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What is the price of freedom? Estimating women's willingness to pay for job schedule flexibility*

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Abstract

We conducted a discrete choice experiment to elicit women's revealed preferences regarding job schedule flexibility. We contrast preferences for flexible scheduling with that of part-time employment. We did so without deception by applying a methodology proposed by Kessler et al. (2019) for job seekers instead of employers. We find that women have a high willingness to pay for a flexible schedule within a full-time contract, but a much lower desire to trade wages for part-time contracts. This difference is not driven by inattention, although participants appeared to learn over the course of the experiment. We find that the willingness to pay for a flexible work arrangement is greatest for those with a higher family income, more educated women and those out of the labor force, which implies that flexibility is a luxury good. Demand for part-time employment is highest among those with children and older women, suggesting that these types of jobs may be more responsive to their time demands. Our estimates also reflect self-declared preferences and provide evidence that public policies that foster flexibility could lead to greater female labor force participation.

JEL Codes: J22, J31

Keywords: schedule flexibility, part-time employment, discrete choice experiment, willingness to pay, female labor participation

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1 Introduction

A world survey conducted by the Thomson Reuters Foundation and the Rockefeller Foundation found that the main concern of working women in the G20 is their work–life balance. Women remain the primary caregivers in most countries, which generates higher opportunity costs for their time when looking for work.¹ This may cause them to value flexibility more strongly in terms of time at work, which could in turn motivate them to accept lower-status jobs with lower wages (see [Kleven et al., 2018](#)). But how much are they really willing to sacrifice to obtain this added flexibility? We elicited revealed preferences in a discrete choice experiment for women in the metropolitan area of Bogota, Colombia to obtain credible estimates of their willingness to pay for different forms of flexibility. We find a large willingness to pay for a flexible schedule within a full-time contract, but a much lower desire to trade off monthly wages for part-time contracts.

We first set up a novel and deception-less method to estimate job applicants’ willingness to pay. We applied the methodology proposed by [Kessler et al. \(2019\)](#), but to job seekers instead of employers, as they did. We invited women to participate in a CV-making session and recruited almost 1,500 participants. After a short survey about their demographics and labor situation, we asked them to evaluate 10 different trios of job offers; we randomly varied the order in which the offers (within a given screen) were presented and the order in which each screen was shown, while also varying the relative hourly wage of the flexible time schedule and part-time positions vis-a-vis full-time jobs. We told them that these answers would be used to help pair them with real job offers that matched their interests. Applicants were then able to prepare their CV and were given a list of job offers obtained from a popular job posting website that matched some of the criteria we elicited. While this is clearly costlier than producing fake job advertisements and evaluating the number of responses to each, our approach gives us much greater statistical power, since the same woman’s responses are reported for 10 different choice experiments. It also allowed us to focus on the labor supply side without worrying about the level of demand at the prices that were elicited. Finally, it did not involve lying to subject participants.

Flexibility can be defined in many different ways, such as working from home, the number of hours worked per week and the working schedule. Some employers allow employees to choose among these alternatives, but others make the choice themselves. All of these definitions are important to understand the extent to which workers value all such jobs/arrangements/contracts. For example, [Silim and Stirling \(2014\)](#) define flexible work as the “ability of an employee to effectively reconcile commitments in their work and domestic lives” and discuss the role that flexible working options can play in addressing adverse labor market outcomes for women. Our study

¹According to the OECD (2014), in Latin America and the Caribbean, women spend more than twice as much time as men in unpaid care work. This is similar to Asia, less than in Africa, and more than in Europe and North America, although there is still a substantial gap in those regions.

focuses on two aspects of schedule flexibility: whether applicants have control over their schedule (keeping the total hours worked each week constant) and whether employment was full or part time. Since we randomly altered the relative wages of standard and flexible contracts, we can compare the weight that women placed on wages versus flexibility when selecting which ad they preferred using a conditional logit estimation. We then transform these coefficients into measures of willingness to pay for each of our flexible work arrangements. Although many of these women have limited resources, we find a large (15–14 percent of the country’s monthly minimum wage) and statistically significant willingness to pay for a flexible time schedule. However, we find that women are willing to sacrifice only 26 percent of full-time monthly wages to work 50 percent of a full-time schedule. This suggests that, at least for this population, the amount they are willing to sacrifice every month, while substantial, is nowhere near the reduction in the number hours that part-time employment gives them. In other words, their willingness to pay for part-time employment is unlikely to be enough to entice private firms to offer part-time contracts without the existence of subsidies. Finally, we find that combining flexibility and part-time employment was particularly unattractive to the respondents: when the number of working hours is already reduced, flexible scheduling provides no added benefit.

Our controlled design allows us to verify that our results are robust to a number of alternative explanations. Since we can control for the ad’s relative position on the computer screen, we can show that individuals were careful in their selection and did not simply click on the ad that was located in a given position on the screen. We also repeated one of the selection screens in a small number of cases to check how consistent individuals were in their choices, and even restricted our analysis to those who answered consistently in these two screens. The results for that subsample were extremely similar to those for the full sample. Finally, since we also randomly altered the order in which the screens appeared, we can check whether our estimates change according to whether the selection was made earlier or later. We find that, if anything, as the selection process advanced, the willingness to pay for flexibility, particularly part-time contracts, increased. Overall, our main conclusions remain extremely similar when comparing across screen order. This suggests that our results are not driven by inattention or boredom; if anything, individuals appear to have learned as they progressed through the experiment.

We next explore our two main hypotheses regarding why participants value flexibility. The first hypothesis suggests that women value flexibility because they face time demands related to family tasks. We use a number of characteristics to proxy for these time demands – age, whether she has children, household composition, whether the workshop was held during a school vacation, and commuting costs (measured as the distance from her place of residence to the location of the fictional job). Surprisingly, we find that household composition has a limited impact on women’s willingness to pay for schedule flexibility. Women with children and those

over 45 years old value part-time employment significantly more, indicating that time needs at home play an important role for these individuals. Our proxy for commuting costs does little to explain the attractiveness of flexible work arrangements, despite the long commuting times that many of these women face in Bogota. Demand for flexibility is substantially greater when children are out of school, suggesting that the difficulty of combining childcare tasks and work may be particularly demanding during some periods of the year.

The next hypothesis suggests that flexibility is a luxury good that is only accessible to those who can afford to earn less money. To determine whether this is the case, we used variations in household income, the woman's educational attainment and her labor market prospects to proxy for available resources. We find evidence that flexibility is a luxury good: willingness to pay for flexible work arrangements is highest for those with higher family incomes, higher educational attainment and those who are out of the labor force rather than unemployed. Willingness to pay for part-time employment, however, shows a slightly different pattern: it is highest for low-income workers and high school dropouts, and for those who are inactive and unemployed for a short period of time. This suggests substantial differences in how different types of women value "flexibility".

Finally, we find that the survey results capture an important finding when they directly ask about preferences regarding flexibility. We find a significantly greater willingness to pay for all types of flexibility among women who reported that a flexible schedule was an important criteria when selecting employment relative to those who did not.

