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Understanding the Main Determinants of Telework and Its Role in Women's Labor Force Participation

Gabriela Inchauste
Mariel Cecilia Siravegna

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Abstract

This paper studies telework as an opportunity to increase women's labor force participation in Mexico. Using data on the availability and use of information technology in households, the paper models women's labor force participation and worksite choice during the COVID-19 pandemic. The results show that telework can potentially increase female labor force participation, particularly among college-educated women. Although this is not the largest segment of women out of the labor force, as many as one in five women with higher education remain outside the labor market in Mexico. In addition, the findings show that family conditions are a clear divide in labor force status between men and women, whereas age, education, and socioeconomic status are not. Caring for children and looking after their husbands or partners seems to be a responsibility that affects women's decision to work. To promote female workers' engagement in the workforce, policies that encourage part-time and hybrid work arrangements, along with well thought out child and senior care programs and access to internet infrastructure need to be considered. Overall, bringing these workers into the labor force would result in productivity and growth gains for the country.

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Gabriela Inchauste and Mariel Cecilia Siravegna[1]

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1. Introduction

The COVID-19 pandemic has increased existing gender gaps in Mexico. Women's labor force participation dropped more than men's, and women's re-employment slowed. According to the National Institute of Statistics and Geography (INEGI) in Mexico, the participation rate in the first trimester of 2020 was 76.4 percent for men and 45.1 percent for women. One year later, women's participation rate dropped by almost four percentage points while men's dropped two percentage points.[2] At the same time, approximately 1.45 million female workers had not returned to work one year later compared with 0.6 million male workers.[3]

Social distancing measures, unanticipated lockdowns, and the collapse of in-person schooling have made the pandemic harder for women, especially those with household, eldercare, and childcare responsibilities. These circumstances have translated into a need for more flexibility for women in all aspects. Information and communication technologies[4] have played an essential role in increasing the possibilities for some workers to work from home.

Teleworking was crucial for many women to keep their income and jobs and relieve their double burden of childcare and household tasks (Berniell, Gasparini, Marchionni, & Viollaz, 2021). During the COVID-19 pandemic, 93 percent of employed women who work from home reported having done domestic chores compared with 68 percent of working men.[5] This unequal burden places women in a weaker position within the labor market (Dominguez V. & Brown G., 2013) and is mirrored in labor force participation, especially by age group.

By facilitating telework, workers are provided with the flexibility to set their working hours and engage in work-life balance arrangements, saving cost and time. Working from home involves not incurring *fixed monetary costs,*[6] such as public transportation, and *fixed time costs,* such as commuting time (Edwards & Field-Hendrey, 2002). Furthermore, it gives additional time to the worker to reconcile work and care responsibilities as *home production* could be done *jointly.*[7] Moreover, telework could be conducive to choosing a more convenient childcare arrangement, mainly when there is a lack of trust in the childcare system, as in the case of Mexico (Muller & Jaen, 2020).

As schools struggled to return to normal during the COVID-19 pandemic, remote work has been an opportunity for many families when childcare was unavailable. This type of work arrangement did not have a legal framework in Mexico until December 2020, when the government approved Article 311 of the Federal Law of Work to regulate teleworking conditions, obligations, and rights. The Home Office law considers activities done at the worker's home for more than 40 percent of the time and under the employer's direction. As part of this agreement, the employer must provide the worker with devices

[2] Labor force participation in 2021Q1 was 41.7 percent for women and 74.2 percent for men (ENOE, INEGI).

[3] In 2020Q1, the number of workers was 33.3 million for men and 21.8 million for women. In 2021Q1, 32.7 million men and 20.3 million women.

[4] In Mexico, there has been an increase in the use of the internet in the last decade. According to the ENDUTIH, in 2020, 72 percent of the population use the internet. However, 93.8 percent use it to communicate, 91 percent to look for information, and 89 percent to access the social network.

[5] INEGI, Telephone Survey on COVID-19 and the Labor Market (ECOVID-ML) July 2020.

[6] In the literature on labor markets, fixed costs are those that do not vary with the number of hours a person works.

[7] A pioneering paper, Edwards & Field-Hendrey (2002) proposed that flexible work enables women to better integrate employment and family roles.

needed to telework and pay for telecommunication services such as the internet and the proportional cost of electricity used for telework purposes, among other benefits.[8]

One benefit of telework is the possibility that workers can better balance the demands of paid employment and unpaid household work. However, digital skills and access to technological equipment are not an option for many employees in Mexico, in particular women. Women and men do not have the same opportunities, uses, and access to technology. According to the 2020 ENDUTIH survey,[9] 19 percent of women did not know how to use a computer in 2020 compared with 15 percent of men in the same situation. Moreover, not all Mexicans can afford the cost of a computer. For instance, only one-eighth of women knew how to use a computer but do not have access, unlike one-ninth of men.[10]

In this paper, we aim to contribute to understanding women's labor force and workplace decisions in emerging economies by studying the characteristics of teleworkers in Mexico during the COVID-19 pandemic, distinguishing between being an employee or being self-employed. We use data from the National Survey on Availability and Use of Information Technology in Households (ENDUTIH) carried out in 2020 to estimate the extent to which telework can influence labor supply decisions. We estimate the probability for men and women to choose between five states: out of the labor force, working on-site salaried, working on-site self-employed, teleworking salaried, or teleworking self-employed using a multinomial framework.

Our paper differs from earlier empirical work on workplace choice[11] as it focuses on telework, adopting a narrower definition of working at home, which considers using computers for work at home and discriminates between self-employed and salaried workers. Moreover, this paper adopts a micro perspective to understand what characteristics determine telework. We argue there are two factors at play: first, the existence of fixed costs to working on-site, and second, the possibility of engaging in the joint production of income and household work.

In addition, we contribute to the literature by considering not only the monetary and time costs of working, but also the potential emotional costs of going to work and leaving a child or loved one in the care of others. Previous literature did not consider the emotional costs that workers may feel when leaving their dependents to someone else's care, including guilt, anxiety, and uncertainty. Muller & Jaen (2020) show evidence that these feelings arise from social gender norms and affect women's desire to work in favor of caring for their children. As a result, labor force participation decisions should account

[8] This law gives employees 9 new rights: (1) receive equipment necessary to perform the job (computer, ergonomic chairs, printers, among others), (2) receive work and salary payment in a timely manner and on stipulated dates, (3) receive compensation for the costs derived from working at home such as internet and electricity service charges, (4) mechanisms that preserve the security of information and data used by workers, (5) the right to disconnect at the end of the working day, (6) balance of work and family responsibilities, (7) receive training, (8) receive social security, and (9) gender perspectives that reconcile personal life and availability of workers.

[9] National Survey on Availability and Use of Information Technology in Households, ENDUTIH 2020, undertaken by INEGI.

[10] The set of technological skills is different for women and men across the same level of education. Women at the college level have similar or greater competence in all the capacities related to digital technologies, but that is not true with more complex computer skills. For example, abilities such as creating a spreadsheet or generating and using a database are mainly dominated by men in all the different levels of education ENDUTIH (2020).

[11] Earlier work had defined all types of home-based work, without focus on the impact of telework (Dominguez V. & Brown G., 2013).

for the trade-off between women's career aspirations and traditional gender roles associated with motherhood.

In this context, we test the implicit assumption that telework is an attractive option for women who face high fixed costs of working away from home.[12] Our results show that women with higher education are more likely to jointly generate household (i.e., care for dependents) and work production when working from home, providing an incentive to remain in the labor force. This effect is most significant for college-educated women, thus having the potential to encourage highly productive women to participate. Not surprisingly, college education is connected to a high reduction in the probability of staying at home. Interestingly, among men, the case is similar regarding teleworking but not regarding staying at home. Indeed, we find that family characteristics divide the labor force status between men and women, whereas age, education, and socioeconomic status do not. Almost all women are less likely to participate in the labor market if there are children in the household or if they are married/partnered; whereas all men in these groups are more likely to participate under these circumstances.

