The gender employment gap: the effects of extended maternity leave policy in Viet Nam

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Abstract: This study seeks to determine the effect on the gender employment gap and women's employment of the extension of maternity leave from four months to six months in Viet Nam's 2012 Labor Code. To identify this effect, labour market outcomes of groups of women and men are compared. We use the national representative Viet Nam Household Living Standards Survey for 2008–16, with the difference-in-differences approach. The objective of this study is to provide evidence of the relationship between extensions of maternity leave and the gender employment gap in Viet Nam. The findings show that, on average, the new law did not exacerbate the gender employment gap, and there was a narrowing of the gap in the formal jobs sector compared to the waged jobs sector for women of childbearing age without infant children; however, this narrowing is very small. Industry-specific findings show a clear heterogeneity of those effects on the gender employment gap; there are more industries with a wider gap than industries with a narrower gap, and there is evidence of a wider gender gap for women with infants, whereas the gap tends to be narrower for women without infants.

Key words: gender employment gap, women's employment, maternity leave, waged job, formal job

JEL classification: J16, J21

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1 Introduction

The International Labour Organization (ILO) has highlighted the importance of providing maternity protection provisions, which cover three key aspects of maternity leave: the duration, the benefit paid, and the source of funding (ILO 2010). Family policies such as maternity leave and childcare are often introduced by governments to incentivize women's employment. In Asia only five countries meet or exceed the 14-week ILO standard. With the Law on Social Insurance of 2012, Viet Nam increased maternity leave from four to six months, placing Viet Nam among the countries with the longest leave. Why do some countries provide a long maternity leave period, while others offer only a short period? This question is important, because maternity leave is one of the key policies that influence female labour participation and gender equality at work.

We use the date that Viet Nam issued the Labor Code 2012 as a natural experiment to examine the impact of the extended maternity leave on female workers of childbearing age and women who have infants. We incorporate attitudes towards gender-based discrimination, where the extended maternity leave benefits women and not men, to view the gender employment gap under the influence of the new policy. To identify this effect, labour market outcomes of two groups of women and men are compared. We use the national representative Viet Nam Household Living Standards Survey (VHLSS) 2008–16, with a difference-in-differences approach. The findings show that the extension of maternity leave did not exacerbate the gender employment gap among waged jobs, and there are small effects in formal jobs. However, this phenomenon holds only when considering the average effect, and there are significant gender gaps in different industries in both directions—aggravating and mitigating.

The outline of the paper is as follows: Section 2 provides a review of the literature. Section 3 presents the critical characteristics of household data and its suitability for use, descriptive statistics, and the empirical model. In Section 4, we present the estimation results. Finally, Section 5 concludes by summarizing the main findings, discussing some interested points for future research.

2 Literature review and research gaps

An international review of leave policies found that there are three types of leave across the world. (1) Maternity leave is provided for the mother to protect the health of the mother and the newborn child; the mother can use this leave before, during, and after childbirth. (2) Paternity leave is provided for fathers only; the father can use this leave soon after the birth of the child. (3) Parental leave is applied for both mothers and fathers, either as non-transferable or transferable to the other parent; the father and mother can divide the duration of the leave between themselves (Blum et al. 2018).

Maternity leave is central to showing decent work and productivity for women and gender equality at work. Since 1919, the ILO has made maternity protection an important provision. The data from 185 countries and territories over the world in 2013 shows that about one-third of countries provide at least 14 weeks of leave with payment as a requirement of the ILO Maternity Protection Convention 2000 (Figure 1). In the countries where maternity leave is available, the payment is funded by social insurance or public funds. Although there are bright spots in maternity leave policy in some parts of the world, many female workers around the world do not yet have adequate maternity protection. Almost 80 per cent of these women are in Africa and Asia (ILO 2014). In countries where maternity protection exists, its effects on women's employment is unclear.

Figure 1: Statutory duration of maternity leave, 2013 (185 countries and territories)

Duration of maternity leave
- Less than 12 weeks
- 12 to 13 weeks
- 14 to 17 weeks
- 18 weeks or more
- No data
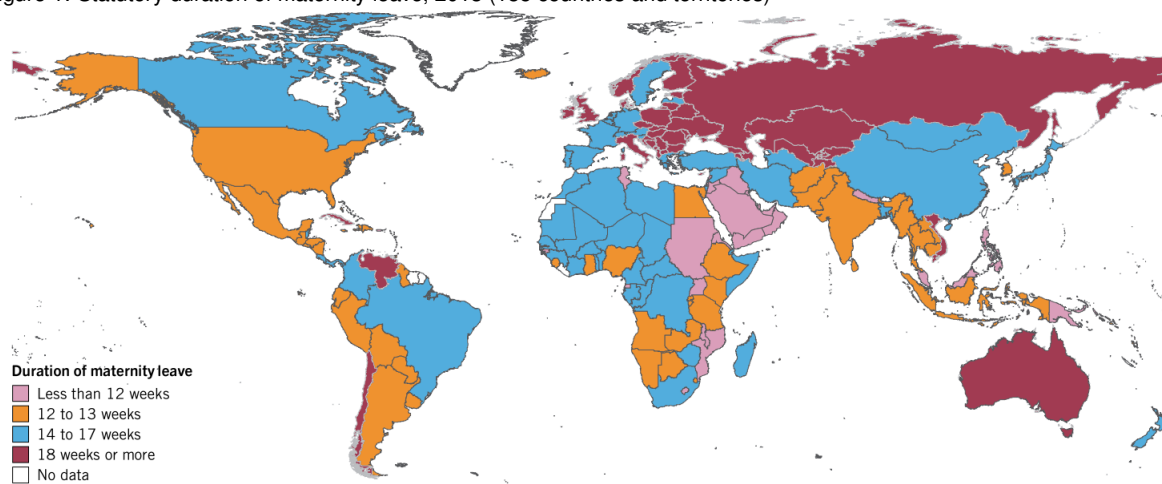
Source: ILO Working Conditions Laws Database—Maternity Protection, 2013. Available at: www.ilo.org/travdatabase.
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Southeast Asian countries have tried to reach common regional standards for labour laws in reference to the ILO conventions and recommendations (Half the Sky 2019). However, they still lag behind the global average in terms of providing employee benefits and maternity leave coverage. Some countries, such as the Philippines, have adopted increased paid maternity leave, up to 105 days from 60 days, with the option to extend for 30 days without pay. Singapore provides 16 weeks of maternity leave with pay. Unfortunately, there was no clear statutory mandated paternity leave in Malaysia until in 2020, when it became 60 days with full pay. Indonesia is the country in the region with the largest economy that grants 12 weeks of paid leave. Thailand also gives 12 weeks of maternity leave for employees, with a maximum of 45 days of full pay; the remaining 45 days are paid from the Social Welfare Fund. Viet Nam is the fastest-growing economy in Southeast Asia and has the longest period of paid maternity leave, at 6 months since 2012.

Viet Nam has a population of more than 90 million, and women contribute significantly to the economy at around 48 per cent of the total labour force. Roughly 73 per cent of women aged 15+ are in the labour force (World Bank 2019). In Viet Nam, women have opportunities to be involved in politics, the sciences, and management. The Vietnamese government has a commitment to promote gender equality at work from the first Labor Code 1994, with a chapter on female workers adopted, then amended in 2002, 2006, 2007, and 2012 (as new Labor Codes). There have been several changes in the length of maternity leave over time, with a low of 8 weeks in the period 1947–60, 9 weeks (60 days) in the period 1960–84, then 26 weeks in the years 1984–94, reduced to 17 weeks (120 days) in 1994–2012, and then in 2012 increased back to 26 weeks (180 days).