Our paper contributes to a large literature which shows that women are particularly limited in their labor market participation because of their important role in raising children and performing household tasks. For example, some studies show that increased child care provision could increase female labor force participation and employment. [Baker et al. \(2008\)](#) documents that childcare subsidies increased female labor participation by 7.7 percentage points in Quebec, Canada. [Berlinski et al. \(2008\)](#) similarly show that a preschool program in Argentina greatly increased child care provision and significantly increased women's participation in the workforce. Likewise, [Martínez and Perticará \(2017\)](#) show that the delivery of an after school care program in Chile increased the employment and labor participation of mothers. [Cardona-Sosa et al. \(2015\)](#) demonstrate that an increase in the availability of public nurseries facilitated the labor participation of vulnerable mothers in Medellin, Colombia by 9 percentage points, on average; the effect for those who live close to program facilities was 31 percentage points. [Barros et al. \(2011\)](#) analyze a lottery for free publicly provided child care for low-income families in Rio de Janeiro, and find that access to this care led to a 10-percentage-point increase in the mothers' employment. In Nicaragua, [Hojman and López Bóo \(n.d.\)](#) find that access to subsidized care increases a mother's likelihood of being employed by one-third. Our study suggests that policy alternatives that only

allow a better combination of work and household duties, like part-time employment subsidies, are unlikely to have such large impacts. It also highlights that factors other than household duties appear to influence job seekers' desire for flexible work schedules.

Another literature argues that women are happier working fewer hours. The empirical evidence mostly comes from European countries, where women seem to have higher levels of job satisfaction when they have part-time jobs. Very few women who work part time would like to change their schedules (Booth and Van Ours (2008, 2013)). Bentancor and Robano (2014) show that Chilean women who work part time have lower hourly wages, demonstrating that they are willing to pay a cost to obtain this kind of flexibility. Other authors have argued that greater flexibility in working hours can help increase women's participation in the labor market. Del Boca (2002) asserts that the low levels of female labor participation in Italy are related to the absence of part-time work. Our results do not match these European patterns. Our focus on women with less access to social protection may explain the lower willingness to pay we observe in Colombia compared to Europe. Our findings also appear to be aligned with the evidence presented by Montero and Rau (2015), who show that there is no evidence in Chile that women in part-time employment are happier than those in full-time employment. This may suggest that part-time employment in developing countries may be less by choice than by obligation.

In this line of research, Blau and Ferber (1991) analyzed the career plans and earnings expectations of women and men about to graduate from a US business school, and found that women were more concerned than men about flexible hours, pleasant work environments and comfort; they were less worried than men about their professional progress, salary and intellectual challenges. They also find that women plan to work a fewer number of years than men over their lifetimes, and about 5 times more years in part-time schedules than men. Wiswall and Zafar (2017) conducted a hypothetical choice experiment at a large private US university (n=257). They analyze the estimated stated preferences of men and women for different job attributes, and find that women, on average, have a higher willingness to pay for jobs with greater work flexibility and job stability, while men prefer jobs with higher earnings growth. We find a substantial willingness to pay for flexibility in a very different population of women in a developing country, suggesting that women may universally seek flexible scheduling.

In an experiment related to our design, Mas and Pallais (2017) estimated the willingness to pay for alternative work arrangements. They conducted a discrete choice experiment using a sample of applicants to a national call center in the US. They offered each applicant two alternatives: a baseline position in which workers had to do the job from Monday to Friday from 8 am to 5 pm on site, and an alternative position that included flexibility in scheduling, working from home or having the ability to set their own working schedule. The alternatives also offered different wages – e.g. the flexible option come with lower pay. The authors elicited preferences

for different work arrangements and calculated their willingness to pay for those arrangements. Unlike us, they find that individuals were *not* willing to forego any salary in order to be able to choose their schedule or the number of hours worked, particularly because most applicants prefer a full-time job (40 hours a week). Also, applicants do not like working overtime, and did not like alternatives in which the employer has the discretion to set the schedule. Workers would require a wage premium for these two alternatives. However, job applicants demand jobs that allow them to work from home. The study finds that applicants are willing to pay 8 percent of their salary to access a ‘working from home’ schedule, a smaller amount than our estimate for a flexible schedule. Their results may differ from ours in part due to the fact that they focused on call center employment, in which schedules may already involve nights and weekends.

In a recent paper, [He et al. \(2019\)](#) explore compensating differentials for job flexibility using a field experiment conducted on a Chinese job board. They generated random variation in ads that differ in terms of time and workplace flexibility. They also vary the salary, and collect other information on job seekers’ willingness to trade off pay and job flexibility in the specific jobs for which they apply. They find strong evidence that workers value job flexibility, especially regarding the place of work, similar to [Bloom et al. \(2014\)](#). Their job applicants, however, are IT workers in China, who may have a higher demand for flexibility than the average worker. Our methodology and focus on women with lower levels of educational attainment and labor force attachment differentiates us from [He et al. \(2019\)](#), although we reach similar conclusions regarding the attractiveness of schedule flexibility.

Our paper is organized as follows. The next section details the experimental set-up, while section 3 presents the data and empirical methods employed. We then present our results, and the final section concludes.

2 Experimental set-up

We conducted a discrete choice experiment to estimate preferences for flexible contracts among women from Bogota. We presented a group of nearly 1,500 participants a series of job offers with varied working schedules. We varied the total number of hours worked per week (part or full time) and the schedule (flexible or fixed). Our experimental design allows us to observe revealed (rather than declared) preferences regarding working schedules. This approach permitted us to be truthful to participants about the fictitious character of the job advertisements, while maintaining incentives for them to truthfully reveal their preferences.

2.1 Workshop context

The experiment took place in a resume construction workshop that we developed in order to mimic the job search environment in which participants were making decisions. We invited women to participate in the workshops across 12 localities in Bogota. The workshops were held in various local government offices, such as the House of Equality of Opportunities in the Women’s Secretary Office, the Institute for the Protection of Children and Youth, and Community Development Centers from the Department of Social Integration. The experimental sessions took place from June 2018 to February 2019. Women were recruited through our own advertisement and those of the government agencies listed above.

An experimenter read the informed consent to each participant as she arrived at the workshop site, explaining the purpose, steps, duration, risks and benefits of participating. Upon agreeing and signing the consent, another experimenter gathered her information using an on-line questionnaire² that collected demographic characteristics, occupation status and preferences regarding employment characteristics. The questionnaire was administered on tablets and cell phones.

The workshop then continued in a room where computers were available for all participants. The experimenter first explained the difference between a flexible schedule and part-time employment. Real examples were given to help women understand the differences between each type of “flexibility”. Participants were then asked to select a type of occupation and a desired wage range. Based on this, they were presented with 10 screens in which 3 job advertisements per screen were offered. They were informed that these advertisements were fictitious, but that the information they provided in their selection would later be used to display real advertisements that matched their preferences, reversing the methodology of Kessler et. al (2019) for job seekers. Below, we describe exactly how we conducted the experiment.

