the entrance of mothers into the labor market.

We also propose different measures of social norms and attitudes towards women in the society using data from 2018 Latinobarómetro. The first captures the share of males considering that a team of women and men will have better results than a team of only men. The second captures the opinions towards women and men being equally skilled in science and technology. Results reported in column (4) of Table 2 show a that the positive association holds (but its non-significant with the second measure).

Finally, column (5) of Table 2 reports the main findings when the sample is restricted to urban areas. The direction of the main findings remains the same. However, the penalty associated to young children is larger than in the baseline estimates. In urban areas, women having an additional child in the 0-3 age range are 6 percentage points less likely to participate in the labor market (the

estimate in the main sample was 4 percentage points). The penalty for an children aged 4 to 6 years old is 3 percentage points (instead of 2 percentage points), and that of children aged 7 to 12 years is less than 1.3 percentage points (instead of less than 1 percentage point).

6. Conclusion

During most of the 2000's, Guatemala grew at a relatively high rate, fertility rates declined, and female educational attainment rose without precedent. Despite these promising trends, Guatemala remained the country with the lowest FLFP rate in the LCR. This under-utilization poses a large cost to this upper-middle income country where most women are not engaged in paid jobs. This paper explored a wide set of micro data sets between 2002 and 2018 to investigate the role of different factors in influencing the women's decision to participate in paid employment to shed new light on the reasons behind the trend over the 2000s and the drivers of its large within country dispersion. We assessed the role of: (i) individual and household socioeconomic characteristics (such as the level of education or the number of children), (ii) local social norms and attitudes towards women (at home and in the community), (iii) social public policies (such as investments in pre-schools), and (iv) local labor market characteristics (such as the ratio of male to female employment or the composition of employment across sectors of activity). Traditionally, a small state, weak governance, and chronically low tax revenues lead to limited public investment in infrastructure and human capital, largely explaining the lack of developmental progress and large gaps in social outcomes. We conjecture that regional differences in these factors influence women's willingness and ability to participate in paid employment.

Even though our sample only covers data up to 2018, the impact of COVID-19 raises an even gloomier scenario for FLFP in Guatemala. Globally, women suffer larger work stoppage rates than men (Alon et al., 2021; Kugler et al., 2021). Estimates for Guatemala indicate that women were 20 percentage points more likely than men to lose their jobs in the early stages of the pandemic (Cucagna and Romero, 2021). The larger impact of the COVID-19 pandemic recession on female employment and the unbalanced burden of childcare activities across genders are very likely to further impact women's LFP. Moreover, women that were initially forced to leave their job due to the pandemic are likely to become permanently affected by facing long unemployment spells and eventually dropping out of the labor force.

We showed that the increases in FLFP of 5.7 percentage points between 2002 to 2018 (from 26% to 32%) was partly explained by the drastic increases in the school attainment of women, the reduction in fertility and the country's structural transformation towards services. However, a large component remained unexplained by the proposed Oaxaca-Blinder decomposition.

Exploring within country differences in FLFP in 2018, we showed that social norms, attitudes towards women in the society and public social policies such as the availability of public pre-schools or the investments in health, are all important determinants of these changes. The analysis suggests that, taken together, these factors can all become an important source of increased FLFP moving forward.

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Figure 1. Female labor force participation rate and GDP per capita in 2018. Cross-country perspective
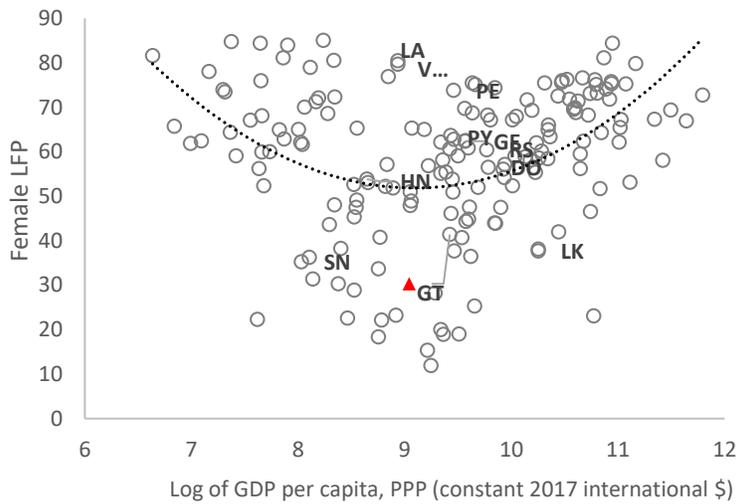
Figure 2. Female labor force participation rate and GDP per capita in 2018. Within-country perspective

Figure 3. Correlations between FLFP and municipal level variables capturing household characteristics, social norms, local labor market factors, and public policy
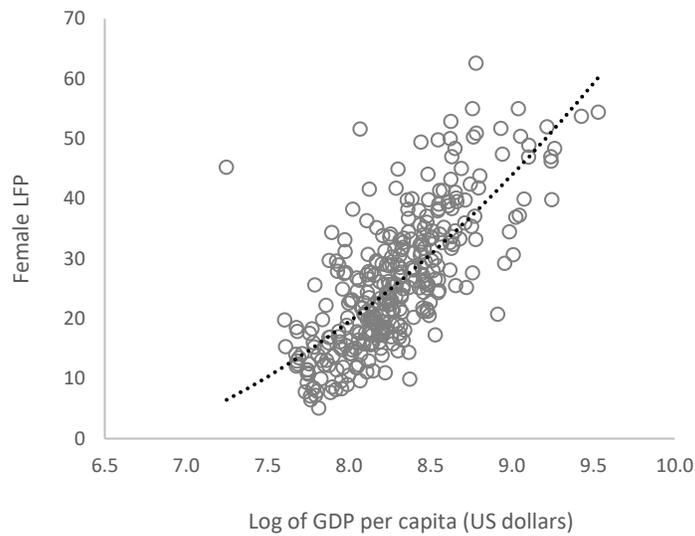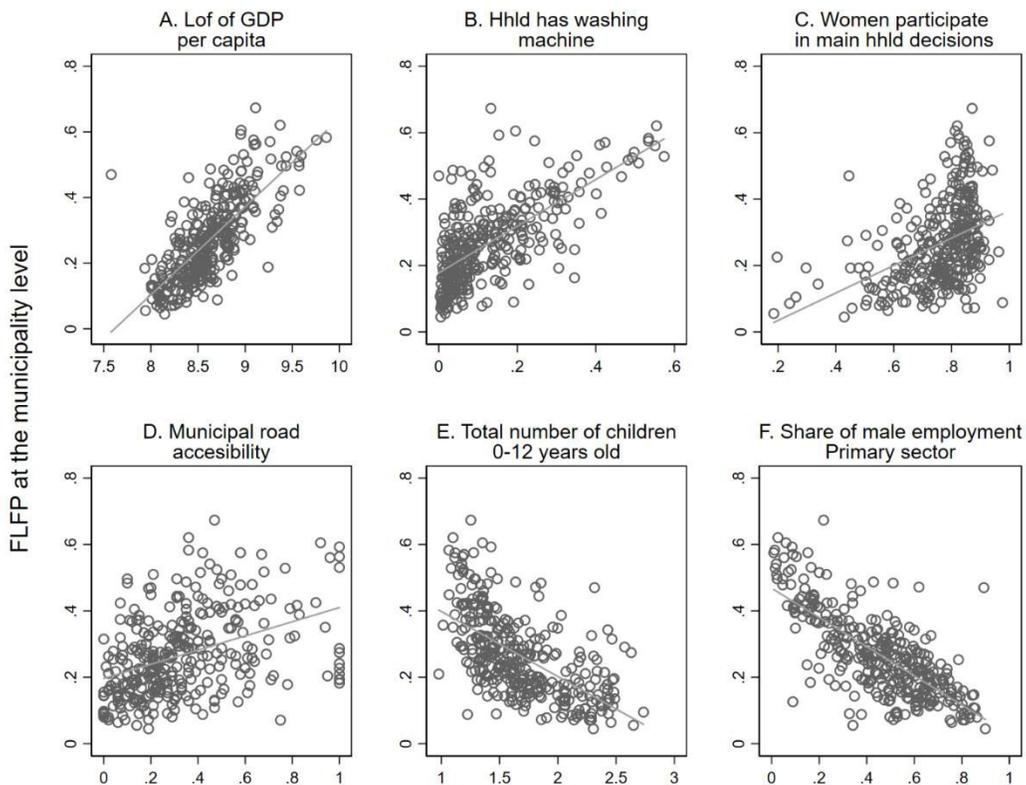
Sources: 2018 National Census of Guatemala (INE) and FUNDESA.
Notes: Each dot represents a municipality. Sample includes women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves. Table A1 in the Appendix provides the definition of each variable.

Figure 4. FLFP and individual and household characteristics
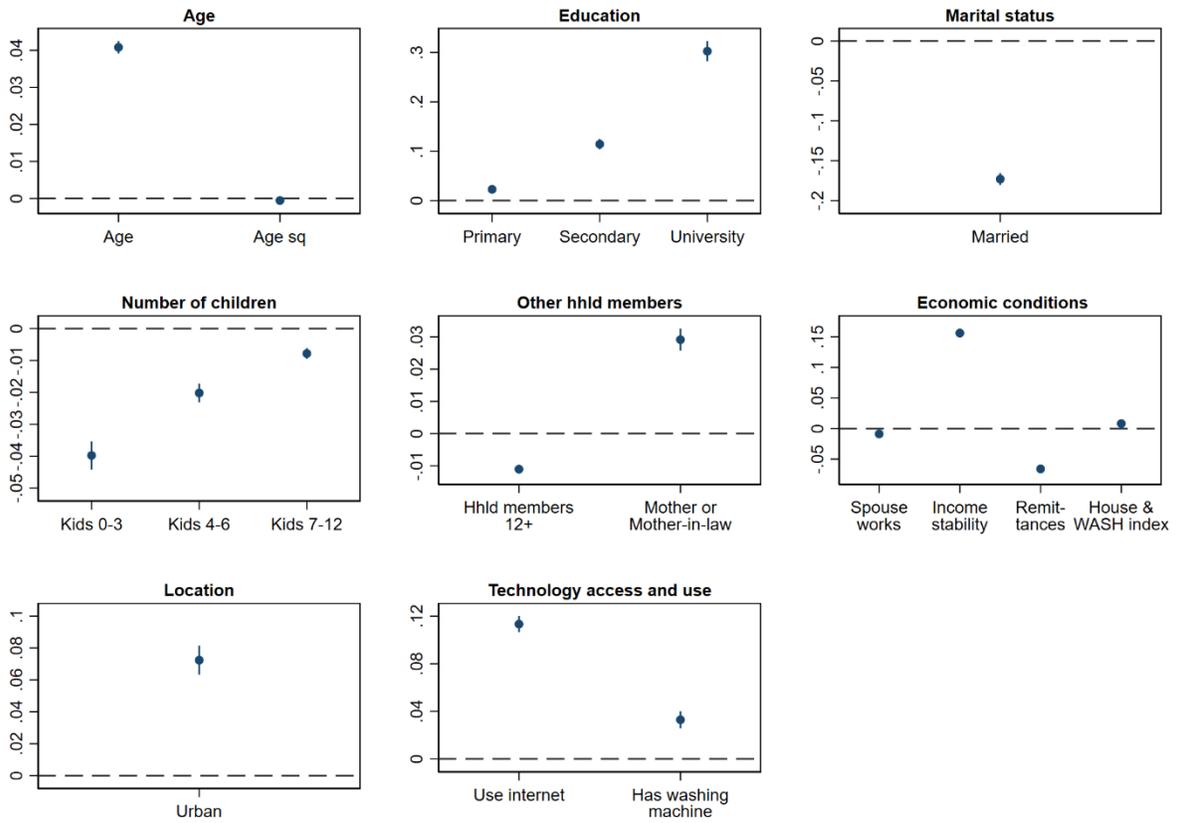
Notes: Point estimates and 90% CI from estimating model (1) by OLS. Table A1 in the Appendix provides details on variables' definition, while Table A2 provides complete estimation results.