The length of maternity leave impacts labour market outcomes in general, and directly impacts women's employment in particular. However, there are different perspectives on those impacts. There is no defined conclusion on the most appropriate duration for maternity leave. When leave is too short, mothers may not feel ready to return to work, they are concerned about their child's and their own health, and they might drop out of the workforce. Conversely, a prolonged absence from the workplace may break women's ties from the labour market (Dustmann and Schonberg 2012). A longer leave period may also increase the risk of discrimination against female workers of childbearing age. If mandated maternity leave benefits increase the cost of labour to employers, then the labour demand curve will shift down as employers pass the costs of the benefits along to mothers in the form of lower wages (Gruber 1994; Gruber and Krueger 1991).

Maternity leave provides an employment guarantee that ensures women of childbearing age have equal-opportunity access to work, to maintain their wages, and to access benefits during their maternity leave, and protection of their previous job and position after giving birth. Some studies carried out in developed economies have found that women's employment is affected by maternity leave and childcare provision. For instance, a study in Germany has found a 'positive and significant correlation between paid maternity leaves and women's return to the workforce after giving birth' (Bergemann and Riphahn 2011). Also focusing on Germany, Schoenberg and Ludsteck (2007) analyse the impact of expansions in leave coverage on mothers' labour market outcomes after childbirth. There is strong evidence that each expansion induces women to delay their return to work. Despite this strong short-term effect, the expansions had little impact on women's labour supply in the long run. On the opposite side, studies in Canada have shown increased likelihood of mothers returning to work when job-protected maternity leave options are in place (Baker and Milligan 2008).

In the United States new mothers return to work very quickly after giving birth. Berger and Waldfogel (2004) examine the relationships between maternity leave coverage and women's post-birth leave-taking and employment decisions from 1988 to 1996. The results suggest that maternity leave coverage is related to leave-taking: women who have jobs with leave coverage return to work more quickly than women without leave coverage. The results also indicate that women with leave coverage are less likely to take a leave longer than 12 weeks, as, in the US context, a woman with job-protected maternity leave coverage would most likely have to return to work within 12 weeks to keep her job. About ten years later, a study by Tominey (2016) also found that in response to a household shock, such as an unexpected change to a husband's employment, women eligible for maternity leave return to work quicker than women who are not protected during maternity leave. The effect of the US maternity leave policy is similar to that of Scandinavian-type policies, which lead to substantial increases in participation of mothers with children under six years old, but with little long-term effect, while the effects on wages are minimal (Low and Sánchez-Marcos 2015).

However, in Colombia, the impact of the extension of maternity leave on women's employment has different conclusions in different studies: Baum (2003) examined the impact of the Family and Medical Leave Act (FMLA) of 1993, which guarantees 12 weeks of unpaid leave for eligible mothers. The results indicate that the legislation increases the number of mothers who eventually return to their pre-childbirth jobs. However, Ramírez Bustamante et al. (2019) found that an extension of maternity leave from 12 to 14 weeks in Colombian labour law in 2011 increased the probability of unemployment, informality, and self-employment, and decreased the wages of women compared with men.

Although there are a number of studies on the effects of maternity leave on women's employment, which have investigated mainly developed countries, none of these have examined the effects of maternity leave on the gender employment gap. In this study we approach the issue from a different direction; we examine whether the extension of maternity leave has an impact on gender equality in the labour force, which is a matter of concern in Viet Nam. Although we do not see a significant effect overall, there are significant differences between industries, which implies the need for policy provisions for specific industries.

3   Data and methodology

3.1   2012 Viet Nam Labor Code

The 2012 Labor Code was approved by the National Assembly of Viet Nam on 18 June 2012, to replace the old Labor Code (which has passed three amendments). It came into effect from 1 May 2013, includ-

ing 17 chapters and 242 articles. The new Labor Code contains new provisions for female employees in chapter X, articles 153–160.

Chapter X includes eight articles regulating the state's policies towards female employees: obligations of employers towards female employees; maternity protection for female employees; the right to unilaterally terminate or suspend labour contracts of pregnant female employees; maternity leave; job security for female employees on maternity leave; allowances when taking leave to care for sick children; antenatal care and contraceptive measures; and whether a job is allowed to use female workers.

This chapter has several new points compared to the Law on Social Insurance 2006:

- It specifies the obligations of employers towards female employees in ensuring the implementation of gender equality principles not only in recruitment and employment, but also in training, working hours, time off, salary, and other benefits.

- It increases the length of maternity leave in accordance with the Law on Social Insurance; specifically, the period of leave before and after childbirth is six months, increased by two months compared to the 2006 Law on Social Insurance. Supplemental regulations allow female employees to take prenatal leave for no more than two months. Before the expiration of her maternity leave, female workers have the right to go to work early without risking harm to their health.

- There are supplemental regulations on job security for female employees after giving birth; if they cannot return to their old jobs, they will be assigned another job by their employer with a salary not lower than the salary before their maternity leave.

- There are some cases where female employees are entitled to benefits when taking leave to care for sick children or in other situations, such as curettage, abortion, stillbirth, pathological abortion, etc., to comply with regulation provisions in the Law on Social Insurance.

With the above provisions in the Labor Code 2012, Viet Nam became one of the countries with the best maternity policies in Southeast Asia.

3.2   Sample selection

In this study we use four national representative VHLSS: 2008, 201,0 2014, and 2016. The baseline period for our analysis is 2008 through 2010 as the pre-period, and 2014 through 2016 as the post-period.

The VHLSS are conducted every two years to monitor systematically the living standards of Viet Nam's societies and, at the same time, to exercise monitoring and assessment of the implementation of the Comprehensive Poverty Alleviation and Growth Strategy. The VHLSS covers the whole country. Samples from the VHLSS are selected to represent the entire country, covering eight regions including urban and rural areas, and 64 provinces/cities.

Topics covered by the VHLSS survey reflect the living standards of households across the entire country. Demographic characteristics of household members are collected, including age, sex, ethnicity, and marital status. A household's income information includes income level, income from different sources, and income classified by economic sector and industry. Employment status and working hours are also collected. All individuals aged ten years and older are asked to respond to the economic activity questions, covering working status, occupation, and industry of employment.

The sample is pooled across all four waves of the VHLSS (2008, 2010, 2014, and 2016). Since the labour law only affects people of working age, the sample selection includes only people aged 15–64.[1] In order to ensure that the children of a household are the children of the woman in that household, we only selected households with one or two generations of the household head, the spouse, and their children.

3.3   Patterns of women's employment in Viet Nam

In this section we provide an overview of the patterns of women's employment in Viet Nam described in the sample, including the share of women's employment out of total employment, the relation between women's education and their employment, the children in households where women work, and finally the relation between marriage and women's employment.

We start by describing the main variables used in the analysis. Table 1 describes women's share of total employment. Across the country in the period 2008–16, in the selected sample, women comprise half of the labour force, of which 38.38 per cent are women of childbearing age (15–49),[2] and 11.46 per cent are women not of childbearing age. About 60.4 per cent of people in the sample have completed secondary school, of which about 30 per cent have received a high school certificate and about 7.78 per cent have a college or higher education degree. A total of 68.76 per cent of adults are married, and 28.55 per cent of people live in urban areas.

Table 1: Share of women's employment in total employment

Sample selection	Per cent
Female	49.84
Female of childbearing age	38.38
Female not of childbearing age	11.46
Education	
Less than primary	15.66
Primary	24
Secondary	29.43
High school	23.14
Higher education	7.78
Labour force	
Labour force total	82.5
Labour force male	51.6 ($n = 40{,}543$)
Labour force female	48.4 ($n = 38{,}063$)
Wage employment	39.07
Formal job	21.43
Married	68.76
Urban	28.55
Observations (n)	95,278

Note: the sample selection includes people of working age.

Source: authors' calculations based on VHLSS 2008–16.

