

# Women's Economic Participation, Time Use, and Access to Childcare in Urban Bangladesh

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## Abstract

This study documents the labor market outcomes and time-use patterns of women in urban Bangladesh. Using survey data collected in 2018 in low-income neighborhoods of Dhaka, the paper finds that women with children aged 0–5 years have lower likelihood of labor market participation, lower likelihood of working, and lower likelihood of being an earner, compared to women with no children and women with children aged 6 years or older. While this motherhood penalty affects all mothers, those who have young children but have no access to childcare support face the largest penalty. Time-use patterns confirm these findings, indicating that mothers of young children with no

access to childcare spend less time on market work, more time on unpaid work, and less time on leisure or other activities. In addition, they are more likely to perform childcare as a secondary activity along with other paid and unpaid work, which may have implications for their productivity and the quality of care provided to children. The paper proposes entry points to ease the double burden of paid and unpaid care work on mothers in urban areas, where the availability and affordability of formal childcare services is low, and community-based or other informal care arrangements are not common.

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# Women's Economic Participation, Time Use, and Access to Childcare in Urban Bangladesh <sup>\*</sup>

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## 1. Introduction

Women's participation in the economy of Bangladesh has increased steadily since the country's independence. Female labor force participation (FLFP) grew from just 4 percent in 1974 to 8 percent in 1984, before jumping to 24 percent in 2000. This trend has continued over the past two decades, partly attributable to a ready-made garment sector that accounts for 80 percent of total export earnings and employs 4.4 million people, including more than 3 million women (Fathi 2019, World Bank 2012a).<sup>1</sup> Yet, at 36 percent in 2017, FLFP in Bangladesh is still below the world average of 47 percent (World Bank 2020). In addition, FLFP has consistently been lower in urban areas than in rural areas and has declined in recent years despite economic growth and increases in women's education. Between 2010 and 2017, urban FLFP fell from 34.5 to 30.8 percent, while rural FLFP increased from 36.4 to 38.5 percent (BBS 2018).

Many explanations have been offered for the low FLFP, ranging from underreporting of women's home-based work in labor market surveys (Mahmud and Tasneem 2011) to social and cultural factors that traditional labor market studies omit, such as norms about women's safety and seclusion (Solotaroff et al. 2019, Kotikula et al. 2019, Węziak-Białowolska et al. 2020). It is also widely recognized that women's employment is mediated by their roles in the reproductive and care economy and by the patriarchal norms that define their role in society (Khatun et al. 2014). In Bangladesh, women's care responsibilities increase substantially after marriage and childbirth. Marriage is universal, and the average age at first marriage, 15.9 years (BDHS 2014), has increased very slowly over the past few decades (Zahangir 2015, Shuler and Rottach 2010). The average age of first childbirth is 18; women in the age group 20–24 years have the highest childbearing rate; and more than 90 percent of women give birth to at least one child by age 49 (Roy and Hossain 2017). In other words, many working-age women take on substantial caregiving responsibilities early in their lives and likely face a tradeoff with their other roles in society, including their economic participation.

For women with young children, lack of childcare support can lead to withdrawal from the labor market, especially in patriarchal societies where men are considered breadwinners and women caregivers. Globally, an estimated 606 million working-age women consider themselves unavailable for employment or not seeking a job because of unpaid care work, as opposed to only 41 million men (Gromada et al. 2020). Even if women reenter the labor force after childbirth, they might end up in low-

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<sup>1</sup> Kabeer (2000), Mahmud (2010), Kabeer and Mahmud (2004), and Khosla (2009) have documented the hazardous working conditions in the ready-made garment sector in Bangladesh and argued that women's disproportionately large employment in this sector is a sign of vulnerability, as it is partly driven by the belief that women are unlikely to take collective action against low pay, occupational health, safety, poor working conditions, and job insecurity.

paying or informal jobs that offer flexibility to balance paid and unpaid work, at the expense of a pay gap (Alfers 2016, ILO 2018). Mothers can also have reduced career prospects due to productivity losses associated with multitasking and taking care of children at work. An estimated 40 percent of mothers in developing countries bring their children to the workplace or provide childcare while working (World Bank 2012b, UN Women 2015). Those who cannot take their children to work have no choice but to leave them unsupervised or to rely on family members, including other children. In a sample of low-income countries, 46 percent of children aged 5 or below were either left alone or in the care of their siblings under 10 years old for at least an hour per week (Samman et al. 2016).

The potential long-term consequences of inadequate childcare support on women's well-being, as well as the well-being of their children, has led development practitioners to draw attention to a "hidden crisis in care" (Samman et al. 2016). Across 66 countries representing two-thirds of the world's population, women spend on average 3.3 times as much time as men on unpaid care work (Gromada et al. 2020). Yet, 35 million children below primary-school age lack access to childcare, 80 percent of whom live in low- and middle-income countries (Devercelli and Beaton-Day 2020).<sup>2</sup> As more women enter the labor force out of necessity or choice, the need for childcare will likely grow. In addition, the increasing trend of migration from rural to urban areas and the nuclearization of households are likely to impede access to extended support networks, leading to further increases in the demand for caregiving in urban areas. Without institutional support or access to informal care arrangements, the double burden on mothers could grow, especially for those who cannot exit the labor force or afford professional childcare services.

This paper examines the relationship between availability of childcare and three outcomes: (i) female labor force participation and employment; (ii) time spent on market work, unpaid work, and other activities; and (iii) likelihood of performing (and time spent on) childcare as a secondary activity. The paper uses the Dhaka Low-Income Area Gender, Inclusion, and Poverty Survey that was conducted by the World Bank in 2018. Focusing on the sample of ever-married women ages 15–49 years, the paper identifies a substantial motherhood penalty, especially for women who have young children (ages 0–5 years) but do not have access to childcare support. Further, time-use patterns show that mothers of young children spend less time on market work, more time on unpaid work, and less time on leisure or other activities, as well as spending more time on childcare as a secondary activity. Mothers of young children who have

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<sup>2</sup> It is estimated that children living in low-income countries are 5 percentage points less likely to have access to childcare than those living in high-income countries. The difference may be even larger, since these estimates exclude parents who are already out of the labor market due to unmet childcare needs (Devercelli and Beaton-Day 2020).

access to childcare spend just as much time on unpaid work as those who do not have access to childcare, suggesting a significant double burden on this group. Having access to childcare is positively associated with women's labor market outcomes and time spent on paid market work, suggesting that making childcare services more widely available could partly offset the adverse labor market impacts of motherhood, with potential implications for their social and economic well-being and empowerment.

The paper builds on the empirical literature on the relationship between childcare and women's economic outcomes. Previous literature has focused predominantly on high- and middle-income countries and wage labor settings (Bick 2016, Givord and Marbot 2015, McCoy et al. 2017). Few studies consider low-income countries, vulnerable population groups, and other types of market work and unpaid work. Similarly, even though the link between women's unpaid work and market work has been documented in some contexts (App and Rees 2005, Antonopoulos 2009, Charmes 2015, Samuels et al. 2018), the relative scarcity of time-use surveys in developing countries constrains the growth of this strand of literature. In South Asian countries, specifically, the literature has focused on identifying the determinants of low and declining FLFP in Bangladesh, India, and Sri Lanka, considering marriage, childbirth, and access to childcare among the possible drivers of these trends (Das 2006, Rani and Unni 2009, Bhalla and Kaur 2011, Gunatilaka 2013, Kapsos et al. 2014, Sorsa et al. 2015, Chatterjee et al. 2015, Solotaroff et al. 2019). The few studies that examine women's labor market disadvantages in relation to childcare support, however, measure access to childcare indirectly, using household composition and other proxy variables (Madurawala 2009, Das and Žumbyté 2017, Solotaroff et al. 2020). Finally, studies that causally attribute the effect of childcare on women's employment outcomes remain scarce, with a notable exception of an impact evaluation of a public child support program in India (Jain 2016).<sup>3</sup>

This paper makes three contributions to the literature. First, labor force surveys typically omit questions on availability of childcare and, as a result, many previous studies use household beneficiary status in child development programs, access to child subsidies, or the presence of grandparents in the household to deduce whether or not families have access to childcare (see, for example, Maurer-Fazio et al. 2011, Posadas and Vidal-Fernandez 2013, Bick 2016, García-Morán and Kuehn 2017).<sup>4</sup> This paper uses a direct measure of childcare support, using women's own responses to a survey question "who would take care of their young children when women go to work?" This makes the findings less dependent on

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<sup>3</sup> Integrated Child Development Services (ICDS), India's largest child development program, provides preschooling as well as other services, including supplementary feeding, immunization, and health checkups.

<sup>4</sup> Measuring childcare availability through child development programs may lead to biases because some parents, such as those from lower income groups, may not have access to such programs. Similarly, using presence of elders in the family as a proxy may be problematic, since parents may have access to childcare regardless of the presence of grandparents, and the presence of grandparents by itself does not guarantee that they actively provide childcare, as they may need care support themselves.

assumptions and less prone to biases. Second, while most previous studies analyze access to childcare in relation to traditional labor market outcomes, this paper complements that approach with time-use analysis to validate and enrich the labor market impacts, and to provide a more accurate depiction of the double burden of paid work and unpaid work on mothers of young children. In addition, it takes advantage of a unique feature of the dataset to analyze childcare performed as a secondary activity, capturing an important aspect of caregiving for working mothers: that a large part of childcare constitutes secondary supervision as opposed to full and active involvement in children’s activities throughout the day.<sup>5</sup> Finally, this study uses a unique dataset from the low-income neighborhoods of a megacity where FLFP has declined in recent years, with a particular focus on a population group that is constrained in their access to childcare and in their ability to withdraw from the labor force due to their socioeconomic status. Hence, the findings have direct policy relevance as they pertain to the urban context where FLFP trends have reversed and a population group that is most likely to benefit from targeted interventions to ease the double burden on mothers.

## **2. Data and Methodology**

### *2.1. Data*

This paper uses the Dhaka Low-Income Area Gender, Inclusion, and Poverty Survey data collected by the World Bank in low-income neighborhoods of Dhaka in 2018 (see Kotikula, Hill, and Raza 2019). The dataset is representative of slums and low-income areas of the Dhaka City Corporations (North and South) and the low-income areas of the Greater Dhaka Statistical Metropolitan Area. The slums include informal settlements listed in the Bangladesh Bureau of Statistics’ slum census of 2013/14. The low-income areas include non-slum census enumeration areas with a poverty rate of 8 percent or above. The households were sampled using a two-stage stratification process based on neighborhood population size (slums) and poverty rate (low-income neighborhoods).<sup>6</sup> In addition to interviewing the heads of households, an

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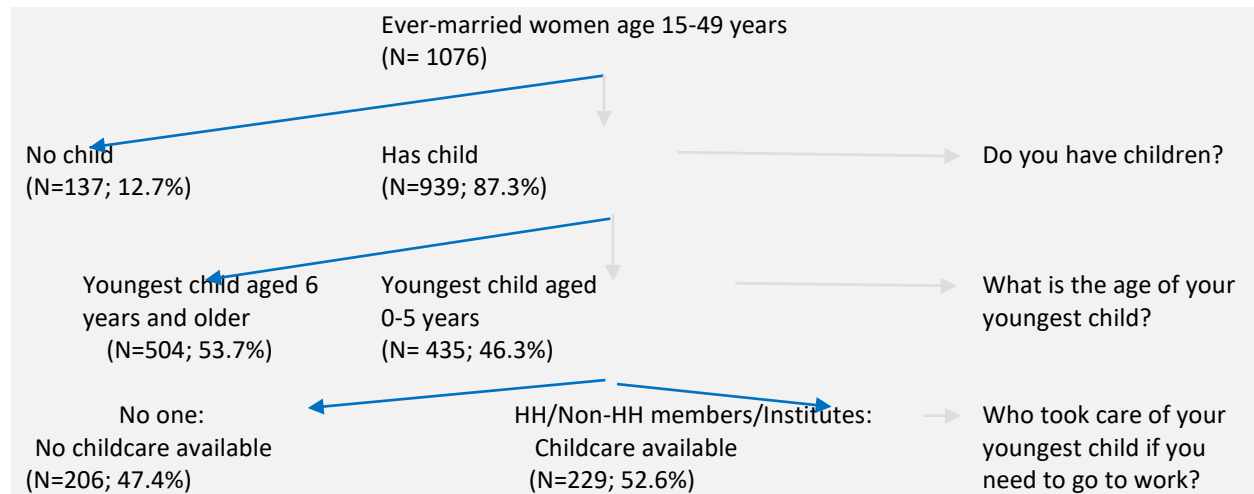
<sup>5</sup> Several studies on women's time use and childcare, including secondary childcare, discuss women’s disproportionate burden of childcare and its valuation (Bittman 1999, Ironmonger 2004, Mullan 2010, Floro and Miles, 2003, Floro and Pichetpongsa 2010). App and Rees (2005) assess the gender differences in the time allocation of women and men in Australia, Germany, and the United Kingdom based on access to childcare and the tax treatment of the female partner. However, they only consider situations in which childcare is provided as a primary activity, such as feeding or bathing the child, which likely underestimates the time women spent on childcare.

<sup>6</sup> The first stage randomly selected the primary sampling units (PSUs) using probability proportional to size, based on the strata for low-income enumeration areas and slums. In the low-income PSUs, the first stratum consisted of enumeration areas with a poverty headcount ratio of 8–10 percent, the second stratum with a poverty headcount ratio 11–14 percent, and the third stratum with a poverty headcount ratio of 15 percent or above. In the slum PSUs, the first, second, and third strata consisted of slums that included 50–75 households, 76–99 households, and more than 100 households, respectively. In the second stage of sampling, 20 households were selected in each PSU for face-to-face interviews from three categories: (a) households with

individual survey module was administered to one male and one female member of each household (usually, husbands and wives).