After they completed the exercise, the workshop continued as a CV construction class via a webpage designed for this experiment: www.tuhojadevida.co. The webpage gathered information about their education, labor market experience, and objectives and formatted it into a professional-looking CV. All of this was mediated by the experimenter, who had received training in producing CVs for this labor market. Once the CV was completed, real job offers posted on one of Bogota’s main search engines (elempleo.com) that matched the occupation and wage range requested by the participant were shown on the screen. The experimenters helped identify the best alternatives according to the women’s preferences and skills, and sent all the information about the application process to their email address. While we originally planned to use the preferences regarding flexibility indicated by the participant to show either more or fewer

²The questionnaire is available [here](#).

Table 1. Information provided by the experimenter about types of schedule flexibility

Schedule	
Flexible	Non-flexible
<ol style="list-style-type: none">1. The schedule is agreed with the employer (time of entry and exit)2. You can work more hours on one day and reduce the number of hours worked on another day of the week3. You can work using the schedule you want, as long as you work the required number of total hours	<ol style="list-style-type: none">1. The schedule of entry and exit is fixed and determined by the employer2. The employer establishes a fixed number of hours that must be worked on one day
Total number of hours worked	
Full-time	Part-time
The employee has to work 48 hours a week: every day from Monday to Saturday	The employee works less than 48 hours per week – i.e. in the morning or afternoon only, or 2–3 days a week

part-time employment options, we were unable to do so given the very small number of real job postings that involved some degree of flexibility.

The last two stages of the workshop were designed to increase participation and provide compensation for the attendees. The experimenter devoted most of each session to helping individuals fill out the CV form in our web app. At the end of the workshop, each participant received a printed copy and a digital version of her completed CV, a voucher for public transportation worth \$USD 5, and flyers with information about job searches and women’s protection programs from different district offices.

2.2 Experimental details

The experiment started with a guided conversation and discussion of job flexibility. After asking women about their understanding of flexibility, the experimenter defined and provided an example of job flexibility in terms of working schedule and total number of hours worked per week. Table 1 describes what the experimenter included about labor market flexibility:

The experimenter then provided some specific examples. A salesperson in a shop would be considered fixed schedule, full time if they work Monday to Saturday from 8am to 5pm, but fixed schedule, part time would involve working Monday to Saturday from 8am to noon or 2pm to 6pm. Flexible full-time employment would allow the employee to work from 10am to 7pm, or to work intensively 4 days a week, etc. Finally, flexible part-time employment was described

as working 2 or 3 days a week, selecting which day every week, or working only mornings or afternoons, alternating each week.

The experimenter then instructed participants to continue to the choice experiment, making it clear that the job postings were fictitious. First, they had to choose the sector (labor market activities) and their expected salary range (\$USD 260–327, \$USD 327–408 and \$USD 408–507).³ The first range is close to the minimum wage, and the other two are within reach for individuals with limited education. The reference wage for all postings will be the upper limit of that range (w) and the random variation in the wages will be a fraction (δ) of that wage, namely δw .

Participants were then exposed to 10 screens each of which had 3 fictitious job postings that differed in terms of schedule flexibility and salary. Each posting refers to a job within the participant's sector and occupation of choice. The ads contained the name and general description of the position, as well as the schedule and salary. They were all said to be from a downtown firm, so the location was kept fixed. The postings did not include any other information regarding the firm, or the type or duration of the contract.

The baseline job posting was always conceived as full-time employment earning w per month and part-time employment earning $w/2$, irrespective of the flexibility. Three screens compared full-time/not flexible, full-time/flexible and part-time/not flexible ads, varying the wage of the flexible full-time employment but keeping the other two alternatives at the same rate. Three screens compared the same three options, but this time altering the wage of the part-time posting while keeping it fixed for the two full-time jobs. Finally, three additional screens asked participants to choose between full time/not flexible, part time/not flexible and part time/flexible, altering the relative wage of the last option, while keeping the first two fixed. The wages were varied according to a set of four δ_1 to δ_4 ; the first three were uniformly employed in all other sets of 3 screens, while the fourth was only used for the first set of comparisons (Table 2 includes an example). Participants were also able to select "I am not interested in any offer" if they did not find any of the offers listed attractive.

We randomized by individual the order that each of the three offers within each screen was displayed, and the order of appearance of all 10 screens by week. This allows us to check for inattention in the way the answers were provided. In addition, we changed the values of the deltas for every week, ranging from 0–20 percent over the course of the experiment.

³This corresponded to COP 800,000–1,000,000, COP 1,000,001–1,250,000 and COP 1,250,001–1,550,000. COP corresponds to Colombian Pesos. The labor market activities that we included in the experiment were: administrative and finance, archival, sales and telemarketing, education, repairing and installations, logistics and distribution, maintenance, marketing, processes and operations, health services, receptionist services, secretary services, customer service, cleaning and surveillance, and technology services (systems).

Table 2. Example of choice experiment reported in the screens

	Job ad 1	Job ad 2	Job ad 3
Screen 1	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 1,000,000	Time: Part Schedule: No Flexible Salary: COP 500,000
Screen 2	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 940,000	Time: Part Schedule: No Flexible Salary: COP 500,000
Screen 3	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 880,000	Time: Part Schedule: No Flexible Salary: COP 500,000
Screen 4	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 1,000,000	Time: Part Schedule: No Flexible Salary: COP 500,000
Screen 5	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 1,000,000	Time: Part Schedule: No Flexible Salary: COP 470,000
Screen 6	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 1,000,000	Time: Part Schedule: No Flexible Salary: COP 440,000
Screen 7	Time: Part Schedule: No Flexible Salary: COP 500,000	Time: Part Schedule: Flexible Salary: COP 500,000	Time: Full Schedule: No Flexible Salary: COP 1,000,000
Screen 8	Time: Part Schedule: No Flexible Salary: COP 500,000	Time: Part Schedule: Flexible Salary: COP 470,000	Time: Full Schedule: No Flexible Salary: COP 1,000,000
Screen 9	Time: Part Schedule: No Flexible Salary: COP 500,000	Time: Part Schedule: Flexible Salary: COP 440,000	Time: Full Schedule: No Flexible Salary: COP 1,000,000
Screen 10	Time: Full Schedule: No Flexible Salary: COP 1,000,000	Time: Full Schedule: Flexible Salary: COP 1,000,000	Time: Part Schedule: No Flexible Salary: COP 500,000

3 Empirical methodology and data

Our experimental design allows to determine women's preferences between different levels of scheduling flexibility for jobs offered at different salaries. In other words, this approach allows us to measure the willingness to pay (or sacrifice) in terms of salary for a more flexible job alternative.

3.1 Empirical methodology

Our data set consists of a panel of 30 job postings for each individual. For each posting, we have information about the salary that was offered, whether the employment was part or full time, whether it was flexible, the screen on which it appeared and its position on the screen. We also know whether the posting was preferred.