Telework can help women with dependents stay in employment and potentially increase female labor force participation and overall labor productivity. Teleworking could help women with small children and college education to keep working, but once children are above 3 years old, education does not make teleworking more likely. Indeed, we find that telework is not a substitute for reliable childcare, so additional policies on this front are needed. With these insights, the use of telework should be seen as a tool for workplace flexibility that can support women with caregiving responsibilities. It has the advantage of eliminating the time required to commute and expanding women's choices for dependent care, such as on-site care centers as well as home-based supervision or childcare arrangements, which may be more cost-effective or convenient for the family.

This paper is structured as follows: Section 2 reviews the existing literature related to work from home and gender. Section 3 presents the theoretical framework used to explain women's choices related to where and how to work. Section 4 details the data and explains the empirical methodology. Section 5 presents the results of the multinomial model for women, and we compared them with men. Section 6 briefly discusses the policy implication and concludes.

2. Related Literature

The increase in the use of information technology in the last decade has shaped the labor market. One example of that is teleworking. This work arrangement enables people to work from home and the possibility of combining work with home responsibilities. During the COVID-19 pandemic, the government-mandated lockdown inevitably brought negative consequences to the labor market, while having more pronounced effects on women as school closures heightened their household responsibilities. For instance, 46 percent of women report having experienced an increase in childcare responsibilities during the pandemic compared to 30 percent of men (World Bank High Frequency Household Survey, 2021). Throughout that time, telework may have been the easiest way to care for

[12] Edwards & Field-Hendrey (2002) explain that the attractiveness is given by the possibility of combining unpaid domestic work with gainful home-based employment.

children while simultaneously generating income, particularly for households with internet access and in occupations amenable to remote work.

Heggeness and Suri (2021) study the impact of childcare responsibilities on mothers who telework in the United States. They compare how mothers' labor force participation decreased relative to prime-age women without children and prime-age custodial fathers. They find that flexible work helps to increase women's labor supply. As Baruch (2001) remarks in his paper, teleworking enlarges the employer's labor market as more people can be hired (i.e. single parents, second earners with children, people who live in remote places, etc.). Moreover, in another quantitative study, Baruch (2001) found that teleworking was the only option to work for working mothers with young children at home. Chung and vad der Horst (2018) find that a flexible arrangement for women after childbirth helps them sustain their employment status.

In the same line, Berniel et al. (2021) use microdata from the World Bank's high-frequency phone household survey data (HFPS) to analyze the factors that account for the asymmetric impact of the COVID-19 in Latin America. They look at heterogeneities by occupations and construct potential work from home measures for each individual to estimate different labor outcomes. In line with prior studies, they find that the impact of the COVID-19 shock was harder for women, but the ability to work from home mitigated the adverse effect, particularly for women with children. A possible mechanism behind their results is that women in Latin American countries are more likely to be responsible for family and home care; therefore, they are more likely to stay at home to care for the children following school closures. Indeed, they also found evidence that women who were able to work from home were more likely to keep their jobs.

Concerning the effect of the internet on women's labor force participation, Dettling (2017) finds a positive impact of high-speed internet use on the labor supply decisions of married women by about 4.1 percentage points. This conclusion does not hold for men or single women, for whom high-speed internet does not have an impact on their labor supply decisions.

Beyond the use of telework to refer to the decision of where and how to work; there is a much longer literature that considers to costs and benefits of participating in the labor market as the basis for women's decision to work. For instance, Cogan (1981) analyzes the labor supply factors to explain the desired number of hours a person will choose to work. He shows that the fixed costs of working are why people choose to work very few hours. Using data from the 1967 National Longitudinal Survey on Mature Women, he considered married women between 30 to 34 years old and considered variables such as the number of young children, husband's earnings, and individual characteristics such as the level of education and age. He finds the presence of children raises fixed costs by about one-third.

Cogan (1981) 's original idea of fixed costs has been modified by Edwards and Field-Hendrey (2002) to distinguish home-based work. They use data from the Public Use Microdata Samples (PUMS) to model women's decisions on labor force participation and the workplace in the US, taking into account specific worker types, such as self-employed and employees. They find that women who have a high cost of working (i.e., living in a rural area, having young children, etc.) have a higher probability of working from home and being self-employed.

In this paper, we use Edwards and Field-Hendrey's (2002) framework to study the characteristics of workers who were able to telework in Mexico during the COVID-19 pandemic. From an efficiency point of view, we argue that the benefits of less time and money spent commuting and more time with the family affect workers' decisions on where and how to work. Our paper complements the literature that examines

flexibility as a tool that helps workers to remain in the labor market using the theoretical framework of the fixed cost of working. As teleworking does not fit all the skills levels, we provide relevant evidence to characterize women who may be the best fit for teleworking considering different types of fixed costs in their decision of how and where to work.

3. Theoretical Framework

Neoclassical models put forward two reasons that explain why men and women decide to work from home: (i) there is a fixed cost when working on-site, and (ii) it is possible to engage in the joint production of work and household outputs (Rani & Unni, 2009; Edwards & Field-Hendrey, 2002).

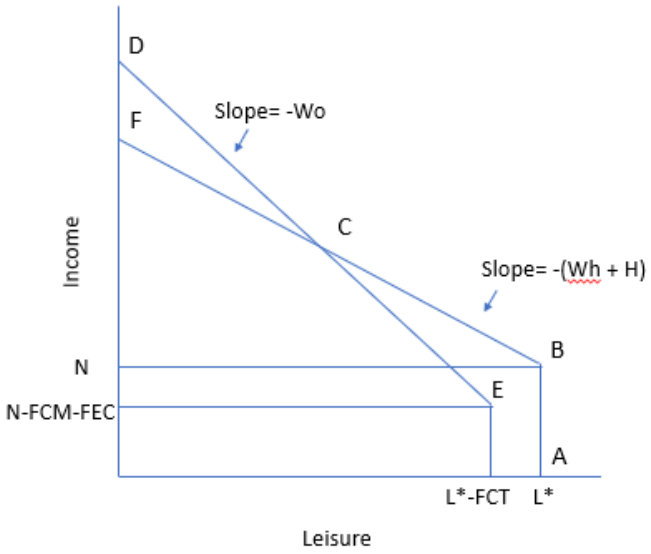
Fixed costs of working may vary across individuals and can be classified into three types. There are "time fixed costs" such as the loss of leisure or household production activities due to commuting time, "monetary costs" such as the price paid for work clothing, child care, or transportation, and lastly, "emotional fixed costs" such as the stress associated with having a job, leaving a loved one such as a child, a disabled or elderly family member in someone else's care, and the stress associated with not being able to fulfill both work and household responsibilities.

We start by following Edwards and Field-Hendrey (2002), who modified the Cogan (1981) model to explain workers' decision to work at home, on-site, or out of the labor force. Their model considers the fixed costs of working if the employee decides to work on-site and a joint household production function if the worker decides to undertake home-based work. For example, they cook and care for young children or an older adult while working remotely.

The higher the fixed costs the person faces, the higher the reservation wage. For instance, for some women, the fixed costs could be high enough to choose to stay at home and out of the labor force. The theoretical model is illustrated in Figure 1, where L^* represents the total time available, the nonlabor income[13] is N, FCT and FCM represent the time and monetary cost of working on-site, respectively. We add emotional cost as FEC to the model following Muller & Jaen (2020) findings for Mexico City. We assume that individuals may be willing to pay an amount of money to reduce or limit these costs. From this point of view, emotional costs are modeled as a lump sum. In addition, in line with Edwards and Field-Hendrey (2002), we treat the choice of employee or self-employment as the option to choose between two wage offers in each work site (one for being an employee and the other for self-employed, selecting the higher of the two alternatives).

[13] Examples of non-labor income are investments and transfers income among other incomes that are not acquired in the labor market.