Consistent with previous literature, the analysis focuses on ever-married women in the working age range. In our dataset, this includes 1,076 women ages 15–49 years who reported being married, widowed, separated, or divorced.<sup>7</sup> While it is possible for women who have never been married to have children, this is not common in Bangladesh or in the sample studied in this paper. We then follow a three-step process to identify our target groups (Figure 1). First, we identify female respondents who have children. As expected, a large proportion of the women included in the sample, 87.3 percent, have at least one child. Then, we categorize women who have children into two groups—women whose youngest children are 0–5 years old, and women whose youngest children are age 6 or older. This age threshold is informed by previous literature indicating that closely supervised childcare needs are greatest in the first 5 years of life, when children are dependent on their caregivers and have a high risk of injury if they are left unsupervised (Morrongiello and McArthur 2018, Maryland State Department of Education 2012). Also, in Bangladesh, children start primary school at age 6, after which schools partially fulfill the parents’ childcare needs (World Bank 2020, World Health Organization 2013). In our sample, 46.3 percent of mothers have young children ages 0–5 years.

**Figure 1. Sample distribution of ever-married women ages 15–49 years by the availability of childcare**



Source: Authors.

working-age male and female members; (b) households with only working-age females; and (c) households with only working-age males.

<sup>7</sup> This paper’s focus on ever-married females ages 15–49 years is consistent with the Demographic Health Survey (DHS). We determine the marital status of women by matching the marital status of women from the household roster with women’s own responses in the individual surveys.



We then identify the respondents who have access to childcare based on women's responses to the survey question on whether childcare is available when they need to go to work. The response categories capture both informal sources (spouse, other household members, non-household members) as well as formal sources (childcare institutions, schools) of support. In our sample, just over half of mothers with young children, 52.6 percent, have access to childcare.<sup>8</sup> It is important to note that the prevailing childcare arrangements are largely informal. Only 2.2 percent of mothers with young children have access to childcare institutions or schools; the remaining 97.8 percent rely on their spouses (45.8 percent), other household members (29.3 percent), and people outside their household such as friends, relatives, and neighbors (22.7 percent).

To examine the characteristics of the mothers more closely, we create three analytical categories that will be carried through the empirical analysis in this paper:

- (a) **Group A (reference group)** includes women with no children or with youngest children ages 6 or older. This group faces the least pressure for childcare needs, as they either have no children or have older children. It makes up 59.6 percent of the sample.
- (b) **Group B** includes women whose youngest children are ages 0–5 and who have access to childcare. This group has substantial childcare needs given the young age of their children, but some of needs are shouldered by their support network. It makes up 29.3 percent of the sample.
- (c) **Group C** is the most disadvantaged group, including women whose youngest children are ages 0–5 and who do not have access to childcare. This group makes up 19.1 percent of the sample.

The main characteristics of these three groups are in Table 1. At 33.5 years, the average age of women in Group A, who have older children or no children, is about 7 years higher than that of Groups B and C. Women in Group A also live in smaller households and are more educated (Columns 4 and 5 in Table 1), consistent with the literature suggesting a negative relationship between fertility choice and education in Bangladesh (see Zahangir 2015). Looking at the differences between Group B and Group C (Column 6 in Table 1), women in the most disadvantaged group, Group C, have fewer female members aged 15–64 years living in their households, as well as fewer elderly members 65+ years. This pattern supports the notion that availability of other women and older individuals in the household can provide some relief from childcare responsibilities. Finally, women in Group C are more likely than both Group A and Group B to live in slums, suggesting a link across poverty status, fertility, and childcare needs.

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<sup>8</sup> Due to lack of data, it is not possible to compare the availability and affordability of formal childcare in this sample with the rest of Bangladesh. Firm-level data suggest that childcare centers are not common and only 23 percent of employers offer childcare to their employees (International Finance Corporation 2019).

**Table 1. Sample characteristics by the availability of childcare**

	(1)	(2)	(3)	(4)	(5)	(6)
	A: No child or youngest child is 6 years and older	B: Youngest child is 0–5 years and childcare available	C: Youngest child is 0–5 years and no childcare available	ttest (2) – (1)	ttest (3) – (1)	ttest (3) – (2)
<b>Individual characteristics</b>						
Average age	33.5	26.2	26.0	-7.3***	-7.5***	-0.2
Education						
No education	45.6	21.2	20.3	-24.5***	-25.4***	-0.8
Class 1 to 5	30.4	40.7	47.6	10.1**	17.1***	7.0
Class 6 to 8	14.7	19.6	17.3	4.9	2.6	-2.3
Class 9	2.4	10.1	7.0	7.7***	4.6*	-3.1
SSC and above	6.5	8.3	7.6	1.8	1.1	-0.7
Wear <i>burkha</i> to travel outside=1	31.1	31.6	27.2	0.5	-4.0	-4.4
<b>Household characteristics</b>						
Average head's age	40.4	33.5	32.9	-6.9***	-7.5***	-0.6
Head is female=1	14.5	7.1	4.9	-7.3***	-9.6***	-2.2
Head's education						
No education	54.0	38.7	31.2	-15.3***	-22.8***	-7.5
Class 1 to 5	23.9	29.2	32.4	5.3	8.5*	3.2
Class 6 to 8	12.0	15.2	22.8	3.2	10.7**	7.6
Class 9	3.1	8.6	4.6	5.5**	1.5	-4.0
SSC and above	6.9	8.2	8.9	1.3	2.0	0.7
HH receive international remittance=1	2.0	0.4	1.8	-1.6**	-0.2	1.4
Average log of HH annual expenditure per capita	9.6	9.4	9.5	-0.1***	-0.1	0.1
HH living standard index	-0.06	0.02	0.1	0.08	0.2	0.1
Number of children aged 6 to 14 years	0.8	0.7	0.5	-0.1	-0.2***	-0.1
Number of working-age women aged 15–64 years	1.4	1.3	1.1	-0.1	-0.2***	-0.1*
Number of working-age men aged 15–64 years	1.4	1.1	1.1	-0.3***	-0.3***	-0.01
Number of HH members aged 65+	0.07	0.1	0.03	0.06	-0.04**	-0.1***
<b>Regional characteristics</b>						
Dhaka City Corporation=1	87.3	88.5	84.2	1.2	-3.1	-4.3
Slum =1	14.3	14.8	21.3	0.4	6.9**	6.5*
Birthplace (regions)						
Central	53.4	53.1	54.3	-0.3	0.9	1.2
Northern	7.8	6.7	8.0	-1.0	0.2	1.2
Eastern	13.3	16.1	8.8	2.8	-4.5	-7.3*
Southern	25.5	24.0	28.9	-1.5	3.4	4.9
Observations	641	229	206	870	847	435

Note: a. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

b. Survey weight applied.

## 2.2. Methodology

We are interested in examining the relationship between the availability of childcare on one hand, and women's labor market outcomes and time-use patterns on the other, after controlling for individual, household, and regional characteristics. Our empirical approach uses three sets of econometric models. First, we use a probit model to examine the relationship between the availability of childcare and women's labor market outcomes. In this model, the dependent variables of interest are: (a) the probability of being an income earner (=1), 0 otherwise; (b) participating in the labor market (being available to work or looking for work in the last 30 days) (=1), 0 otherwise; and (c) working in the last 30 days (=1), 0 otherwise.<sup>9</sup> The model is given by:

$$Y_i = \beta_0 + \beta_{1\theta}C_{\theta i} + \beta_X X_i + \varepsilon_i, Y_i^* = \mathbb{I}(Y_i^* > 0) \quad (1)$$

where  $Y_i$  represents the three dependent variables listed above;  $C_{\theta}$ ,  $\theta=0,1,2$  is a categorical variable that takes the value of 0 if women have no child or their youngest child is older than 6 (reference category, Group A), 1 if the youngest child is age 0–5 and childcare is available (Group B), and 2 if the youngest child is age 0–5 and no childcare is available (Group C), respectively;  $X$  represents a vector of control variables, including lifecycle stage (age and age squared), education, conservativeness (whether or not women wear a *burkha* to travel outside), whether the household head is female, age of the household head, whether the household receives remittances, log of annual household expenditure per capita,<sup>10</sup> household living standards index,<sup>11</sup> household composition (number of children aged 6–14 years, working-age women and men aged 15–64 years, and number of elderly members aged 65 years and older), and location (lives in Dhaka City Corporation, slum, and regions of birthplace); and  $\varepsilon$  is a vector of residuals. The probit model is run separately for each of the three outcome variables described above.<sup>12</sup>

Second, we examine the relationship between the availability of childcare and women's time allocation across market work, unpaid work, and other activities. The time use module in the survey recorded a log of the daily activities of the individuals in the last 24 hours, starting from the previous day

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<sup>9</sup> Being an earner means that the respondent is an earning member of the household. Irrespective of being an earner or not, an individual may be in the labor market looking for paid jobs in the last 30 days (labor force participation) or may not have worked with pay in the last 30 days (working).

<sup>10</sup> Per capita expenditure is calculated as follows: [(Value of rice, milk, milk products, eggs, fish, and meat consumed in last week) \* 52 + Spending on children's clothing and shoes in the last 12 months] / HH size.

<sup>11</sup> Index with principal component analysis using: stove used (electric / gas = 1, 0 otherwise), wall of house (tin / wood / brick / cement = 1, 0 otherwise); roof of house (tin / tally / brick / cement = 1, 0 otherwise); toilet used (sanitary pit latrine = 1, 0 otherwise); toilet shared (no = 1, 0 otherwise); source of drinking water supply (piped supply = 1, 0 otherwise); source of light (metered electricity = 1, 0 otherwise).

<sup>12</sup> Because of the small sample size, we also run Generalized Maximum Entropy (GME) models on the likelihood of being an earner, participating in the labor market in the last 30 days, and working in the last 30 days with full control variables to check the consistency of the results. We confirm that the results are qualitatively similar and consistent with the findings presented in this paper.

at 4 am and finishing at 4 am of the following day, using 15-minute intervals. Building on previous literature, using the time-use diary of the individuals, “market work” includes time spent on working or on the production of goods and services. In our dataset, this includes working or being employed; owning a business; staple grain farming; horticultural or high-value crop farming; raising large livestock (cattle, buffaloes), small livestock (sheep, goats, pigs), and poultry and other small animals (chickens, ducks, turkeys); and fishpond culture. “Unpaid work” activities include time spent on caregiving (including caring for children as a primary activity and caring for adults, the sick, or the elderly); shopping or getting services (including health services); cooking; other domestic work (including fetching water and fuel); and weaving, sewing, or textile work.<sup>13</sup> Lastly, we classify as “other activities” time spent on personal care, sleeping and resting, eating and drinking, attending school and doing homework, exercising, social activities and hobbies, religious activities, commuting to and from work or school, and other activities that cannot be classified as market work or unpaid work. For the econometric analysis, we use a Seemingly Unrelated Regression (SUR) framework to account for the interdependence of market work, unpaid work, and other activities that all take place within a 24-hour window. In this model, the three sets of activities are determined simultaneously by the same set of explanatory variables and are estimated jointly as a system:

$$T_{ia} = \beta_{a0} + \beta_{a1\theta}C_{\theta i} + \beta_{aX}X_i + \varepsilon_i \quad (2)$$

where  $T_{ia}$  refers to the number of hours per day spent by individual  $i$  on activity  $a = 1, 2, 3$  corresponding to market work, unpaid work, and other activities, respectively, and  $C_{\theta}$ ,  $\theta = 0, 1, 2$ ,  $X$  and  $\varepsilon$  are as defined above. The model is estimated for each of the three activities captured in the time-use survey with an Ordinary Least Squares (OLS) estimator.<sup>14</sup>

As mentioned above, the time-use model in (2) must meet restrictions to capture the interdependence of activities  $a = 1, 2, 3$  performed in any given day. Any variation in the amount of time spent on one activity due to a change in an exogenous variable must be compensated by a corresponding change in the time spent on other activities. Hence, the sum of the intercepts of the three equations must equal the total number of hours in a day or 24 hours. In addition, the sum of the coefficients for each of

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<sup>13</sup> Activities such as weaving/sewing/textile care are considered unpaid work because, in the time-use module, the paid employments are captured using the category “work as employed.” As many women from low-income households work in the garment industry, the activity weaving/sewing/textile care may also capture paid labor market work rather than unpaid work. Nevertheless, in the sample studied, women reported spending 0.1 hours (6.5 minutes) on average per day on weaving/sewing/textile, suggesting that these activities referred to unpaid work rather than employment in the garment sector.