Our underlying model is that the utility woman i receives from job j that was presented in screen s is given by:

$$U_{ijs} = \alpha_0 + \alpha_1 X_j + \alpha_2 W_j + \mu_{is} + \varepsilon_{ijs},$$

where X_j measures the amenities of job j (which include flexibility and time requirements), W_j represents the wage of the job, and μ_i represents elements that are constant about woman i . A job j would be selected if $U_{ijs} > U_{iks}$ for all other k jobs available on the same screen.

Y_{ijs} is a dummy indicating that option j was selected by woman i in screen s . The estimation we can perform is:

$$Pr(Y_{ijs} = 1) = Pr(\text{Max}(U_{i1s}, U_{i2s}, U_{i3s}) = U_{ijs})$$

It can then be shown that if ε_{ijs} has an extreme value type I distribution,

$$Pr(Y_{ijs} = 1) = \frac{\exp(\alpha_0 + \alpha_1 X_{js} + \alpha_2 W_{js} + \mu_{is})}{\sum_{k=1}^3 \exp(\alpha_0 + \alpha_1 X_{ks} + \alpha_2 W_{ks} + \mu_{is})}$$

We estimate the parameters α using a conditional logit model. We allow the errors to be correlated within a screen/woman.

This procedure excludes all individuals who declared a preference not to receive any offers among those available on the screen. We return to these participants below.

Using these coefficients, we then estimate the willingness to pay for job attribute X_j using the following equivalence:

$$WTP(X_j) = -\frac{\frac{\partial U}{\partial X_j}}{\frac{\partial U}{\partial W_j}} = -\frac{\alpha_1}{\alpha_2}$$

We calculate willingness to pay using our point estimates of α_1 and α_2 , and compute confidence intervals using the delta method, as programmed in Stata using the WTP (willingness to pay) command.

3.2 Data

Our data consists of the information collected in the pre-experimental survey, the experimental data and the information provided on the CV that the participants prepared during the workshop. We start, in Table 3, by describing the characteristics of the 1,487 study participants. The largest age group in our sample was 26–45 years old (39 percent); a slightly lower fraction was under 25 and less than a quarter were over 45. Over half (60 percent) were single, and 34 percent were childless while 27 percent had dependents at home (either a child under 5 years or an adult who requires permanent care). Nearly half (49 percent) live more than a 45-minute commute from downtown (where all the fictional jobs in the experiment were located). Educational attainment (coded from the CV rather than self-reported in the interview) was relatively high: almost 50 percent of the sample had obtained their high school diploma; 16 percent had less education than that and almost 35 percent reported some tertiary education.

Almost a third of the sample is the head of their household. Nearly half (42 percent) of the households have a total income below our lowest wage range (COP 800,000), while a similar fraction have a household income within the range of wages we report (COP 800,000 to 1,500,000) and 15 percent have incomes above that threshold.

The last panel summarizes our participants' labor situation. One-third of the sample actively participates in the labor force, while 68 percent does not. Of those who are looking for work, 50 percent have been unemployed for less than 8 weeks. When asked about their main preferences when looking for employment, 23 percent reported that a flexible schedule was their most important criteria, while 42 percent declared it was their second or third priority. Almost all participants claimed to be willing to take a part-time or flexible schedule job in any of these three priorities. Finally, 13 percent of the sample participated in the workshop during school holidays, and 3 percent took part during school holidays and had dependent family members at home.

Next we describe the patterns of responses. We find that participants declared they were not interested in any of the job offers presented in only 5 percent of the screens. The type of ad selected most often is full time/flexible (46 percent), followed by full time/not flexible (35 percent). Finally, we find that the left, middle and right options were selected with almost the same probability, which indicates that the selection appears to have been made deliberately and not simply pointing to the same point on the screen.

Table 3. Descriptive statistics of the participants

Variable	N	Mean	St. Dev.
<i>Demographics</i>			
Age 18–25	1,487	0.38	0.49
Age 26–45	1,487	0.39	0.49
Age 46+	1,487	0.23	0.31
Single	1,386	0.60	0.49
Childless	1,487	0.34	0.47
Dependents	1,321	0.27	0.44
Long commute	1,487	0.49	0.50
High school dropout	1,487	0.16	0.37
High school	1,487	0.49	0.50
Tertiary	1,487	0.35	0.48
<i>Household characteristics</i>			
Household head	1,321	0.30	0.46
Hhd income < 800	1,364	0.42	0.49
Hhd income 800–1.500	1,364	0.43	0.50
Hhd income > 1.500	1,364	0.15	0.35
<i>Labor supply</i>			
Active	1,483	0.32	0.47
Inactive	1,363	0.68	0.47
Unemployment spell < 8 weeks	895	0.50	0.50
Flexibility No. 1 priority	1,487	0.23	0.42
Flexibility No. 2 or 3 priority	1,487	0.42	0.50
School holidays	1,487	0.13	0.33
School holidays + dependents	1,487	0.03	0.18

Table 4. Probability of selecting an ad

	%	N
<i>Panel A: By type of flexibility offered</i>		
Full-time no flex	35.45	9,584
Full-time flex	46.05	13,068
Part-time no flex	21.28	13,403
Part- time flex	10.66	4,154
No interest	5.01	13,403
<i>Panel B: By position on the screen</i>		
Left	31.32	13,403
Middle	31.85	13,403
Right	31.67	13,403

4 Results

4.1 Average willingness to pay

In this section we estimate our empirical model. Table 5 presents the coefficients of our main estimating equation, broken down by monthly (first column) and hourly (second column) wages. This is only relevant for part-time contracts. In the first column, we will thus see whether, for the same monthly wage, women prefer part-time to full-time contracts. In the second, we will show whether women prefer part-time contracts if they earn half of the full-time contract each month.

These results suggest women strongly prefer flexible contracts over those that are more rigid. The coefficient is positive and strongly statistically significant. As expected, they also desire higher wages: the coefficient on wage is very significant. Finally, we observe that the coefficient for part-time changes the sign between the two columns. It indicates that women very much prefer part-time employment when the monthly wage is fixed (i.e. for the same wage, they prefer to work less), but for a given hourly wage, they actually prefer working full time to part time. This could indicate there is a fixed cost associated with starting to work, thus requiring a higher per hour payment to prefer that type of contract. We also observe that participants have a strong distaste for combining flexibility and part-time employment. This suggests that once schedules are significantly shortened, flexibility does not have the same benefits as it does with a full-time schedule.

Table 5. Conditional logit coefficients

	Monthly Wage	Hourly Wage
Full Time Flex	0.25*** (0.02)	0.33*** (0.03)
Part Time no Flex	0.32*** (0.09)	-0.49*** (0.03)
Part Time Flex	-0.53*** (0.11)	-1.16*** (0.06)
Monthly cost (USD)	-0.00*** (0.00)	
Hourly cost (USD)		-1.47*** (0.11)
N	36,651	36,651

*** p<0.01, ** p<0.05, * p<0.1

We transform this into a measure of willingness to pay, and find that our participants are willing to sacrifice \$USD 57 per month or 22 cents per hour to obtain a flexible rather than fixed work schedule (see Table 6). Our estimate is relatively precise: our 95 percent confidence intervals range from \$USD 44–69 per month and 18–26 cents per hour. This is a very large amount (10–20 percent), given the minimum wage of \$USD 284 per month or \$USD 1.78 per hour.