Figure 1: Model of labor supply by the work site



Source: Edwards and Field-Hendrey, 2002

In addition, we assume that women who work from home have a lower reservation wage than women who work on-site, in line with lower fixed costs. The latter assumption comes from Cogan (1981), who demonstrates that the fixed costs of working raises the reservation wage compared to the absence of fixed costs.[14]

As Edwards and Field-Hendrey (2002) explain, there is also a difference in the wage offered between these two types of workplaces. If there were not, the opportunity set for on-site work would be part of the opportunity set for a home-based position.[15]

Women who telework will receive *Wh* plus *H* as a salary. This amount considers the economic value of home production per hour of working from home, *H* (Edwards and Field-Hendrey, 2002). At the same time, women who work on-site receive *Wo* salary. Given lower fixed costs when working from home, the wage offered *Wh* will be lower than the wage offered for working on-site (*Wo*) to elicit the same amount of labor supply. Then, their indifference curve map will determine which segment of the budget constraint ABCD they may locate and, therefore, their choice related to how and where to work.

The optimal choice is when the indifference curve of the woman is tangent to the budget constraint. This point could be located at point B, where the women's choice is to be out of the labor force, and she does

[14] In addition, Winkler (2020) explains that the reservation wage is the wage at which a person is willing to enter the labor market, which in turn is affected by the presence of children in the household and the availability of market substitutes for household production. Dominguez & Brown, (2013) note that women working from home combine household responsibilities with their market-based employment job, leading to a lower reservation wage than for employment outside the home.

[15] In order for this to be true, the fixed cost of remote work has to be lower than on-site work. In addition, (Edwards & Field-Hendrey, 2002) mentions that there are factors that imply a lower wage offer for home-based workers such as no all the jobs can be done at home. Additionally, employers may believe that the marginal product of the workers could be lower given the fewer interactions among colleagues and the lack or difficulty of monitoring.

not supply any hours of work. If the utility function is tangent to any point on the segment CD, the decision will be to work on-site and teleworking for the segment BC.

Basically, the difference between on-site work and teleworking is the presence of fixed costs associated with working on-site and the possibility of getting some household work done while teleworking. The fixed costs are shown in the slope of the line DE. The higher the fixed cost, the further to the left will be the segment corresponding to working on-site (DC). The joint production is shown in the slope of the line FB; the higher the joint production, the further to the right will be the segment CB associated with home-based work.

Given our model, we expect that women facing higher fixed costs are more likely to work from home or stay out of the labor force. Then the question is, what characteristics make a woman more likely to telework instead of being out of the labor force? We aim to shed some light on this question in the empirical exercise discriminating between self-employed and salaried workers. Workers may differ in their characteristics such as motivation, ability or entrepreneurial aptitude and therefore their decision to work from home or on-site.

The preceding analysis focuses on the supply of labor, ignoring the fact that there may be no demand for at-home work for some occupations. The evidence shows that there are different demands for telework across sectors[16] and occupations.[17] There is a group of workers who will be unable to work remotely even if they wanted it. Workers in sectors like services, retail trade, and wholesale, may not have the option to work on-site. Moreover, some firm characteristics may explain the need for on-site and/or home-based workers. Given the requirements of face-to-face interaction, digital access, and the technology intensity of the production process,[18] firms can adopt telework if a minimum level of technological and organization provisions are met (Tokarchuk, Gabriele, & Neglia, 2021).

In general, firms with employees that are more skilled and with greater experience are more likely to use teleworking. According to Brussevich, Dabla-Norris, & Khalid (2020) Mexico has the lowest tele-workability scores making Mexican workers more economically vulnerable. For instance, a high share of workers with low levels of education,[19] part-time work, informal or casual working arrangements, and limited access to computers and the internet. In fact, in 2019 less than half the households in Mexico had a computer, and just about 56 percent had internet access.[20]

4. Data and Empirical Strategy

i. Data

We use the National Survey on Availability and Use of Information Technologies in Households (ENDUTIH) which is representative nationwide. This survey is conducted by Mexico's National Institute of Statistics and Geography (INEGI). It has information on communication technologies such as cellphones, computers, radio, and television and their use by individuals and households. For this paper, we largely use the 2020

[16] Less teleworkable sectors are accommodation and food service, construction, transportation, and retail among others. Those sectors require face-to-face interactions and during the COVID-19 pandemic faced a higher risk of layoffs and furloughs.
[17] Fewer teleworkable occupations are elementary, plant/machinery, crafts/trade, and service/shop/market among others.
[18] (Brussevich, Dabla-Norris, & Khalid, 2020)
[19] Only 23 percent of Mexican aged 23-25 have a college degree according to OECD data.
[20] The percent of households which access to computers in 2019 was 44.3 and 44.2 in 2020. Access to internet 56.4 and 60 percent. (ENDUTIH 2020)

wave that was conducted during the fourth quarter of 2020, and later compare with the 2017 and 2018 rounds. The data contains sociodemographic information for six-year-old and older household members who reside in Mexico.

An important feature of this survey is that the data allows us to identify men and women who use the computer at home to perform activities related to their work. In this paper, we refer to them as teleworkers.[21] Following Edwards and Field-Hendrey (2002), we restrict the sample to prime-aged men and women between 22 and 55 years old who are either working or out of the labor force. We identify their labor force and employment status using the question of whether they worked last week.[22] We restrict our sample to exclude unemployed individuals, students, pensioners, and persons with physical or mental limitations that prevent them from working.

Individuals can be in five exclusive states: out of the labor force, working on-site, working on-site in a condition of self-employed, telework, and telework in a self-employed situation. We identify teleworking category with two key questions related to the place and purpose of using the computer.[23] Table 1 shows that 71.1 (41.2) percent of men (women) worked on-site, 24.17 (17.35) percent teleworked, and 4.73 (41.45) percent were out of the labor force in 2020. The total sample includes 46.43 percent of men and 53.54 percent of women and as expected, a much larger share of women is out of the labor market than men. Interesting, between men and women, teleworking has the smaller gap between the shares of 6.82 percentage points, compared with being out of the labor force 36.42 percentage points. There is 15.87 percent of women working as self-employed, with 2.62 percent of them teleworking and 13.25 working on site. Of men, 19.94 percent work as self-employed, and almost one-fourth of self-employed men do teleworking.

[21] There is no agreement in the literature on how to define telework. However, an accepted definition is to define teleworkers as workers who work from a remote work location and use information technology for operation and communication (See Sthanasiadou and Thriou, 2021, IRS 1996, Moon and Stanworth 1997). The definition of telework is important as it could lead to wrong comparisons based on different base definitions.

[22] We include as part of the labor force those individuals who reported working at least one hour during the reference period.

[23] Questions p6_7_1 and p6_9_1 from the ENDUTIH. Specifically, question p6_7_1 asks about whether the computer is used at the house, and question p6_9_1 asks if the use is related to work activities.

Table 1: Women with children are mainly out of the labor force.