In this study we use the definitions of employment from the 2008 VHLSS handbook, including: (1) labour force participants are those who have worked in the past 12 months. All individuals aged 10 years and older were asked to respond to the economic activity questions, including whether an individual has worked in waged jobs or self-employment in agriculture or self-employment in non-farm activities. Occupation and industry of employment codes are printed directly in the household questionnaire. (2) Waged jobs are those for which workers receive wages or salaries in cash or in kind by offering their labour (physical or intellectual) in exchange for wages and salaries; these workers are unable to decide issues related to their jobs, such as salary, working hours, vacation time, and leave. (3) Formal jobs

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[1] Using the World Bank definition of population of working age.

[2] Using the WHO definition of women of reproductive age.

are those for which workers have waged jobs in business areas such as corporations, private firms, state enterprises, and foreign-invested enterprises. This excludes workers who work for private agriculture businesses or private service businesses.

The labour participation rate in the sample is about 82.5 per cent, of which men account for about 52.6 per cent and women about 48.4 per cent. This shows that Vietnamese women play an important role in the economy. Among people participating in the workforce, the number of people having a waged job accounts for 39.07 per cent, among whom 21.43 per cent have a formal job. It can be seen that the labour force participation rate in Viet Nam is high compared to the world average,[3] but the proportion of workers with waged jobs accounts for only half of them, and only one-quarter of workers have formal jobs. This reflects the vulnerability of the labour force in Viet Nam, in which women are always engaged in more vulnerable employment than are men (World Bank 2021).[4]

Figure 2 describes the employment of women of childbearing age by education level. At all levels of education in the sample the proportion of women of childbearing age participating in the labour force is quite high; more than 90 per cent of women with college or higher education degrees participate in the labour force. About 70 per cent of women who have secondary or high school degrees participate in the labour force, and women with primary education or lower join the workforce at about 80 per cent participation rate. In the study by Klasen et al. (2020) on female labour force participation in Viet Nam over 2002–14, these authors found that the relationship between women's educational attainment and their employment is positive, but over time it becomes J-shaped.[5]

Figure 2: Employment of women of childbearing age by education level
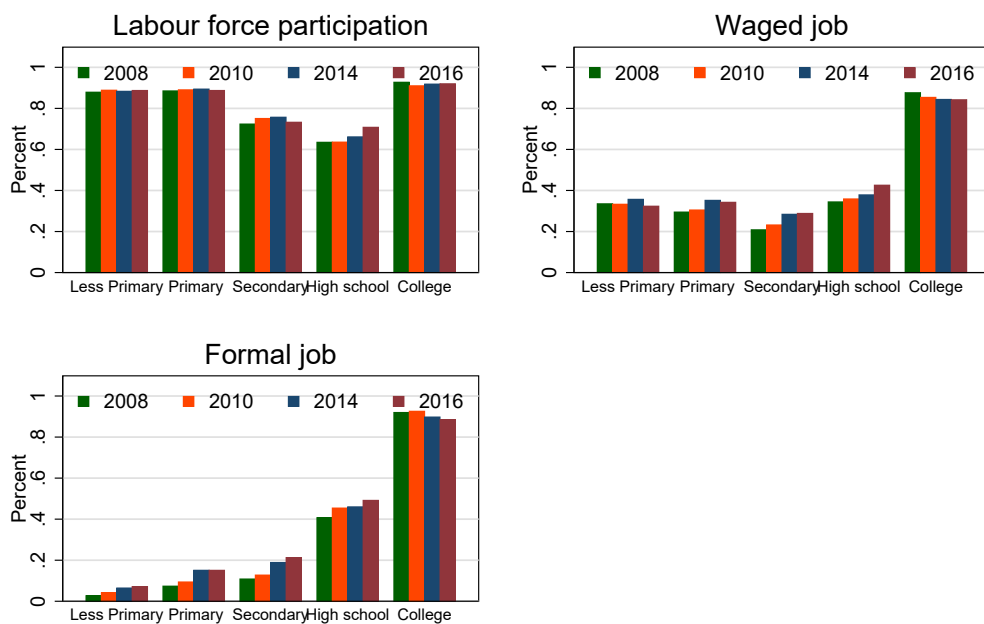
Notes: the sample selection includes people of working age.

Source: authors' calculations based on VHLSS 2008–16.

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[3] The world labour force participation rate in the period 2008–16 is around 67 per cent; data from https://data.worldbank.org.

[4] The ILO estimates the share of female vulnerable employment of the female labour force as 84.4 per cent in 2000; the rate has been reduced every year, down to around 57.8 per cent in 2019. Rates for male workers were 77.6 per cent in 2000 and 47.3 per cent in 2019; data from https://data.worldbank.org.

[5] The J-shaped relationship of women's education with their labour force participation is a weak linear relationship, where positive returns begin from secondary level

However, the level of education makes a noticeable difference in the group of waged jobs and formal jobs. About 90 per cent of women with college or higher education degrees have waged jobs and formal jobs, whereas only about 20–40 per cent of women with a high school degree or below have a waged job. Thus, women with a college degree or higher participate in the workforce and they mainly work in waged jobs and in the formal sector. Not surprisingly, educational attainment is positively correlated with the likelihood of having a formal job; a woman with a college degree is four times more likely to have a formal job than those having only a secondary degree, and about 6-8 times more likely than women who only completed primary school or less than primary school. Education might not display an important role in women's labour participation, but does play an important role in the availability of good jobs for women. In order to empower women economically, the governments needs to increase both the quantity and quality of work for women—in this matter, education clearly plays a key role.

Figure 3 describes the correlation of women's employment and the number of children in the household. In general, having children in the household does not create barriers to Vietnamese women entering the labour force, and even motivates them to work. Across all child age groups (0–1 (G1), 1–4 (G2), and 5–14 (G3)) more than 80 per cent of women with children participate in the labour force. And when the family has more than one child in these age groups (G5, G6, G7), women's labour participation is even higher, reaching almost 90 per cent. This phenomenon was also found in the Klasen et al. (2020) study; these authors found that the weaker children effects in poorer countries may reflect income constraints, whereby mothers have to earn a living and cannot afford to stay out of the labour force.

Figure 3: Women's employment and children in the household

Notes: the sample selection includes people of working age. G0 = no child; G1 = have children 0–1 years; G2 = have children 1–4 years; G3 = have children 5–14 years; G4 = have children 0–1 and 1–4 years; G5 = have children 0–1 and 5–14 years; G6 = have children 1–4 and 5–14 years; G7 = have children 0–1, 1–4, and 5–14 years.

Source: authors' calculations based on VHLSS 2008–16.

The role of children is also not noteworthy for women's waged jobs. While women in households (G7) with three children of ages 0–1, 1-4,and 5-14 are less likely to participate in the labour force in all time periods. Overall, years after 2012 women participate in waged jobs more than before in all family groups.

The role of children in the household has an influence on women's work in formal jobs. There is a slight decrease for women with children in the range 5–14 years (G3) and for women who have more than one child in the age groups 0–1, 1–4, or 5–14 (G4, G5,G6). This trend is more pronounced when women have three children in all of these age groups. This can be explained as women with more children will

have to spend more time caring and transporting children to school so they tend to choose informal jobs with flexible schedules or part-time jobs to balance household tasks. There is a clear signal that the proportion of women in waged jobs and formal jobs has increased in the years 2014–16.

Figure 4 shows the relation of the gender employment gap and marriage. Labour force participation for married adults is quite high in Viet Nam, at about 95 per cent for men and 90 per cent for women. This rate has remained stable over the years from 2008 to 2016. Most unmarried adults are young people and might still be in school, so the labour force participation rate is about 55–60 per cent. In each group of married or unmarried adults the proportion of men participating in the labour force is about 2–5 per cent higher than that of women.