Table 6. Willingness to Pay

	Monthly Wage	Hourly Wage
Full Time Flex	56.65***	.22***
Part Time no Flex	73.60***	-.33***
Part Time Flex	-121.38***	-.79***
N	36,651	36,651

*** p<0.01, ** p<0.05, * p<0.1

The willingness to pay for a part-time contract is around \$USD 74 per month, and the 95 percent confidence interval is a bit wider at \$USD 47–100 per month. However, as discussed above, this would clearly not compensate employers for the fact that these women would work half as many hours. The willingness to pay on an hourly basis is thus negative, with a mean of 33 cents and a confidence interval of 26–40 cents. Finally, the willingness to pay for part-

time/flexible jobs is negative and statistically significant in terms of monthly and hourly wages.

4.2 Robustness

Above we showed that the participants exhibited a significant willingness to pay for flexibility (either in terms of schedule or number of hours). In this section we evaluate whether these results could be explained by confounding factors.

First, we are very much worried that participants suffered from inattention in their decision. If this were the case, our estimated trade-offs would basically reflect noise rather than their real preferences. Although we informed them that their answers to the hypothetical postings would be relevant when they selected from among the real job postings, they may have simply gone through the exercise automatically without much care. In order to demonstrate that our answers are unlikely to stem from simply noise, we exploit the fact that a subsample of our participants was shown exactly the same postings on two different screens. Table 7 shows that while the responses do not fully correspond, a large majority of participants (69 percent) responded in the same way on both screens.

To further verify whether a lack of attention could explain our results, we repeat our estimating procedure, restricting our sample to the 333 individuals who answered the same when faced with two identical screens. These results are presented in Table 8, broken down by monthly (column 1) and hourly (column 2) wages. Our results are roughly consistent with those presented in Table 5. The magnitudes of the flexible full-time coefficient are somewhat larger than our full-sample estimates (and clearly noisier, given the significantly smaller sample size), but our willingness-to-pay estimate remains close to the one for the full sample at \$USD 68 per month or 28 cents. The willingness to pay for part-time employment is also larger in terms of monthly wage (\$USD 138) but smaller in terms of the compensation required for the hourly wage (19 cents). Finally, the distaste for part-time/flexible contracts is somewhat reduced in this sample when looking at monthly or hourly wages. Thus, these results suggest that our participants responded truthfully and carefully to the exercise, and that our results are not driven by inattention.

Table 7. Comparison of selection in identical screens

Second screen	First screen			
	None	Full time/not flexible	Full time flexible	Part time/not flexible
None	6	9	0	6
Full time/not flexible	6	81	33	0
Full time/flexible	3	42	195	9
Part time/not flexible	6	21	12	51

Table 8. Conditional logit coefficients (individuals who repeated their answers on two identical screens)

	Monthly Wage	Hourly Wage
Full Time Flex	0.76*** (0.09)	0.86*** (0.09)
Part Time no Flex	1.53*** (0.38)	-0.58*** (0.11)
Part Time Flex	0.79* (0.47)	-1.08*** (0.25)
Monthly cost (USD)	-0.00*** (0.00)	
Hourly cost (USD)		-3.02*** (0.52)
N	3,171	3,171

*** p<0.01, ** p<0.05, * p<0.1

We next use another method to test whether participants’ responses show evidence of inattention, this time assessing whether answers were given simply depending on the ads’ position on the screen. Our finding that respondents were equally likely to select the left, middle or right option on a given screen suggests that this explanation is unlikely. To test this more formally, we re-estimate our main estimation equation, adding the job posting’s position on the screen as a control in the regression. We find strong evidence that our results are completely orthogonal to the randomized position on the screen: the coefficients of our job characteristics are unaffected by the introduction of such controls, and the controls play no statistical role in explaining which posting is preferred.

Table 9. Conditional logit coefficients, controlling for position on screen

	Monthly Wage	Hourly Wage
Full time/flexible	0.25*** (0.02)	0.33*** (0.03)
Part time/not flexible	0.32*** (0.09)	-0.49*** (0.03)
Part time/flexible	-0.53*** (0.11)	-1.16*** (0.06)
Monthly cost (USD)	-0.00*** (0.00)	
Hourly cost (USD)		-1.47*** (0.11)
Left	-0.01 (0.02)	-0.01 (0.02)
Middle	0.01 (0.02)	0.01 (0.02)
N	36,651	36,651

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Finally, we test whether our results are driven by fatigue. Since our procedure required women to answer 10 different sets of job postings, their level of attention may have gradually decreased over the course of the experiment. Since we randomized the order of offers across participants, we are able to formally test for this possibility. Table 10 re-estimates our main empirical equation using only the first three screens, then the following three and finally the last four. Randomizing the screen order makes it possible for each of these sub-groups to include choices over all types of job schedules. For simplicity, in this table, we focus only on regressions that use monthly wage as the control variable. We find little evidence of fatigue in this data. If anything, it seems that there is evidence of learning since as the screens progressed, the coefficients on our

different types of schedule become more and more positive. This translates into a willingness to pay that is relatively constant between \$USD 50 and 59 for flexible but full-time schedules, and a strongly increasing willingness to pay for part-time employment increasing from \$USD 29 to 103 over the period. The distaste for the combination of flexibility and part-time employment also falls from \$USD 237 to 69 as time exposed to the experiment increases.

Table 10. Conditional logit coefficients, depending on screen order

	Screen 1–3	Screen 4–6	Screen 7–10
Full time/flexible	0.18*** (0.04)	0.22*** (0.05)	0.32*** (0.04)
Part time/not flexible	0.09 (0.15)	0.27* (0.16)	0.55*** (0.14)
Part time/flexible	-0.77*** (0.19)	-0.52*** (0.20)	-0.37** (0.17)
Monthly cost (USD)	-0.00*** (0.00)	-0.00*** (0.00)	-0.01*** (0.00)
N	11,115	11,031	14,505

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Overall, we interpret these results as implying that the coefficients we estimate appear to reflect participants' real preferences. If anything, they may be slightly underestimated for part-time employment due to participants' lack of familiarity with the experimental environment.