<sup>14</sup> There are general arguments on whether to use Tobit or OLS to explain individuals’ time allocations using time diaries. We use the OLS approach because time-use specialists suggest it is more appropriate for analyzing time diary data (Stewart 2009). The reported zeroes in any activity might be just measurement error rather than non-participation. Foster and Kalenkoski (2013) find that Tobit estimations are sensitive to censoring window. Nevertheless, we run Tobit regressions on time spent on secondary childcare with full control variables to check the consistency of the results with OLS estimates and confirm that they are consistent with the findings presented in this paper.

the explanatory variables should be equal to zero to ensure that there are no unaccounted hours left in a given day. These constraints are summarized below:

$$\begin{aligned} \sum \beta_{a1} &= 0; \text{ i. e., } \beta_{31} = 0 - \beta_{11} - \beta_{21} \\ \sum \beta_{aX} &= 0; \text{ i. e., } \beta_{3X} = 0 - \beta_{1X} - \beta_{2X} \\ \sum \beta_{a0} &= 24; \text{ i. e., } \beta_{30} = 24 - \beta_{10} - \beta_{20} \end{aligned} \quad (3)$$

Finally, taking advantage of a unique feature of the dataset, we examine the association between the availability of childcare and the likelihood of providing childcare as a secondary activity and the number of hours spent on it. The time-use module in the individual dataset includes a question on whether or not the respondent provided care for children while engaging in their primary activities. Specifically, while logging daily activities in the time diaries, individuals also indicated whether or not they also cared for children at each timeslot. We consider affirmative responses to this question as indication of “secondary childcare” provision, but to avoid double counting, we exclude those cases in which the respondent identified childcare as their primary activity. We use a probit model similar to model (1) to estimate the likelihood of engaging in childcare as a secondary activity:

$$S_i = \beta_0 + \beta_{1\theta}C_{\theta i} + \beta_X X_i + \varepsilon_i, S_i^* = \mathbb{I}(S_i^* > 0) \quad (4)$$

where,  $S_i$  takes the value of 1 if individuals performed childcare along with primary activities (market work, unpaid work, and other activities excluding primary childcare) and 0 otherwise; and  $C_{\theta}$ ,  $\theta=0,1,2$ ,  $X$  and  $\varepsilon$  are as defined above.<sup>15</sup>

To estimate the time spent on secondary childcare, we use a regression model akin to model (2):

$$O_i = \beta_0 + \beta_{1\theta}C_{\theta i} + \beta_X X_i + \varepsilon_i \quad (5)$$

where,  $O_i$  is time spent (in hours) on secondary childcare along with primary activities (market work, unpaid work, and other activities excluding primary childcare). In estimating this model, we first give equal weight to the amount of time spent on primary activities and secondary childcare at the same time. For example, an hour spent on working while providing childcare as a secondary activity is counted as one hour spent on secondary childcare. We then repeat the same analysis by deflating the weight put on secondary childcare by half (an hour spent on working while providing childcare as a secondary activity is counted as half an hour of secondary childcare provision) to reflect the low-intensity nature of secondary

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<sup>15</sup> Because of the small sample size, we also run a Generalized Maximum Entropy (GME) model on the likelihood of engaging in childcare as a secondary activity to check the consistency of the results with the probit estimate. We confirm that the results are qualitatively similar to the findings presented in this paper.

childcare, which does not require active involvement of the caregiver for the full period in any given hour.<sup>16</sup>

It is worth noting that the relationships explored in this paper can be subject to endogeneity. For instance, it is possible that women stay at home because they have younger children who need childcare, but it is also possible that women who do not participate in the labor market have different fertility choices and have more babies. Similarly, women may do less market work because their time is taken up by childcare needs, but they may also have more childcare needs because they do market work. We cannot address these issues since the dataset does not include appropriate instruments. Our results should be interpreted with caution without any claims about causality.

### **3. Empirical Findings**

#### *3.1. Labor Force Participation, Employment, and Income Earning Status*

The labor market outcomes show large differences across the three groups of women examined in this paper. Figure 2 shows that 59.7 percent of the women in Group A (those that do not have children or have children aged 6 years and older) reported being income earners, while 62.1 percent reported participating in the labor market, and 58.8 percent reported working in the past 30 days.<sup>17</sup> These rates are significantly higher than the rates for women who have young children. In particular, women in Group B and C, respectively, have a 15.7 and 28.4 percent lower labor force participation rate than those in Group A. In addition, a much larger share of women in Group A reported working in the past 30 days (15.2 and 32.6 percent higher than Groups B and C, respectively) or earning an income (17.2 and 32.2 percent higher than Groups B and C, respectively). The bivariate differences across the three groups are statistically significant at 5 percent or lower. In other words, having young children ages 0–5 confers a clear labor market disadvantage for mothers in Groups B and C.

Comparing Groups B and C, which include mothers of young children with different levels of childcare support, gives a sense of the labor market disadvantage that may be driven by access to childcare. Between these two groups, those who do not have access to childcare (Group C) face a larger disadvantage than women who have access to childcare (Group B). Measured with respect to the reference category, Group A, the disadvantage faced by Group C is about twice as large as the disadvantage faced by Group B. More specifically, while the FLFP rate of Group B is only 17.2 percent

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<sup>16</sup> We run Tobit regressions on time spent on secondary childcare with full control variables to check the consistency of the results with OLS estimates. We confirm that findings are reasonably consistent with the findings presented in this paper.

<sup>17</sup> The survey oversampled the working-age women and men, resulting in a higher female labor force participation rate in this dataset compared to the national statistics for Bangladesh and for urban areas in Bangladesh.

lower than Group A, the FLFP rate of Group C is 32.2 percent lower. Looked at differently, availability of childcare goes hand-in-hand with better labor market outcomes. Compared to Group C, an additional 15.1 percent of mothers in Group B with access to childcare reported being earners; an additional 12.7 percent of them participated in the labor market; and an additional 17.4 percent worked in the last 30 days. Again, all the bivariate differences are statistically significant at 5 percent or lower.<sup>18</sup>

**Figure 2. Percentage of respondents who earned income, participated in the labor market, or worked in the last 30 days (by motherhood and access to childcare)**



Note: Survey weights were applied. Differences across groups are statistically significant at 5% or below.

Next, we test these descriptive patterns in a multivariate setting presented in model (1), after controlling for a range of covariates. We add the covariates stepwise to the probit model specification to check the sensitivity of the results to the individual, household, and regional variables. The marginal effects reported in Table 2 confirm the descriptive findings above that women with young children aged 0–5 years (Groups B and C) have worse labor market outcomes compared to those who have no children or have children aged 6 years and older (Group A), with mothers of young children who do not have access to childcare facing the largest penalty.

<sup>18</sup> As an additional analysis, we also assess the availability of childcare by women and men. Our descriptive findings in Appendix A, Table A1 shows that almost all men aged 15-49 years who have youngest children ages 0-5 years indicated that they have access to childcare. Additional descriptive analyses of gender gaps in labor market outcomes and time allocation between all women and men aged 15-49 years, and women and men aged 15-49 years with youngest children ages 0-5 years, reveal the gendered division of labor in the low-income neighborhoods of Dhaka. Table A2 in Appendix A shows that almost all men participate in the labor market or are employed, spending more time in market work than women. Women, however, spend nearly 14 times more time doing unpaid work relative to men. Men's participation and the time spend on secondary childcare are also minimal compared to women. Interestingly, these gaps in labor market outcomes and time allocation increase between women and men with young children aged 0-5 years.

**Table 2. Marginal effects of the correlation between the availability of childcare and labor market outcomes**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Earner	LFP in last 30 days	Worked in last 30 days	Earner	LFP in last 30 days	Worked in last 30 days	Earner	LFP in last 30 days	Worked in last 30 days
<i>Ref: A. No child or youngest child is 6 years and older</i>									
B. Youngest child is 0–5 years and childcare available	-0.155*** (0.056)	-0.148*** (0.057)	-0.132** (0.056)	-0.184*** (0.059)	-0.167*** (0.059)	-0.160*** (0.059)	-0.174*** (0.059)	-0.157*** (0.059)	-0.150** (0.059)
C. Youngest child is 0–5 years and no childcare available	-0.313*** (0.056)	-0.281*** (0.057)	-0.315*** (0.055)	-0.311*** (0.058)	-0.278*** (0.060)	-0.315*** (0.057)	-0.305*** (0.058)	-0.273*** (0.060)	-0.309*** (0.057)
Age	0.077*** (0.022)	0.085*** (0.022)	0.078*** (0.022)	0.062** (0.025)	0.078*** (0.025)	0.065*** (0.025)	0.059** (0.025)	0.074*** (0.024)	0.062** (0.024)
Age squared	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
<i>Ref: Education: No education</i>									
Class 1 to 5	-0.161*** (0.053)	-0.127** (0.053)	-0.140*** (0.053)	-0.128** (0.056)	-0.098* (0.055)	-0.106* (0.056)	-0.137** (0.056)	-0.108* (0.056)	-0.115** (0.056)
Class 6 to 8	-0.201*** (0.068)	-0.194*** (0.068)	-0.183*** (0.068)	-0.120 (0.074)	-0.121* (0.073)	-0.091 (0.074)	-0.110 (0.074)	-0.111 (0.073)	-0.081 (0.073)
Class 9	-0.182* (0.100)	-0.070 (0.100)	-0.160 (0.099)	-0.107 (0.108)	0.014 (0.107)	-0.074 (0.107)	-0.112 (0.106)	0.013 (0.107)	-0.077 (0.106)
SSC and above	-0.118 (0.086)	-0.144* (0.086)	-0.135 (0.087)	-0.021 (0.099)	-0.040 (0.098)	-0.032 (0.100)	-0.037 (0.100)	-0.060 (0.100)	-0.048 (0.102)
Wear burkha to travel outside	-0.104** (0.049)	-0.128*** (0.048)	-0.101** (0.049)	-0.086* (0.050)	-0.104** (0.050)	-0.079 (0.050)	-0.080 (0.051)	-0.097* (0.050)	-0.075 (0.051)
Head's age				-0.001 (0.004)	-0.000 (0.004)	-0.000 (0.004)	-0.001 (0.004)	0.000 (0.004)	0.000 (0.004)
Head is female (=1)				0.283*** (0.084)	0.297*** (0.085)	0.241*** (0.085)	0.289*** (0.086)	0.307*** (0.087)	0.250*** (0.087)
<i>Ref: Head's education: No education</i>									
Class 1 to 5				-0.134** (0.056)	-0.114** (0.055)	-0.127** (0.056)	-0.140** (0.057)	-0.121** (0.056)	-0.132** (0.056)
Class 6 to 8				-0.154** (0.066)	-0.092 (0.065)	-0.150** (0.066)	-0.158** (0.066)	-0.095 (0.065)	-0.151** (0.066)
Class 9				0.045 (0.113)	0.046 (0.114)	-0.002 (0.113)	0.024 (0.112)	0.021 (0.112)	-0.020 (0.113)
SSC and above				-0.157 (0.100)	-0.156 (0.097)	-0.143 (0.100)	-0.163 (0.102)	-0.163* (0.098)	-0.150 (0.101)
HH receive international remittance=1				-0.343** (0.144)	-0.334** (0.146)	-0.291** (0.143)	-0.313** (0.148)	-0.305** (0.150)	-0.262** (0.148)



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Earner	LFP in last 30 days	Worked in last 30 days	Earner	LFP in last 30 days	Worked in last 30 days	Earner	LFP in last 30 days	Worked in last 30 days
Log of HH annual expenditure per capita				-0.013 (0.055)	0.025 (0.049)	-0.037 (0.055)	-0.008 (0.057)	0.030 (0.049)	-0.034 (0.056)
HH living standard index				0.031* (0.018)	0.055*** (0.018)	0.043** (0.018)	0.031* (0.018)	0.057*** (0.018)	0.047** (0.018)
Number of children aged 6 to 14 years				0.049* (0.029)	0.028 (0.028)	0.037 (0.029)	0.059** (0.030)	0.039 (0.029)	0.048 (0.030)
Number of HH members aged 15–64 years – women				0.044 (0.039)	0.060 (0.039)	0.053 (0.039)	0.053 (0.038)	0.070* (0.038)	0.061 (0.038)
Number of HH members aged 15–64 years – men				-0.132*** (0.036)	-0.127*** (0.035)	-0.125*** (0.035)	-0.131*** (0.035)	-0.126*** (0.035)	-0.123*** (0.035)
Number of HH members aged 65+				0.000 (0.080)	-0.012 (0.080)	-0.001 (0.080)	-0.004 (0.079)	-0.016 (0.077)	-0.000 (0.078)
Dhaka City Corporation (=1)							0.057 (0.043)	0.040 (0.043)	0.051 (0.043)
Slum (=1)							-0.031 (0.049)	-0.037 (0.049)	-0.056 (0.049)
<i>Ref: Birthplace: Central</i>									
Northern							0.161* (0.084)	0.155* (0.086)	0.163* (0.083)
Eastern							-0.001 (0.070)	-0.019 (0.071)	-0.032 (0.071)
Southern							0.101* (0.070)	0.116** (0.071)	0.087 (0.071)
Observations	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076

Note: <sup>a</sup>. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>b</sup>. Standard errors are in parentheses.

<sup>b</sup>. Survey weight applied.

Focusing on the model specification that includes all the control variables (Columns 7–9), Table 2 shows that having children 0–5 years is associated with 17.4 percentage points lower likelihood of being an income earner than those with no children or with children 6 years or older. The disadvantage is larger for women who do not have access to childcare. Women who have young children 0–5 years but no access to childcare (Group C) are 30.5 percentage points less likely to be earners, compared to women with no children or children aged 6 or older (Group A). The same findings hold for the other two labor market outcomes as well. Compared to Group A, women in Group B are 15.7 and 15.0 percentage points less likely to participate in the labor market or to have worked in the last 30 days, respectively, whereas women in Group C are 27.3 and 30.9 percentage points less likely to participate in the labor market or to have worked in the last 30 days, respectively. Once again, mothers with young children but no access to childcare support face a penalty nearly twice as large as the one experienced by mothers who have childcare support. This suggests that the motherhood penalty can be partly offset by making childcare services more widely available to the mothers of young children. The Wald tests confirm that the differences in the marginal effects between Groups B and C are statistically significant for all three labor market indicators (see Appendix B, Table B1).

A few individual and household characteristics are statistically significantly associated with the three labor market outcomes examined. These point to the gendered nature of decisions pertaining to women’s economic role and could partly explain the labor market outcomes discussed above. Table 2 shows that the marginal effects on age, sex of household head, household living standard index, and the number of working-age men in the households are statistically significant. The presence of one additional working-age man in the household decreases the likelihood of being earners, participating in the labor market, and the probability of working for women by 13.1, 12.6, and 12.3 percentage points, respectively. This suggests reinforcement of gender roles within households, where women are primarily considered homemakers and men breadwinners. In addition, wearing a *burkha*, a proxy measure for conservative norms practiced by the household, is statistically significantly associated with a 9.7 percentage point decline in the likelihood of participating in the labor market in the last 30 days. This finding is consistent with previous literature on the relationship between conservative norms and women’s economic outcomes in Bangladesh (Ahmed and Sen 2018).

A series of robustness checks, presented in Table 3, tested the sensitivity of these results. First, we limit the sample of women to the prime working age of 25–49 years to remove from the sample women who might not be working because they are still attending school (we call this Subsample 1). Our conclusions remain unchanged. Table 3 shows that compared to the reference category, women in Group

B are estimated to have a lower probability of being earners, participating in the labor force, and working by 17.8, 16.0, and 16.2 percentage points, respectively. Further, women in Group C face a penalty that is nearly twice as large, with a lower probability of being earners, participating in the labor force, and working by 30.4, 28.3, and 30.6 percentage points, respectively.