Figure 4: Gender employment gap and marriage
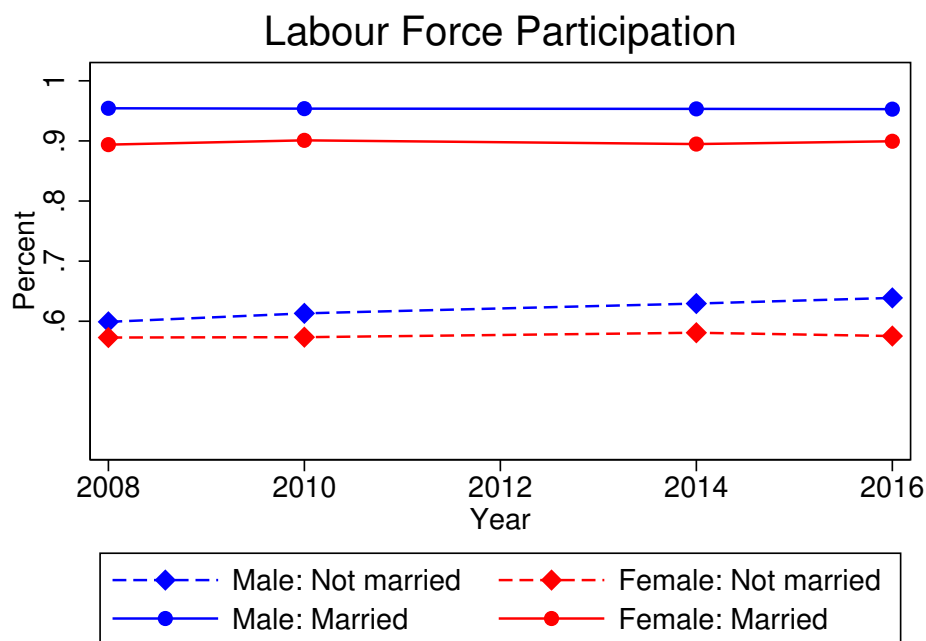
Notes: the sample selection includes people of working age.

Source: authors' calculations based on VHLSS 2008–16.

Figure 5 shows the proportion of workers with waged jobs and formal jobs by gender and marital status. The graph shows the growth rate of waged jobs for both men and women from 2008 to 2016, which is reflected in the increase in employment in the economy. However, the gender gap has not been improved; the gap is wider than the labour participation rate in general, and the waged job gap between men and women (in each group of married or unmarried) has remained similar over eight years.

For formal jobs the story is different. Unmarried women have the highest rate of having a formal job, while married women have the lowest rate of participation in these jobs. This shows clear evidence of a disadvantage for married women. Married men also tend to be less involved in formal jobs, but still at a higher rate than married women. In 2016 there was asymmetry between the married men and married women groups, and the unmarried men and unmarried women groups. For formal jobs, Figure 5 is linked to Figure 3 in showing the influence of marriage and children on women's work, a signal that women are making the trade-off of formal jobs in order to take care of family and children.

Figure 5: Gender employment gap, marriage, and waged and formal jobs
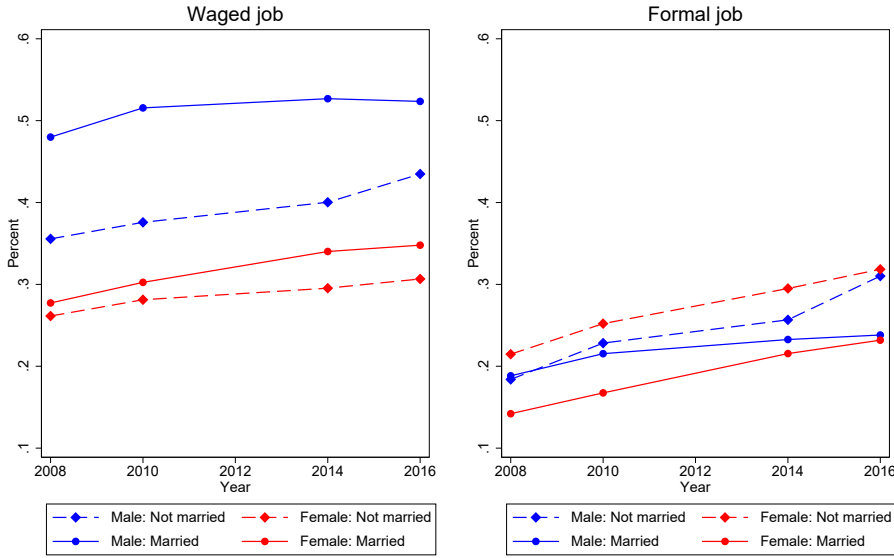
Notes: sample selection include people in working age.

Source: Authors' calculations based on VHLSS 2008-2016.

3.4 Empirical strategy

We use the difference-in-differences (DID) approach. The extended maternity leave policy should have a greater effect on women with infants and women in the childbearing age group than women not in the childbearing age group. Because a woman in the childbearing age group is likely to become pregnant at some point in the future, employers would consider that as a negative point when hiring women in that group. Therefore, for our empirical strategy, we focus the analysis on two treatment groups. The first is mothers with infants (children under the age of one year at the time of the survey). We expect that the expansion will have the strongest effect on this group. The second treatment group includes all women of childbearing age.

We use all men as the control group, as has frequently been done in the literature. However, men in Viet Nam are also entitled to paternity leave of 5–14 days, depending on the circumstances. Therefore, married men could potentially be affected by the extended maternity leave policy if households make work decisions jointly, or if the extended maternity leave prompts employers to substitute men for women. To determine how sensitive our results are to the control group selected, we use single men as a second control group for a robustness check.

In this study, we only focus on the group of workers included in the social insurance law, which is those in waged employment. To observe the signal of the impact of the new law on labour mobility in the labour market, we also look specifically at the group of workers engaged in formal employment.

Thus, to estimate the effect of the extended maternity leave policy on the gender employment gap, we compare outcome differences between treatment and control groups in the post-law 2012 period with those in the pre-law 2012 period. We propose the following empirical model:

$$Y_i = \alpha_0 + \alpha_1 T_i + \alpha_2 Law_{2012} + \alpha_3 T_i \times Law_{2012} + \beta X_i + \theta_t + \varepsilon_i \tag{1}$$

for individual i in year t, where Y is the dependent variable measured in three indicators: *the probability of having a wage job*, *The probability of having a formal job*, and *The log of real monthly income*. $\mathbf{T_i}$ is a three-group comparison dummy variable. Group 0 (external controls) are men. Group 1 (treated group) are mothers with infants. Group 2 (internal controls) consists of women not in the treated group. $\mathbf{Law_{2012}}$ is a variable that takes the value of 1 for all years after 2012, when the expansion maternity

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leave policy was introduced. Alternatively, $\mathbf{T_i}$ is a three-group comparison dummy variable, in which Group 0 (external controls) are men, Group 1 (treated group) will be women of childbearing age, and Group 2 (internal controls) will be women not of childbearing age.

To control for the bias originating in differences in characteristics between the three groups that could explain the differences in participation and employment decisions, we include vector X of control variables in the model that allow us to control for observable characteristics. These variables include controls for age, age squared, education, marital status, and the number of children in the household. We also control for fixed effects by area of residence and year.

There are two DID estimators for this model: one for Group1 $\times$ Law2012 and the other for Group2 $\times$ Law2012. The margin effects will give us expected outcomes in each group in each time period. The second will give us the average pre–post difference in each group. The coefficient of interest is α_3, which indicates whether the extended maternity leave policy differently affected women in the treatment group in comparison with men. We estimate the equations using probit regression analysis, and use OLS (ordinary least squares) regression for wage equations. Given this setup, only people who have waged work will be included in the estimation of the wage equation.

The employment measure takes the form of a dummy variable that equals 1 if the respondent had a wage job or a formal job at the time of the survey. The wage measure is the log of the wage reported for the respondent's main job. All wages are adjusted appropriately using the consumer price index from the World Bank for 2011.