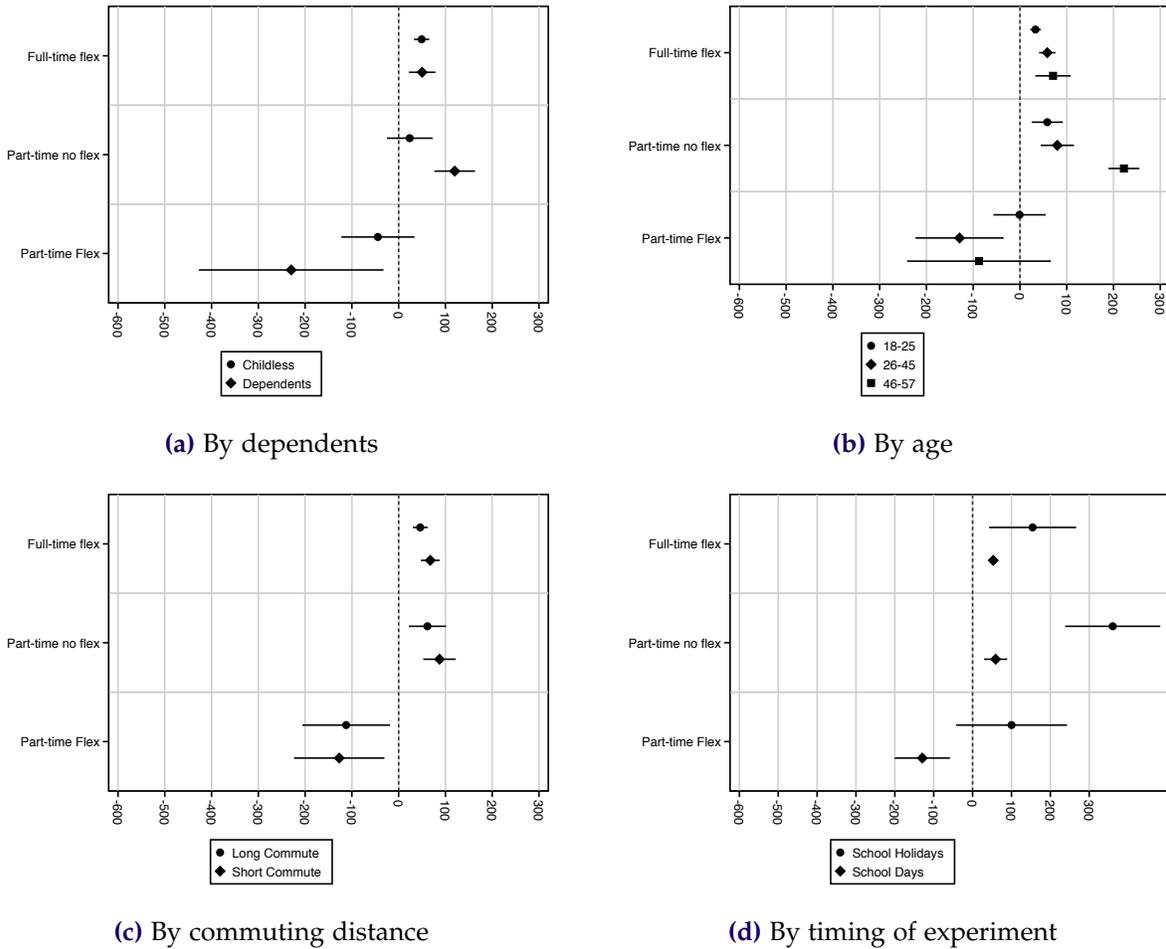
4.3 Heterogeneous effects

Having shown a substantial willingness to pay for flexibility, we next explore which participants exhibited a greater desire for flexibility. We divide our analysis between two types of reasons for desiring flexibility: one is that the need for flexibility is driven by factors that make it difficult to pursue employment with a rigid full-time schedule; the other is that flexibility is a luxury that an individual can afford if they do not need to obtain employment at any cost. We thus use participants' characteristics to try to differentiate these two hypotheses.⁴

We suggest that if the demand for flexibility stems more from need, we should observe strong differences between women with and without children; between participants of child-bearing age and those who are older; between participants who live close to or far from potential jobs; and whether the workshop was held during school holidays or when school was in session. These factors measure in some way the possible value of flexibility for participants. Those with children

⁴See the Appendix for heterogeneous effects estimated for hourly wages.

Figure 1. Heterogenous willingness to pay for flexibility by proxy for need to flexibility



would be more likely to demand flexibility, particularly during periods when children need to be taken care of. Long commuting times are also likely to increase the demand for flexibility since they may allow workers to alter their schedule in a way that reduces the time lost going to and from work. We present our main estimating equation for these subgroups. The results are shown in Figure 1.

In panel (a), we distinguish between participants with and without dependents (children or elderly parents/family members under their care). In panel (b), we separate our sample by the respondent's age, those who may still be studying, and prime working-age women and those over 46 years old, who are much less likely to still have children under their care. Panel (c) then divides the sample between women who live within 45 minutes of the center of Bogota (location of the fictitious firm in the posting) and those who live further away. Finally, panel (d) divides the sample between women with dependents who participated in the workshop during the school

holidays and those with dependents who participated when elementary schools were in session. We find limited evidence that the preference for flexible schedules is related to our proxy for the need for flexibility. Women with and without dependents appear to have a similar willingness to pay for flexible schedules. Older women are slightly more willing to pay, although the difference is not statistically significant. Surprisingly, it is greatest for those with a short commute to downtown, although the difference is not statistically significant. Finally, the willingness to pay for a flexible schedule increases during school holidays, but again the difference is not statistically significant.

We find that our needs characteristics are better able to explain preferences for part-time employment. Women with dependents, those older than 45 and those who participated during the school holidays are shown to have a substantially greater willingness to pay for part-time employment than those in other categories. This suggests that part-time employment may be a solution for women who find it difficult to combine their responsibilities with their desire to participate in the labor market.

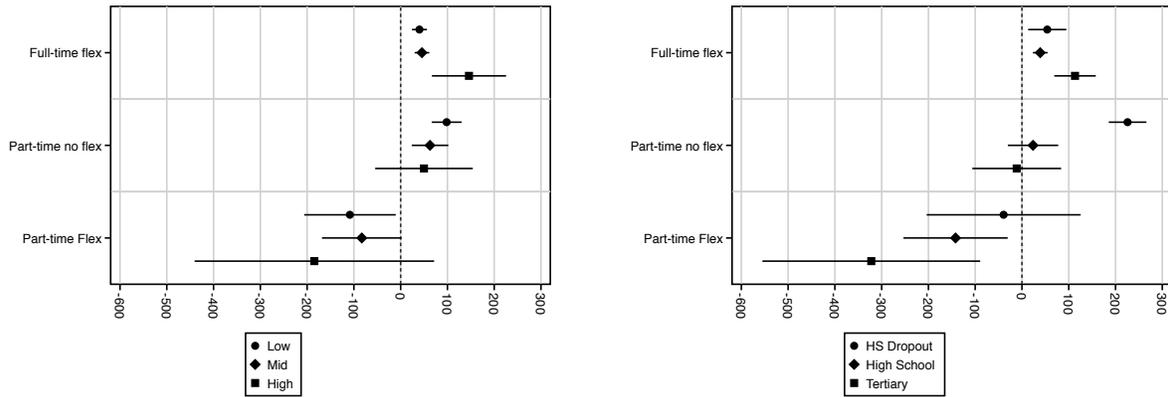
Combining part-time and flexible schedules seems to be attractive only to women who participated during the school holidays (however, the result is not statistically different from zero). For all others, we find a relatively strong distaste. This would suggest that this type of schedule is only useful for women who find it particularly difficult to balance their family and work obligations.