**Table 3. Summary of the robustness tests results: Marginal effects of the correlation between the availability of childcare and labor market outcomes**

	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
<b>1. Limit the age of women to prime age: 25 to 49 years<sup>a</sup></b>			
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	-0.178** (0.074)	-0.160** (0.073)	-0.162** (0.073)
C. Youngest child is 0–5 years and no childcare available	-0.304*** (0.073)	-0.283*** (0.074)	-0.306*** (0.073)
Observations	829	829	829
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>			
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	-0.250*** (0.066)	-0.240*** (0.065)	-0.233*** (0.066)
C. Youngest child is 0–5 years and no childcare available	-0.376*** (0.066)	-0.353*** (0.066)	-0.388*** (0.066)
Observations	758	758	758
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>			
<i>Ref: A. Youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	-0.205*** (0.076)	-0.226*** (0.076)	-0.230*** (0.074)
C. Youngest child is 0–5 years and no childcare available	-0.358*** (0.076)	-0.348*** (0.077)	-0.337*** (0.076)
Observations	599	599	599
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes

Note: <sup>a</sup> Full table provided in Appendix B, Table B3. <sup>b</sup> Full table is in Appendix B, Table B4. <sup>c</sup> Full table is in Appendix B, Table B5. <sup>d</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance. <sup>e</sup> Standard errors are in parentheses. <sup>f</sup> Survey weight applied.

Next, instead of including all women in the analysis, we limit the sample to those women whose children are 0–12 years (Subsample 2) and 0–8 years (Subsample 3). Generally speaking, the younger the children, the more intense the childcare need and the harder it is for the mother to participate in the labor market in the absence of any childcare support. By excluding the mothers of older children from the

sample, we test whether the stark differences across groups are partly due to the diversity of Group A, which includes women with children of any ages 6 years or above, as well as women with no children. The sample restriction effectively narrows the age range of the children in the reference category to 6–12 years and 6–8 years, respectively.

Again, the main findings and conclusions remain unchanged—if anything, the penalty experienced by mothers of young children grow larger, with those without any childcare support experiencing the largest disadvantage compared to the reference group. As shown in Table 3, under Subsample 2, women in Group C are estimated to have a lower probability of being earners, participating in the labor force, and working than women in Group A by 37.6, 35.3, and 38.8 percentage points, respectively. Similarly, compared to Group A, Group C is estimated to have a lower probability of being earners, participating in the labor force, and working by 35.8, 34.8, and 33.7 percentage points, respectively, under Subsample 3. Comparing Groups B and C, women with children aged 0–5 years face a smaller penalty when childcare support is available. The penalty that women with children aged 0–5 years who have access to childcare face in their probability of working in the last 30 days is 13.5 percentage points lower than that of women with children aged 0–5 who do not have access to childcare. The Wald tests confirm that the difference in marginal effects for Groups B and C are statistically significant (see Appendix B, Table B2).

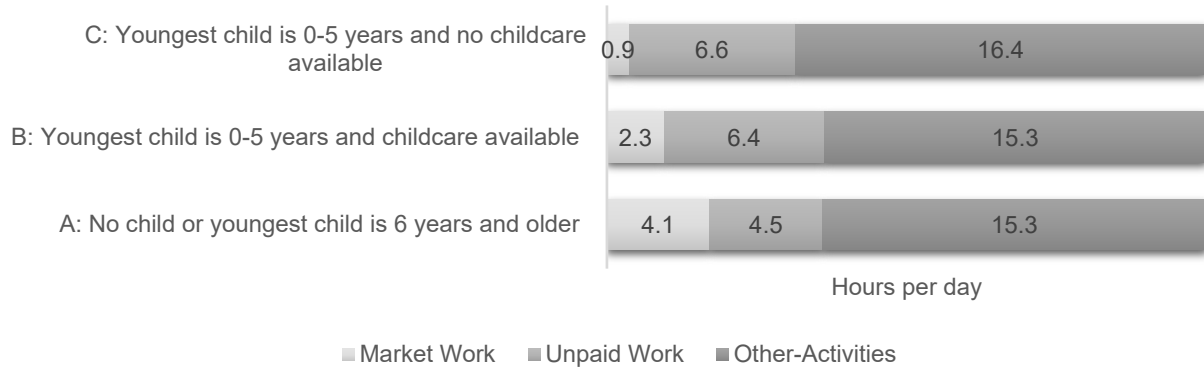
### *3.2. Time Allocation on Market Work, Unpaid Work, and Other Activities*

On any given day, individuals allocate 24 hours across various activities, with any change in the time spent on one activity affecting the amount of time remaining for other activities. Figure 3 shows the time allocation by women in Group A, Group B, and Group C across three primary activities: market work, unpaid work, and other activities. As expected, women in Group A, who face the least amount of pressure for childcare (because they have older children or no children), spend 4.1 hours on average per day on market activities, the largest among the three groups. Women with young children spend on average 2.3 hours per day on market work, while those in Group C spend only 0.9 hours. Compared to Group A, the latter two groups also spend two additional hours on unpaid work that includes domestic chores and caregiving. In particular, compared to 4.5 hours per day of unpaid work performed by women in Group A, those in Group B spend 6.4 hours and those in Group C spend 6.6 hours per day.

Although the bivariate difference in time spent on market work between Group B and Group C are statistically significant, with women in Group C being significantly constrained in their ability to take up market work, there is no such difference between these two groups in the amount of time spent on

unpaid work. A possible explanation for this finding is that women who have young children perform their care obligations and domestic chores equally, irrespective of their participation in the labor market.

**Figure 3. Time allocation (in hours) on primary activities during a 24-hour period (by motherhood and access to childcare)**



Notes: <sup>a</sup>Market work is defined as time spend on: work as employed, own business work, staple grain farming, horticultural (gardens) or high-value crop farming, large livestock raising (cattle, buffaloes), small livestock raising (sheep, goats, pigs), poultry and other small animals raising (chickens, ducks, turkeys), and fishpond culture.<sup>b</sup> Unpaid work is defined as time spend on shopping/getting service (including health services), weaving/sewing/textile care, cooking, domestic work (including fetching water and fuel), and caring for adults (sick, elderly). Unpaid work also includes caring for children as primary activities.<sup>c</sup> Other activities is defined as time spend on sleeping and resting, eating and drinking, personal care, school (including homework), exercising, social activities and hobbies, religious activities, other (specify), and commuting (to/from work or school).

The SUR-OLS estimates for model (2), summarized in Table 4, show differences in time allocation after controlling for individual, household, and regional covariates. The results confirm the descriptive patterns above, indicating that women with young children 0–5 years spend statistically significantly less time on market work than women with no children and women with children 6 years or older. Regressions with full control variables (Columns 7–9) show that, compared to women in Group A, women in Group B spend 1.8 hours less time on paid market work per day, whereas women in Group C spend on average 3 hours less. In other words, women who have young children but no access to childcare in Group C face the largest penalty in terms of the amount of time they have available for market work. Women in Group B, who have young children and access to childcare, are able to spend an additional 1.2 hours on market work per day compared to Group C, with the Wald test indicating that the difference in time allocation across these two groups is statistically significant (see Appendix C, Table C1).

Since the total number of hours in a given day is constant, the results in Table 4 suggest that women with children aged 0–5 years redistribute their time away from market work toward unpaid work. Particularly, women in Group B spend on average an additional 1.8 hours on unpaid work per day, while women in Group C spend an average of 2 additional hours on unpaid work per day, compared to women in Group A. Interestingly, even though women in Group C spend 1 additional hour in other activities in

comparison to women in Group A, there is no such difference between women in Group A and Group B. It is possible that women in Group C are stay-at-home mothers who spend the least amount of time on market work and, therefore, they are able to spend some time on other activities after completing their work around the house.

Looking at the differences between mothers of young children, women in Group B spend more time on market work than those in Group C, but both groups spend an equal amount of time on unpaid work per day. The Wald test indicates that there is no statistically significant difference in the marginal effects of unpaid work between these two groups (see Appendix C, Table C1). This finding suggests that mothers of young children who have access to childcare take advantage of that support and participate in the labor market, or alternatively, it is because they have to work that these women have childcare arrangements in place. Regardless, access to childcare does not relieve any burden of unpaid work on these mothers, who spend as much time on domestic chores and care obligations as mothers of young children who do not have access to childcare and are likely stay-at-home mothers. As a result, working mothers seem to be the most overworked group in terms of shouldering the double burden of paid work and unpaid work, despite having access to childcare support.

Finally, we perform robustness checks using the same three subsamples used for testing the association between childcare availability and women's labor market outcomes. In the first subsample, we limit the age of women to 25–49 years to explore how women allocate their time during their prime working age years. The second and third subsamples focus on mothers with young children aged 0–12 years and 0–8 years, respectively, to explore the change in time allocation across paid work and unpaid work by children's age.

As shown in Table 5, for women in Group B and C, having children aged 0–5 is associated with less time being spent on market work compared to the reference group. The Wald tests confirm that the differences in marginal effects of time spent on market work by women with children aged 0–5 with and without childcare are not statistically significant (see Appendix C, Table C3). In other words, women with children aged 0–5 spend more time in unpaid work in general, regardless of the availability of childcare support. That women with young children spend the same amount of time to take care of household responsibilities irrespective of their labor market status suggest the presence of a gendered division of labor in the sampled urban areas of Dhaka.

**Table 4. Regression estimates of the relationship between the availability of childcare and time allocation on primary activities**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
<i>Ref: A. No child or youngest child is 6 years and older</i>									
B. Youngest child is 0–5 years and childcare available	-1.688*** (0.485)	1.854*** (0.300)	-0.166 (0.276)	-1.932*** (0.455)	1.829*** (0.298)	0.103 (0.367)	-1.786*** (0.454)	1.785*** (0.297)	0.0004 (0.366)
C. Youngest child is 0–5 years and no childcare available	-3.149*** (0.426)	2.125*** (0.282)	1.02*** (0.382)	-3.143*** (0.418)	2.025*** (0.282)	1.117*** (0.373)	-3.064*** (0.413)	1.997*** (0.281)	1.066*** (0.371)
Age	0.360** (0.167)	0.108 (0.110)	-0.467*** (0.138)	0.331* (0.185)	0.122 (0.114)	-0.453*** (0.151)	0.296 (0.182)	0.126 (0.114)	-0.421*** (0.150)
Age squared	-0.006** (0.003)	-0.001 (0.002)	0.007*** (0.002)	-0.005* (0.003)	-0.001 (0.002)	0.007*** (0.002)	-0.005* (0.003)	-0.002 (0.002)	0.006*** (0.002)
<i>Ref: Education: No education</i>									
Class 1 to 5	-0.911** (0.446)	0.664*** (0.252)	0.247 (0.348)	-0.522 (0.446)	0.428* (0.260)	0.094 (0.343)	-0.601 (0.442)	0.433* (0.258)	0.169 (0.340)
Class 6 to 8	-1.525*** (0.567)	0.442 (0.335)	1.083** (0.474)	-0.805 (0.586)	0.139 (0.326)	0.666 (0.490)	-0.705 (0.578)	0.113 (0.325)	0.592 (0.482)
Class 9	-2.006*** (0.620)	1.491*** (0.504)	0.515 (0.581)	-1.592** (0.656)	1.158** (0.500)	0.434 (0.632)	-1.625** (0.657)	1.174** (0.494)	0.451 (0.630)
SSC and above	-1.028 (0.667)	0.341 (0.355)	0.687 (0.562)	-0.271 (0.736)	-0.137 (0.438)	0.407 (0.624)	-0.459 (0.741)	-0.082 (0.442)	0.542 (0.617)
Wear burkha to travel outside	-1.056*** (0.390)	0.440* (0.231)	0.616* (0.324)	-0.925** (0.371)	0.291 (0.231)	0.634** (0.321)	-0.827** (0.376)	0.233 (0.233)	0.594* (0.326)
Head's age				-0.012 (0.027)	-0.009 (0.014)	0.021 (0.022)	-0.010 (0.026)	-0.010 (0.014)	0.020 (0.021)
Head is female (=1)				1.441** (0.639)	-1.342*** (0.337)	-0.098 (0.510)	1.542** (0.630)	-1.329*** (0.333)	-0.213 (0.500)
<i>Ref: Head's education: No education</i>									
Class 1 to 5				-0.914** (0.411)	0.666*** (0.254)	0.248 (0.332)	-0.941** (0.411)	0.672*** (0.253)	0.269 (0.330)
Class 6 to 8				-1.125** (0.468)	0.485 (0.302)	0.640 (0.403)	-1.117** (0.464)	0.489 (0.302)	0.627 (0.405)
Class 9				0.986 (0.992)	0.072 (0.646)	-1.058 (0.739)	0.838 (0.967)	0.151 (0.630)	-1.00 (0.742)
SSC and above				-1.139 (0.726)	1.072** (0.540)	0.066 (0.678)	-1.168 (0.744)	1.058* (0.541)	0.110 (0.678)
HH receive international remittance=1				-1.262 (1.059)	1.489** (0.648)	-0.226 (0.743)	-1.033 (1.092)	1.372** (0.644)	-0.339 (0.781)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
Log of HH annual expenditure per capita				-0.649*	-0.168	0.817***	-0.602	-0.222	0.824***
				(0.390)	(0.248)	(0.317)	(0.396)	(0.251)	(0.319)
HH living standard index				0.177	-0.043	-0.134	0.182	-0.002	-0.180
				(0.131)	(0.083)	(0.109)	(0.135)	(0.084)	(0.111)
Number of children aged 6–14 years				-0.034	0.174	-0.140	0.042	0.158	-0.199
				(0.216)	(0.130)	(0.169)	(0.215)	(0.132)	(0.165)
Number of HH members aged 15–64 years – women				0.063	0.125	-0.188	0.109	0.097	-0.206
				(0.297)	(0.192)	(0.215)	(0.287)	(0.187)	(0.210)
Number of HH members aged 15–64 years – men				-0.786***	0.391***	0.395*	-0.760***	0.404***	0.355*
				(0.278)	(0.146)	(0.210)	(0.272)	(0.144)	(0.205)
Number of HH members aged 65+				0.040	-0.044	0.003	0.048	0.013	-0.060
				(0.599)	(0.385)	(0.391)	(0.571)	(0.376)	(0.369)
Dhaka City Corporation (=1)							0.005	-0.401**	0.395*
							(0.304)	(0.194)	(0.241)
Slum (=1)							-0.133	-0.350	0.483*
							(0.359)	(0.234)	(0.289)
<i>Ref: Birthplace: Central</i>									
Northern							1.689**	-0.667*	-1.021**
							(0.680)	(0.362)	(0.505)
Eastern							-0.475	-0.260	0.735*
							(0.503)	(0.293)	(0.398)
Southern							0.762*	-0.392	-0.371
							(0.419)	(0.251)	(0.344)
Constant	0.240	1.933	21.828***	7.971*	2.948	13.081***	7.462*	4.116	12.421***
	(2.621)	(1.687)	(2.199)	(4.381)	(3.151)	(3.682)	(4.403)	(3.168)	(3.698)
Observations	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076

Note: <sup>a</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Figure 3.