The United Nations Industrial Development Organization (UNIDO) examined a case study of Viet Nam (UNIDO 2019), which represents different geo-economic regions, production structures, and industrialization trajectories. The patterns identified suggest a story of female-led as well as export-led industrialization in Viet Nam. This story also brings to light the particular vulnerabilities of female migrant workers, both internal and external. This leads us to ask whether an extended maternity policy can reduce the gender gap in employment in Viet Nam, and if so, whether the effects differ across industries. To find whether there is any industry-specific effects, we add the interaction $\mathbf{T_i} \times Law \times Z$, where Z is the vector of industry of employment and type of employer:

$$Y_i = \alpha_0 + \alpha_1 T_i + \alpha_2 Law_{2012} + \alpha_3 T_i \times Law_{2012} + \alpha_4 T_i \times Law_{2012} \times Z_i + \beta X_i + \theta_t + \varepsilon_i \qquad (2)$$

Model (2) will give us two important comparisons as follows. (a) The heterogeneity of the effect of the new law on different industries, with agriculture, forestry, and fishing as the benchmark. (b) The heterogeneity of the effects of the new law on the gender employment gap by industries. We study the effect of the policy on the gender employment gap by comparing the treated group with the external control group, and the internal control group with the external control group. It should be noticed that we do not directly compare the two groups of women. However, we can obtain the difference between groups of women by calculating the gap between them and men.

4   Results

In this section we discuss the findings of the empirical analysis. First, we discuss the gender employment gap in the general context. Second, we examine the impact of the extension of maternity leave policy on the gender employment gap in three aspects: waged jobs, formal jobs, and average monthly incomes. All the results use heteroscedasticity robust standard errors clustered at the survey-year level. Third, we assess the impact of the extended maternity leave policy at the industry level for different industries.

All comparisons in this section are with an assumption that women in the treated group, women in the internal control, and men in the external control groups have similar individual and household backgrounds.

4.1 The gender employment gap *before* the implementation of extended maternity leave policy

Table 2 shows the results of the gender employment gap before the extended maternity leave policy was implemented. The first column (I) shows that women with an infant (<1 year) and women without an infant have lower rates of waged jobs than do men, respectively, at 18.5 per cent and 16.5 per cent lower.

Table 2: Extended maternity leave and gender employment gap (female with infant)

	Have a wage job (I)	Have a formal job (II)	Log income (III)
Ref.: male workers			
Women with infant	−0.185***	0.002	−0.887***
	(0.004)	(0.004)	(0.024)
Women without infant	−0.165***	−0.011***	−0.877***
	(0.004)	(0.002)	(0.033)
Law 2012	0.031*	0.021	0.419*
	(0.010)	(0.009)	(0.160)
Ref: male × Law2012			
Women with infant × Law2012	−0.005	−0.006	−0.154**
	(0.007)	(0.008)	(0.031)
Women without infant × Law2012	0.010	0.019***	−0.011
	(0.004)	(0.002)	(0.039)
Age	0.049***	0.007***	0.225***
	(0.001)	(0.000)	(0.011)
Age squared	−0.001***	−0.000***	−0.003***
	(0.000)	(0.000)	(0.000)
Education Less than primary			
Primary	−0.014*	0.008**	0.015
	(0.005)	(0.002)	(0.044)
Secondary	−0.049**	0.045***	−0.053
	(0.010)	(0.001)	(0.081)
High school	0.016	0.276***	0.611**
	(0.011)	(0.010)	(0.136)
Higher education	0.369***	0.713***	3.201***
	(0.008)	(0.022)	(0.078)
Ethnicity, 1 = Kinh	0.048***	0.068**	0.479***
	(0.002)	(0.014)	(0.012)
Urban	0.009	0.090***	0.352***
	(0.005)	(0.005)	(0.009)
Share children age 1–4 in house	0.015*	0.004	0.146**
	(0.005)	(0.003)	(0.037)
Share children age 5–14 in house	−0.005*	−0.013***	−0.019
	(0.002)	(0.002)	(0.010)
Constant	−0.356***	−0.050**	−2.191***
	(0.026)	(0.011)	(0.284)
Observations	95,276	78,605	95,276
R^2-a	0.154	0.335	0.207
Province FE	No	No	No

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0); (III) log of real monthly income. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

When we look at the larger treated group, which is the group of women of childbearing age in Table 3, the results are not much different to those in Table 2. The gender employment gap between women of

childbearing age is 17 per cent lower than for men, and for women not of childbearing age it is 15.4 per cent lower than for men.

Table 3: Extended maternity leave and gender employment gap (women of childbearing age)

	Have a wage job (I)	Have a formal job (II)	Log income (III)
Ref: male workers			
Women of childbearing age	−0.170***	−0.005	−0.897***
	(0.004)	(0.003)	(0.059)
Women not of childbearing age	−0.154***	−0.025**	−0.799***
	(0.005)	(0.004)	(0.086)
Law2012	0.032*	0.020	0.423*
	(0.010)	(0.009)	(0.160)
Ref: Male × Law2012			
Women of childbearing age × Law2012	0.008	0.028***	−0.057
	(0.004)	(0.003)	(0.085)
Women not of childbearing age × Law2012	−0.001	−0.016**	−0.003
	(0.003)	(0.005)	(0.146)
Age	0.049***	0.005***	0.229***
	(0.001)	(0.000)	(0.010)
Age squared	−0.001***	−0.000***	−0.003***
	(0.000)	(0.000)	(0.000)
Education level, ref: less than primary			
Primary	−0.014*	0.007**	0.018
	(0.005)	(0.002)	(0.043)
Secondary	−0.048**	0.044***	−0.049
	(0.010)	(0.001)	(0.080)
High school	0.017	0.275***	0.614**
	(0.011)	(0.009)	(0.136)
Higher education	0.369***	0.710***	3.202***
	(0.009)	(0.022)	(0.076)
Ethnicity, 1 = Kinh	0.049***	0.068**	0.481***
	(0.002)	(0.014)	(0.014)
Urban	0.009	0.090***	0.353***
	(0.005)	(0.005)	(0.009)
Share children age 1–4 in house	0.013*	0.005	0.139**
	(0.005)	(0.002)	(0.038)
Share children age 5–14 in house	−0.005*	−0.013***	−0.015
	(0.002)	(0.002)	(0.009)
Constant	−0.362***	−0.030*	−2.243***
	(0.024)	(0.010)	(0.277)
Observations	95,276	78,605	95,276
R^2-a	0.153	0.335	0.207
Province FE	No	No	No

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0); (III) log of real monthly income; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

In Tables 2 and 3 the second column (II) presents results for formal jobs. We only find a gender employment gap between the groups of women without an infant and men to be 1.1 per cent lower, and the gap between women not of childbearing age is 2.5 per cent lower. This finding, is combined with the

information in Figure 5, can be explained by the fact that married men tend to be less likely to choose formal jobs than do unmarried women; however, the group of married women is even less likely to choose formal jobs than are married men. As a result, in general, the gender employment gap between these two groups of women and men are small.

In Tables 2 and 3 the third column (III) reports the log monthly income. All groups of women have lower monthly incomes than the men, at around 24 per cent lower (since exp(0.87) = 2.4). Based on ILO data, Our World in Data concludes, and gives statistics showing, that in most countries the gender pay gap is positive: women earn less than men but there is a good sign in most countries that the gender pay gap has decreased in the last couple of decades (Ortiz-Ospina and Roser 2018). However, observing the change in the gender pay gap in Viet Nam for the period 2006–16, it tends to have increased by about 4 per cent (round 6.5–10.8 per cent). Also, note that the statistics in the Our World in Data information are unadjusted gender pay gap in average hourly earnings, covering all workers regardless of whether they work full-time or part-time. Our research study only covers the group of waged job workers, and we consider the average monthly income.