Figure 5. FLFP and local labor market variables
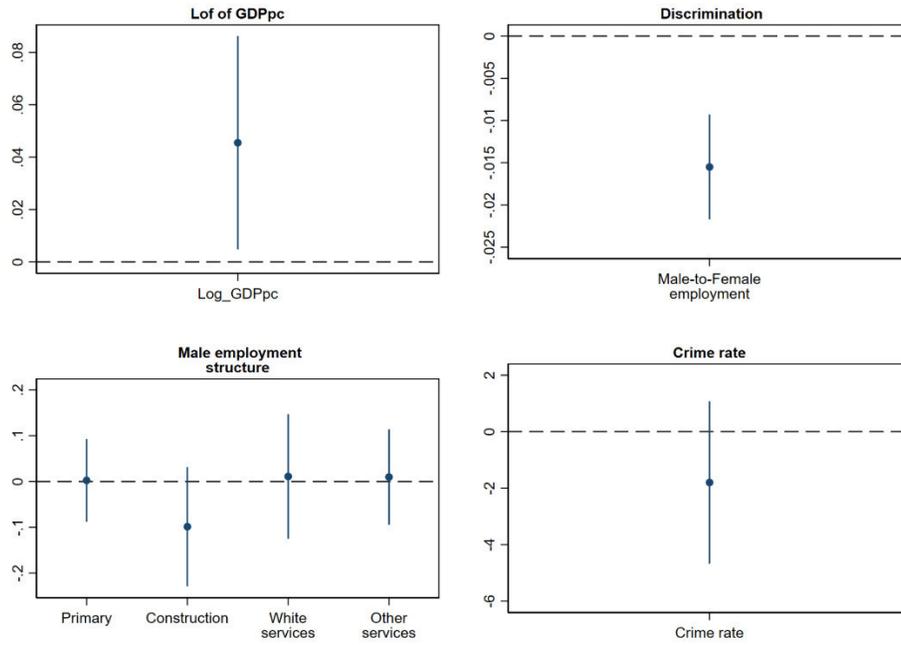
Notes: Point estimates and 90% CI from estimating model (1) by OLS. Table A1 in the Appendix provides details on variables' definition, while Table A2 in the Appendix provides complete estimation results.

Figure 6. FLFP and variables capturing social norms and attitudes towards women
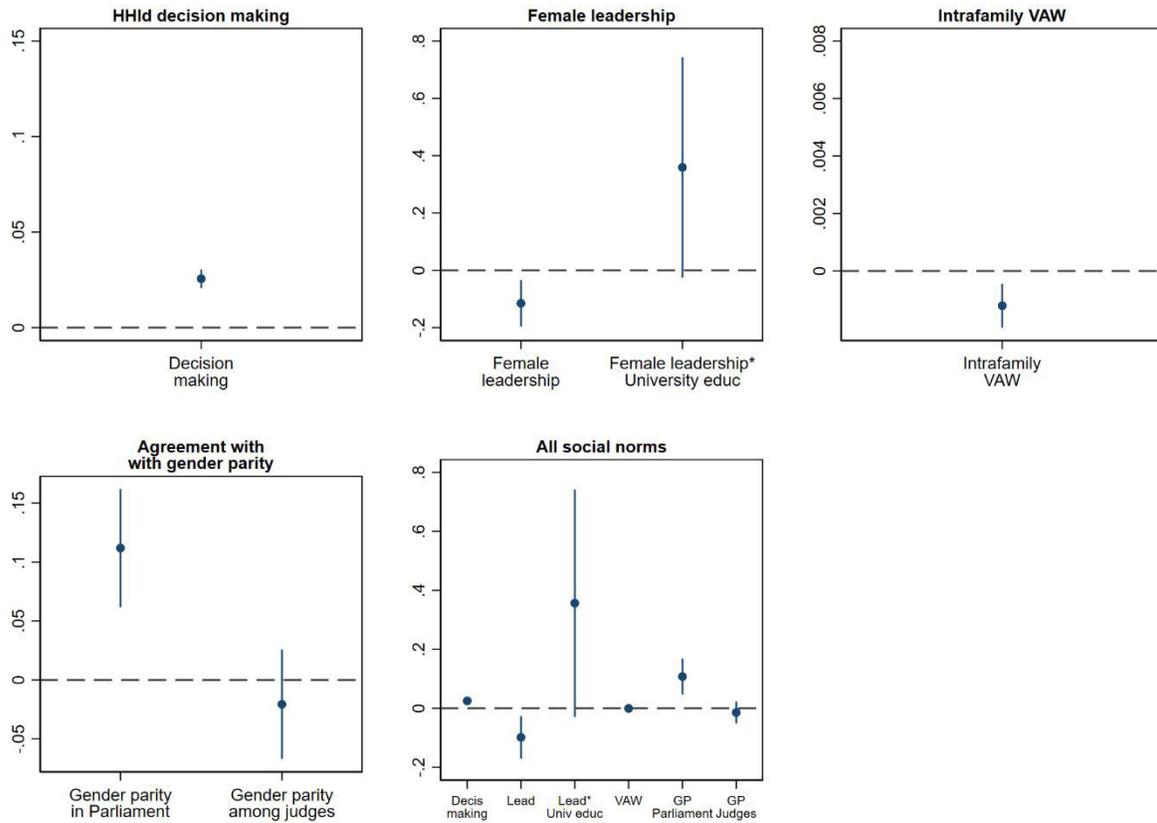
Notes: Point estimates and 90% CI from estimating model (1) by OLS. Table A1 in the Appendix provides details on variables' definition, while Table A3 in the Appendix provides complete estimation results.

Figure 7. FLFP and social policy variables
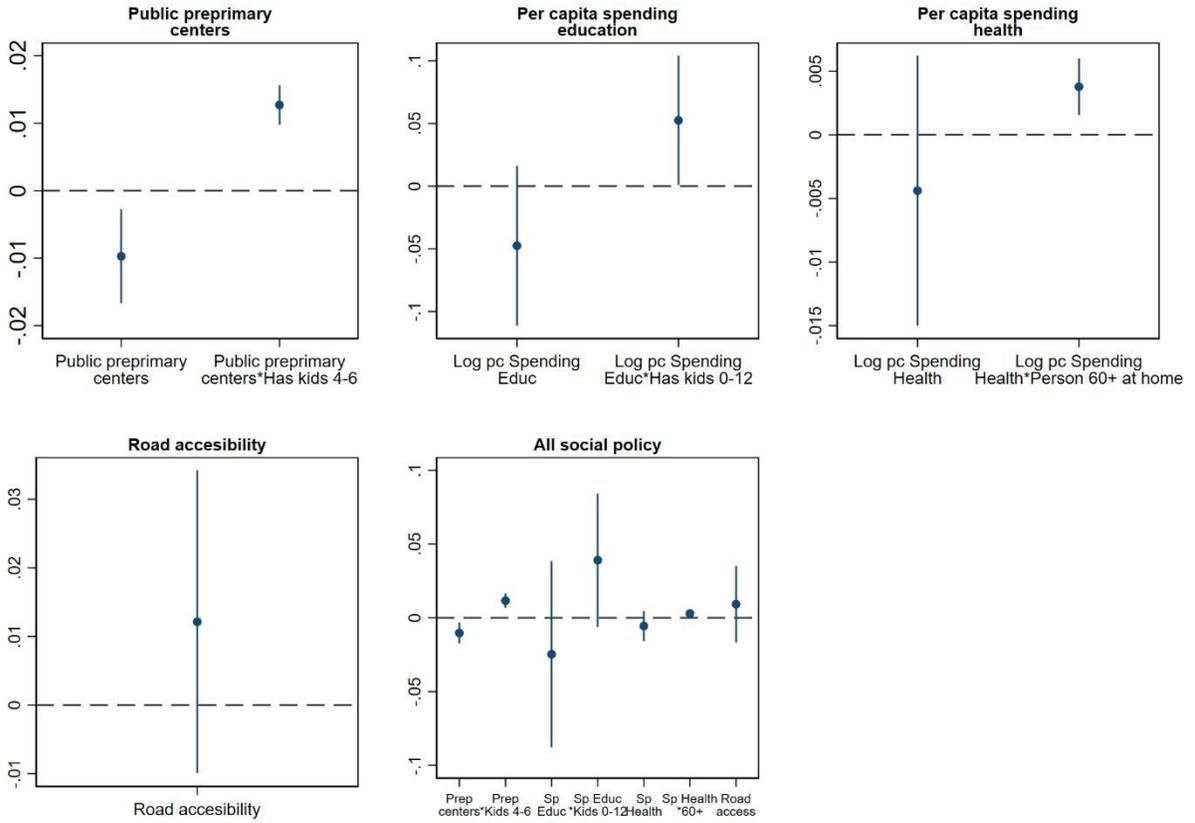
Notes: Point estimates and 90% CI from estimating model (1) by OLS. Table A1 in the Appendix provides details on variables' definition, while Table A4 in the Appendix provides complete estimation results.