Variable	Men Aged 22-55						Women Aged 22-55					
	Teleworking (self-employed)	Teleworking	On-site Workers (self-employed)	On-site Workers	Out of labor force	Total	Teleworking (self-employed)	Teleworking	On-site Workers (self-employed)	On-site Workers	Out of labor force	Total
Age												
22-24	2.44	18.68	7.68	62.89	8.32	48.62	1.93	16.38	7.82	33.00	40.87	51.11
25-29	4.31	23.98	9.81	57.03	4.86	47.58	2.50	21.41	8.72	28.87	38.51	52.04
30-34	5.61	20.87	14.72	54.80	4.00	46.52	3.53	16.75	12.83	26.35	40.54	53.39
35-39	4.28	22.54	14.52	55.79	2.88	44.81	2.91	12.09	12.97	28.97	43.06	55.20
40-44	3.71	20.91	18.59	53.44	3.36	46.37	2.17	14.50	15.77	28.76	38.79	53.74
45-49	4.29	18.37	18.72	53.77	4.85	45.75	2.73	12.96	15.20	28.60	40.52	54.25
50-54	4.80	12.77	22.88	53.27	6.28	46.25	2.26	9.64	17.19	23.33	47.58	54.07
Education												
Middle School	0.72	0.84	24.19	68.83	5.42	44.49	0.17	0.28	17.14	26.33	56.08	55.43
High School	1.71	5.49	19.82	67.91	5.07	45.34	1.03	1.43	15.78	32.59	49.17	54.50
Certificate/Diploma	10.00	30.44	9.28	44.32	5.96	25.65	2.59	11.96	19.99	27.76	37.70	73.93
College or more	7.31	36.37	9.63	42.47	4.22	48.64	4.93	31.23	9.29	25.47	29.08	51.49
Socioeconomics												
Low	1.07	5.30	27.26	60.70	5.67	44.32	0.56	3.95	17.35	20.73	57.42	55.64
Middle Low	3.50	15.93	14.48	61.27	4.82	46.83	2.21	11.06	14.24	31.00	41.50	53.17
High Low	6.80	31.04	11.32	46.70	4.14	48.16	3.37	25.64	9.16	31.24	30.59	51.76
High	10.09	47.27	7.85	31.14	3.64	44.96	7.75	35.43	7.45	20.35	29.02	55.25
Partner or Married	4.01	18.88	15.95	56.82	4.35	47.71	2.50	13.77	12.83	23.59	47.30	52.29
Presence of children												
None	5.94	24.42	14.44	48.93	6.27	50.25	2.80	21.40	13.25	30.08	32.47	49.73
Under 2 yr.	2.16	19.18	15.25	59.05	4.36	53.63	3.09	12.94	9.40	28.47	46.11	46.63
Between 3 and 6 yr.	3.58	16.56	13.59	61.86	4.41	44.46	2.62	13.02	11.21	24.62	48.54	55.63
Between 7 and 15 yr.	3.24	16.50	17.30	59.54	3.42	43.13	2.46	10.59	14.04	27.19	45.73	56.84
Rural residence	1.21	6.59	23.30	63.49	5.41	44.73	1.05	4.88	15.80	21.23	57.04	55.29
Presence of elderly or	3.98	19.02	15.85	56.50	4.65	45.21	2.56	13.75	13.11	27.58	42.99	54.77
Sample	4.31	19.86	15.63	55.47	4.73	46.43	2.62	14.73	13.25	27.95	41.45	53.54
Observations	1,072,015	4,935,751	3,885,093	13,785,473	1,175,936	24,854,268	751,571	4,223,202	3,798,954	8,014,158	11,887,255	28,675,140

Source: Own estimates based on ENDUTIH (2020). Each row adds to 100% by gender.

Most working men with children in the household work on-site. In contrast, most women with children in the home are out of the labor force. Most women with secondary schooling or less are out of the labor force, while men work on-site. In contrast, college-educated women are almost evenly divided between teleworkers and out of the labor force. The table shows that education and income are connected with teleworking as highly educated men and women in high-income[24] families are like to have jobs that let them work from home. The presence of children, elderly, or disabled household members is higher among on-site workers for men but out of the labor force for women. Finally, very few rural workers (7.8 and 5.93 percent of men and women, respectively) telework.

[24] The socioeconomic stratification undertaken by INEGI is based on the physical characteristics of the dwelling and its assets, along with the sociodemographic characteristics of its residents, not including income. This information is taken from 34 indicators of the 2010 Population and Housing Census. The socioeconomic status is obtained by applying a multivariate method (factor analysis) which divides the dwellings into non-overlapping subsets called stratum (*estrato* in Spanish). Dwellings within a socioeconomic status are homogeneous (with a reduced variation) and are heterogeneous with respect to dwellings that are outside the stratum. In other words, between one stratum and another, there is a wide variation. From this process, the housing subsets are classified as high, middle high, middle low, and low. It is worth mentioning that socioeconomic status does not reflect any status of social vulnerability; the objective of stratification is to optimize the survey information.

ii. Empirical Strategy

Using Edwards and Field-Hendrey's (2002) notation, we model the labor force participation decision using an unordered multinomial. In this type of model, there is no need to specify the order of the decision about working, ownership of the business, and worksite.[25] There are five regimes or states to choose from: (i) out of the labor force, (ii) salaried working on-site, (iii) self-employed working on-site, (iv) salaried teleworking, and (v) self-employed teleworking. A woman will choose the option that provides her with the greatest utility. We motivate the model by a random utility function for each woman in any state *t*,

$$U_t = U_t(C_t, L^* - L_t, Z, v) \quad (1)$$

where C_t and L_t denote consumption and leisure respectively, both in the state t. L^* is the total time available to spend between work and leisure. *Z* contains individual characteristics that determine preferences in their choice, and *v* is an unobserved component such as propensity to work. The basic model of a trade-off between consumption and leisure assumes that an individual desire to consume the greatest possible quantity of both, so her utility function increase with each argument.

Each person chooses a status that maximizes their utility subject to the following budget constraint,

$$C_t + (W_t + H_t)(L^* - FCT_t - L_t) \leq N - FCM_t - FEC_t + (W_t + H_t)(L^* - FCT_t) \quad (2)$$

For t=1,2,3,4,5.

where *W* is the wage rate in state *t*, *N* is the unearned income, *H* is the value of household production per hour that the employee undertakes at the same time as working for pay in the state teleworking, *FCT, FCM* and *FEC* are the fixed time, monetary and emotional costs if she chooses to work on-site. We assume the fixed costs for home-based workers are zero, but there is a positive home production *H*. In the case of on-site workers, *H* is zero, and they incur fixed costs of working that can be monetary, time or/and emotional. According to this, the budget constraint function in the presence of fixed costs is discontinuous and jumps from zero to the reservation wage when the individual chooses to work (Figure 1).

Hence, the model is driven by the probability that state *t* is chosen where $Prob(Ut > Uk)$ for all *t* such that $t \neq k$. In that way, women choose the state *t* that maximizes their indirect utility *Vt* which is defined as

$$V_t = V(\ln W_t, lnH_t, FCT_t, FCM_t, FEC_t | Z, v) \quad (3)$$

The individual characteristics of each person, such as the number of children, education, age, etc., are constant across the possible states. Then, the indirect utility function can be written as a linear function,

[25] See Greene (2014).

$$V_{it} = \beta_0 + \beta_{1t} lnW_t + \beta_{2t} lnH_{it} + \beta_3 FCT_{it} + \beta_4 FCM_{it} + \beta_5 FEC_{it} + Z'_i \delta_t + v_{it} \quad (4)$$

To estimate this last equation, we need data for each variable. Unfortunately, there are no direct values for each of them; thus, we use predicting equations to substitute them,

$$lnW_{it} = \alpha_1 + \alpha_{2t} X_i + \tau_{it} \text{ (5)}$$

$$lnH_{it} = \vartheta_1 + \vartheta_{2t} X_i + \omega_{it} \text{ (6)}$$

$$FCT_{it} = \theta_1 + \theta_{2t} X_i + \varepsilon_{it} \text{ (7)}$$

$$FCM_{it} = \pi_1 + \pi_{2t} X_i + \sigma_{it} \text{ (8)}$$

$$FEC_{it} = \rho_1 + \rho_{2t} X_i + \epsilon_{it} \text{ (9)}$$

where X is a vector of predicting variables that includes Z, then we replace each of the equations (5) through (9) in (4). Now, the equation to estimate the indirect utility is the following:

$$V_{it} = \beta_0 + \beta_{1t}\alpha_{2t} X_i + \beta_{2t}\vartheta_{2t} X_i + \beta_{3t}\theta_{2t} X_i + \beta_4 \pi_{2t} X_i + \beta_5 \rho_{2t} X_i + \varphi_{it} \text{ (10)}$$

Where $\beta_0 = \alpha_1 + \vartheta_1 + \theta_1 + \pi_1 + \rho_1$ and $\varphi_{it} = \tau_{it} + \omega_{it} + \varepsilon_{it} + \sigma_{it} + \epsilon_{it}$ the composed error term.