Education and formal jobs have a clear positive correlation. We use 'less than primary' as a benchmark. In terms of chance to have a formal job, compared to those with less than primary education, those who have completed primary school have a 0.8 per cent higher chance, those who have completed secondary school have a 4.5 per cent higher probability, those who have completed high school have a 27.6 per cent higher probability, and those who received a college degree have up to 71.3 per cent higher probability. Cross-referencing to the description in Figure 2 regarding formal jobs shows that educational attainment plays an important role for women's employment, in particular, and employability in general. A formal job is an important indicator of decent work, in which workers have opportunities to engage in productive work that delivers a fair income, and there is equality of opportunity and treatment for all women and men. This finding has policy implications for the need to invest in girls' education, removing barriers so that girls and young women have equal opportunities to obtain knowledge and qualifications, which are important foundations for their employability. Improving education for women in particular and for people in general will help Viet Nam improve its country index for decent work.

The effect of education on the likelihood of having a waged job in general is not significantly different for those who completed secondary school or below. The significantly positive return is only shown to those who have completed high school or higher. In studies that look at the correlation between women's education and women's employment, it is often not clear whether this relationship is strong or weak, because in terms of the overall workforce we see women participate at all levels of education, they are an important member of the family for earning income, especially in poor and developing countries, where women are the main earners in the family. The impact of education on women's employment is only seen when we consider the quality of work that these women are doing. Across many countries the effect of educational attainment on women employment is generally positive, but this impact varies significantly; in countries where gender norms are more conservative education has a larger impact on women's employment (Bussemakers et al. 2017).

In some countries it can be seen that the number of children in the family influences a woman's decision to join the labour force (Klasen et al. 2020); however, in Viet Nam, as a developing economy, in order to maintain living conditions for a family with children, both husband and wife have to earning income. In this study we find the impact of having children in the household on employment is not significant, for either waged jobs or formal jobs; it is only about 0.5–1.5 per cent, depending on the group of workers.

In general, living in a city does not give an added advantage in terms of having a waged job, but it can give the advantage of having a formal job (about 9 per cent higher) and about 14 per cent (exp(0.352) = 1.42) higher monthly income than rural workers who have similar backgrounds.

4.2 The effects of the extended maternity leave policy on the gender employment gap

This is the main part of this study. We have heard warnings from both researchers and social experts that they are concerned that increasing the maternity period can lead to the side effect of exacerbating gender inequality in employment. In this section we investigate the effect on the gender employment gap of extending the maternity leave policy in the Viet Nam Labor Code 2012.

In general we have received warnings that extended maternity leave can be a double-edged sword. On the one hand, it protects women in terms of employment rights and wages after maternity leave. However, the law is unlikely to protect women from discriminatory attitudes by employers in recruitment and promotion. One example comes from the UK: women have suffered various forms of maternity discrimination, such as redundancy, loss of job, and being overlooked for promotion, where employers consider pregnancy as a burden for their organization, and many UK employers are not willing to support pregnant women or women going on maternity leave (Ndzi 2019). Two studies, published two decades apart, came to the same conclusion about the effect of duration of maternity leave on women's employment. Ruhm (1998) shows evidence from a variety of countries that the longer new mothers are away from paid work, the less likely they are to be promoted, move into management, or receive a pay rise once their leave is over. Hideg et al. (2018) show the length of maternity leave is perceived as a signal of women's commitment to the job, and thus is used to gauge their dedication. This undermines perceptions of women's agency, job commitment, and perceived suitability for leadership roles. In Viet Nam the ILO cooperated with Navigos Search to conduct a review of 12,300 job advertisements in the country, combined with two online surveys—one with employers in the private sector and the other with candidates for mid-career posts. They found that maternity leave may result in discrimination against women in terms of their prospects for promotion. These findings suggest that employers prefer not to recruit women who plan to have children in the near future, fearing that their reproductive role could affect the company's costs and performance. Ten per cent of interviewees witnessed their co-workers being fired upon returning to work after giving birth, and 8 per cent saw their female colleagues being placed in different positions with lower salaries on their return (ILO 2015).

Despite all these warnings, our research shows a good sign for the Vietnamese government: the extended maternity leave policy did not increase the gender employment gap. We found no increase in the gender employment gap for women with infants (Table 2) or women of childbearing age (Table 3) in waged jobs. Furthermore, we see an improvement in the gender employment gap for women without infants compared to men in formal jobs, at around 1.9 per cent increase; similarly, we see around a 2.8 per cent increase for women of childbearing age, but there is a slight decrease of approximately 1.6 per cent for women not of childbearing age. The findings in this research support the findings of Vu and Glewwe (2021), who investigate the effect of the same law on women's choice of work and find that the law increased formal employment and decreased unpaid work among women of childbearing age but not for older women.

Vu and Glewwe (2021) also find some evidence that the new law is associated with an increase in earnings, but they cannot rule out that such results are driven by pre-treatment trends or unrelated factors affecting the difference between the treatment group and the control group. In our study we use the DID method to examine the income difference between each subgroup of women and men before and after the new law came into effect. We find clear evidence that women with infants, before the new law came into effect, had incomes 24 per cent lower than those of men; since the new law came into effect they have incomes 11.6 per cent lower than those of men. The gender income gap for other groups of women did not change.

Interestingly, under the new law men see a positive effect on their probability of having a waged job (increase 3.1 per cent) and about a 15.2 per cent (since exp(0.419) = 1.52) increase in income compared to before the implementation of the new law. However, this should be a reference rather than a direct

cause–effect relationship, as this comparison is the group of men with themselves before and after 2012, so this may be a reflection of growth in the economy, or a portion of men may get jobs as replacements for women who have longer maternity leave.

To check the heterogeneity by provinces, we put province fixed effects into the analyses. The results are reported in Tables A1 and A2 in Appendix A. The results are very similar to those in Tables 2 and 3.

4.3   The effects of extended maternity leave on gender employment gap by industries

In the previous section we found that the effects of the extended maternity leave policy on the gender employment gap is negligible (for both waged and formal jobs). However, in this section we examine the effects on the gender employment gap by industries, and we find clear gaps in different industries.[6]

Figure 6 demonstrates the main coefficients of interest, listed in Table A3. The graph displays the interaction terms of groups of female workers with Law2012 by industry. These coefficients report the gaps in employment rates in waged or formal jobs for women with infants vs men and women without infants vs men.

Figure 6: The effects of extended maternity leave on gender employment gap by industries: female vs male by industry

Note: the figure demonstrates the main coefficients of interest, the interaction term of groups of female workers with Law2012 and industries. The sample selection includes people of working age. Industries as listed in footnote 6. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0).

Source: authors' calculations based on VHLSS 2008–16.

Women with infants: We find that in some industries the gender gap continues to widen under the influence of the new law, including; mining and quarrying (2), wholesale and retail trade (6), information and communication (9), financial, real estate, insurance activities (10), administrative and support services (12), and other services (14). The gender gap widens in both waged jobs and formal jobs.

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[6] We use the International Standard Industrial Classification (ISIC): (1) agriculture, forestry, fishing; (2) mining and quarrying; (3) manufacturing; (4) water supply; (5) construction; (6) wholesale and retail trade; (7) transportation and storage; (8) accommodation and food service activities; (9) information and communication; (10) financial, real estate, insurance activities; (11) professional, scientific, and technical; (12) administrative and support services; (13) public, education, health, and entertainment; (14) other service activities; and (15) domestic services.

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Notably, in transportation and storage (7) and domestic services (15) the gender gap is wider for women with infant in waged jobs in general, but narrows for formal jobs in particular. This might be a signal that women with infants in these industries tend to choose formal jobs to enjoy the benefits of the new law, which could also be a signal that these industries might offer opportunities for women to access formal jobs more easily, or these industries might be trending towards formalization. This issue needs more research to confirm.

Women without infants: In most industries the impact of the extended maternity policy on the gender gap for this group is not significant. There are two industries—information and communication (9) and administrative and support services (12)—where the gender gap between this group and men is narrowed under the impact of the new law (while in these industries the gender gap for women with infants is wider). Particularly, in construction (5) the gender gap between this group of women and men is wider.

Overall, Figure 6 shows the number of industries with a wider gender employment gap is greater than the number of industries with a narrower gender employment gap. Also, there is clear evidence of a wider gender employment gap for women with infants, while it tends to be narrower for women without infants, especially for formal jobs.