Table 1. Oaxaca-Blinder decomposition of the change in FLFP between 2002 and 2018

	Overall (1)	Explained (2)	Unexplained (3)
Year 2018	0.32		
	[0.0217]***		
Year 2005	0.264		
	[0.0256]***		
Difference	0.0569		
	[0.00706]***		
Total effect		0.153	-0.0964
		[0.0247]***	[0.0252]***
Individual characteristics		0.0257	0.401
		[0.00235]***	[0.0323]***
Household characteristics		0.0139	-0.118
		[0.00155]***	[0.00713]***
Economic situation		0.00624	0.00943
		[0.00211]***	[0.00352]***
Local labor market variables		0.104	-0.0757
		[0.0255]***	[0.0288]***
Geography		0.00341	0.0199
		[0.00200]*	[0.00932]**
Constant			-0.332
			[0.0306]***
Observations	2,909,416	2,909,416	2,909,416

Sources: 2002 and 2018 National Census of Guatemala (INE).
Notes: Robust standard errors in brackets. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves and who live in municipalities appearing in both censuses (331 municipalities). Individual characteristics include age and its squared, dummies of educational level and an indicator variable of belonging to an indigenous group. Household characteristics include a dummy of being married, number of children ages 0 to 3, ages 4 to 6 and ages 7 to 12, number of household members 13 years old or older, presence of grandmother, household headship. Economic situation includes an indicator of whether the spouse works, an indicators of income stability, and a household & WASH index. Local labor market variables include the share of male employment by economic sector. Geography factors include an indicator of urban area and department fixed effects. Table A1 in the Appendix provides details on variables' definitions.

Table 2. Within-country correlates of FLFP in 2018. Robustness checks. OLS estimates

	Women 25-55		Women with kid 4-6	Latino-barometro 2018	Urban areas only
	(1)	(2)	(3)	(4)	(5)
Individual & Household characteristics					
Age	0.034	0.034	0.0362	0.0408	0.0495
	[0.000811]***	[0.000809]***	[0.00141]***	[0.00232]***	[0.00104]***
Age squared	-0.000433	-0.000434	-0.000476	-0.000534	-0.000654
	[1.20e-05]***	[1.21e-05]***	[2.10e-05]***	[3.68e-05]***	[1.38e-05]***
Primary level	0.0227	0.0226	0.0165	0.0207	0.0250
	[0.00187]***	[0.00190]***	[0.00206]***	[0.00299]***	[0.00352]***
Secondary level	0.115	0.115	0.101	0.113	0.105
	[0.00703]***	[0.00708]***	[0.00504]***	[0.0137]***	[0.00818]***
University level	0.304	0.303	0.310	0.302	0.281
	[0.0130]***	[0.0131]***	[0.0137]***	[0.0253]***	[0.0113]***
Indigenous person	0.0426	0.0416	0.0445	0.0507	0.0560
	[0.00646]***	[0.00656]***	[0.00672]***	[0.00859]***	[0.0103]***
Married	-0.155	-0.155	-0.220	-0.174	-0.163
	[0.00393]***	[0.00396]***	[0.00509]***	[0.00603]***	[0.00736]***
Number of children 0-3	-0.0403	-0.0405	-0.0332	-0.0398	-0.0588
	[0.00276]***	[0.00280]***	[0.00214]***	[0.00648]***	[0.00291]***
Number of children 4-6	-0.0206	-0.00881	-0.0138	-0.0202	-0.0310
	[0.00186]***	[0.00173]***	[0.00167]***	[0.00443]***	[0.00231]***
Number of children 7-12	-0.00736	-0.00741	-0.00566	-0.00766	-0.0134
	[0.000999]***	[0.00102]***	[0.000865]***	[0.00226]***	[0.00144]***
Number of people > 12	-0.0123	-0.0124	-0.00634	-0.0109	-0.0131
	[0.000430]***	[0.000431]***	[0.000847]***	[0.000697]***	[0.000596]***
Presence of grandmother	0.0305	0.0306	0.0230	0.0296	0.0344
	[0.00226]***	[0.00225]***	[0.00292]***	[0.00420]***	[0.00258]***
Household head	0.103	0.102	0.0978	0.104	0.119
	[0.00386]***	[0.00386]***	[0.00525]***	[0.00672]***	[0.00333]***
Spouse works	-0.00507	-0.00496	-0.00671	-0.00746	-0.0216
	[0.00343]	[0.00342]	[0.00462]	[0.00969]	[0.00466]***
Income stability	0.15	0.15	0.128	0.156	0.184
	[0.00432]***	[0.00432]***	[0.00469]***	[0.0110]***	[0.00327]***
At least one person receives remittances regularly	-0.061	-0.0605	-0.0562	-0.0674	-0.0731
	[0.00248]***	[0.00250]***	[0.00308]***	[0.00370]***	[0.00381]***
Household Home & WASH index	0.00841	0.00861	0.00722	0.00747	0.0161
	[0.00163]***	[0.00163]***	[0.00140]***	[0.00167]***	[0.00403]***
Urban	0.072	0.0715	0.0628	0.0748	-
	[0.00541]***	[0.00554]***	[0.00587]***	[0.00509]***	
Use internet in the last 3 months	0.114	0.114	0.115	0.114	0.112
	[0.00411]***	[0.00410]***	[0.00501]***	[0.00810]***	[0.00478]***
Washing machine	0.025	0.0247	0.0444	0.0347	0.0286
	[0.00436]***	[0.00440]***	[0.00453]***	[0.00724]***	[0.00353]***
Social norms & attitudes towards women					
Men-to-all agreement with gender parity in teams				0.0416	
				[0.0200]**	
Men-to-all agreement with gender parity in STEM skills				-0.0453	
				[0.0274]	
Social policy variables					
Public preprimary centers per 100 children 4-6 in the municipality (2017)		-0.00873			
		[0.00410]**			
Public preprimary centers per 100 children 4-6 in the municipality (2017) * Has child 4-6		0.0108			
		[0.00170]***			
Has child 4-6		-0.0274			
		[0.00294]***			
Children 4-6 assist to preprimary education			0.0123		
			[0.00161]***		

Table 2 (Cont.)

	Women 25-55		Women with kid 4-6	Latino-barometro 2018	Urban areas only
	(1)	(2)	(3)	(4)	(5)
Local labor market variables					
Male/Female employment ratio in the municipality	-0.0155	-0.0157	-0.0144	-0.0142	-0.0157
	[0.00374]***	[0.00366]***	[0.00374]***	[0.00246]***	[0.00398]***
Log of municipality GDP per capita	0.0475	0.0487	0.0443	0.0342	0.0412
	[0.0245]*	[0.0245]**	[0.0255]*	[0.0130]**	[0.0329]
Crimes in the municipality / Total population in the municipality	-1.55	-1.865	-1.768	-1.523	-2.37
	[1.743]	[1.769]	[2.081]	[1.369]	[1.970]
Share of male employment in primary (municipality)	0.00393	0.00526	-0.0344	-0.00259	0.0198
	[0.0541]	[0.0539]	[0.0528]	[0.0459]	[0.0680]
Share of male employment in construction (municipality)	-0.0837	-0.0848	-0.204	-0.123	-0.0933
	[0.0784]	[0.0780]	[0.0812]**	[0.0841]	[0.0883]
Share of male employment in white services (municipality)	0.00477	0.00716	-0.0368	0.029	0.0336
	[0.0819]	[0.0826]	[0.0818]	[0.0785]	[0.106]
Share of male employment in other services (municipality)	0.0132	0.00382	-0.0509	0.00711	0.0535
	[0.0621]	[0.0624]	[0.0591]	[0.0676]	[0.0859]
Constant	-0.738	-0.733	-0.644	-0.72	-0.881
	[0.232]***	[0.231]***	[0.240]***	[0.131]***	[0.308]***
Observations	1,983,873	1,983,873	580,115	1,696,260	961,743
R-squared	0.247	0.248	0.228	0.255	0.206
Department fixed effects	Yes	Yes	Yes	No	Yes
Clustered std. errors	Municipality	Municipality	Municipality	Department	Municipality

Notes: Robust standard errors in brackets clustered at the municipality/department level. *** p<0.01, ** p<0.05, * p<0.1. Table A1 in the Appendix provides details on variables' definitions.

Appendix

Table A1. Variables' definition

Variable	Definition	Level of Variation
Age	Age in years	Individual
Education	Dummy variables equal one when a woman has no education, primary level of education (complete or incomplete), secondary level (complete or incomplete) or university level (complete or incomplete).	Individual
Indigenous	Dummy variable equals one if a woman identifies herself as Maya, Garífuna or Xinka.	Individual
Married	Dummy variable equals one if a woman is married or lives with a partner.	Individual
Number of children 0-3	Number of children ages 0 to 3 who are sons or daughthers of the household head.	Household
Number of children 4-6	Number of children ages 4 to 6 who are sons or daughthers of the household head.	Household
Number of children 7-12	Number of children ages 7 to 12 who are sons or daughthers of the household head.	Household
Numner of persons > 12	Number of household members older than 12 years of age.	Household
Presence of grandmother	Dummy variable equals one if a woman's mother or mother-in-law lives in the household.	Household
Household head	Dummy variable equals one if the woman is the household head.	Individual
Spouse works	Dummy variable equals one if the woman's spouse works. Takes the value 0 for women who are not married or living with a partner.	Individual
Income Stability	Dummy variable equals one when there is at least one wage earner in the household and is zero otherwise.	Household
At least one person receives remittances regularly	Dummy variable equals one if at least one household member receives remittances on a regular basis.	Household
Household Home & WASH index	Index capturing the type of dwelling (equal to 1 if it is a house or apartment), dwelling property (equal to 1 if the family owns it), wall materials (equal to 1 if they are of materials such as bricks or concrete), roof materials (equal to 1 if they are of materials such as concrete or cement), access to water (equal to 1 if through a pipeline) and type of toilet (equal to 1 if connected to a sewerage system or to a septic tank). Index is created using a factor model.	Household
Urban	Dummy variable equal one if woman lives in an urban area.	Individual
Use internet in the last 3 months	Dummy variable equal one if woman the woman used the internet in the last three months regardless of the place of use.	Individual
Washing machine	Dummy variable equal one if the family owns a washing machine.	Household
Female Decision Making	Dummy variable equals one if the main decisions in the household are taken by a woman or by a woman jointly with a man and is zero otherwise	Household
High Wage Female Workers in the Public Sector	Share of women among all Central Government employees earning a high salary (at least 10,000 Quetzales per month).	Department
Intrafamily VAW	Number of cases of intrafamily violence against women in the municipality where each woman lives per 1,000 women 15 or older in the same municipality.	Municipality
Men-to-all agreement with gender parity in Parliament	Ratio between the share of men 18 years old or more that in each department agrees with having gender parity in the Parliament and the share of all people ages 18 or more that agrees with the same statement in the same department.	Department
Men-to-all agreement with gender parity among judges	Ratio between the share of men 18 years old or more that in each department agrees with gender parity among judges and the share of all people ages 18 or more that agrees with the same statement in the same department.	Department
Public preprimary centers	Number of public preprimary centers in each municipality per 100 children ages 4 to 6 in the same municipality.	Municipality
Per capita public spending in education	Per capita spending in education in 2007 PPP USD.	Department
Per capita public spending in health	Per capita spending in health in 2007 PPP USD.	Department
Municipal Road Acessibility	Kilometers of roads built relative to targets defined in the National Road Plan 2032.	Municipality
Male-to-Female employment ratio	Ratio between the employment rate of men ages 15 to 60 in each municipality and the employment rate of women in the same age range and municipality.	Municipality
GDP per capita	GDP per capita in 2007 PPP USD.	Municipality
Crimes in the municipality / Total population in the municipality	Number of crimes per person	Municipality
Share of male employment in primary	Share of male employment in agriculture, forestry and fishing or mining and quarrying	Municipality
Share of male employment in manufacturing	Share of male employment in manufacturing sector	Municipality
Share of male employment in construction	Share of male employment in construction sector	Municipality
Share of male employment in white services	Share of male employment in financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities; education; or health.	Municipality
Share of male employment in other services	Share of male employment in utilities; wholesale and retail trade; transportation and storage; accommodation and food services activities; information and communication; arts, entertainment and recreation; activities of households as employers; activities of extraterritorial organizations and bodies.	Municipality