The base outcome is out of the labor force in our multinomial logit model, this means that attributes change only across observations and not across choices. [26] We refer to it as alternative 1. We write the probability of salaried working on-site (alternative 2), self-employed working on-site (alternative 3), salaried teleworking (alternative 4) or self-employed teleworking (alternative 5) as

$$ln\theta_{m|1}(x) = ln\frac{\Pr(y = m|x)}{\Pr(y = 1|x)} = x\beta_{m|1}$$

Where m takes the values of alternatives (i.e., 1 to 5). Solving to compute the probabilities for each outcome

$$\Pr(y = m|x) = \frac{\exp(x\beta_{m|1})}{\sum_{j=1}^{5} \exp(x\beta_{j|1})}$$

Given the complex interpretation of the multinomial, we refer to the marginal effects of the independent variable in our model, which are defined as

[26] Most of this section is based on Long & Freese (2014) and (Trivedi, 2005)

$$\frac{\partial \Pr(y=m|x)}{\partial x_k} = \Pr(y=m|x)\left\{\beta_{k,m|5} - \sum_{j=1}^{5} \beta_{k,j|5} \Pr\,(y=j|\boldsymbol{x})\right\}$$

According to this last equation, the marginal change depends on the level of all the dependent variables in the regression. For that reason, we use discrete changes to interpret our results to avoid misleading the marginal effect when the probability curve changes rapidly. Formally,

$$\frac{\Delta \Pr\,(y=m|x)}{\Delta x_k (x_k^{start} \rightarrow x_k^{end})} = \Pr\left(y=m\middle|x, x_k = x_k^{end}\right) - \Pr(y=m|x, x_k = x_k^{start}) \quad (11)$$

where the discrete change is the difference between the probability that y=m given x_k from the start value to the end value. For example,[27] from $x_k^{start} = 0$ to $x_k^{end} = 1$ holding the other independent variables constant.

iii. Econometric approach

We estimate equation (10) with variables available in our dataset. Our independent variable will take five values, as people choose among five status choices: out of the labor force, salaried working on-site, self-employed working on-site, salaried telework or self-employed teleworking. We predict that their choice is due to different reservation wages and joint production possibilities in line with the neoclassical model.

First, the fixed cost of working will be measured by a set of variables which include the presence in the household of children under the age of 2, between 3 and 6 years old, and between 7 and 15 years old, the presence of an elderly and/or disabled person living on the household, and if the person lives in rural areas where there are fewer job opportunities.

We expect variables related to FCM, FCT, and FCE to be associated with a lower probability of teleworking. However, the lower likelihood of telecommuting in rural areas is likely related to lower labor demand and fewer job opportunities rather than commuting times. This variable could reflect Mexico's particularity, where the commuting time in urban areas may be much longer than in rural areas, given congestion, long distances, and limited public transportation.

Second, to proxy the determinants of the wage offer, we use age and level of education. In this case, we would expect that workers who have a high level of education show a higher probability of teleworking.

Next, household productivity is captured by a spouse or partner's presence at home and includes the list of variables that proxy for the fixed cost of working. For instance, the presence of dependents reflects the potential demand for care that women may face while teleworking. We expect that women with a spouse or partner present have a greater preference for working from home or being out of the labor force.[28] These women face a more considerable burden as they are culturally expected to take on much of the

[27] Consider the dichotomic variable "Partnered/Married" that takes the value of 1 if the person is married or has a partner, and 0 otherwise. The discrete change is from x_k^{start} = "not Partnered/Married" to x_k^{end} = "Partnered/Married," holding the other independent variables constant.

[28] Compared with women without a spouse or partner present in the household.

household work. For instance, the average Mexican woman spends six hours a day doing unpaid housework, compared to an average of two hours per day for men (World Bank, 2019).

Finally, as a proxy for unearned income, we use the socioeconomic status provided by INEGI as part of the survey. The relationship between the reservation wage and non-labor income is positive only if leisure is a normal[29] good. Under this condition, there is a disincentive effect on entry into the labor market with an increase in unearned income.

Each independent variable takes the form of a dichotomic variable. The same set of proxy variables is considered for each state. In other words, there will be an identical group of exogenous factors for people who do not participate in the labor market, salaried or self-employed work on-site, and salaried or self-employed telework.

5. Results and Discussion

The results are divided into three sections. First, we present the multinomial results for women and explore how the probability changes for the different independent variables. Next, we analyze male teleworkers to see which factors determine their propensity to choose to work from home and test whether those factors differ from female teleworkers. Finally, we run the multinomial for several rounds of the same survey and analyze how the marginal effects have changed over time for male and female teleworkers.

i. Women

The first two columns in Table 2 in the Appendix show the multinomial coefficients for women in the sample. This table provides us with an idea of women's characteristics associated with a higher probability of being in a specific state. Each column presents the odds of the outcome category of the dependent variable for working on-site and teleworking, as self-employed or salaried, respectively, compared with the reference category of being out of the labor force.

The level of education is positively associated with teleworking and working on-site regardless of choosing self-employment or not. However, being self-employed is less likely for the youngest cohort between 22-24 years old. This is because young people lack access to the capital to build their own businesses. The same is true for the different levels of socioeconomic status and the choice of being self-employed and telework. There is a higher likelihood of being employed for women who have college or more level of education and in particular, a higher likelihood of being teleworkers. For women, children in the household are negatively associated with any type of work.

Given the complexity of interpreting a nonlinear model such as the multinomial, we show the marginal effects in Table 3, which are easier to follow. Each marginal effect represents the average discrete change from 0 to 1 for each outcome category as described in equation (11). In other words, it shows how a discrete change in the independent variable is related to predicted changes in the probabilities of being in a particular state.

[29] The consumption of leisure increases with the rise in income.

We first address the variables that proxy for the fixed costs of working on-site. On average, the presence of children under the age of 2 decreases the probability of teleworking by nearly 2.3 percentage points compared with someone who does not have children of the same age in the household. This effect drops to 2.1 percentage points if the children are between 3 and 6 years old and 1.7 percentage points if the children who live in the home are between 7 and 15 years old, likely because the care of older children is not as time intensive as newborns or infants. In the case of being self-employed and teleworking, the probability of teleworking increases by 0.2 percentage points compared with a woman who does not have children of similar age, and is constant across the ages of children. While this change is small, teleworking for self-employed women can offer flexibility to accommodate household chores or other obligations and promote female worker's engagement in the labor force.

At the same time, the presence of an elderly or disabled person in the household decreases the probability of on-site self-employment by 0.8 percentage points, but increases the probability of being a teleworker by 0.1 percentage points. This variable also increases the likelihood of being out of the labor force by 1 percentage points. In the case of the presence of a partner or spouse at home, the probability of being out of the labor force increases. Living in a rural area decreases the probability of salaried teleworking and salaried working on-site by 0.6 and 2.6 percentage points, respectively. It is worth mentioning that the last result may reflect lower job opportunities in rural areas rather than longer commute times, as discussed above. Moreover, living in rural locations increases the probability of being out of the labor force by 3.4 percentage points and choosing self-employment telework by 0.1 percentage point.

The marginal effects for education show that higher levels of schooling are associated with a higher probability of teleworking. For example, the likelihood of telework increases by nearly 0.24 for women who have a college degree compared with someone who does not have the same level of education. Not surprisingly, the likelihood of being out of the labor force falls drastically among those with college degrees (-13.5 percentage points).

In Figure 2, we compare the marginal impacts of children in the household by levels of education. Women who have secondary education are far more likely to be out of the labor market and far less likely to work compared to those with those women who have certificate or diploma, regardless of the age of the children. However, even with a college education, having children at home is associated with a non-negligible probability of being out of the labor market. For self-employed workers, having a certificate or diploma and older children is associated with a higher probability of being on site than telework.