When we look at the impact of the extended maternity leave policy on the gender employment gap for both groups of jobs—waged and formal—we only see a narrowing trend, if any, mainly for formal jobs. Especially in domestic services (15), the difference is clearly shown: the new maternity leave policy narrows the gender gap for formal jobs but widens it for waged jobs in general.

Women of childbearing age: Figure 7 demonstrates the main coefficients of interest listed in Table A4. In this table, the treated group has been expanded to women of childbearing age; this picture is slightly brighter than that in Figure 6, the gender employment gap tends to be narrower and more pronounced in formal jobs. The improvement is clear in information and communication (9) and administrative and support services (12). However, domestic services (15) still shows its vulnerability for waged jobs, and the gender employment gap only improves for formal jobs.

Figure 7: The effects of extended maternity leave on gender employment gap by industries: childbearing vs not childbearing
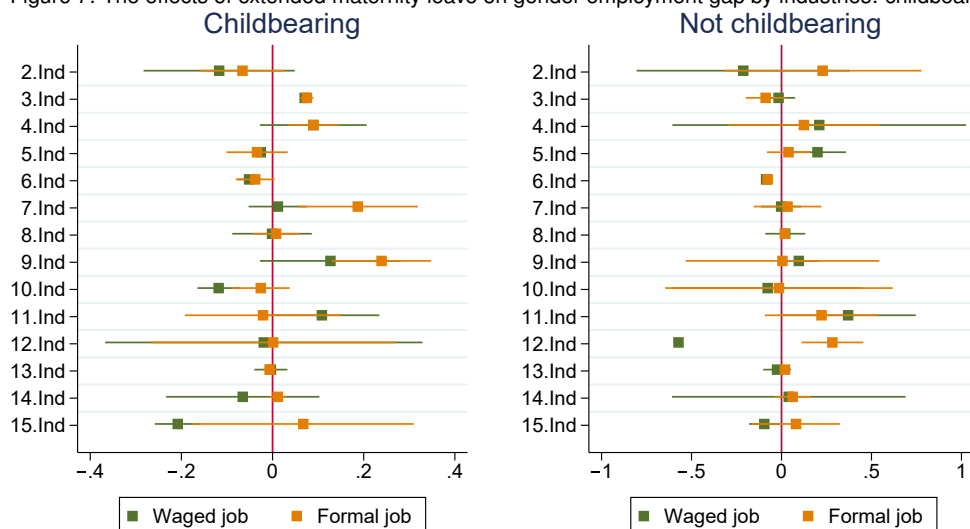
Note: the figure demonstrates the main coefficients of interest, the interaction term of groups of female workers with Law2012 and industries. The sample selection includes people of working age. Standard errors are clustered at the survey-year level. Industries are numbered as in footnote 6. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0).

Source: authors' calculations based on VHLSS 2008–16.

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Women not of childbearing age: As expected, the extended maternity leave policy had no significant impact on this group of women, except for in mining and quarrying (2), where the gender gap was narrowed for the formal jobs group.

In summary, when looking at the effect of the extended maternity leave policy on the gender employment gap in general, there is no remarkable impact, but when looking at the averages for each industry it is explicit, and the impacts are quite different in both narrower and wider directions. However, there is still the good sign that women of childbearing age now tend to appear more in formal jobs, following the implementation of the new law.

We should also mention that the Fourth Industrial Revolution has been taking hold in different industries and generating new categories of jobs; however, it affects women and men in different ways. In addition, whole industries have been transformed; by their nature, global industries have the potential to enable the narrowing of gender gaps in employment. As industries prepare to adapt to transformation, tackling gender gaps could also unlock new opportunities for growth (World Economic Forum 2016). It is important to realize that intervention to promote gender equality, such as extended maternity leave legislation, will not produce the same results for all industries. They should be accompanied by a set of provisions and long-term commitments, combined with raising awareness within corporations, industries, and society more broadly.

4.4   Robustness check

In the extended maternity leave policy, men whose wives have given birth are also entitled to parental leave. Although this benefit is quite small, it might also affect the labour market for married men. To test the sensitivity of the external control group, we replace the group of men with a group of single men in model (1).

The results in Table 4 show that there is no further change in the gender employment gap between women with infants and single-men groups in all aspects of comparison: waged jobs, formal jobs, and income. Comparing the results of Table 4 with those in Table 2, there is a very small change in the women without infants group: in Table 2 the gender gap is narrowed by a small but significant amount in formal jobs, but in Table 4 the significance signal disappears.

Similarly, in Table 5 we expand the treated group to be the group of women of childbearing age, and examine the gender employment gap vs the single-men group. The results in Table 5 are very similar to those in Table 4. In comparison with the results in Table 3, where there is a sign of positive small (significant) change in formal jobs, that signal of significance also disappears in Table 5.

Although the extended maternity leave has a direct impact on the group of women with infants, we are concerned that the impact may persist and continue to affect the group of women with young children (<2 years). We check this concern by replacing the treated group by the group of women with young children. The results show that the gender employment gap has narrowed in waged jobs, but the change is very small and there is no change in formal jobs. The gender income gap of this group of women vs men has narrowed from 11.6 per cent (Table 2) to 10.8 per cent (Table 4).

Similarly, we also examine the gender employment gap of the group of women with young children vs the group of single men (Table 5). The picture is similar to the results for women with infants group (Table 5).

The results of the robustness check show that the conclusions in the main findings are solid even when the control group is changed, or the treatment group is expanded.

Table 4: Gender employment gap: women with young children vs single men

	Have a wage job (I)	Have a formal job (II)	Log income (III)
Ref: single male workers			
Woman with infant × Law2012	0.00555	−0.0225	−0.0034
	(1.17)	(−2.08)	(−0.05)
Woman without infant × Law2012	0.0189	0.00105	0.129
	(1.5)	(−0.07)	(1.35)
Woman of childbearing age × Law2012	0.016	0.00664	0.0856
	(1.41)	(0.57)	(1.27)
Woman not of childbearing age × Law2012	0.00974	−0.0356	0.148
	(0.91)	(−2.01)	(0.6)
N	62,745	47,553	62,745
Age control	Yes	Yes	Yes
Individual characteristics	Yes	Yes	Yes
Household demographics	Yes	Yes	Yes
Year	Yes	Yes	Yes

Note: this table reports the main coefficient of interest. The sample selection includes people of working age. Standard errors are clustered at the survey-year level

Source: authors' calculations based on VHLSS 2008–16.

Table 5: Gender employment gap: women with young child vs men

	Have a wage job (I)	Have a formal job (II)	Log income (III)
Ref: male workers			
Woman with young child × Law2012	0.00855*	0.00424	−0.0808**
	(3.8)	(0.71)	(−12.53)
Woman without young child × Law2012	0.00662	0.0182**	−0.0247
	(1.36)	(9.37)	(−0.59)
Ref: Single male workers			
Woman with young child × Law2012	0.0179	−0.0134	0.0646
	(1.74)	(−1.17)	(0.6)
Female without young child × Law2012	0.0153	−0.000303	0.115
	(1.3)	(−0.02)	(1.3)
N	95,276	78,605	95,276
Age control	Yes	Yes	Yes
Individual characteristics	Yes	Yes	Yes
Household demographics	Yes	Yes	Yes
Year	Yes	Yes	Yes

Note: this table reports the main coefficient of interest. The sample selection includes people of working age. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0); (III) log of real monthly income. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

5   Conclusion

In this paper we ask whether the extended maternity leave policy impacted on the gender employment gap in Viet Nam. Using four national representative VHLSS (2008, 2010, 2014, 2016), we use the DID approach for a three-group comparison analysis: group 0 (external controls) are men, group 1 (treated

group) are mothers with infants, and group 2 (internal controls) are women not in the treated group. Alternatively, we also expand the treated group of women to those of childbearing age.