Table A2. FLFP, individual & household characteristics and local labor market variables in 2018. OLS estimates

	(1)	(2)
Individual & household characteristics		
Age	0.0407	0.0408
	[0.00103]***	[0.00102]***
Age squared	-0.000533	-0.000534
	[1.55e-05]***	[1.54e-05]***
Primary level	0.0206	0.0227
	[0.00233]***	[0.00197]***
Secondary level	0.112	0.114
	[0.00644]***	[0.00643]***
University level	0.301	0.303
	[0.0126]***	[0.0124]***
Indigenous person	0.0513	0.0433
	[0.00581]***	[0.00658]***
Married	-0.174	-0.173
	[0.00459]***	[0.00459]***
Number of children 0-3	-0.0398	-0.0398
	[0.00267]***	[0.00267]***
Number of children 4-6	-0.0201	-0.0202
	[0.00181]***	[0.00180]***
Number of children 7-12	-0.00763	-0.00782
	[0.00106]***	[0.00103]***
Number of people > 12	-0.0109	-0.011
	[0.000440]***	[0.000422]***
Presence of grandmother	0.0297	0.0292
	[0.00212]***	[0.00208]***
Household head	0.105	0.104
	[0.00384]***	[0.00397]***
Spouse works	-0.00621	-0.0088
	[0.00396]	[0.00367]**
Income stability	0.156	0.156
	[0.00445]***	[0.00444]***
At least one person receives remittances regularly	-0.0663	-0.066
	[0.00265]***	[0.00250]***
Household Home & WASH index	0.00781	0.00818
	[0.00169]***	[0.00162]***
Urban	0.0754	0.0724
	[0.00564]***	[0.00551]***
Use internet in the last 3 months	0.115	0.113
	[0.00426]***	[0.00409]***
Washing machine	0.0347	0.0329
	[0.00463]***	[0.00432]***
Local labor market variables		
Male-to-Female employment ratio	-0.0141	-0.0155
	[0.00310]***	[0.00377]***
Log of per capita GDP	0.0342	0.0455
	[0.0113]***	[0.0247]*
Crime rate	-2.086	-1.799
	[1.493]	[1.744]
Share of male employment in primary sector	0.0185	0.00249
	[0.0440]	[0.0548]
Share of male employment in construction	-0.0982	-0.0986
	[0.0717]	[0.0789]
Share of male employment in white services	0.0619	0.0111
	[0.0765]	[0.0825]
Share of male employment in other services	0.0273	0.00988
	[0.0601]	[0.0632]
Constant	-0.744	-0.818
	[0.114]***	[0.235]***
Observations	1,696,260	1,696,260
R-squared	0.255	0.256
Department fixed effects	No	Yes

Sources: 2018 National Census of Guatemala and 2018 municipality statistics (FUNDESA and INE).
Notes: Women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves. Robust standard errors clustered at the municipality level between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A3. FLFP, individual & household characteristics, social norms & attitudes towards women, and local labor market variables in 2018. OLS estimates

	(1)	(2)	(3)	(4)	(5)
Individual & household characteristics					
Age	0.0406	0.0408	0.0408	0.0408	0.0406
	[0.00102]***	[0.00234]***	[0.00102]***	[0.00232]***	[0.00231]***
Age squared	-0.000531	-0.000534	-0.000534	-0.000535	-0.000532
	[1.53e-05]***	[3.71e-05]***	[1.54e-05]***	[3.68e-05]***	[3.66e-05]***
Primary level	0.0215	0.0216	0.0226	0.0213	0.0209
	[0.00195]***	[0.00296]***	[0.00197]***	[0.00291]***	[0.00290]***
Secondary level	0.113	0.113	0.114	0.113	0.111
	[0.00649]***	[0.0140]***	[0.00643]***	[0.0137]***	[0.0142]***
University level	0.3	0.109	0.302	0.302	0.109
	[0.0126]***	[0.134]	[0.0124]***	[0.0252]***	[0.135]
Indigenous person	0.0445	0.0472	0.0427	0.0493	0.0468
	[0.00662]***	[0.00957]***	[0.00655]***	[0.00865]***	[0.00940]***
Married	-0.172	-0.174	-0.173	-0.173	-0.172
	[0.00461]***	[0.00585]***	[0.00459]***	[0.00596]***	[0.00601]***
Number of children 0-3	-0.0395	-0.0399	-0.0398	-0.0399	-0.0397
	[0.00267]***	[0.00652]***	[0.00267]***	[0.00650]***	[0.00653]***
Number of children 4-6	-0.0201	-0.0202	-0.0202	-0.0203	-0.0202
	[0.00180]***	[0.00445]***	[0.00180]***	[0.00444]***	[0.00446]***
Number of children 7-12	-0.00783	-0.00774	-0.00777	-0.00779	-0.00786
	[0.00103]***	[0.00226]***	[0.00103]***	[0.00226]***	[0.00228]***
Number of people > 12	-0.011	-0.0109	-0.011	-0.011	-0.011
	[0.000423]***	[0.000697]***	[0.000422]***	[0.000694]***	[0.000716]***
Presence of grandmother	0.0299	0.0294	0.0291	0.0297	0.0303
	[0.00209]***	[0.00428]***	[0.00208]***	[0.00416]***	[0.00439]***
Household head	0.0992	0.105	0.104	0.105	0.1
	[0.00381]***	[0.00655]***	[0.00397]***	[0.00663]***	[0.00629]***
Spouse works	-0.00907	-0.00684	-0.0089	-0.00725	-0.0079
	[0.00366]**	[0.00961]	[0.00369]**	[0.00965]	[0.00959]
Income stability	0.155	0.156	0.156	0.156	0.155
	[0.00441]***	[0.0109]***	[0.00445]***	[0.0110]***	[0.0107]***
At least one person receives remittances regularly	-0.0664	-0.0661	-0.066	-0.0663	-0.0666
	[0.00250]***	[0.00368]***	[0.00251]***	[0.00370]***	[0.00365]***
Household Home & WASH index	0.00812	0.00827	0.00817	0.00861	0.00896
	[0.00164]***	[0.00175]***	[0.00161]***	[0.00164]***	[0.00169]***
Urban	0.0722	0.0754	0.0729	0.073	0.0732
	[0.00548]***	[0.00487]***	[0.00550]***	[0.00502]***	[0.00484]***
Use internet in the last 3 months	0.113	0.114	0.113	0.114	0.112
	[0.00412]***	[0.00830]***	[0.00410]***	[0.00795]***	[0.00817]***
Washing machine	0.0328	0.034	0.0326	0.0338	0.0331
	[0.00432]***	[0.00675]***	[0.00429]***	[0.00697]***	[0.00648]***
Social norms & attitudes towards women					
Women participates in hhld decision making	0.0256				0.0253
	[0.00295]***				[0.00457]***
High Wage Female Workers in the Public Sector (department level)		-0.115			-0.0987
		[0.0473]**			[0.0418]**
High Wage Female Workers in the Public Sector (department level) * University level		0.359			0.357
		[0.223]			[0.224]
Cases of intrafamily VAW in the municipality (2017) / 1,000 women 15+ in the municipality			-0.00121		-0.000455
			[0.000463]***		[0.000322]
Men-to-all agreement with gender parity in Parliament				0.112	0.108
				[0.0291]***	[0.0356]***
Men-to-all agreement with gender parity among judges				-0.0206	-0.0143
				[0.0270]	[0.0216]

	(1)	(2)	(3)	(4)	(5)
Local labor market variables					
Male-to-Female employment ratio	-0.0154	-0.016	-0.0155	-0.0147	-0.0162
	[0.00382]***	[0.00291]***	[0.00371]***	[0.00255]***	[0.00276]***
Log of per capita GDP	0.0454	0.0345	0.0497	0.034	0.0321
	[0.0246]*	[0.0103]***	[0.0249]**	[0.0127]**	[0.0112]***
Crime rate	-1.713	-2.042	-1.54	-1.66	-1.516
	[1.729]	[1.554]	[1.711]	[1.288]	[1.320]
Share of male employment in primary sector	0.00408	0.0255	0.00216	0.0114	0.0227
	[0.0543]	[0.0486]	[0.0538]	[0.0429]	[0.0434]
Share of male employment in construction	-0.103	-0.0837	-0.0931	-0.0894	-0.0772
	[0.0781]	[0.0914]	[0.0782]	[0.0830]	[0.0800]
Share of male employment in white services	0.0121	0.046	0.0162	0.0534	0.055
	[0.0815]	[0.0905]	[0.0814]	[0.0747]	[0.0815]
Share of male employment in other services	0.0143	0.0225	0.0091	0.0257	0.0304
	[0.0626]	[0.0658]	[0.0623]	[0.0643]	[0.0628]
Constant	-0.833	-0.677	-0.849	-0.822	-0.767
	[0.234]***	[0.126]***	[0.235]***	[0.135]***	[0.125]***
Observations	1,696,260	1,696,260	1,696,260	1,696,260	1,696,260
R-squared	0.256	0.255	0.256	0.255	0.256
Department fixed effects	Yes	No	Yes	No	No

Sources: 2018 National Census of Guatemala, 2017 and 2018 municipality statistics (FUNDESA and INE), 2017-2018 Census of Human Resources in Central Government (INE), 2017 Latinobarometro survey.