However, this result is interesting by itself. Higher levels of education combined with teleworking could help educated, and potentially highly productive Mexican women participate in the labor market. On the one hand, the presence of children increases the probability of being out of the labor force. On the other hand, the level of education increases the likelihood of teleworking and staying in the labor force. Figure 2 shows that telework helps women with small children and college education to keep working as the probability is much higher than for other education groups) but once children are above 3 years old, education does not make teleworking more likely.

ii. Men

There are two fundamental differences between the multinomial coefficient for men and women in Table 2. One is related to the presence of children in the household: there is a positive probability of working on-site for men who live in a household with children. In contrast, the likelihood of women working

declines with children. The only exception is that the likelihood that men are self-employed teleworking declines with children under six years old.

The second difference is the odds of working in the presence of the partner or being married. The coefficient is positive for men, but for women, it is negative regardless of the decision to work. Caring for children and looking after their husbands seems to be a responsibility that affects women's decision to work.

When we analyze the change in the probabilities for men in Table 3, we find that having children decreases the likelihood of being out of the labor force. This probability is small and similar in magnitude regardless of children's ages;[30] however, for women, the probability of being out of the labor force increases and does so by a larger amount. Teleworking has similar effects across genders; however, for teleworking self-employed workers, women have a small but positive likelihood of being out of the labor force compared with men. These results show the impact of childcare as a barrier that affects women's access to paid work; however, self-employed telework seems to offer women greater flexibility in terms of hours and location helping women stay in the labor force.

Since education may be a determinant of participating in the labor force, we show how different the predicted probability of not working for men is in the presence of children and across levels of schooling in Figure 2. The degree of education seems not to influence the very low predicted probability of being out of the labor force for men regardless of minors' age. Still, telework has the same trend as the predicted probabilities for women; however, the likelihood for men with college degrees to telework is almost double the size for women with same level of education and with the presence of children under the age of 2 years old in the house.[31]

iii. Dynamics of the determinants of teleworking

Digital technology has been changing over time and the possibility of working from anywhere with it. In Mexico, the number of workers who benefit from telework has been dynamic in the last few years. The share of salaried workers doing telework decreased between 2017 and 2018 but increased between 2018 and 2020, regardless of gender (Table 4). However, self-employed telework has shown the opposite trend. It grew between 2017 and 2018 but then decreased between 2018 and 2020. This decrease has been more significant for men than for women.

To assess the extent to which the impact of education and the presence of children on telework have changed over time, we run the multinomial model for several rounds of the same survey. Figure 3 and Figure 4 shows that the observed increase in salaried telework was more substantial for women with education and those without young children. While telework continued in 2020, it was depressed by general labor market conditions, as many people left the labor force on account of the pandemic. However, that trend was most severe for women with young children. Overall, these results highlight the fact that telework can reduce the costs of participating in the labor market but is not a substitute for childcare. While teleworking provides more flexibility for workers to balance work and family

[30] The probability of being out of the labor force decreases by 0.4 percentage points when there are children younger than 2 years, decreases by 0.6 percentage points when there are children between 3 and 6 years old, and decreases by 0.9 percentage points when there are children between 7 and 15 years old.

[31] Men have a predicted probability of approximately 0.41 and women 0.24. See Figure 2.

responsibilities our results show that it is not a solution for workers who need to care for your children. In addition, telework may not be feasible for all types of jobs or industries.

6. Conclusion

In Mexico, the percentage of women active in the labor force is less than two-thirds the rate of active men. This difference between women's and men's labor participation is one of the most critical sources of gender inequality, and it can only be addressed if women's barriers to work are identified and start to be a priority for policymakers in Mexico.

This paper aims to provide support with an analytical framework and empirical evidence for policy to promote responsive labor force participation strategies by studying the extent to which teleworking could help to increase women's participation in the labor market. Women with a higher fixed cost to work, such as small children at home, are more likely to be out of the labor force. Our results indicate that the level of schooling is crucial to determining which women have the possibility of combining household tasks with their paid job.[32]

Indeed, access to telework could increase female labor force participation, particularly among college-educated women. While the group of college-educated women is not the largest share of potential female workers, it likely represents one of the most productive untapped potential sources of growth. In fact, 1 out of 5 women with higher education remain outside the labor market in Mexico (OECD, 2019), a statistic that worsened with the pandemic. Bringing them to work will result in productivity and growth gains.

In addition, to ensure that everyone can enjoy the benefits of teleworking, it will be necessary to both increase access to the internet and close the skill gap among different worker groups. On the first, interventions to strengthen access to technology and the internet, along with competent teachers to provide education in digital skills will be needed. Moreover, training should focus on the digital skills that satisfy the needs of firms demanding these services. The purpose should be to acquire the right set of technological skills to facilitate access to the labor force. Finally, there may be need for targeted policies that aim to increase the capacity for telework for disadvantaged workers such as rural workers.

Beyond the need to reduce the skills gap in digital technology, there is need to address the care responsibilities that women face. Telework can ease the costs of participating in the labor force, but it does not make up for the burden of care that Mexican women face. Our finding that family characteristics divide labor force status between men and women and affect women's decision to work has policy implications: women's employment is closely tied to their family conditions. To support women's labor force participation, well-designed policies that encourage part-time and hybrid work arrangements, along with well-thought-out child and senior care programs, will be needed.

Increasing female labor force participation is crucial for economic development. No country could grow to its fullest potential if it leaves out almost 50 percent of the population in the productivity process.

[32] Our results are in line with Rani & Unni (2009). They find that the level of education, the fixed cost of working, and the cultural and social environment influences women's home-based employment decision. Opposite to women, men do not consider such factors when deciding where and how to work.