<sup>a</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>b</sup> Standard errors are in parentheses.

<sup>b</sup> Survey weight applied.



**Table 5. Summary of the robustness tests results: Regression estimates of the relationship between the availability of childcare and time allocation on primary activities**

	(1)	(2)	(3)
	Market work <sup>d</sup>	Unpaid work <sup>d</sup>	Other activities <sup>d</sup>
<b>1. Limit the age of women to prime age: 25–49 years<sup>a</sup></b>			
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	-2.197*** (0.576)	1.732*** (0.383)	0.465 (0.433)
C. Youngest child is 0–5 years and no childcare available	-3.238*** (0.520)	1.887*** (0.347)	1.351*** (0.428)
Observations	829	829	829
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>			
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	-2.395*** (0.538)	1.945*** (0.343)	0.451 (0.432)
C. Youngest child is 0–5 years and no childcare available	-3.606*** (0.510)	2.109*** (0.337)	1.500*** (0.421)
Observations	758	758	758
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>			
<i>Ref: A. Youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	-2.366*** (0.605)	1.601*** (0.383)	0.764 (0.478)
C. Youngest child is 0–5 years and no childcare available	-3.635*** (0.588)	1.759*** (0.372)	1.875*** (0.473)
Observations	599	599	599
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes

Note: <sup>a</sup> Full table provided in Appendix C, Table C5. <sup>b</sup> Full table is in Appendix C, Table C6. <sup>c</sup> Full table is in Appendix C, Table C7. <sup>d</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Figure 3. <sup>e</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance. <sup>f</sup> Standard errors are in parentheses. <sup>g</sup> Survey weight applied.

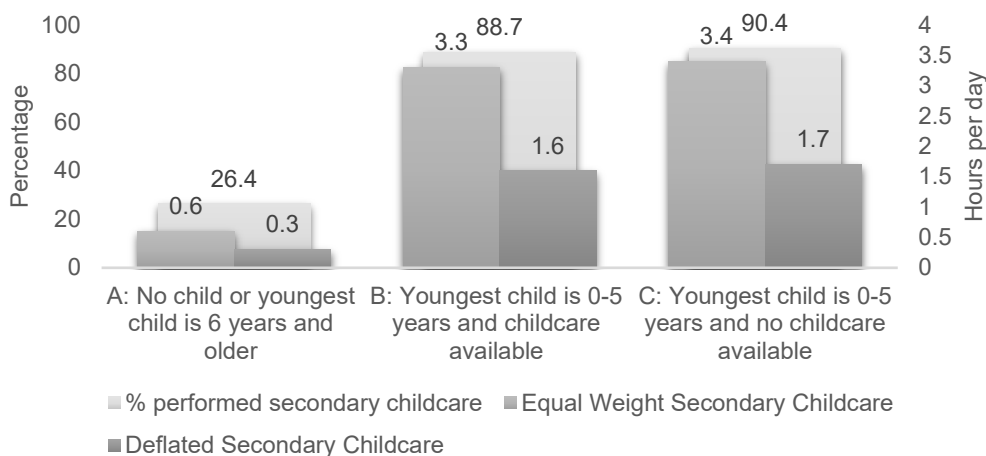
### 3.3. Childcare as a Secondary Activity

As mentioned earlier, a unique feature of the dataset is the inclusion of information on childcare performed as a secondary activity, along with other paid and unpaid work. Childcare is considered a primary activity if the caregiver is actively involved in children’s activities for a large part of the day. It is considered a secondary or supervisory activity if the caregiver engages in another primary activity and keeps an eye on children at the same time. This information makes it possible to explore the relationship

between the availability of childcare and the likelihood of performing childcare as a secondary activity, as well as the amount of time women spend on secondary childcare, to better capture the double burden of work and caregiving roles.

The proportion of women who reported providing secondary childcare is presented in Figure 4 (left axis), along with the amount of time spent on secondary childcare (right axis). Only 26.4 percent of women in Group A performed secondary childcare, since they either have no children or their children are 6 years or older,<sup>21</sup> compared to 88.7 percent of Group B and 90.4 percent of Group C. Therefore, it is not surprising that women in Group A spend less time in secondary childcare (0.6 hours with equal weight) than women in Group B (3.3 hours) and Group C (3.4 hours). Interestingly, similar to findings on unpaid work, there are no significant differences in the proportion of mothers who perform secondary childcare (88.7 versus 90.4 percent) or the time spent on secondary childcare (3.3 versus 3.4 hours per day) between women in Group B and Group C.

**Figure 4. Percentage of respondents performing secondary childcare (left axis) and time allocation (in hours) on secondary childcare (right axis) (by motherhood and access to childcare)**



Note: a. In summing the total time spent in secondary or overlapped childcare, overlapped childcare is given equal (1.00) weight with primary activities when the childcare was performed. b. In summing the total time spent in secondary or overlapped secondary childcare, overlapped childcare is deflated by giving the half (0.50) the weight of primary activities when the childcare was performed. c. Survey weights applied.

The marginal effects from probit regression in model (4) are presented in Table 6, showing the correlation between the availability of childcare and the probability of performing secondary childcare (Column 7). The findings indicate that women in Group C, who have young children 0–5 years but no

<sup>21</sup> Group A consists of women with no children or children aged 6 years and older. However, they may still do secondary childcare if there are young children in their households that belong to extended family members, or they themselves take care of the children of others, such as neighbors or friends.

access to childcare, are 65.3 percentage points more likely to perform secondary childcare compared to women in Group A. Similarly, even with childcare available, women who have children 0–5 years are 67.7 percentage points more likely to perform secondary childcare than the reference group. The Wald test shows that the 2.4 percentage point difference in the marginal effects between Group B and C is not statistically significant, suggesting that the likelihood of performing secondary childcare is the same for the mothers of young children, regardless of whether or not they have access to childcare (see Appendix C, Table C2).

Table 6 also shows the SUR-OLS regression results on the association between the availability of childcare and the time spent on secondary childcare based on model (5). For this model, we report two alternative results, one of which puts equal weights on the primary activity and secondary childcare (one hour of primary activity conducted alongside secondary childcare counts as one hour of secondary childcare) and the other one puts only half the weight on secondary childcare (one hour of primary activity conducted alongside secondary childcare counts as half an hour of secondary childcare). In the model with equal weights and full control variables (Column 8), women with children aged 0–5 with no access to childcare spend 2.7 hours more time performing secondary childcare, while women with children aged 0–5 with access to childcare spend 2.4 hours more time, compared with women with no children or children aged 6 years and older. The Wald test of equality shows that the difference of 0.3 hours in the marginal effects for Group B and C is not statistically significant (see Appendix C, Table C2). In other words, similar to the time-use findings discussed above, irrespective of the availability of childcare support, women with children aged 0–5 are more likely to perform secondary childcare and for longer periods per day. Again, the findings point to the gendered distribution of caregiving.

Finally, the robustness checks using models (4) and (5), presented in Table 7, confirm the validity of these findings. Consistent with the previous results, women who have children 0–5 years old have a higher probability of performing secondary childcare than the reference group of women in the three subsamples discussed above. Women with children 0–5 years also spend more time doing secondary childcare than those in the reference group. The Wald tests of equality (Appendix C, Table C4) do not show any significant differences between the marginal effects of women with children aged 0–5 years with and without childcare.

**Table 6. Marginal effects of the likelihood of doing secondary activities and regression estimates of the relationship between the availability of childcare and time allocation on secondary childcare**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: A. No child or youngest child is 6 years and older</i>									
B. Youngest child is 0–5 years and childcare available	0.606*** (0.039)	2.414*** (0.298)	1.207*** (0.149)	0.650*** (0.042)	2.401*** (0.302)	1.200*** (0.151)	0.653*** (0.042)	2.440*** (0.299)	1.220*** (0.149)
C. Youngest child is 0–5 years and no childcare available	0.625*** (0.041)	2.518*** (0.277)	1.259*** (0.139)	0.674*** (0.039)	2.582*** (0.282)	1.291*** (0.141)	0.677*** (0.039)	2.674*** (0.276)	1.337*** (0.138)
Age	0.079*** (0.022)	0.057 (0.087)	0.028 (0.044)	0.021 (0.025)	-0.036 (0.088)	-0.018 (0.044)	0.021 (0.025)	-0.047 (0.087)	-0.023 (0.043)
Age squared	-0.001*** (0.0003)	-0.001 (0.001)	-0.001 (0.001)	-0.0004 (0.0004)	0.0004 (0.004)	0.0001 (0.001)	-0.0004 (0.0004)	0.0004 (0.001)	0.0002 (0.001)
<i>Ref: Education: No education</i>									
Class 1 to 5	0.030 (0.055)	0.129 (0.236)	0.065 (0.118)	0.013 (0.057)	0.110 (0.279)	0.055 (0.140)	0.008 (0.057)	0.116 (0.278)	0.058 (0.139)
Class 6 to 8	0.029 (0.073)	0.316 (0.314)	0.158 (0.157)	0.042 (0.077)	0.408 (0.353)	0.204 (0.177)	0.045 (0.077)	0.439 (0.341)	0.219 (0.170)
Class 9	0.046 (0.129)	-0.314 (0.374)	-0.157 (0.187)	0.064 (0.122)	-0.131 (0.409)	-0.066 (0.205)	0.058 (0.124)	-0.139 (0.411)	-0.069 (0.206)
SSC and above	0.148 (0.090)	0.004 (0.311)	0.002 (0.156)	0.162 (0.104)	0.171 (0.382)	0.086 (0.191)	0.148 (0.102)	0.163 (0.382)	0.081 (0.191)
Wear burkha to travel outside	0.019 (0.051)	-0.335* (0.183)	-0.167* (0.092)	0.003 (0.054)	-0.399** (0.193)	-0.199** (0.097)	0.004 (0.056)	-0.408** (0.197)	-0.204** (0.098)
Head's age				-0.004 (0.003)	-0.016 (0.012)	-0.008 (0.006)	-0.004 (0.003)	-0.016 (0.012)	-0.008 (0.006)
Head is female (=1)				-0.105 (0.088)	0.030 (0.348)	0.015 (0.174)	-0.100 (0.087)	0.004 (0.346)	0.002 (0.173)
<i>Ref: Head's education: No education</i>									
Class 1 to 5				0.032 (0.061)	0.207 (0.280)	0.104 (0.140)	0.025 (0.062)	0.193 (0.275)	0.096 (0.138)
Class 6 to 8				-0.044 (0.074)	0.034 (0.409)	0.017 (0.205)	-0.058 (0.075)	0.014 (0.417)	0.007 (0.208)
Class 9				-0.029	-0.553	-0.276	-0.045	-0.642	-0.321

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	With individual controls			With individual + household controls			With individual + household + regional controls		
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
SSC and above				(0.128)	(0.397)	(0.199)	(0.128)	(0.402)	(0.201)
HH receive international remittance=1				-0.017 (0.107)	-0.052 (0.354)	-0.026 (0.177)	-0.027 (0.106)	-0.052 (0.351)	-0.026 (0.175)
Log of HH annual expenditure per capita				0.228* (0.131)	0.233 (0.319)	0.116 (0.160)	0.218 (0.136)	0.347 (0.300)	0.174 (0.150)
HH living standard index				0.070 (0.052)	0.024 (0.198)	0.012 (0.099)	0.067 (0.053)	0.059 (0.202)	0.030 (0.101)
Number of children aged 6 to 14 years				-0.017 (0.020)	-0.050 (0.072)	-0.025 (0.036)	-0.017 (0.021)	-0.068 (0.072)	-0.034 (0.036)
Number of HH members aged 15–64 years – women				0.249*** (0.031)	0.407*** (0.121)	0.203*** (0.061)	0.249*** (0.032)	0.448*** (0.131)	0.224*** (0.066)
Number of HH members aged 15–64 years – men				-0.016 (0.041)	0.295 (0.209)	0.148 (0.104)	-0.018 (0.041)	0.352* (0.214)	0.176* (0.107)
Number of HH members aged 65+				-0.023 (0.041)	-0.042 (0.113)	-0.021 (0.057)	-0.024 (0.042)	-0.038 (0.109)	-0.019 (0.055)
Dhaka City Corporation (=1)				0.073 (0.081)	0.211 (0.404)	0.106 (0.202)	0.062 (0.081)	0.179 (0.391)	0.090 (0.195)
Slum (=1)							-0.102** (0.051)	0.663*** (0.167)	0.332*** (0.084)
<i>Ref: Birthplace: Central</i>									
Northern							-0.056 (0.076)	0.745 (0.561)	0.372 (0.281)
Eastern							0.031 (0.068)	0.529* (0.294)	0.265* (0.147)
Southern							0.078 (0.061)	0.435* (0.237)	0.218* (0.118)
Constant		0.343 (1.381)	0.172 (0.691)		1.340 (2.190)	0.670 (1.095)		0.198 (2.210)	0.099 (1.105)
Observations	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076
R-squared		0.261	0.261		0.283	0.283		0.300	0.300

Note: <sup>a</sup> For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in Figure 4. <sup>a</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>b</sup> Standard errors are in parentheses. <sup>b</sup> Survey weight applied.