Notes: Women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves. Robust standard errors clustered at the municipality level in columns 1 and 3 and at the department level in columns 2, 4 y 5 between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A4. FLFP, individual & household characteristics, social policy, and local labor market variables in 2018. OLS estimates

	(1)	(2)	(3)	(4)	(5)
Individual & household characteristics					
Age	0.0409	0.0412	0.0408	0.0408	0.0412
	[0.00104]***	[0.00249]***	[0.00232]***	[0.00102]***	[0.00249]***
Age squared	-0.000536	-0.000541	-0.000534	-0.000534	-0.000543
	[1.57e-05]***	[3.96e-05]***	[3.68e-05]***	[1.54e-05]***	[3.97e-05]***
Primary level	0.0227	0.0207	0.0205	0.0227	0.0207
	[0.00199]***	[0.00297]***	[0.00295]***	[0.00196]***	[0.00292]***
Secondary level	0.114	0.113	0.112	0.114	0.113
	[0.00646]***	[0.0135]***	[0.0137]***	[0.00643]***	[0.0137]***
University level	0.302	0.302	0.301	0.303	0.302
	[0.0125]***	[0.0253]***	[0.0253]***	[0.0124]***	[0.0255]***
Indigenous person	0.0423	0.0511	0.0511	0.0433	0.0492
	[0.00667]***	[0.00947]***	[0.00903]***	[0.00658]***	[0.00964]***
Married	-0.173	-0.173	-0.174	-0.173	-0.173
	[0.00464]***	[0.00595]***	[0.00584]***	[0.00459]***	[0.00592]***
Number of children 0-3	-0.04	-0.0376	-0.0398	-0.0397	-0.0381
	[0.00272]***	[0.00589]***	[0.00650]***	[0.00268]***	[0.00613]***
Number of children 4-6	-0.00841	-0.0174	-0.0201	-0.0201	-0.00869
	[0.00171]***	[0.00379]***	[0.00445]***	[0.00180]***	[0.00241]***
Number of children 7-12	-0.00788	-0.00395	-0.00759	-0.00779	-0.0044
	[0.00105]***	[0.00150]**	[0.00227]***	[0.00103]***	[0.00172]**
Number of people > 12	-0.0111	-0.011	-0.0109	-0.011	-0.0112
	[0.000419]***	[0.000683]***	[0.000678]***	[0.000420]***	[0.000700]***
Presence of grandmother	0.0292	0.0298	0.0227	0.0292	0.023
	[0.00208]***	[0.00425]***	[0.00555]***	[0.00208]***	[0.00579]***
Household head	0.104	0.105	0.105	0.104	0.105
	[0.00398]***	[0.00646]***	[0.00645]***	[0.00397]***	[0.00641]***
Spouse works	-0.00869	-0.00577	-0.00609	-0.00903	-0.0057
	[0.00366]**	[0.00953]	[0.00968]	[0.00366]**	[0.00950]
Income stability	0.156	0.156	0.156	0.156	0.156
	[0.00445]***	[0.0111]***	[0.0111]***	[0.00444]***	[0.0111]***
At least one person receives remittances regularly	-0.0655	-0.066	-0.0664	-0.0659	-0.0657
	[0.00252]***	[0.00374]***	[0.00382]***	[0.00250]***	[0.00377]***
Household Home & WASH index	0.00839	0.0079	0.00764	0.00821	0.00782
	[0.00162]***	[0.00154]***	[0.00175]***	[0.00162]***	[0.00161]***
Urban	0.0719	0.0756	0.0751	0.0723	0.0746
	[0.00565]***	[0.00507]***	[0.00512]***	[0.00550]***	[0.00525]***
Use internet in the last 3 months	0.113	0.115	0.115	0.113	0.115
	[0.00410]***	[0.00813]***	[0.00812]***	[0.00408]***	[0.00811]***
Washing machine	0.0325	0.0343	0.0348	0.0328	0.034
	[0.00436]***	[0.00737]***	[0.00735]***	[0.00432]***	[0.00745]***
Public policy					
Public preprimary centers per 100 children 4-6 in the municipality (2017)	-0.00971				-0.0103
	[0.00422]**				[0.00416]**
Public preprimary centers per 100 children 4-6 in the municipality (2017) * Has child 4-6	0.0127				0.0116
	[0.00178]***				[0.00282]***
Has child 4-6	-0.0294				-0.0246
	[0.00301]***				[0.00313]***
Log of per capita public spending in education (2017)		-0.0475			-0.0247
		[0.0371]			[0.0368]
Log of per capita public spending in education (2017) * Has child 0-12		0.0525			0.0391
		[0.0299]*			[0.0262]
Has child 0-12		-0.288			-0.216
		[0.156]*			[0.136]
Log of per capita public spending in health (2017)			-0.00439		-0.00557
			[0.00617]		[0.00594]
Log of per capita public spending in health (2017) * Has family member 60+			0.00379		0.00292
			[0.00129]***		[0.00138]**
Has family member 60+			-0.00874		-0.00505
			[0.00703]		[0.00704]
Municipal Road Acessibility				0.0121	0.00925
				[0.0134]	[0.0151]

Table A4 (Cont.)

	(1)	(2)	(3)	(4)	(5)
Local labor market variables					
Male/Female employment ratio in the municipality	-0.0157	-0.0142	-0.0138	-0.0154	-0.0143
	[0.00370]***	[0.00249]***	[0.00252]***	[0.00377]***	[0.00243]***
Log of municipality GDP per capita	0.0468	0.0338	0.0411	0.0433	0.0374
	[0.0247]*	[0.0125]**	[0.0180]**	[0.0248]*	[0.0182]*
Crime rate	-2.125	-2.183	-2.227	-1.627	-2.332
	[1.776]	[1.503]	[1.560]	[1.786]	[1.533]
Share of male employment in primary (municipality)	0.00398	0.0213	0.0163	0.00838	0.0275
	[0.0546]	[0.0455]	[0.0497]	[0.0559]	[0.0490]
Share of male employment in construction (municipality)	-0.0993	-0.0908	-0.105	-0.0964	-0.0952
	[0.0786]	[0.0942]	[0.0982]	[0.0798]	[0.0947]
Share of male employment in white services (municipality)	0.0127	0.0667	0.0561	0.0168	0.0711
	[0.0833]	[0.0890]	[0.0911]	[0.0828]	[0.0914]
Share of male employment in other services (municipality)	0.00105	0.0286	0.0262	0.0108	0.0193
	[0.0635]	[0.0651]	[0.0684]	[0.0630]	[0.0640]
Constant	-0.815	-0.494	-0.781	-0.806	-0.608
	[0.234]***	[0.264]*	[0.174]***	[0.234]***	[0.256]**
Observations	1,696,260	1,696,260	1,696,260	1,696,260	1,696,260
R-squared	0.256	0.255	0.255	0.256	0.255
Department fixed effects	Yes	No	No	Yes	No

Sources: 2018 National Census of Guatemala, 2017 and 2018 municipality statistics (FUNDESA and INE), 2017 social spending data (ICEFI).

Notes: Women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves. Robust standard errors clustered at the municipality level in columns 1 and 4 and at the department level in columns 2, 3 and 5 between brackets. *** p<0.01, ** p<0.05, * p<0.1.