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7. Appendix

Table 2: Multinomial logit coefficients

Variable	Women				Men			
	On-site Workers	On-site Workers (self-employed)	Teleworking	Teleworking (self-employed)	On-site Workers	On-site Workers (self-employed)	Teleworking	Teleworking (self-employed)
Age								
22-24	0.865 ***	-0.441 ***	0.678 ***	-0.127 ***	-0.068 ***	-1.349 ***	-0.081 ***	-1.067 ***
	0.002	0.003	0.003	0.006	0.003	0.004	0.004	0.006
25-29	0.822 ***	-0.270 ***	1.136 ***	0.267 ***	0.288 ***	-0.627 ***	0.598 ***	-0.051 ***
	0.002	0.002	0.003	0.005	0.003	0.004	0.004	0.005
30-34	0.666 ***	0.052 ***	0.995 ***	0.611 ***	0.358 ***	-0.134 ***	0.780 ***	0.529 ***
	0.002	0.002	0.003	0.005	0.004	0.004	0.004	0.005
35-39	0.670 ***	-0.017 ***	0.642 ***	0.385 ***	0.673 ***	0.139 ***	1.294 ***	0.699 ***
	0.002	0.002	0.003	0.005	0.004	0.004	0.004	0.005
40-44	0.596 ***	0.193 ***	0.944 ***	0.308 ***	0.490 ***	0.253 ***	1.227 ***	0.521 ***
	0.002	0.002	0.003	0.005	0.004	0.004	0.004	0.005
45-49	0.466 ***	0.088 ***	0.588 ***	0.420 ***	0.208 ***	0.006 **	0.612 ***	0.158 ***
	0.002	0.002	0.003	0.005	0.003	0.004	0.004	0.005
Education								
High School	0.178 ***	0.137 ***	1.519 ***	1.696 ***	0.063 ***	0.100 ***	1.772 ***	0.757 ***
	0.001	0.002	0.008	0.010	0.003	0.003	0.006	0.007
Certificate/Diploma	0.183 ***	0.578 ***	3.542 ***	2.502 ***	-0.615 ***	-0.836 ***	3.225 ***	2.183 ***
	0.004	0.004	0.009	0.013	0.010	0.012	0.012	0.013
College or more	0.273 ***	0.190 ***	4.778 ***	3.498 ***	-0.160 ***	-0.239 ***	3.726 ***	2.263 ***
	0.001	0.002	0.008	0.010	0.003	0.003	0.006	0.006
Socioeconomics								
Low	-0.110 ***	0.608 ***	-1.174 ***	-2.062 ***	-0.103 ***	0.537 ***	-1.446 ***	-1.355 ***
	0.002	0.003	0.003	0.007	0.005	0.006	0.006	0.008
Middle Low	0.282 ***	0.477 ***	-0.640 ***	-0.923 ***	0.193 ***	0.149 ***	-0.835 ***	-0.781 ***
	0.002	0.003	0.002	0.003	0.004	0.005	0.004	0.005
High Low	0.418 ***	0.192 ***	-0.046 ***	-0.638 ***	0.243 ***	0.181 ***	-0.346 ***	-0.339 ***
	0.002	0.003	0.002	0.004	0.004	0.005	0.004	0.005
Partner or Married	-1.117 ***	-0.694 ***	-0.713 ***	-0.772 ***	0.274 ***	0.143 ***	0.197 ***	0.152 ***
	0.001	0.001	0.002	0.003	0.002	0.003	0.002	0.003
Presence of children in HH								
under 2 yr.	-0.404 ***	-0.309 ***	-0.880 ***	-0.220 ***	0.347 ***	0.333 ***	0.115 ***	-0.146 ***
	0.001	0.002	0.002	0.004	0.003	0.003	0.003	0.005
between 3 and 6 yr.	-0.471 ***	-0.261 ***	-0.743 ***	-0.150 ***	0.440 ***	0.398 ***	0.145 ***	-0.018 ***
	0.001	0.001	0.002	0.003	0.003	0.003	0.003	0.004
between 7 and 15 yr.	-0.178 ***	-0.003 **	-0.447 ***	-0.046 ***	0.535 ***	0.525 ***	0.398 ***	0.273 ***
	0.001	0.001	0.001	0.003	0.002	0.002	0.003	0.003
Rural residence	-0.467 ***	-0.271 ***	-0.362 ***	-0.150 ***	0.041 ***	-0.001 **	-0.462 ***	-0.689 ***
	0.001	0.002	0.003	0.005	0.003	0.003	0.004	0.006
Presence of elderly or disable person in the HH	-0.070 ***	-0.223 ***	-0.041 ***	-0.195 ***	-0.356 ***	-0.339 ***	-0.256 ***	-0.274 ***
	0.002	0.002	0.002	0.004	0.003	0.003	0.003	0.004

Source: Own estimates using ENDUTIH (2020).

Note: t statistics are in parenthesis. *** Significant at the 1% level, ** at 5 % level and * at 10% level.

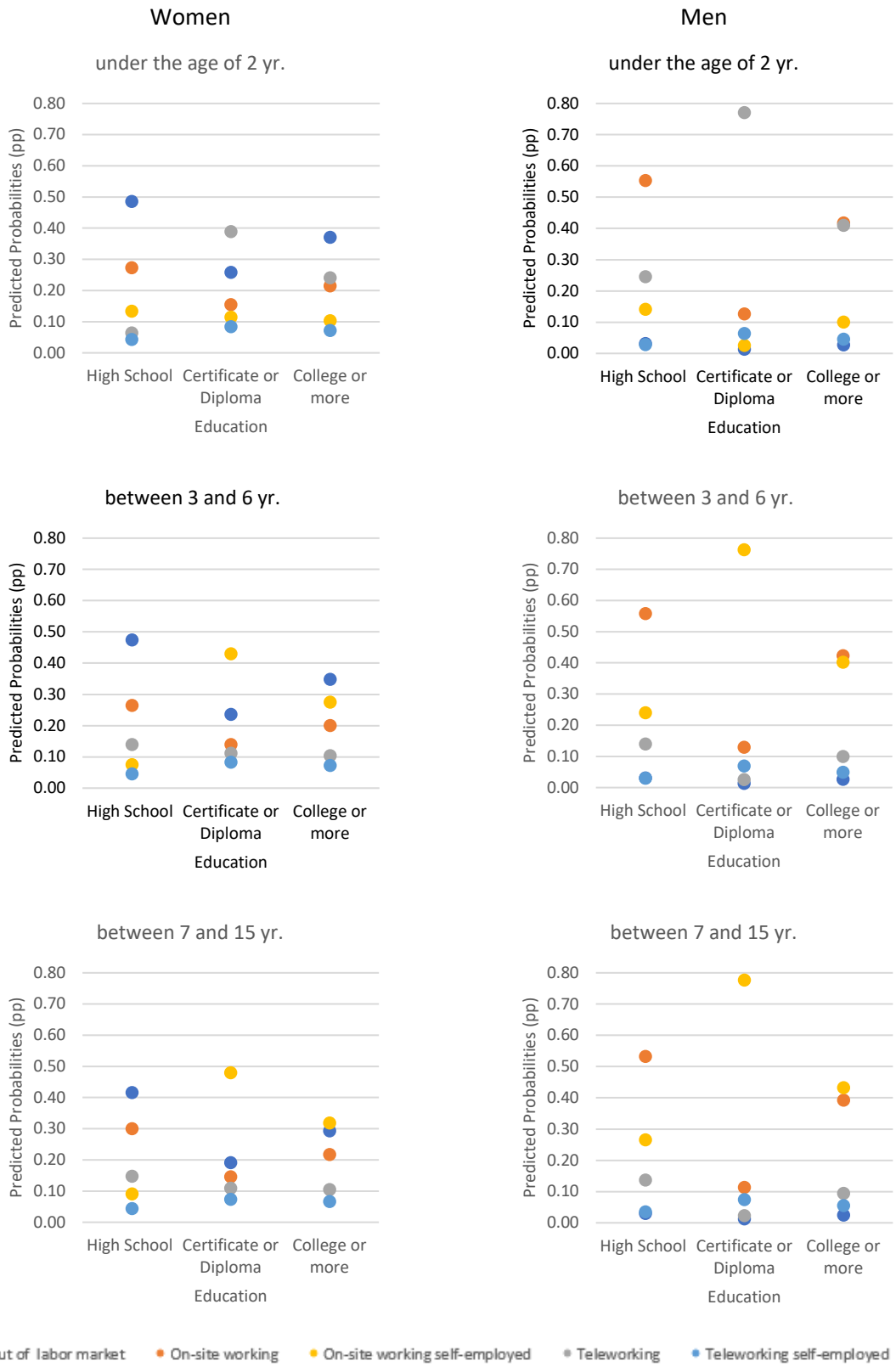
The dependent variable takes values 1 out of the labor market, 2 for work on-site, 3 for self-employed working on-site, 4 for teleworking and 5 for self-employed teleworking. All coefficients refer to the oods of being in the specific labor force category versus being out of the labor force.