We thus find evidence that the demand for flexibility in determining one's hours is not related to variables that predict more difficulty in balancing household and labor market tasks, but the demand for part-time employment may be more related to this aspect.

We next turn to variables to measure how desperate the participant is to find work. The idea is that while many may desire flexibility, few may be able to afford it. As proxies for affordability, Figure 2 uses household income in Panel (a) and education in Panel (b). As proxies for needing employment, Panel (c) uses reported labor force status (those who are inactive would be more marginal in their decisions about whether to work) and Panel (d) uses length of unemployment for those who are unemployed (above or below 8 weeks).

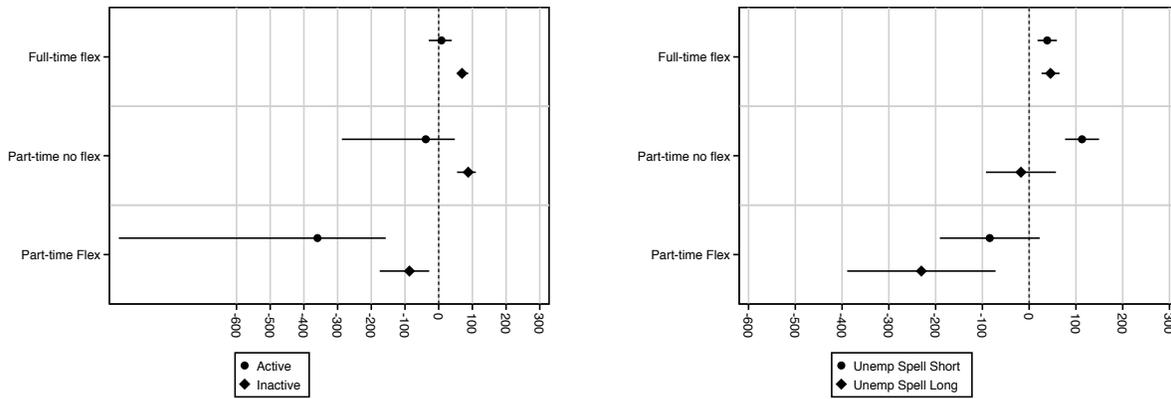
The results, displayed in Figure 2, show that flexible scheduling appears to be more of a luxury good than one based on necessities. Women from households with more income, those with more education (although not statistically significantly so) and those inactive in the labor market at the time of the interview display a higher willingness to pay for this type of contract. The patterns for part-time employment are less consistent with this hypothesis: high school dropouts and those who are inactive in the labor force demonstrate a significantly greater willingness to pay for that type of contract. Surprisingly, however, it is those who have been unemployed for

Figure 2. Heterogenous willingness to pay for flexibility by proxies for affordability



(a) By household income

(b) By education



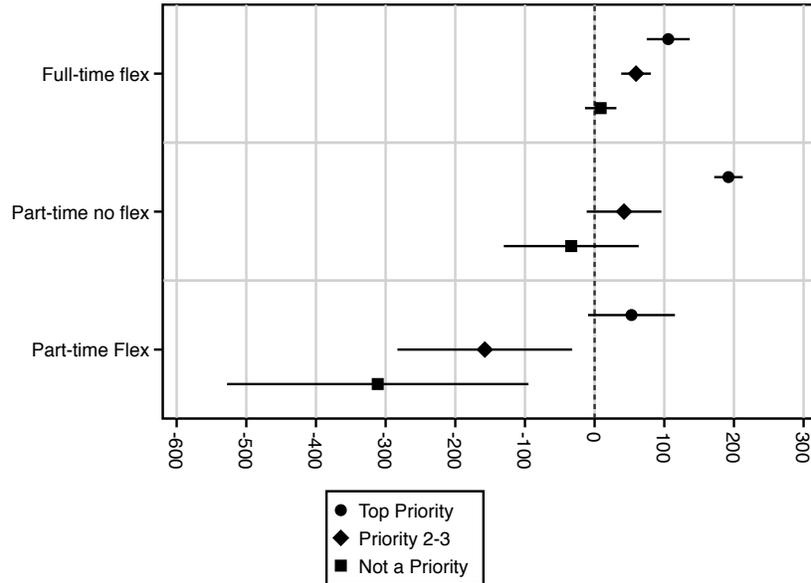
(c) By labor force status

(d) By unemployment spell

a short period of time who have a stronger preference for part-time contracts, suggesting that those who have been looking for work for longer may not exhibit the same willingness to obtain only part-time employment. We observe no statistically significant differences in the willingness to pay for flexible part-time employment.

Finally, we also contrast our estimates of willingness to pay for flexibility with the stated preferences of women in our survey. Before the experiment, women were asked to list the criteria they were seeking in a future job. We divide our sample into three groups: (1) women who stated that flexibility was the most important criteria in their job search, (2) those who ranked it second or third, and (3) those who did not mention it as a priority. Figure 3 shows the estimates by these subsamples. We find strong evidence that participants who identified flexibility as a priority in their job search were willing to pay a higher price to acquire that characteristic than those who did not. This was the case for flexible schedule, part-time employment or a combination of

Figure 3. Heterogenous willingness to pay for flexibility by declared preference



both. This suggests that women are quite conscious of their preferences, and that there is a large variance in how much some participants are willing to sacrifice to obtain flexibility.

5 Conclusions

This paper estimates women’s willingness to pay for flexibility. We find that freedom has a positive price, contrary to the evidence presented by Mas and Pallais (2017). We find a large and statistically significant willingness to pay for a flexible time schedule. However, we find that while women are willing to earn less each month in order to obtain a part-time contract, they are unwilling to pay a positive amount in terms of their hourly wage. This result is robust to alternative explanations. Demand for a flexible work schedule seems to be driven more by factors that influence the capacity to “afford” a flexible job, while the demand for part-time employment is linked to constraints on job seekers’ schedules. Overall, the results suggest that policies that seek to enhance flexibility in developing countries could increase female labor force participation. However, if flexibility is a luxury good, its impact on increasing the female labor force participation of lower-income households is probably limited.

Latin America’s labor market policies have historically been designed to promote formal employment; they have generally not considered part-time employment. Women who seek this type of work arrangement often turn to the informal sector. However, the fact that the willingness

to pay for part-time employment does not come close to compensating employers for the lower time commitment of workers suggests that modest subsidies to employers would fail to increase women's employment through more offers of part-time jobs.

Our design cannot determine how flexible work schedules may alter workers' productivity. Would flex-time generate an increase in productivity and thus result in a win-win case for workers and firms? If it generates a loss in productivity, how would this loss compare to the willingness to pay we document here? We leave these questions to future research.