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Table A5. Correlates of male LFP in 2018. OLS estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Individual & household characteristics							
Age	0.00758	0.007	0.007	0.00752	0.00698	0.00764	0.00749
	[0.000707]***	[0.000588]***	[0.000586]***	[0.000875]***	[0.000588]***	[0.000952]***	[0.000865]***
Age squared	-0.000114	-0.000106	-0.000106	-0.000113	-0.000106	-0.000114	-0.000112
	[9.38e-06]***	[7.86e-06]***	[7.84e-06]***	[1.23e-05]***	[7.85e-06]***	[1.33e-05]***	[1.22e-05]***
Primary level	0.0292	0.0285	0.0285	0.0299	0.0284	0.0297	0.0298
	[0.00567]***	[0.00379]***	[0.00374]***	[0.00733]***	[0.00380]***	[0.00707]***	[0.00676]***
Secondary level	0.036	0.0353	0.0353	0.0362	0.0353	0.0374	0.0367
	[0.00592]***	[0.00500]***	[0.00491]***	[0.00600]***	[0.00503]***	[0.00600]***	[0.00558]***
University level	0.0315	0.0313	0.0314	-0.0796	0.0313	0.0319	-0.0627
	[0.00615]***	[0.00543]***	[0.00534]***	[0.0401]*	[0.00554]***	[0.00538]***	[0.0395]
Indigenous person	0.0147	-0.00355	-0.00357	0.00998	-0.00376	0.0113	0.00712
	[0.00921]	[0.00778]	[0.00778]	[0.0103]	[0.00786]	[0.0104]	[0.00776]
Married	0.0531	0.0499	0.05	0.0529	0.0499	0.0529	0.0509
	[0.00399]***	[0.00355]***	[0.00376]***	[0.00730]***	[0.00355]***	[0.00724]***	[0.00653]***
Number of children 0-3	-0.000364	0.00208	0.00208	-0.000434	0.00208	-0.000461	-0.000277
	[0.00162]	[0.000911]**	[0.000909]**	[0.00249]	[0.000910]**	[0.00245]	[0.00235]
Number of children 4-6	0.0018	0.00347	0.00347	0.00174	0.00348	0.00169	0.00173
	[0.00118]	[0.000757]***	[0.000760]***	[0.00177]	[0.000758]***	[0.00172]	[0.00172]
Number of children 7-12	0.00136	0.00255	0.00255	0.00125	0.00257	0.00126	0.00109
	[0.000883]	[0.000601]***	[0.000603]***	[0.00118]	[0.000594]***	[0.00113]	[0.00119]
Number of people > 12	-0.00506	-0.00413	-0.00412	-0.00513	-0.00412	-0.00523	-0.0053
	[0.000662]***	[0.000455]***	[0.000458]***	[0.00115]***	[0.000455]***	[0.00113]***	[0.00118]***
Presence of grandmother	-7.42E-05	0.00119	0.00119	-0.000458	0.00116	-0.000211	-9.57E-05
	[0.00193]	[0.00163]	[0.00161]	[0.00250]	[0.00162]	[0.00241]	[0.00225]
Household head	0.0273	0.0257	0.0256	0.0272	0.0257	0.0267	0.0271
	[0.00235]***	[0.00210]***	[0.00217]***	[0.00387]***	[0.00210]***	[0.00380]***	[0.00409]***
Spouse works	0.00391	0.00311	0.00312	0.00361	0.00304	0.00323	0.00316
	[0.00221]*	[0.00193]	[0.00190]	[0.00473]	[0.00195]	[0.00464]	[0.00459]
Income stability	0.128	0.124	0.124	0.128	0.124	0.129	0.129
	[0.00908]***	[0.00818]***	[0.00817]***	[0.0183]***	[0.00820]***	[0.0185]***	[0.0183]***
At least one person receives remittances regularly	-0.0291	-0.0273	-0.0273	-0.0288	-0.0273	-0.0294	-0.0282
	[0.00398]***	[0.00334]***	[0.00335]***	[0.00668]***	[0.00334]***	[0.00682]***	[0.00646]***
Household Home & WASH index	-2.12E-05	0.000316	0.000317	0.000518	0.000302	0.000721	0.00137
	[0.00408]	[0.00279]	[0.00279]	[0.00501]	[0.00279]	[0.00487]	[0.00469]
Urban	0.0408	0.021	0.021	0.0409	0.0212	0.038	0.0363
	[0.00838]***	[0.00518]***	[0.00518]***	[0.00817]***	[0.00506]***	[0.00689]***	[0.00695]***
Use internet in the last 3 months	0.015	0.0131	0.0131	0.0144	0.0131	0.0136	0.0132
	[0.00188]***	[0.00155]***	[0.00154]***	[0.00238]***	[0.00155]***	[0.00175]***	[0.00174]***
Washing machine	0.00221	0.00165	0.00166	0.0013	0.00155	0.00113	0.00118
	[0.00264]	[0.00204]	[0.00205]	[0.00310]	[0.00201]	[0.00348]	[0.00315]
Social norms & attitudes towards women							
Women participates in hhld decision making			-0.000313				0.00269
			[0.00304]				[0.00362]
High Wage Female Workers in the Public Sector (department level)				-0.124			-0.141
				[0.131]			[0.128]
High Wage Female Workers in the Public Sector (department level) * University level				0.208			0.176
				[0.0788]**			[0.0776]**
Cases of intrafamily VAW in the municipality (2017) / 1,000 women 15+					-0.000453		0.00226
					[0.000856]		[0.00101]**
Men-to-all agreement with gender parity in Parliament						0.0943	0.0747
						[0.0902]	[0.0958]
Men-to-all agreement with gender parity among judges						0.075	0.0736
						[0.0631]	[0.0692]
Local labor markets							
Male/Female employment ratio in the municipality	0.009	0.0108	0.0108	0.00676	0.0108	0.00685	0.0052
	[0.00427]**	[0.00350]***	[0.00351]***	[0.00478]	[0.00350]***	[0.00565]	[0.00450]
Log of municipality GDP per capita	0.0715	0.318	0.318	0.0709	0.319	0.0632	0.0706
	[0.0250]***	[0.0592]***	[0.0592]***	[0.0232]***	[0.0584]***	[0.0242]**	[0.0242]***
Crime rate	1.831	-4.475	-4.476	1.9	-4.38	3.578	3.065
	[2.396]	[2.719]	[2.722]	[3.128]	[2.684]	[3.434]	[3.522]
Share of male employment in primary (municipality)	0.0583	0.156	0.156	0.0651	0.156	0.0514	0.0547
	[0.0667]	[0.0638]**	[0.0638]**	[0.0732]	[0.0637]**	[0.0675]	[0.0592]
Share of male employment in construction (municipality)	-0.0877	0.08	0.0801	-0.0689	0.0822	-0.116	-0.112
	[0.105]	[0.103]	[0.103]	[0.123]	[0.102]	[0.121]	[0.110]
Share of male employment in white services (municipality)	-0.307	-0.637	-0.637	-0.327	-0.635	-0.354	-0.433
	[0.180]*	[0.182]***	[0.182]***	[0.213]	[0.184]***	[0.177]*	[0.216]*
Share of male employment in other services (municipality)	0.0859	0.137	0.137	0.079	0.136	0.0876	0.0801
	[0.0769]	[0.0637]**	[0.0637]**	[0.0672]	[0.0633]**	[0.0665]	[0.0626]
Constant	-0.0626	-2.207	-2.207	0.0209	-2.219	-0.13	-0.0875
	[0.246]	[0.539]***	[0.540]***	[0.263]	[0.534]***	[0.257]	[0.278]
Observations	1,453,762	1,453,762	1,453,762	1,453,762	1,453,762	1,453,762	1,453,762
R-squared	0.087	0.116	0.116	0.088	0.116	0.089	0.092
Department fixed effects	No	Yes	Yes	No	Yes	No	No
Clustered std. errors	Municipality	Municipality	Municipality	Department	Municipality	Department	Department

Table A5 (Cont.)

	(8)	(9)	(10)	(11)	(12)	(13)
Individual & household characteristics						
Age	0.00697	0.00742	0.00753	0.00694	0.00727	0.0072
	[0.000585]***	[0.000947]***	[0.000913]***	[0.000582]***	[0.000876]***	[0.000799]***
Age squared	-0.000105	-0.00011	-0.000113	-0.000105	-0.000108	-0.000107
	[7.83e-06]***	[1.30e-05]***	[1.27e-05]***	[7.82e-06]***	[1.20e-05]***	[1.11e-05]***
Primary level	0.0284	0.0288	0.0279	0.0284	0.0272	0.0283
	[0.00379]***	[0.00732]***	[0.00761]***	[0.00376]***	[0.00751]***	[0.00691]***
Secondary level	0.0353	0.035	0.0352	0.0351	0.0338	0.035
	[0.00500]***	[0.00586]***	[0.00617]***	[0.00491]***	[0.00592]***	[0.00555]***
University level	0.0313	0.0308	0.0299	0.0314	0.0289	-0.0447
	[0.00542]***	[0.00546]***	[0.00595]***	[0.00535]***	[0.00575]***	[0.0386]
Indigenous person	-0.0034	0.0144	0.0121	-0.00328	0.0133	0.00568
	[0.00737]	[0.0120]	[0.0108]	[0.00771]	[0.0103]	[0.00684]
Married	0.0496	0.0469	0.0524	0.0493	0.0458	0.0441
	[0.00349]***	[0.00646]***	[0.00698]***	[0.00357]***	[0.00595]***	[0.00560]***
Number of children 0-3	0.00205	-0.00272	-0.000422	0.00245	-0.0021	-0.00196
	[0.000880]**	[0.00276]	[0.00252]	[0.000895]***	[0.00253]	[0.00238]
Number of children 4-6	-0.00212	-0.000693	0.0018	0.00374	-0.00463	-0.00447
	[0.00162]	[0.00212]	[0.00177]	[0.000751]***	[0.00388]	[0.00381]
Number of children 7-12	0.00249	-0.00157	0.00125	0.00274	-0.00118	-0.00133
	[0.000594]***	[0.00161]	[0.00120]	[0.000594]***	[0.00142]	[0.00141]
Number of people > 12	-0.0041	-0.00487	-0.0049	-0.00399	-0.00455	-0.00478
	[0.000447]***	[0.00109]***	[0.00117]***	[0.000449]***	[0.00103]***	[0.00110]***
Presence of grandmother	0.00118	-0.000196	0.0129	0.0013	0.0122	0.0118
	[0.00163]	[0.00255]	[0.00214]***	[0.00163]	[0.00215]***	[0.00185]***
Household head	0.0256	0.0265	0.0259	0.0253	0.0249	0.025
	[0.00210]***	[0.00382]***	[0.00346]***	[0.00214]***	[0.00319]***	[0.00350]***
Spouse works	0.00313	0.00397	0.00366	0.00312	0.00379	0.00301
	[0.00194]	[0.00483]	[0.00480]	[0.00191]	[0.00481]	[0.00457]
Income stability	0.124	0.128	0.128	0.124	0.128	0.129
	[0.00819]***	[0.0182]***	[0.0184]***	[0.00816]***	[0.0183]***	[0.0184]***
At least one person receives remittances regularly	-0.0273	-0.0289	-0.0295	-0.0268	-0.0293	-0.0283
	[0.00332]***	[0.00654]***	[0.00669]***	[0.00328]***	[0.00637]***	[0.00633]***
Household Home & WASH index	0.000312	-0.000279	-0.00142	0.000604	-0.00185	-8.60E-05
	[0.00277]	[0.00500]	[0.00534]	[0.00272]	[0.00515]	[0.00470]
Urban	0.0211	0.0406	0.0378	0.0208	0.0374	0.0339
	[0.00526]***	[0.00785]***	[0.00762]***	[0.00509]***	[0.00768]***	[0.00679]***
Use internet in the last 3 months	0.0131	0.0149	0.0149	0.0125	0.0145	0.0128
	[0.00155]***	[0.00221]***	[0.00220]***	[0.00151]***	[0.00216]***	[0.00179]***
Washing machine	0.00164	0.00228	0.00295	0.00104	0.00266	0.00126
	[0.00204]	[0.00365]	[0.00371]	[0.00201]	[0.00381]	[0.00328]
Public policy						
Public preprimary centers per 100 children 4-6 in the municipality (2017)	-0.000114				0.00311	0.0047
	[0.00666]				[0.00710]	[0.00727]
Public preprimary centers per 100 children 4-6 in the municipality (2017) * Has child 4-6	0.002				0.000689	-0.000124
	[0.00129]				[0.00156]	[0.00159]
Has child 4-6	0.00506				0.00516	0.00585
	[0.00216]**				[0.00410]	[0.00423]
Log of per capita public spending in education (2017)		0.00846			0.00453	-0.000234
		[0.0572]			[0.0588]	[0.0394]
Log of per capita public spending in education (2017) * Has child 0-12		-0.0289			-0.0232	-0.0109
		[0.0285]			[0.0252]	[0.0200]
Has child 0-12		0.164			0.134	0.0696
		[0.149]			[0.131]	[0.105]
Log of per capita public spending in health (2017)			-0.0334		-0.0295	-0.0255
			[0.0139]**		[0.0135]**	[0.00982]**
Log of per capita public spending in health (2017) * Has family member 60+			0.00487		0.0048	0.00485
			[0.00212]**		[0.00224]**	[0.00218]**
Has family member 60+			-0.0404		-0.0393	-0.0392
			[0.0114]***		[0.0119]***	[0.0118]***
Municipal Road Acessibility				0.0856	0.0666	0.0669
				[0.0202]***	[0.0191]***	[0.0201]***
Local labor markets						
Male/Female employment ratio in the municipality	0.0108	0.0088	0.0112	0.0112	0.0111	0.007
	[0.00355]***	[0.00539]	[0.00628]*	[0.00348]***	[0.00595]*	[0.00437]
Log of municipality GDP per capita	0.318	0.071	0.127	0.303	0.12	0.114
	[0.0590]***	[0.0228]***	[0.0384]***	[0.0568]***	[0.0364]***	[0.0327]***
Crime rate	-4.46	1.747	0.763	-3.294	1.671	2.804
	[2.719]	[2.925]	[3.437]	[2.516]	[3.251]	[3.563]
Share of male employment in primary (municipality)	0.156	0.0616	0.0409	0.199	0.0728	0.0703
	[0.0637]**	[0.0726]	[0.0775]	[0.0632]***	[0.0742]	[0.0604]
Share of male employment in construction (municipality)	0.0803	-0.0825	-0.143	0.0977	-0.154	-0.155
	[0.103]	[0.117]	[0.140]	[0.0999]	[0.147]	[0.145]
Share of male employment in white services (municipality)	-0.638	-0.303	-0.355	-0.595	-0.338	-0.448
	[0.183]***	[0.188]	[0.212]	[0.174]***	[0.198]	[0.211]**
Share of male employment in other services (municipality)	0.138	0.0908	0.0777	0.144	0.09	0.0815
	[0.0654]**	[0.0699]	[0.0707]	[0.0592]**	[0.0680]	[0.0641]
Constant	-2.206	-0.104	-0.369	-2.131	-0.394	-0.337
	[0.540]***	[0.436]	[0.307]	[0.521]***	[0.433]	[0.349]
Observations	1,453,762	1,453,762	1,453,762	1,453,762	1,453,762	1,453,762
R-squared	0.116	0.088	0.089	0.118	0.091	0.095
Department fixed effects	Yes	No	No	Yes	No	No
Clustered std. errors	Municipality	Department	Department	Department	Department	Department