Table 3 Marginal effects (average discrete change)

	Women					Men				
Variable	Out of labor force	On-site Workers	On-site Workers (self-employed)	Teleworking	Teleworking (self-employed)	Out of labor force	On-site Workers	On-site Workers (self-employed)	Teleworking	Teleworking (self-employed)
Age										
22-24	-0.028	0.045	-0.024	0.011	-0.004	0.004	0.035	-0.040	0.009	-0.009
25-29	-0.046	0.045	-0.027	0.031	-0.003	-0.003	0.024	-0.039	0.024	-0.005
30-34	-0.042	0.029	-0.012	0.024	0.001	-0.006	0.004	-0.023	0.023	0.001
35-39	-0.035	0.036	-0.013	0.012	0.000	-0.010	0.003	-0.024	0.034	-0.002
40-44	-0.039	0.023	-0.005	0.023	-0.001	-0.008	-0.011	-0.014	0.036	-0.003
45-49	-0.028	0.021	-0.006	0.012	0.001	-0.004	-0.003	-0.010	0.020	-0.002
Education										
High School	-0.048	-0.022	-0.008	0.062	0.016	-0.008	-0.077	-0.016	0.103	-0.001
Certificate/Diploma	-0.031	-0.021	0.000	0.048	0.005	-0.001	-0.033	-0.011	0.040	0.005
College or more	-0.135	-0.092	-0.037	0.243	0.021	-0.016	-0.201	-0.053	0.260	0.009
Socioeconomics										
Low	0.010	0.002	0.039	-0.038	-0.013	0.004	0.020	0.045	-0.057	-0.012
Middle Low	-0.016	0.032	0.028	-0.034	-0.009	0.000	0.054	0.009	-0.052	-0.011
High Low	-0.020	0.032	0.003	-0.008	-0.007	-0.002	0.029	0.003	-0.025	-0.005
Partner or Married	0.092	-0.068	-0.013	-0.008	-0.002	-0.005	0.013	-0.006	-0.002	-0.001
Presence of children in HH										
under 2 yr.	0.036	-0.012	-0.003	-0.023	0.002	-0.004	0.014	0.003	-0.007	-0.005
between 3 and 6 yr.	0.042	-0.022	-0.001	-0.021	0.002	-0.006	0.020	0.002	-0.011	-0.005
between 7 and 15 yr.	0.018	-0.008	0.006	-0.017	0.002	-0.009	0.014	0.003	-0.004	-0.003
Rural residence	0.034	-0.026	-0.004	-0.006	0.001	0.002	0.025	0.003	-0.021	-0.008
Presence of elderly or disable person in the HH	0.010	-0.001	-0.008	0.001	-0.001	0.007	-0.010	-0.001	0.004	0.000

Source: Own estimates using ENDUTIH (2020).
Note: Marginal effects are read as, on average, the change in the probability of being in a specific state: out of the labor market, work on-site, and teleworking when the variable change from 0 to 1, holding all other variables constant.

Figure 2 Predicted Probabilities across education conditional on the age of children at home



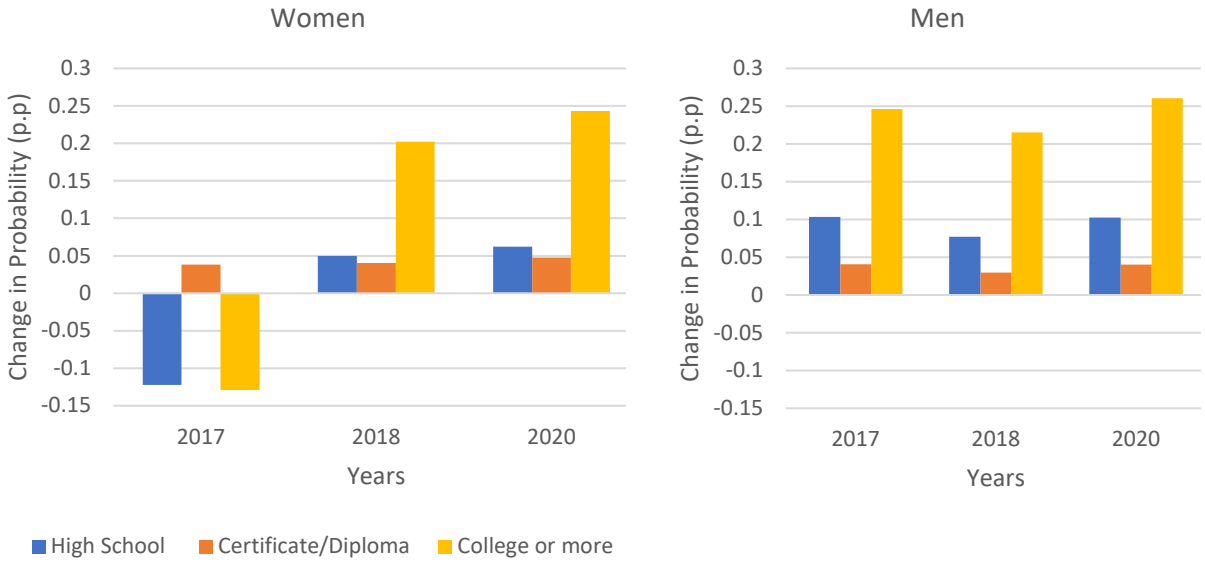
Source: Own estimates using ENDUTIH (2020).

Table 4 Share of women and men in specific status over time

Specific Status		2017	2018	2020
Out of labor force	Women	21.46	21.22	22.21
	Men	0.88	1.13	2.20
Salaried On-site	Women	22.93	16.01	14.97
	Men	34.70	26.93	25.75
Self-employed On-Site	Women	0.14	7.14	7.10
	Men	0.51	7.01	7.26
Salaried Teleworking	Women	8.37	7.83	7.89
	Men	10.55	9.10	9.22
Self-employed Teleworking	Women	0.10	1.46	1.40
	Men	0.36	2.15	2.00

Source: Own estimates using ENDUTIH (2020).
Note: 2019 is not comparable since the sample size differs from the other years.

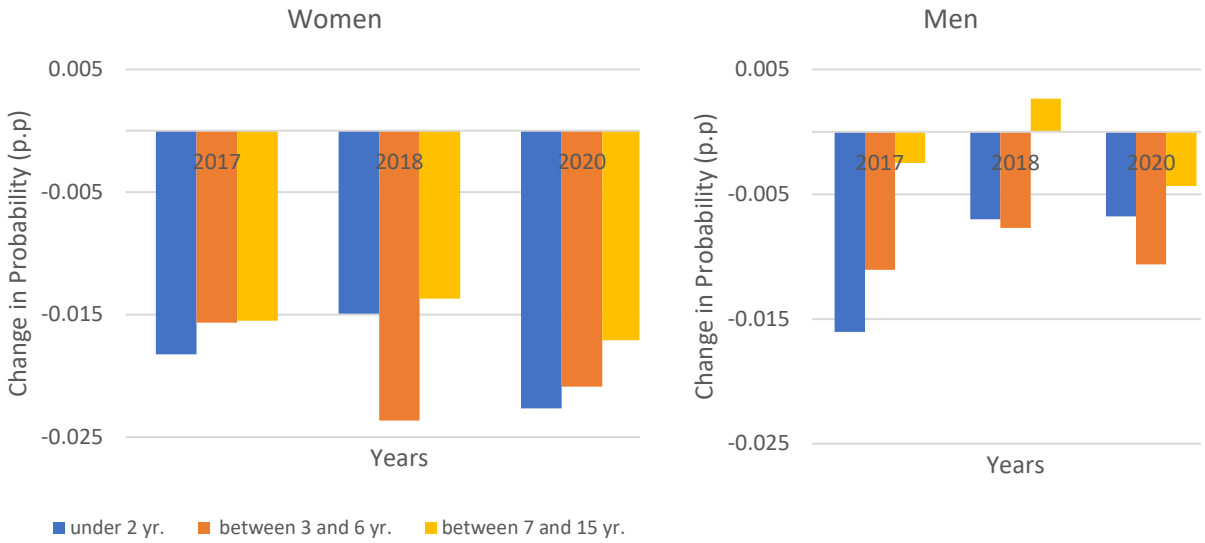
Figure 3 Marginal effects of teleworking over the time: Level of education (2017-2020)



Source: Own estimates using ENDUTIH (2020).

Note: Marginal effects are read as, on average, the change in the probability of teleworking when the variable change from 0 to 1, holding all other variables constant.

Figure 4 Marginal effects of teleworking over the time: Presence of children in the household (2017-2020)



Source: Own estimates using ENDUTIH (2020).

Note: Marginal effects are read as, on average, the change in the probability of teleworking when the variable change from 0 to 1, holding all other variables constant.