**Table 7. Summary of the robustness tests results: Marginal effects of the likelihood of doing secondary activities and regression estimates of the relationship between the availability of childcare and time allocation on secondary childcare**

	(1)	(2)	(3)
	Marginal probit estimates – secondary childcare	Equal weight secondary childcare <sup>d</sup>	Deflated secondary childcare <sup>d</sup>
<b>1. Limit the age of women to prime age: 25–49 years<sup>a</sup></b>			
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	0.573*** (0.058)	2.319*** (0.404)	1.159*** (0.202)
C. Youngest child is 0–5 years and no childcare available	0.600*** (0.051)	2.342*** (0.348)	1.171*** (0.174)
Observations	829	829	829
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>			
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	0.423*** (0.056)	1.907*** (0.349)	0.954*** (0.175)
C. Youngest child is 0–5 years and no childcare available	0.446*** (0.054)	2.169*** (0.326)	1.085*** (0.163)
Observations	758	758	758
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>			
<i>Ref: A. Youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	0.249*** (0.063)	1.294*** (0.412)	0.647*** (0.206)
C. Youngest child is 0–5 years and no childcare available	0.272*** (0.064)	1.584*** (0.411)	0.792*** (0.205)
Observations	599	599	599
Individual controls	Yes	Yes	Yes
Household controls	Yes	Yes	Yes
Regional controls	Yes	Yes	Yes

Note: <sup>a</sup> Full table provided in Appendix C, Table C8. <sup>b</sup> Full table is in Appendix C, Table C9. <sup>c</sup> Full table is in Appendix C, Table C10. <sup>d</sup> For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in Figure 4. <sup>e</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance. <sup>f</sup> Standard errors are in parentheses. <sup>g</sup> Survey weight applied.

#### 4. Conclusion

Women's labor force participation in Bangladesh, while on a steady uphill trend for several decades, remains low and has been declining in urban areas over the past decade. In addition to constraining economic growth, evidence suggests that female labor force participation could result in greater investments in children's education and health, poverty reduction, and overall improvements in household well-being, as well as promoting women's voice and empowerment. Among the factors that have been identified as potential drivers of low and declining FLFP in Bangladesh, access to childcare has received little attention in the literature, especially in urban and low-income contexts.

This paper aimed to address this gap using a unique dataset from the slums and low-income neighborhoods of Dhaka, Bangladesh's largest city. The analysis of labor market outcomes measured the magnitude of the disadvantage that women face in the world of work due to lack of access to childcare. Unlike most previous studies, it used a direct measure of access to childcare, as well as focusing on the urban context where FLFP has been declining in recent years. The time-use analysis not only validated and enriched the labor market analysis with a different outcome variable (number of hours spent on paid market work), but also revealed additional insights about how mothers with differentiated access to childcare divide their time between paid work, unpaid work, and leisure. Finally, the analysis of secondary childcare provision, a common mechanism mothers in developing countries use to cope with the lack of institutional childcare, took this analysis one step further to reflect a fuller picture of the childcare burden experienced by mothers, even when they are engaged in other activities.

The findings support the existence of a significant motherhood penalty, especially for women who have young children but do not have access to childcare support. This finding is confirmed through labor market analysis and time-use analysis of paid work, unpaid work, and other activities. While mothers of young children emerge as the most disadvantaged group in the labor market analysis, though, the time-use analysis reveals another interesting finding. It suggests that working mothers with young children who spend a fair amount of time on market work incur the largest time burden, since they engage in as much unpaid work as mothers of young children who do not engage in as much market work. This group is just as likely to perform childcare as a secondary activity as well, providing further support to the finding that they shoulder a significant double burden. All the findings pass several robustness checks.

The findings imply that future policy and programmatic efforts that seek to increase women's participation in the labor market need to consider childcare as an area of intervention. This is particularly important in urban areas, where women's labor force participation has been declining in recent years, and where anonymity, weaker social support systems, and concerns about safety may not give parents a

lot of options for meeting their childcare needs. Women from low-income households and slums might be particularly disadvantaged, as they are unlikely to be able to afford to leave the labor market at will or pay for professional care services for their children. While the childcare needs of all mothers require intervention, working mothers might need more targeted support to ease the double burden and to provide a pathway for non-working mothers who do not have access to childcare to join the labor force. If left unaddressed, these trends may perpetuate a vicious cycle of women either dropping out of the labor force after childbirth, which typically occurs at a very young age in Bangladesh, or taking on increased double burden of paid and unpaid work, with implications for their own well-being as well as for the well-being of their children.

Addressing the childcare needs in the slums and low-income areas of an urban megacity may not be straightforward, however. Mothers who have access to childcare rely on informal care arrangements such as friends and neighbors, but these arrangements may not be as dependable in cities as they are in rural areas. Institutional support for childcare remains very limited in urban Bangladesh, and even if it were available, the cost of such services would likely deter low-income households from accessing them. In addition, concerns about women's mobility and safety, as well as poor transportation infrastructure, may prevent mothers from accessing available childcare options in different parts of the city. Moreover, given Bangladesh's traditional culture, the responsibility for childcare is assigned to mothers and many parents remain hesitant about leaving their children in childcare centers. Previous research suggests that parents in Bangladesh lack trust and confidence in childcare providers and choose not to enroll their children in care centers, even when these services are available and affordable for them (Elsey et al. 2019).

Future interventions will need to address these and other constraints that may be identified by future research to ease the caregiving burden on women. In addition to traditional supply-side interventions to make childcare centers and subsidies more widely available and accessible, community-based childcare arrangements may help address some challenges associated with caregiving in urban areas at once. Research suggests that community-based childcare has helped reduce child mortality, including drowning and injuries of children in rural parts of Bangladesh (Rahman et al. 2012). In slums and low-income neighborhoods, investing in community-based childcare may serve a dual purpose by promoting the employment of women and elderly as caregivers, as well as enabling more women to enter the labor force in other sectors while ensuring that children receive adequate attention and care.

That said, even though childcare support might enable women to work, they might still end up shouldering a double burden of work given the patriarchal norms in Bangladesh, as suggested by the analysis in this paper. Therefore, it is important to complement local childcare interventions with those



that will not only increase women's labor supply but also reduce women's overall unpaid work. It will be essential to encourage redistribution of the unpaid domestic and care burden among women and men in the household, which will likely help women achieve a work-life balance. If such equitable culture can be promoted, men and the elderly can also work part-time in running the community childcare centers and help reduce women's work intensity. In advocating such new cultural models, policymakers must consider creating a constructive discussion space on family-friendly policies and building on related legislation.

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## Appendix A. Supplemental Tables for Gender Gaps in Labor Market Outcomes and Time Allocation

**Table A1. Distribution of ever-married women and men aged 15-49 years by the availability of childcare**

	Women	Men
A. No child or youngest child is 6 years and older	641 (59.57)	413 (50.86)
B. Youngest child is 0-5 years and childcare available	229 (21.28)	392 (48.28)
C. Youngest child is 0-5 years and no childcare available	206 (19.14)	7 (0.86)
Observations	1076	812

**Table A2. Labor market outcomes and time use of ever-married women and men aged 15-49 years**

	Youngest child is 0-5 years			All		
	Women	Men	ttest	Women	Men	ttest
<b>Labor Market Outcomes</b>						
Earner	36.03	99.68	-63.65***	49.89	98.54	-48.66***
LFP in last 30 days	40.90	97.64	-56.74***	53.30	97.03	-43.73***
Worked in last 30 days	36.02	96.90	-60.87***	49.33	96.24	-46.91***
<b>Time Spend on Primary Activities</b>						
Market work	1.72	9.72	-8.00***	3.12	9.43	-6.30***
Unpaid work	6.61	0.47	6.03***	5.36	0.39	4.98***
Other activities	15.77	13.81	1.96***	15.51	14.18	1.33***
<b>Secondary Childcare</b>						
Likelihood of performing secondary childcare	89.43	45.44	43.99***	52.59	30.63	21.97***
<i>Time spend (in hours)</i>						
Equal weight secondary childcare	3.31	0.59	2.72***	1.74	0.42	1.31***
Deflated secondary childcare	1.65	0.29	1.36***	0.87	0.21	0.66***
Observations	435	399	...	1076	812	...

## Appendix B. Supplemental Tables for Labor Market Analysis

**Table B1. Wald test statistics of equality of the coefficients of labor market outcomes of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
Earners	4.16**
LFP in last 30 days	3.11*
Worked in last 30 days	6.26**

Note: <sup>a</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>b</sup> Survey weight applied.

**Table B2. Robustness tests: Wald test statistics of equality of the coefficients of labor market outcomes of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
<b>1. Limit the age of women to prime age: 25–49 years<sup>a</sup></b>	
Earners	2.26
LFP in last 30 days	2.15
Worked in last 30 days	3.02*
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>	
Earners	3.77*
LFP in last 30 days	2.93*
Worked in last 30 days	5.87**
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>	
Earners	3.54*
LFP in last 30 days	2.64*
Worked in last 30 days	5.54**

Note: <sup>a</sup> Full table provided in Appendix B, Table B3.

<sup>b</sup> Full table is in Appendix B, Table B4.

<sup>c</sup> Full table is in Appendix B, Table B5.

<sup>d</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>e</sup> Standard errors are in parentheses.

<sup>f</sup> Survey weight applied.

**Table B3. Marginal effects of the correlation between the availability of childcare and labor market outcomes, limiting ages of women to prime working age—25–49 years**

	(1)	(2)	(3)
	Earners	LFP in last 30 days	Worked in last 30 days
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	-0.178** (0.074)	-0.160** (0.073)	-0.162** (0.073)
C. Youngest child is 0–5 years and no childcare available	-0.304*** (0.073)	-0.283*** (0.074)	-0.306*** (0.073)
Age	0.072* (0.043)	0.071* (0.042)	0.050 (0.043)
Age squared	-0.001* (0.001)	-0.001* (0.001)	-0.001 (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.090 (0.061)	-0.063 (0.059)	-0.067 (0.060)
Class 6 to 8	-0.097	-0.097	-0.078



	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
Class 9	(0.085) 0.007	(0.082) 0.132	(0.084) 0.046
SSC and above	(0.129) 0.063	(0.121) 0.083	(0.129) 0.096
Wear burkha to travel outside	(0.133) -0.017	(0.126) -0.032	(0.131) -0.021
Head's age	(0.058) -0.000	(0.056) 0.002	(0.057) 0.001
Head is female (=1)	(0.004) 0.360***	(0.004) 0.408***	(0.004) 0.316***
	(0.094)	(0.094)	(0.094)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.152** (0.064)	-0.138** (0.062)	-0.145** (0.063)
Class 6 to 8	-0.200*** (0.074)	-0.160** (0.071)	-0.170** (0.074)
Class 9	0.000 (0.132)	0.063 (0.122)	-0.003 (0.130)
SSC and above	-0.206 (0.137)	-0.212* (0.128)	-0.213 (0.134)
HH receive international remittance=1	-0.386** (0.176)	-0.391** (0.173)	-0.335** (0.168)
Log of HH annual expenditure per capita	-0.026 (0.065)	0.051 (0.054)	-0.045 (0.065)
HH living standard index	0.033 (0.021)	0.063*** (0.020)	0.048** (0.021)
Number of children aged 6–14 years	0.048 (0.031)	0.035 (0.030)	0.038 (0.031)
Number of HH members aged 15–64 years – women	0.037 (0.039)	0.060 (0.038)	0.045 (0.039)
Number of HH members aged 15–64 years – men	-0.116*** (0.037)	-0.098*** (0.036)	-0.102*** (0.036)
Number of HH members aged 65+	-0.011 (0.089)	-0.036 (0.084)	-0.017 (0.087)
Dhaka City Corporation (=1)	0.061 (0.048)	0.042 (0.048)	0.054 (0.048)
Slum (=1)	0.034 (0.057)	0.029 (0.057)	-0.006 (0.057)
<i>Ref: Birthplace: Central</i>			
Northern	0.148 (0.101)	0.151 (0.101)	0.150 (0.101)
Eastern	0.006 (0.078)	0.003 (0.077)	-0.030 (0.077)
Southern	0.061 (0.064)	0.118* (0.062)	0.065 (0.063)
Observations	829	829	829

Note: a. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

b. Standard errors are in parentheses.

b. Survey weight applied.