Sources: 2018 National Census of Guatemala, 2017 and 2018 municipality statistics (FUNDESA and INE), 2017 Latinobarometro survey, 2017 social spending data (ICEFI). Notes: Men ages 25 to 49 who either have spouses that are household heads or that are household heads themselves. Robust standard errors clustered at the municipality/department level. *** p<0.01, ** p<0.05, * p<0.1.

Supplementary materials

I. A Simple Conceptual Framework

In a simple labor supply framework, two main factors affect the female's decision to participate in the labor market: the opportunity cost of the time at home (or the wage level in the labor market) and the household income level. A higher wage makes employment outside the home more attractive and reduces the time allocated to personal activities and/or (unpaid) housework (substitution effect). With higher levels of income (earned by the woman if she is already working or by other household members), labor supply declines because more time can be allocated to personal activities. This assumes that time is a normal good (income effect). In practice, the tension between substitution and income effects is mediated by characteristics of individuals, households or the local labor markets. For instance, in a community where social norms severely constrain work outside the home, a higher wage may not necessarily increase FLFP. We consider four different sets of drivers of FLFP: i) Individual and household characteristics, ii) Social norms and attitudes towards women, iii) Social policies, and iv) Characteristics of the Local labor markets.

Individual and Household Characteristics

Higher levels of education can expand paid employment opportunities outside the house. More education can impact FLFP directly through a substitution effect and indirectly by affecting other determinants. A higher level of education expands paid employment possibilities, changes the type of jobs women can aspire to (with higher wages), and with that, it can affect the relative importance women assign to family and work (Goldin, 2006; Heath and Jayachandran, 2017).[14] Evidence for LCR countries shows a positive association between education and FLFP (Gasparini et al., 2015). We conjecture that there is a positive association between FLFP and women's education levels.

Marriage and family structure can affect FLFP in different directions. Marriage can lead to the drop-out of the labor market of the partner with the lower potential wage, usually the woman (Blau and Kahn, 2005; Bargain et al., 2012). When making their labor market decisions, parents consider the trade-off between the time allocated to raising children, and time allocated to paid work activities. While the former is important for child development, the latter provides financial resources. Mothers tend to adjust their labor market decisions depending on childcare needs. The adjustment can happen through working hours or by exiting the labor market. For the LCR region,

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[14] Higher levels of education at the local level can also shape social norms regarding the role of women at home and in society more generally. They can contribute to the social acceptance of women role in paid employment.

fertility reduces women's LFP in Chile, Mexico, and Argentina with positive or no effects for men (Cruces and Galiani, 2007; Berniell et al., 2021; Aguilar-Gomez et al., 2020). We conjecture that married women participate less in paid employment than unmarried women while mothers of young children participate less in the labor market than other women.

The association of FLFP with the presence of other family members is unclear. While presence of a mother or mother-in-law can reduce the time allocated to childcare and housework activities (Posadas and Vidal-Fernández, 2013; Compton and Pollak, 2014), the opposite result can happen if family members require care, e.g., elderly or disable persons. Female headship, beyond marital status, can be associated to labor market activities through the empowerment of women within the household. We conjecture that female household heads participate more in the labor market than non-household heads.

FLFP can also be determined by the labor status of other household members and by the type of employment they have. If the income effect dominates, a paid job by other household members could lower FLFP, as there would be less economic need for women to work. However, if the jobs are not of good quality, that may result in higher FLFP due to income insecurity (Klasen and Pieters, 2012). However, the opposite result is also possible. When other household members have stable jobs, they can share job information and develop social networks which could be helpful for women to find a job (Klasen and Pieters, 2012). Empirically, the association between FLFP and the labor force status of other household members is unclear.

The emigration of family members can affect FLFP. Migration may lead to an increase in FLFP to compensate for the migrant's income (Binzel and Assad, 2011). But larger remittances may lead to lower FLFP (income effect) (Amuedo-Dorantes and Pozo, 2006; Chen, 2006). Migration of household members may also impact the household decision-making process and, indirectly, women's behaviors. Evidence for Mexico shows that women increase their participation in household decision-making in the presence of migration (Antman, 2015).[15] We conjecture a negative association between FLFP and remittances.

The divide between urban and rural areas can be correlated with the FLFP rate. Urban areas are characterized by higher levels of education and lower fertility rates. Both factors are positively associated with FLFP (Verick, 2014). At the same time, the sectoral structure of employment in urban areas differs from the one in rural areas. Cities and metropolitan areas tend to have larger shares of employment in manufacturing and services compared to rural areas. This difference could play in favor of FLFP in urban areas as women traditionally opt more service jobs. It could also play against it, as better employment prospects of men working in industries instead of

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[15] The increased influence is related to children's schooling or clothing expenditures.

agriculture could result in the withdrawal of married women residing in urban areas from the labor force (World Bank, 2009).

Technology adoption and use can promote FLFP outside the house. Information and communication technologies can increase access to information about job vacancies (Viollaz and Winkler, forthcoming), can provide flexible work options compatible with family responsibilities, such as telework (Billari et al., 2019; Vazquez and Winkler, 2019; Hatayama et al., 2020), and can contribute to changing social norms as users can be exposed to more information and less traditional views (Arias, 2018; Jensen and Oster, 2019). Home technology can increase female labor supply by reducing the time women allocate to household activities, e.g., use of appliances and their declining prices over time (Greenwood et al., 2005; Greenwood and Seshadri, 2005; Cavalcanti and Tavares, 2008; Dinkelman, 2011). We conjecture that there is a positive association between FLFP and the use of digital technologies, or the availability of home appliances

Social norms and Attitudes towards women

Social norms and attitudes towards women likely mediate women's decision and ability to participate in the labor market (see Klasen, 2019). The cultural expectation of women as main caregiver limits their possibility to participate in the labor market, more so in selected occupations. In the LCR region, the time women allocate to unpaid care work and domestic labor is twice that of men (Bustelo et al., 2019). Studies have found that decision-making arrangements that empower women more are more likely to result in higher FLFP rates (Heath and Tan, 2020), and that social attitudes towards working women or men's preferences and beliefs about gender roles can have an impact on FLFP (Fernandez et al., 2004; Fernandez, 2013; Bursztyn et al., 2018).

Similarly, violence against women can affect FLFP, although the direction is unclear. Higher rates of violence against women may lead to a reduction in FLFP. By non-participating in the workforce, women can avoid work-home commute and thus be less likely to become victims violence (Chakraborty, 2017). A reduced FLFP could also be a consequence of the psychological and health costs of violence which can impact labor outcomes directly and indirectly through diminished productivity in the workplace (Currie and Madrian, 1999; Rees and Sabia, 2012). A positive correlation between intrafamily violence episodes and FLFP is also possible. Anecdotal evidence shows that partners react with violence to the increased female bargaining power (Eswaran and Malhotra, 2011; Heath, 2013). We conjecture that FLFP rates are higher when gender social norms are less strict. This happens when women participate more in main household decision making, when they are visibly and well-represented in public service, and when there is a broader view of gender parity in the society.

Public Policies

Public policies can act in favor, or as a disincentive, to FLFP. Non-labor income resulting from conditional cash transfers could disincentivize women's participation in the labor market, because of an "income effect" or due to the compliance of health conditionalities (Garganta et al., 2017). However, compliance with education conditionalities may reduce child labor, possibly prompting women to work due to incomes losses (Parker and Skoufias, 2000; Edmonds and Schady, 2012). But FLFP could also increase as conditional cash transfers can increase women's decision-making power in the household and their sense of autonomy (Bergolo and Galvan, 2018). Family-friendly policies, such as parental leave and childcare policies, can promote FLFP. The effects of subsidized childcare or increased accessibility of public childcare facilities on FLFP are usually positive. For LCR countries in particular, positive effects have been found in Argentina, Chile, Mexico, and Nicaragua (Berlinski and Galiani, 2007; Medrano, 2009; Berlinski et al., 2011; Padilla-Romo and Cabrera-Hernández, 2019; Hojman and Lopez-Boo, 2019). We conjecture a positive relationship between FLPF and policy-related variables supporting social services that free up women's time from child or elderly care, or capturing quality of public infrastructure, possibly decreasing commuting times.[16]

Local labor market characteristics

Changes in the sectoral composition of employment can be a driver of FLFP. Traditionally, women's paid employment in LCR tends to be concentrated in services sectors, such as education or health. These tend to come at the expense of sectors such as manufacturing or agriculture. Differences in the sectoral composition of jobs at the local level can thus drive differences in FLFP rates (Galor and Weil, 1996; Olivetti and Petrongolo, 2014; Ngai and Petrongolo, 2017). In addition, localities with better job opportunities, captured by per capita GDP, can become more attractive for women. High levels of discrimination in the local labor market can also discourage FLFP. We conjecture a positive association between FLFP, the level of subnational GDP per capita and the ratio of local employment in the services sector. We also conjecture a negative relation between FLFP and local labor market discrimination.

II. Sample & Descriptive Statistics

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[16] We do not consider variation in tax policies or in the enforcement of labor market regulations due to lack of data. Some references on this topic include Boeri et al. (2008), Jaumotte (2003) and Guner et al. (2012).