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Appendix

Figure 4. Heterogenous willingness to pay for flexibility by proxies for flexibility needs (hourly wages)

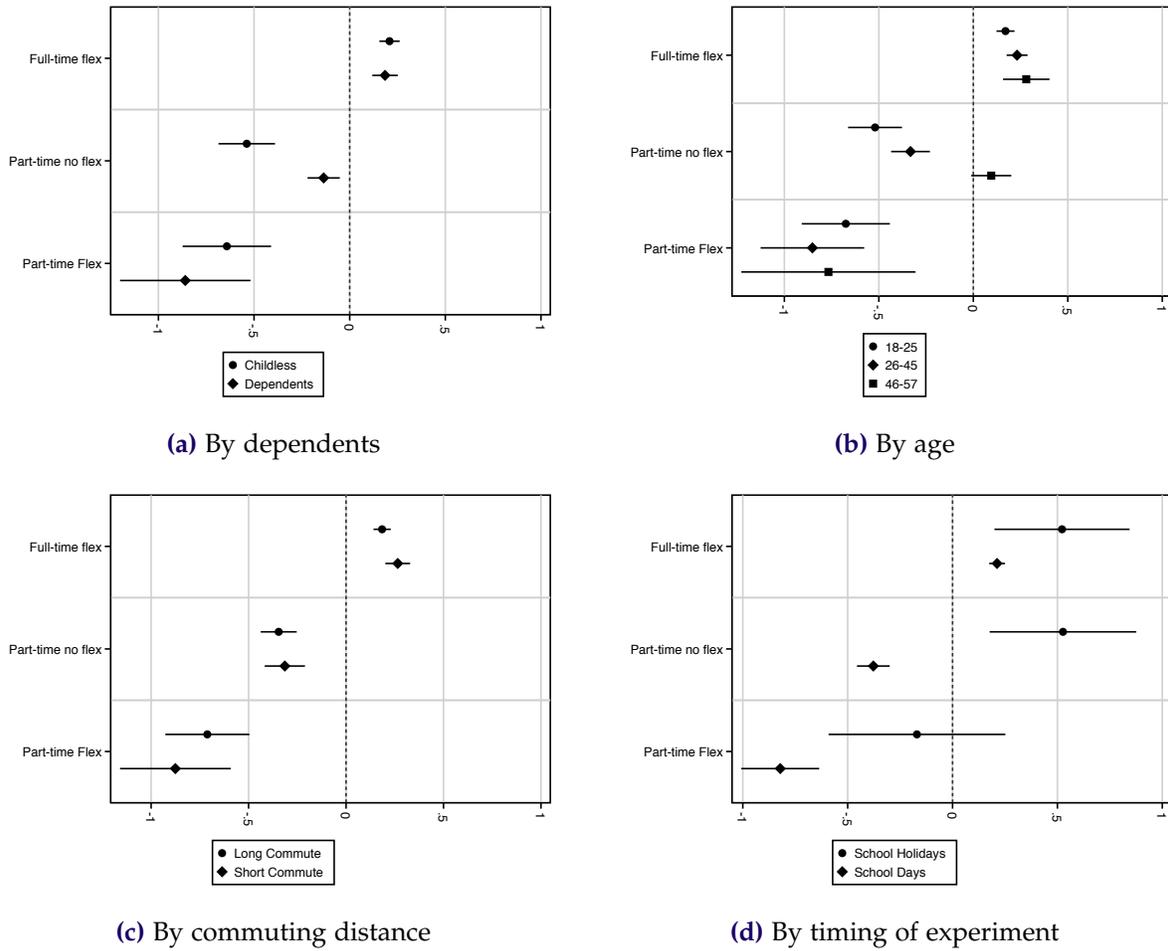
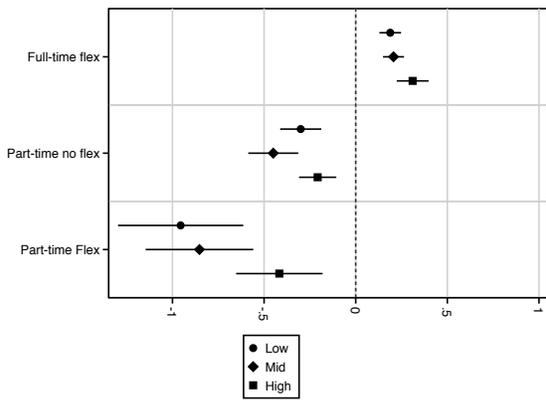
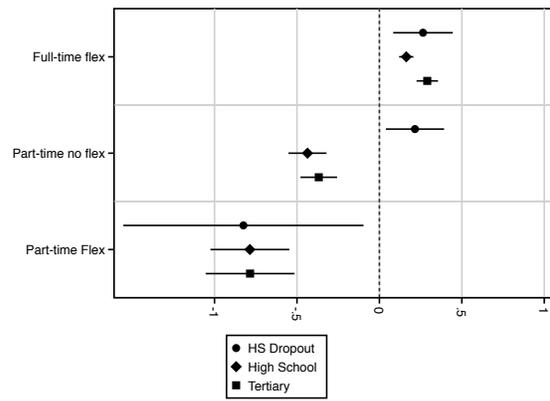


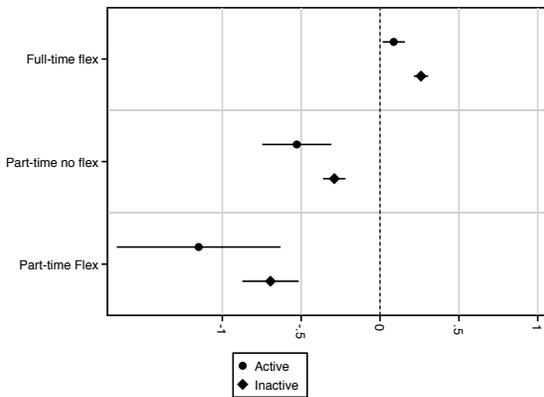
Figure 5. Heterogenous willingness to pay for flexibility by proxies for affordability (hourly wages)



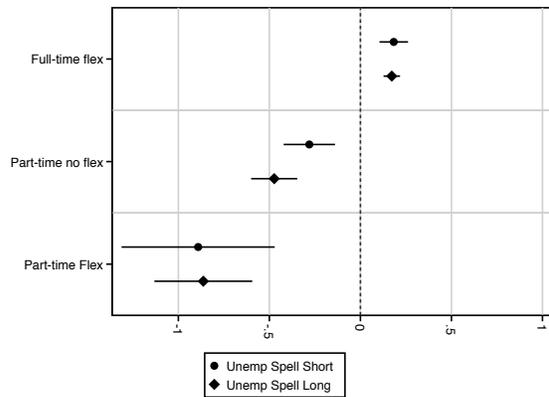
(a) By household income



(b) By education



(c) By labor force status



(d) By unemployment spell