**Table B4. Marginal effects of the correlation between the availability of childcare and labor market outcomes, limiting the age of children in the sample to 12 years and younger**

	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	-0.250*** (0.066)	-0.240*** (0.065)	-0.233*** (0.066)
C. Youngest child is 0–5 years and no childcare available	-0.376*** (0.066)	-0.353*** (0.066)	-0.388*** (0.066)
Age	0.049 (0.034)	0.054 (0.034)	0.057* (0.034)
Age squared	-0.001 (0.001)	-0.001* (0.001)	-0.001* (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.105 (0.069)	-0.057 (0.068)	-0.097 (0.069)
Class 6 to 8	-0.113 (0.089)	-0.114 (0.087)	-0.091 (0.088)
Class 9	-0.052 (0.121)	0.075 (0.121)	-0.046 (0.121)
SSC and above	-0.068 (0.122)	-0.044 (0.118)	-0.053 (0.122)
Wear burkha to travel outside	-0.093 (0.060)	-0.133** (0.059)	-0.085 (0.060)
Head's age	0.004 (0.005)	0.004 (0.005)	0.005 (0.005)
Head is female (=1)	0.394*** (0.110)	0.455*** (0.099)	0.317*** (0.114)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.173*** (0.066)	-0.153** (0.065)	-0.160** (0.066)
Class 6 to 8	-0.183** (0.077)	-0.113 (0.075)	-0.170** (0.076)
Class 9	-0.096 (0.135)	-0.031 (0.132)	-0.103 (0.134)
SSC and above	-0.264** (0.117)	-0.275** (0.112)	-0.263** (0.117)
HH receive international remittance=1	-0.101 (0.157)	-0.061 (0.155)	-0.029 (0.152)
Log of HH annual expenditure per capita	-0.067 (0.072)	-0.016 (0.059)	-0.104 (0.070)
HH living standard index	0.024 (0.022)	0.042** (0.021)	0.032 (0.022)
Number of children aged 6–14 years	0.012 (0.041)	0.008 (0.041)	0.001 (0.041)
Number of HH members aged 15–64 years – women	0.081 (0.050)	0.071 (0.051)	0.071 (0.051)
Number of HH members aged 15–64 years – men	-0.102** (0.049)	-0.095** (0.048)	-0.095** (0.048)
Number of HH members aged 65+	0.009 (0.091)	-0.007 (0.088)	0.009 (0.090)
Dhaka City Corporation (=1)	0.099* (0.053)	0.092* (0.053)	0.085 (0.053)
Slum (=1)	-0.069 (0.057)	-0.072 (0.057)	-0.082 (0.057)
<i>Ref: Birthplace: Central</i>			
Northern	0.102	0.095	0.104

	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
Eastern	(0.104) 0.006	(0.106) 0.006	(0.104) -0.003
Southern	(0.084) 0.104 (0.066)	(0.082) 0.152** (0.063)	(0.084) 0.108* (0.065)
Observations	758	758	758

Note: a. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

b. Standard errors are in parentheses.

b. Survey weight applied.

**Table B5. Marginal effects of the correlation between the availability of childcare and labor market outcomes, limiting the age of children in the sample to 8 years and younger**

	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
<i>Ref: A. No child or youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	-0.226*** (0.076)	-0.230*** (0.074)	-0.197** (0.077)
C. Youngest child is 0–5 years and no childcare available	-0.348*** (0.077)	-0.337*** (0.076)	-0.347*** (0.077)
Age	0.048 (0.038)	0.054 (0.039)	0.057 (0.038)
Age squared	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.069 (0.079)	-0.024 (0.079)	-0.060 (0.079)
Class 6 to 8	-0.072 (0.099)	-0.066 (0.098)	-0.047 (0.098)
Class 9	0.034 (0.127)	0.175 (0.130)	0.041 (0.126)
SSC and above	-0.003 (0.136)	0.054 (0.135)	0.015 (0.135)
Wear burkha to travel outside	-0.089 (0.067)	-0.146** (0.066)	-0.076 (0.067)
Head's age	0.005 (0.005)	0.006 (0.005)	0.006 (0.005)
Head is female (=1)	0.356*** (0.130)	0.438*** (0.121)	0.266** (0.135)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.160** (0.073)	-0.114 (0.074)	-0.146** (0.073)
Class 6 to 8	-0.225** (0.087)	-0.112 (0.086)	-0.210** (0.086)
Class 9	-0.043 (0.148)	0.046 (0.146)	-0.055 (0.146)
SSC and above	-0.291** (0.123)	-0.304** (0.120)	-0.286** (0.122)
HH receive international remittance=1	-0.121 (0.176)	-0.084 (0.174)	-0.064 (0.167)
Log of HH annual expenditure per capita	0.003 (0.070)	-0.016 (0.068)	-0.046 (0.070)

	(1)	(2)	(3)
	Earner	LFP in last 30 days	Worked in last 30 days
HH living standard index	0.019 (0.023)	0.033 (0.023)	0.027 (0.024)
Number of children aged 6–14 years	0.038 (0.046)	0.032 (0.045)	0.026 (0.045)
Number of HH members aged 15–64 years – women	0.064 (0.060)	0.052 (0.062)	0.052 (0.060)
Number of HH members aged 15–64 years – men	-0.094 (0.065)	-0.089 (0.065)	-0.090 (0.064)
Number of HH members aged 65+	-0.016 (0.099)	-0.035 (0.097)	-0.015 (0.097)
Dhaka City Corporation (=1)	0.076 (0.059)	0.070 (0.060)	0.060 (0.058)
Slum (=1)	-0.071 (0.063)	-0.080 (0.063)	-0.083 (0.063)
<i>Ref: Birthplace: Central</i>			
Northern	0.147 (0.109)	0.119 (0.113)	0.146 (0.109)
Eastern	0.037 (0.091)	0.016 (0.090)	0.027 (0.090)
Southern	0.100 (0.073)	0.127* (0.072)	0.101 (0.072)
Observations	599	599	599

Note: a. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

b. Standard errors are in parentheses.

b. Survey weight applied.

## Appendix C. Supplemental Tables for Time-Use Analysis

**Table C1. Wald test statistics of equality of the coefficients of time spend on primary activities of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
Market work <sup>a</sup>	10.99***
Unpaid work <sup>a</sup>	0.44
Other activities <sup>a</sup>	8.90***

Note: <sup>a</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Table 5.

<sup>b</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup> Survey weight applied.

**Table C2. Wald test statistics of equality of the coefficients of time spend on secondary activities of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
Likelihood of performing secondary childcare	0.36
<i>Time Spend (in hours)</i>	
Equal weight secondary childcare <sup>a</sup>	0.43
Deflated secondary childcare <sup>a</sup>	1.39

Note: <sup>a</sup> For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in Table 6.

<sup>b</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup> Survey weight applied.

**Table C3. Robustness tests: Wald test statistics of equality of the coefficients of time spend on primary activities of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
<b>1. Limit the age of women to prime age: 25–49 years<sup>a</sup></b>	
Market work <sup>d</sup>	3.93**
Unpaid work <sup>d</sup>	0.15
Other activities <sup>d</sup>	4.01**
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>	
Market work <sup>d</sup>	10.14***
Unpaid work <sup>d</sup>	0.28
Other activities <sup>d</sup>	9.19***
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>	
Market work <sup>d</sup>	11.36***
Unpaid work <sup>d</sup>	0.26
Other activities <sup>d</sup>	10.39***

Note: <sup>a</sup> Full table provided in Appendix C, Table C5.

<sup>b</sup> Full table is in Appendix C, Table C6.

<sup>c</sup> Full table is in Appendix C, Table C7.

<sup>d</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Table 5.

<sup>e</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>f</sup> Standard errors are in parentheses.

<sup>g</sup> Survey weight applied.

**Table C4. Robustness tests: Wald test statistics of equality of the coefficients of time spent on secondary activities of women with children aged 0–5 years with and without childcare (Groups B and C)**

	Test statistics
<b>1. Limit the age of women to prime age: 25–49 years<sup>a</sup></b>	
Likelihood of performing secondary childcare	0.19
<i>Time spent (in hours)</i>	
Equal weight secondary childcare <sup>d</sup>	0.00
Deflated secondary childcare <sup>d</sup>	0.00
<b>2. Limit the age of child to 0–12 years<sup>b</sup></b>	
Likelihood of performing secondary childcare	0.45
<i>Time spent (in hours)</i>	
Equal weight secondary childcare <sup>d</sup>	0.54
Deflated secondary childcare <sup>d</sup>	0.54
<b>3. Limit the age of child to 0–8 years<sup>c</sup></b>	
Likelihood of performing secondary childcare	0.53
<i>Time spent (in hours)</i>	
Equal weight secondary childcare <sup>d</sup>	0.65
Deflated secondary childcare <sup>d</sup>	0.65

Note: <sup>a</sup> Full table provided in Appendix C, Table C8.

<sup>b</sup> Full table is in Appendix C, Table C9.

<sup>c</sup> Full table is in Appendix C, Table C10.

<sup>d</sup> For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in Table 6.

<sup>e</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>f</sup> Standard errors are in parentheses.

<sup>g</sup> Survey weight applied.

**Table C5. Regression estimates of the relationship between the availability of childcare and time allocation on primary activities, limiting the age of women to prime working age—25–49 years**

	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	-2.197***	1.732***	0.465
	(0.576)	(0.383)	(0.433)
C. Youngest child is 0–5 years and no childcare available	-3.238***	1.887***	1.350***
	(0.520)	(0.347)	(0.428)
Age	0.108	-0.117	0.008
	(0.354)	(0.235)	(0.273)
Age squared	-0.002	0.002	0.001
	(0.005)	(0.003)	(0.004)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.220	0.503*	-0.283
	(0.485)	(0.299)	(0.366)
Class 6 to 8	-0.721	-0.074	0.795
	(0.641)	(0.393)	(0.533)
Class 9	-1.419	0.663	0.756
	(0.920)	(0.605)	(0.779)
SSC and above	-0.101	-0.756	0.857
	(1.070)	(0.521)	(0.845)
Wear burkha to travel outside	-0.461	0.284	0.177
	(0.467)	(0.271)	(0.376)
Head's age	-0.012	-0.014	0.026

	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
	(0.029)	(0.017)	(0.024)
Head is female (=1)	1.711**	-1.266***	-0.445
	(0.685)	(0.382)	(0.532)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.761	0.458	0.302
	(0.487)	(0.301)	(0.387)
Class 6 to 8	-1.325**	0.585	0.740*
	(0.520)	(0.363)	(0.439)
Class 9	1.280	-0.174	-1.105
	(1.292)	(0.806)	(0.927)
SSC and above	-1.465	1.772***	-0.307
	(1.012)	(0.646)	(0.767)
HH receive international remittance=1	-1.904*	1.572**	0.332
	(1.131)	(0.727)	(0.804)
Log of HH annual expenditure per capita	-0.984**	-0.384	1.368***
	(0.462)	(0.296)	(0.343)
HH living standard index	0.209	-0.049	-0.160
	(0.159)	(0.096)	(0.126)
Number of children aged 6–14 years	-0.094	0.137	-0.043
	(0.228)	(0.140)	(0.173)
Number of HH members aged 15–64 years – women	-0.012	0.058	-0.046
	(0.308)	(0.202)	(0.222)
Number of HH members aged 15–64 years – men	-0.687**	0.365**	0.322
	(0.290)	(0.150)	(0.219)
Number of HH members aged 65+	0.467	-0.157	-0.311
	(0.705)	(0.448)	(0.449)
Dhaka City Corporation (=1)	0.047	-0.407*	0.360
	(0.361)	(0.226)	(0.278)
Slum (=1)	0.016	-0.357	-0.342
	(0.434)	(0.282)	(0.340)
<i>Ref: Birthplace: Central</i>			
Northern	1.674*	-0.721*	-0.953
	(0.865)	(0.425)	(0.626)
Eastern	-0.754	-0.080	0.834*
	(0.581)	(0.344)	(0.453)
Southern	0.798	-0.497*	-0.301
	(0.518)	(0.288)	(0.400)
Constant	14.642**	10.386**	-1.029
	(6.788)	(5.185)	(5.286)
Observations	829	829	829

Notes: <sup>a</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Table 5.

<sup>b</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup> Standard errors are in parentheses.

<sup>d</sup> Survey weight applied.

**Table C6. Regression estimates of the relationship between the availability of childcare and time allocation on primary activities, limiting age of children to 12 years and younger**

	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	-2.395*** (0.538)	1.945*** (0.343)	0.451 (0.432)
C. Youngest child is 0–5 years and no childcare available	-3.606*** (0.510)	2.109*** (0.337)	1.500*** (0.421)
Age	0.071 (0.216)	0.241 (0.151)	-0.311* (0.175)
Age squared	-0.001 (0.004)	-0.004 (0.002)	0.005* (0.003)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.104 (0.489)	0.490 (0.315)	-0.386 (0.367)
Class 6 to 8	-0.201 (0.653)	-0.038 (0.391)	0.239 (0.564)
Class 9	-1.061 (0.695)	1.081* (0.588)	-0.20 (0.676)
SSC and above	0.141 (0.734)	-0.037 (0.568)	-0.104 (0.661)
Wear burkha to travel outside	-0.727* (0.419)	0.086 (0.298)	0.641* (0.378)
Head's age	-0.012 (0.034)	-0.011 (0.022)	0.024 (0.028)
Head is female (=1)	1.702** (0.767)	-1.477*** (0.441)	-0.225 (0.593)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-1.341*** (0.455)	1.000*** (0.316)	0.341 (0.363)
Class 6 to 8	-1.069** (0.528)	0.556 (0.348)	0.513 (0.447)
Class 9	-0.621 (1.035)	0.614 (0.620)	0.007 (0.813)
SSC and above	-1.676*** (0.609)	1.327* (0.717)	0.350 (0.684)
HH receive international remittance=1	-0.062 (1.336)	0.497 (0.753)	-0.435 (1.106)
Log of HH annual expenditure per capita	-1.286*** (0.430)	0.011 (0.288)	1.274*** (0.348)
HH living standard index	0.038 (0.154)	0.039 (0.105)	-0.077 (0.122)
Number of children aged 6–14 years	-0.055 (0.262)	0.355** (0.178)	-0.301 (0.224)
Number of HH members aged 15–64 years – women	0.551 (0.365)	0.125 (0.262)	-0.675*** (0.255)
Number of HH members aged 15–64 years – men	-0.565 (0.372)	0.084 (0.220)	0.481* (0.285)
Number of HH members aged 65+	-0.150 (0.653)	-0.354 (0.388)	0.504 (0.441)
Dhaka City Corporation (=1)	0.254 (0.347)	-0.428* (0.235)	0.174 (0.279)
Slum (=1)	-0.141 (0.406)	-0.447 (0.275)	0.587* (0.329)
<i>Ref: Birthplace: Central</i>			
Northern	1.004 (0.691)	-0.411 (0.420)	-0.592 (0.522)



	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
Eastern	-0.055 (0.586)	-0.314 (0.357)	0.369 (0.478)
Southern	0.778* (0.455)	-0.164 (0.312)	-0.613* (0.376)
Constant	16.973*** (4.992)	0.424 (3.672)	6.602* (4.061)
Observations	758	758	758

Notes: <sup>a</sup> For the definitions of labor market work, unpaid work and other activities see footnote of Table 5.