Table II.1 presents descriptive statistics on individual and household characteristics and in local labor market, between 2002 and 2018. During this period, FLFP increased from 26% to 32%, respectively. There were increases in several areas including level of women's education, share of females that is household heads, the share of women with a working spouse or reporting more income stability, measures of water and sanitation at home, or share living in urban areas. On the other hand, the period 2002 to 2018 saw reductions in the share of married women, reductions in the number of children. The number of people older than 12 years old and the presence of women's mother or mother-in-law in the household remained unchanged over this period. The structure of (male) employment in each municipality became less concentrated in agriculture, while the shares of services sectors rose. The main 2018 census sample includes 1,696,260 women of working age (25 to 49 years old) living in households were they or their partner are the household heads. Our final sample covers a total of 333 municipalities (out of 340 total) and 22 departments (out of 22).[17]

Table II.1 Descriptive statistics at the individual and municipality level in 2002 and 2018

	2002	2018
Panel A: Individual and household characteristics		
Labor force participation	0.26	0.32
Age	35.77	36.55
No education	0.40	0.25
Primary level	0.41	0.43
Secondary level	0.15	0.26
University level	0.04	0.07
Indigenous	0.38	0.41
Married	0.91	0.87
Number of children 0-3	1.30	1.17
Number of children 4-6	1.22	1.12
Number of children 7-12	1.77	1.47
Number of people > 12	3.29	3.28
Presence of grandmother	0.05	0.05
Household head	0.20	0.22
Spouse works	0.87	0.89
Income stability	0.52	0.56
Household Home & WASH index	0.00	0.04
Urban	0.50	0.57
Panel B: Municipality structure of male employment		
Share of male employment in primary activities	0.62	0.46
Share of male employment in construction	0.10	0.10
Share of male employment in manufacturing	0.08	0.08
Share of male employment in white collar services	0.03	0.11
Share of employment in other services	0.17	0.25
Observations	1,176,160	1,696,260

Sources: 2002 and 2018 National Census of Guatemala.
Notes: Statistics in Panel A for women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves and who live in municipalities appearing in both censuses (331 municipalities). Table A1 in the paper provides the definition of each variable.

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[17] We exclude 7 municipalities due to missing data.

Table II.2 presents descriptive statistics using the 2018 Census. The average FLFP nationwide is 32%. Most women participating in the labor market are employed. Figure II.1 reports large within-country dispersion. Some municipalities have FLFP rates above 50%, while some others are 10% or less. Panel B reports the profile of average women in the sample. On average these are middle-aged, married and low educated women. When living with children these tend to be young. They live in households with at least 3 people. Nine out ten married women have an employed husband, and more than half of the women live with at least one wage employee. Less than 10% of the women are part of households with regular remittances. The components of the House and WASH index[18] shows that women live in houses or apartments (instead of living in a room or an improvised household unit). In almost 80% of the cases the family owns the house where it lives and most dwellings have roof and wall of resilient materials and access to safe water. Only half of women live in homes with flush toilet to sewerage or septic tank. More than half of women are in urban areas.

Only 20% of women have a washing machine in their homes and only 29% used the internet in the last three months (regardless of the place of use) (Panel C). More than 3 out of 4 women live in households where women participate in the decision-making processes (Panel D).

Figure II.1 Female LFP at the municipality level in 2018
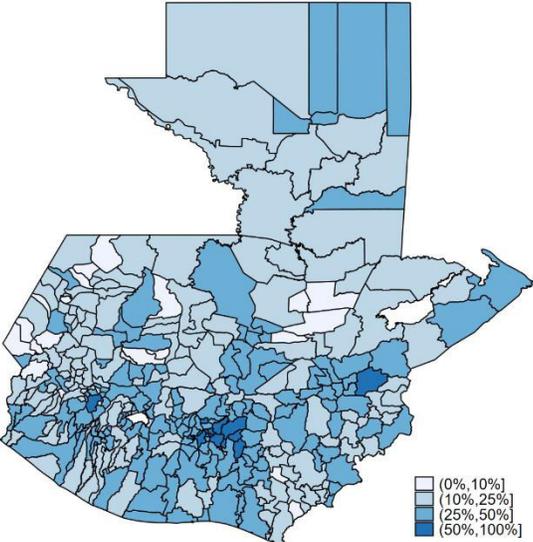
Sources: 2018 National Census of Guatemala.
Notes: Women ages 25 to 49 who either have spouses that are household heads or that are household heads themselves.

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[18] House and WASH Index captures the type of dwelling, dwelling property, wall and roof materials, access to water and type of toilet (equal to 1 if connected to a sewerage system or to a septic tank). Table A1 in the Appendix provides details.

Table II.2 Descriptive statistics for women ages 25 to 49 years old who are household heads of their spouses in 2018

	p25	Mean	p75	N
Panel A: Local Labor Market				
Labor force participation	0.00	0.32	1.00	1,696,260
Unemployment rate	0.00	0.01	0.00	542,137
Employment rate	0.00	0.32	1.00	1,696,260
Panel B: Individual and Household Caracteriscs				
Age	31.00	36.55	42.00	1,696,260
Share with no education	0.00	0.25	0.00	1,696,260
Share with primary level	0.00	0.43	1.00	1,696,260
Share with secondary level	0.00	0.26	1.00	1,696,260
Share with university level	0.00	0.07	0.00	1,696,260
Indigenous	0.00	0.41	1.00	1,696,260
Married	1.00	0.88	1.00	1,696,260
Number of children 0-3	1.00	1.17	1.00	539,732
Number of children 4-6	1.00	1.12	1.00	580,115
Number of children 7-12	1.00	1.47	2.00	976,611
Number of people > 12	2.00	3.28	4.00	1,696,260
Presence of grandmother	0.00	0.05	0.00	1,696,260
Household head	0.00	0.22	0.00	1,696,260
Spouse works	1.00	0.89	1.00	1,395,027
Income stability	0.00	0.56	1.00	1,696,260
Someone in the family receives remittances	0.00	0.08	0.00	1,696,260
Household Home & WASH index	-0.21	0.04	0.51	1,696,260
House	1.00	0.96	1.00	1,696,260
Ownership of the dwelling	1.00	0.79	1.00	1,696,260
Resilience of Walls (bricks/concrete)	0.00	0.66	1.00	1,696,260
Resilience of Roof (concrete/cement)	1.00	0.98	1.00	1,696,260
Access to water (pipeline)	0.00	0.73	1.00	1,696,260
Toilet Safety	0.00	0.54	1.00	1,696,260
Urban	0.00	0.57	1.00	1,696,260
Panel C: Technology Access & Use				
Washing machine	0.00	0.20	0.00	1,696,260
Use of internet in the last 3 months	0.00	0.29	1.00	1,696,260
Panel D: Social Norms				
Female participatea in hhld decision making	1.00	0.77	1.00	1,696,260

Sources: 2018 National Census of Guatemala.
Notes: Table A1 in the paper provides the definition of each variable.

Table II.3 presents statistics for municipality and department level variables. Panel A reports statistics on policy-related variables, Panel B on social norms and Panel C on local labor market variables. Panel A shows that the number of public preprimary centers per 100 children aged 4 to 6 years old in each municipality is 1.5 in 2017. Preprimary education is mandatory in Guatemala and most preprimary centers are public (MINEDUC, 2021). However, net pre-primary attendance rate was only 52% in 2017 (MINEDUC, 2021). The availability of public education centers (free of charge) implies that fertility and work outside the home are not necessarily mutually exclusive for lower income families. The low net attendance rate may be reflecting low accessibility or low quality of public centers. The average per capita spending in education and health at the department level was US$ 201 and US$101 (2007 PPP), respectively. Guatemala is among the countries with

the lowest social spending in LCR but it tends to have higher returns per dollar of social spending (Vargas et al, forthcoming). [19] On average, there are only 33% of kilometers of roads built relative to pre-defined targets (as set in the National Road Plan, 2032).

Panel B present summary statistics for the variables proxying social norms and attitudes towards women. The average share of women in high-paying public jobs (in central administration) is 57%. We hypothesize this larger share of women with respect to men could be related with the occupations women and men have.[20] There are, on average, 6 reported cases of intrafamily violence against women per 1,000 women in the municipality. On average 9 men agree with having gender parity in Congress or in the Judicial system per 10 people agreeing in the entire population.

Panel C presents summary statistics for municipal characteristics related with the local labor markets. On average, a municipality has a per capita GDP of US$ 4,200. On average, the male employment rate is 3.5 times higher than that of women. This is proxying the potential gender discrimination in the labor market. Primary activities are the main source of jobs for men (46%), followed by services (36%). All the variables in Table 2 vary significantly across municipalities. For instance, the rate of intrafamily violence against women is 1.67 in the 25th percentile municipality, while it is 8.3 in the 75th percentile.

Table II.3 Descriptive statistics at the municipality and department level in Guatemala, 2017/2018

	p25	Mean	p75	N
Panel A: Policy Variables				
Public preprimary centers in 2017 (per 100 children 4-6)	0.98	1.47	1.90	333
Public per capita spending on education in 2017 (in USD 2007 PPP)	169.07	200.78	214.49	22
Public per capita spending on health in 2017 (in USD 2007 PPP)	60.94	101.12	117.73	22
Municipal Road Acessibility	0.15	0.33	0.45	333
Panel B: Social Norms				
Share of Females among High Wage Workers in Central Government	0.51	0.57	0.64	22
Intrafamily VAW in 2017 (per 1,000 women aged 15+)	1.67	5.98	8.30	333
Men-to-all agreement with gender parity in Parliament	0.87	0.94	1.01	22
Men-to-all agreement with gender parity among judges	0.85	0.90	0.99	22
Panel C: Demand-Side Variables				
Per capita GDP in 2017 (in USD 2007 PPP)	6,079.34	8,127.58	9,325.32	333
Male / Female employment ratio	2.37	3.47	4.02	333
Share of male employment in primary activities	0.30	0.46	0.62	333
Share of male employment in construction	0.06	0.10	0.12	333
Share of male employment in manufacturing	0.03	0.08	0.10	333
Share of male employment in white collar services	0.07	0.11	0.14	333
Share of employment in other services	0.16	0.25	0.34	333
Crime rate (per 1,000 inhabitants)	0.66	1.81	2.38	333

Sources: INE, ICEFI and FUNDESA data 2017 and 2018.
Notes: Table A1 in the paper provides the definition of each variable.

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[19] Such as poverty rate, Gini coefficient, literacy rates, upper secondary completion rate, and infant measles immunization.

[20] The data does not offer information on occupations held by Central Government employees but has information on level of education. Among workers earning high salaries, the share of men with college education or higher is 65% against a share of 59% for women.

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