<sup>b</sup> \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup> Standard errors are in parentheses.

<sup>d</sup> Survey weight applied.

**Table C7. Regression estimates of the relationship between the availability of childcare and time allocation on primary activities, limiting age of children to 8 years and younger**

	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
<i>Ref: A. Youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	-2.366*** (0.605)	1.601*** (0.383)	0.764 (0.478)
C. Youngest child is 0–5 years and no childcare available	-3.635*** (0.588)	1.759*** (0.372)	1.875*** (0.473)
Age	0.018 (0.237)	0.290* (0.163)	-0.308 (0.200)
Age squared	-0.000 (0.004)	-0.005* (0.003)	0.005 (0.003)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.074 (0.552)	0.387 (0.368)	-0.313 (0.413)
Class 6 to 8	0.262 (0.721)	-0.047 (0.452)	-0.215 (0.596)
Class 9	-0.818 (0.783)	0.822 (0.654)	-0.003 (0.775)
SSC and above	0.227 (0.804)	-0.151 (0.654)	-0.076 (0.741)
Wear burkha to travel outside	-0.333 (0.436)	-0.155 (0.340)	0.487 (0.417)
Head's age	0.008 (0.036)	-0.007 (0.024)	-0.002 (0.031)
Head is female (=1)	1.864* (0.952)	-1.310** (0.594)	-0.553 (0.694)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-1.195** (0.489)	1.033*** (0.365)	0.161 (0.404)
Class 6 to 8	-1.025* (0.584)	0.857** (0.397)	0.168 (0.482)
Class 9	-0.429 (1.088)	0.578 (0.642)	-0.149 (0.882)
SSC and above	-1.842*** (0.651)	1.392* (0.732)	0.450 (0.737)
HH receive international remittance=1	-0.555 (0.765)	1.019 (0.779)	-0.464 (0.745)
Log of HH annual expenditure per capita	-0.825* (0.480)	-0.122 (0.347)	0.947** (0.397)

	(1)	(2)	(3)
	Market work <sup>a</sup>	Unpaid work <sup>a</sup>	Other activities <sup>a</sup>
HH living standard index	0.160 (0.163)	0.011 (0.121)	-0.171 (0.132)
Number of children aged 6–14 years	-0.117 (0.259)	0.333 (0.205)	-0.216 (0.240)
Number of HH members aged 15–64 years – women	0.038 (0.366)	0.290 (0.301)	-0.327 (0.307)
Number of HH members aged 15–64 years – men	-0.721 (0.458)	0.100 (0.271)	0.621* (0.383)
Number of HH members aged 65+	0.232 (0.665)	-0.433 (0.417)	0.201 (0.449)
Dhaka City Corporation (=1)	0.130 (0.369)	-0.300 (0.258)	0.169 (0.311)
Slum (=1)	-0.099 (0.423)	-0.548* (0.302)	0.646* (0.347)
<i>Ref: Birthplace: Central</i>			
Northern	1.553** (0.732)	-0.701 (0.459)	-0.852 (0.569)
Eastern	-0.210 (0.585)	-0.338 (0.397)	0.548 (0.492)
Southern	0.937* (0.487)	-0.129 (0.357)	-0.808** (0.407)
Constant	13.051** (5.519)	1.234 (4.201)	9.714** (4.728)
Observations	599	599	599

Notes: <sup>a</sup>. For the definitions of labor market work, unpaid work and other activities see footnote of Table 5.

b. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

c. Standard errors are in parentheses.

d. Survey weight applied.

**Table C8. Marginal effects of the likelihood of doing secondary activities and regression estimates of the relationship between the availability of childcare and time allocation on secondary childcare, limiting the age of women to prime working age—25–49 years**

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: A. No child or youngest child is 6 years and older</i>			
B. Youngest child is 0–5 years and childcare available	0.573*** (0.058)	2.319*** (0.404)	1.159*** (0.202)
C. Youngest child is 0–5 years and no childcare available	0.600*** (0.051)	2.342*** (0.348)	1.171*** (0.174)
Age	-0.040 (0.046)	-0.395** (0.200)	-0.197** (0.100)
Age squared	0.0004 (0.001)	0.005* (0.003)	0.002* (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.022 (0.063)	-0.063 (0.311)	-0.031 (0.156)
Class 6 to 8	0.085 (0.087)	0.265 (0.376)	0.133 (0.188)
Class 9	0.167 (0.164)	-0.356 (0.522)	-0.178 (0.261)

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
SSC and above	0.168 (0.143)	0.113 (0.383)	0.057 (0.191)
Wear burkha to travel outside	-0.015 (0.064)	-0.528** (0.236)	-0.264** (0.118)
Head's age	-0.002 (0.004)	-0.010 (0.014)	-0.005 (0.007)
Head is female (=1)	-0.072 (0.094)	0.142 (0.392)	0.071 (0.196)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.001 (0.071)	0.187 (0.336)	0.094 (0.168)
Class 6 to 8	-0.046 (0.086)	-0.000 (0.511)	-0.000 (0.256)
Class 9	-0.117 (0.156)	-0.797* (0.443)	-0.398* (0.222)
SSC and above	-0.158 (0.136)	-0.184 (0.439)	-0.092 (0.220)
HH receive international remittance=1	0.165 (0.154)	-0.020 (0.307)	-0.010 (0.154)
Log of HH annual expenditure per capita	0.110* (0.066)	0.279 (0.251)	0.139 (0.125)
HH living standard index	-0.014 (0.023)	-0.067 (0.081)	-0.033 (0.040)
Number of children aged 6–14 years	0.245*** (0.033)	0.400*** (0.135)	0.200*** (0.067)
Number of HH members aged 15–64 years – women	-0.012 (0.045)	0.353 (0.219)	0.176 (0.109)
Number of HH members aged 15–64 years – men	-0.010 (0.043)	-0.008 (0.116)	-0.004 (0.058)
Number of HH members aged 65+	0.090 (0.092)	0.468 (0.471)	0.234 (0.236)
Dhaka City Corporation (=1)	-0.123** (0.056)	0.685*** (0.197)	0.343*** (0.099)
Slum (=1)	0.006 (0.066)	-0.471* (0.245)	-0.235* (0.122)
<i>Ref: Birthplace: Central</i>			
Northern	-0.100 (0.106)	0.981 (0.795)	0.490 (0.398)
Eastern	-0.014 (0.078)	0.551 (0.350)	0.276 (0.175)
Southern	0.067 (0.068)	0.401 (0.274)	0.201 (0.137)
Constant		4.525 (3.719)	2.263 (1.860)
Observations	829	829	829
R-squared		0.297	0.297

Notes: <sup>a</sup>. For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in Table 6.

<sup>b</sup>. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup>. Standard errors are in parentheses.

<sup>d</sup>. Survey weight applied.

**Table C9. Marginal effects of the likelihood of doing secondary activities and regression estimates of the relationship between the availability of childcare and time allocation on secondary childcare, limiting age of children 12 years and younger**

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: A. Youngest child is 6–12 years</i>			
B. Youngest child is 0–5 years and childcare available	0.423*** (0.056)	1.907*** (0.349)	0.954*** (0.175)
C. Youngest child is 0–5 years and no childcare available	0.446*** (0.054)	2.169*** (0.326)	1.085*** (0.163)
Age	-0.018 (0.028)	-0.082 (0.153)	-0.041 (0.076)
Age squared	0.000 (0.000)	0.001 (0.002)	0.000 (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.009 (0.049)	0.053 (0.399)	0.026 (0.199)
Class 6 to 8	0.038 (0.069)	0.519 (0.472)	0.259 (0.236)
Class 9	0.011 (0.108)	-0.106 (0.536)	-0.053 (0.268)
SSC and above	0.157 (0.098)	0.118 (0.567)	0.059 (0.283)
Wear burkha to travel outside	-0.000 (0.049)	-0.527** (0.263)	-0.263** (0.132)
Head's age	-0.002 (0.004)	-0.025 (0.020)	-0.012 (0.010)
Head is female (=1)	-0.112 (0.079)	-0.055 (0.606)	-0.028 (0.303)
<i>Ref: Head's education: No education</i>			
Class 1 to 5	0.006 (0.053)	0.216 (0.368)	0.108 (0.184)
Class 6 to 8	-0.061 (0.065)	0.018 (0.552)	0.009 (0.276)
Class 9	-0.022 (0.115)	-0.919* (0.542)	-0.460* (0.271)
SSC and above	-0.005 (0.097)	-0.043 (0.466)	-0.022 (0.233)
HH receive international remittance=1	0.482*** (0.171)	0.349 (0.454)	0.174 (0.227)
Log of HH annual expenditure per capita	0.040 (0.051)	0.091 (0.298)	0.045 (0.149)
HH living standard index	-0.018 (0.018)	-0.100 (0.099)	-0.050 (0.049)
Number of children aged 6–14 years	0.099*** (0.030)	0.379** (0.183)	0.189** (0.091)
Number of HH members aged 15–64 years – women	-0.000 (0.038)	0.595* (0.346)	0.297* (0.173)
Number of HH members aged 15–64 years – men	-0.037 (0.037)	0.012 (0.228)	0.006 (0.114)
Number of HH members aged 65+	0.057 (0.074)	0.189 (0.530)	0.094 (0.265)
Dhaka City Corporation (=1)	-0.060 (0.046)	0.924*** (0.221)	0.462*** (0.111)
Slum (=1)	-0.011	-0.271	-0.136

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: Birthplace: Central</i>	(0.048)	(0.291)	(0.146)
Northern	-0.032 (0.067)	0.929 (0.747)	0.464 (0.374)
Eastern	0.111* (0.064)	0.891** (0.431)	0.445** (0.216)
Southern	0.115** (0.056)	0.688** (0.337)	0.344** (0.169)
Constant		0.888 (3.383)	0.444 (1.691)
Observations	758	758	758
R-squared		0.199	0.199

Notes: <sup>a</sup>. For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in

Table 6.

<sup>b</sup>. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup>. Standard errors are in parentheses.

<sup>d</sup>. Survey weight applied.

**Table C10. Marginal effects of the likelihood of doing secondary activities and regression estimates of the relationship between the availability of childcare and time allocation on secondary childcare, limiting the age of children to 8 years and younger**

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: A. Youngest child is 6–8 years</i>			
B. Youngest child is 0–5 years and childcare available	0.249*** (0.063)	1.294*** (0.412)	0.647*** (0.206)
C. Youngest child is 0–5 years and no childcare available	0.272*** (0.064)	1.584*** (0.411)	0.792*** (0.205)
Age	0.009 (0.022)	0.018 (0.175)	0.009 (0.087)
Age squared	-0.0002 (0.0004)	-0.001 (0.003)	-0.0004 (0.001)
<i>Ref: Education: No education</i>			
Class 1 to 5	-0.038 (0.042)	0.005 (0.485)	0.003 (0.242)
Class 6 to 8	-0.028 (0.058)	0.571 (0.557)	0.285 (0.278)
Class 9	-0.103 (0.077)	-0.320 (0.640)	-0.160 (0.320)
SSC and above	0.061 (0.082)	0.023 (0.691)	0.012 (0.346)
Wear burkha to travel outside	-0.009 (0.040)	-0.626** (0.318)	-0.313** (0.159)
Head's age	-0.002 (0.003)	-0.032 (0.026)	-0.016 (0.013)
Head is female (=1)	-0.049 (0.067)	-0.013 (0.861)	-0.007 (0.431)

	(1)	(2)	(3)
	Marginal probit estimates: secondary childcare	Equal weight secondary childcare <sup>a</sup>	Deflated secondary childcare <sup>a</sup>
<i>Ref: Head's education: No education</i>			
Class 1 to 5	-0.033 (0.043)	0.245 (0.455)	0.122 (0.228)
Class 6 to 8	-0.043 (0.056)	0.075 (0.670)	0.038 (0.335)
Class 9	-0.009 (0.096)	-1.138* (0.643)	-0.569* (0.322)
SSC and above	-0.004 (0.078)	-0.160 (0.514)	-0.080 (0.257)
HH receive international remittance=1	0.211* (0.116)	0.375 (0.638)	0.187 (0.319)
Log of HH annual expenditure per capita	0.053 (0.039)	0.106 (0.362)	0.053 (0.181)
HH living standard index	-0.009 (0.015)	-0.128 (0.114)	-0.064 (0.057)
Number of children aged 6–14 years	0.043* (0.024)	0.338 (0.224)	0.169 (0.112)
Number of HH members aged 15–64 years – women	0.011 (0.034)	0.935** (0.440)	0.467** (0.220)
Number of HH members aged 15–64 years – men	-0.005 (0.034)	-0.064 (0.328)	-0.032 (0.164)
Number of HH members aged 65+	0.049 (0.066)	0.107 (0.581)	0.054 (0.291)
Dhaka City Corporation (=1)	-0.026 (0.039)	1.255*** (0.265)	0.627*** (0.132)
Slum (=1)	-0.029 (0.038)	-0.365 (0.339)	-0.183 (0.170)
<i>Ref: Birthplace: Central</i>			
Northern	-0.042 (0.053)	1.154 (0.881)	0.577 (0.440)
Eastern	0.092* (0.049)	1.158** (0.498)	0.579** (0.249)
Southern	0.184*** (0.052)	1.118*** (0.407)	0.559*** (0.204)
Constant		-0.604 (4.074)	-0.302 (2.037)
Observations	599	599	599
R-squared		0.144	0.144

Notes: <sup>a</sup> For the methods of calculating time spend on secondary activities using equal and deflated weights check footnote in

Table 6.

b. \*\*\* 1%, \*\* 5% and \* 10% level of significance.

<sup>c</sup> Standard errors are in parentheses.

<sup>d</sup> Survey weight applied.