We find that before the implementation of the extended maternity leave policy, for waged jobs all groups of women have lower rates of waged job than men: 18.5 per cent lower for women with infants and 16.5 per cent lower for women without. Similarly, the gender employment gap between women of childbearing age and men is 17 per cent lower, and for women not of childbearing age is 15.4 per cent lower. However, in the subcategory of formal jobs we find a small gender gap between women without infants vs men and women not of childbearing age vs men.

A good sign for the Vietnamese government is that the extended maternity leave policy did not increase the gender employment gap on average. We found no increase in the gender employment gap for women with infants or women of childbearing age in waged jobs. Furthermore, we see an improvement of gender equality in formal jobs: around 1.9 per cent increase for women without infants and around 2.8 per cent increase for women of childbearing age. However, there is a slight decrease of approximately 1.6 per cent for women not of childbearing age.

There is clear evidence that women with infants, under the implementation of the extended maternity leave, have incomes that stay lower (11.6 per cent) than those of men compared to before the new law. Meanwhile, the gender income gap for other groups of women is not influenced. This phenomenon can be partly explained as follows: According to the Labor Code 2012, female workers on maternity leave will receive maternity allowance from the Social Insurance Fund, which is calculated as 100 per cent of the average monthly salary level of payment for social insurance within six months before taking maternity leave. Thus, in general, female workers will receive maternity allowance lower than their usual monthly income. In Viet Nam, in addition to the basic salary (which is the payment used to calculate insurance premiums), workers also receive other payments such as lunch allowance, sales commissions, bonuses from the profits departments earned in the month, etc. It is quite common in Vietnamese companies to divide the monthly income for employees into several amounts to reduce the amount companies have to pay for social insurance and unemployment insurance, while still ensuring a competitive salary to attract employees. More specific studies on this issue are needed to explore appropriate policy implications.

We also examine those effects on the gender employment gap within different industries. We find clear gaps in different industries, and clear evidence of a wider gender employment gap for women with infants, while it tends to be narrower for women without infants, especially for formal jobs. When we look at the impact of extended maternity leave policy on the gender employment gap in both waged and formal jobs, we see a narrowing trend in some industries, mainly for formal jobs.

The findings from this study may suggest issues for future research, which should use relevant data from industries to investigate more deeply the factors that influence maternity leave policies in women's employment and gender equality in those industries.

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Appendix A

Table A1: The extended maternity leave and gender employment gap (treated group: women with infants)

	Have a wage job	Have a formal job	Income (log)
Ref: male workers			
Female with infant	−0.183***	0.003	−0.883***
	(0.003)	(0.003)	(0.022)
Female without infant	−0.165***	−0.010***	−0.882***
	(0.004)	(0.002)	(0.035)
Law2012	0.030*	0.020	0.417*
	(0.010)	(0.009)	(0.156)
Female with infant × Law2012	−0.002	−0.002	−0.143**
	(0.005)	(0.009)	(0.028)
Female without infant × Law2012	0.009	0.019***	−0.015
	(0.005)	(0.002)	(0.040)
Age	0.049***	0.007***	0.223***
	(0.001)	(0.000)	(0.010)
Age squared	−0.001***	−0.000***	−0.003***
	(0.000)	(0.000)	(0.000)
Ref: education less than primary			
Primary	−0.013**	0.011**	0.016
	(0.004)	(0.003)	(0.032)
Secondary	−0.041**	0.055***	−0.034
	(0.009)	(0.004)	(0.062)
High school	0.025*	0.284***	0.629**
	(0.008)	(0.013)	(0.116)
Higher education	0.380***	0.715***	3.209***
	(0.009)	(0.023)	(0.073)
Ethnicity, 1 = Kinh	−0.032**	0.031**	0.066
	(0.006)	(0.008)	(0.037)
Urban	0.002	0.066***	0.274***
	(0.007)	(0.002)	(0.015)
Share children 1–4 age in house	0.017**	0.005	0.156**
	(0.004)	(0.002)	(0.038)
Share children 5–14 age in house	−0.004	−0.010***	−0.008
	(0.003)	(0.002)	(0.013)
Constant	−0.297***	0.018	−1.574***
	(0.030)	(0.019)	(0.201)
Observations	95,276	78,605	95,276
R^2-a	0.170	0.352	0.222
Province FE	Yes	Yes	Yes

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0); (III) log of real monthly income. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A2: The extended maternity leave and gender employment gap (treated group: women of childbearing age)

	Have a wage job	Have a formal job	Income (log)
Ref: male workers			
Woman of childbearing age	−0.170***	−0.005	−0.899***
	(0.004)	(0.003)	(0.060)
Woman not of childbearing age	−0.155***	−0.026***	−0.812***
	(0.005)	(0.004)	(0.087)
Law2012	0.031*	0.019	0.420*
	(0.010)	(0.009)	(0.156)
Ref: male workers × Law2012			
Woman of childbearing age × Law2012	0.007	0.028***	−0.060
	(0.005)	(0.004)	(0.086)
Woman not of childbearing age × Law2012	0.000	−0.014*	0.004
	(0.004)	(0.006)	(0.145)
Age	0.049***	0.005***	0.227***
	(0.001)	(0.000)	(0.010)
Age squared	−0.001***	−0.000***	−0.003***
	(0.000)	(0.000)	(0.000)
Ref: education less than primary			
Primary	−0.013**	0.010**	0.019
	(0.003)	(0.002)	(0.032)
Secondary	−0.040**	0.053***	−0.029
	(0.008)	(0.004)	(0.061)
High school	0.026**	0.282***	0.633**
	(0.008)	(0.013)	(0.116)
Higher education	0.380***	0.712***	3.212***
	(0.009)	(0.023)	(0.072)
Ethnicity, 1 = Kinh	−0.031**	0.031**	0.067
	(0.006)	(0.008)	(0.036)
Urban	0.002	0.066***	0.275***
	(0.007)	(0.002)	(0.015)
Share children 1–4 age in house	0.016**	0.006*	0.150**
	(0.005)	(0.002)	(0.038)
Share children 5–14 age in house	−0.004	−0.011***	−0.005
	(0.003)	(0.002)	(0.012)
Constant	−0.303***	0.039	−1.627***
	(0.029)	(0.020)	(0.193)
Observations	95,276	78,605	95,276
R^2-a	0.170	0.352	0.223
Province FE	Yes	Yes	Yes

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. Dependent variables: (I) individual has a waged job (1/0); (II) individual has a formal job (1/0); (III) log of real monthly income. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A3: The extended maternity leave and gender employment gap by industries

	Have a wage job	Have a formal job	Income
Ref: male workers			
Women with infant	−0.198***	−0.00044	−0.790***
	(−142.14)	(−0.45)	(−105.23)
Women without infant	−0.132***	0.00241	−0.584***
	(−81.83)	−2.54	(−63.65)
Law2012	0.0298*	0.00289	0.333*
	−8.99	−1.8	−8.49
Women with infant × Law2012	−0.0152	−0.00945*	−0.208*
	(−1.72)	(−6.38)	(−5.06)
Women without infant × Law2012	0.00394	0.00214*	−0.0410*
	−1.29	−8.32	(−5.37)
Ref: agriculture			
2. Mining and quarrying	0.487***	0.484***	3.244***
	−189.12	−1084.88	−425.15
3. Manufacturing	0.321***	0.300***	2.013***
	−157.28	−380.18	−384.07
4. Water supply	0.526***	0.706***	3.360***
	−143.5	−383.66	−192.88
5. Construction	0.599***	0.0957***	3.471***
	−255.32	−106.9	−401.86
6. Wholesale and retail trade	−0.0426**	0.0472***	0.00797*
	(−12.28)	−49.27	−4.36
7. Transportation and storage	0.114**	0.0997***	1.005***
	−28.44	−77.5	−799.56
8. Accommodation and food service activities	0.00218	0.0936***	0.229**
	−0.83	−84.44	−22.09
9. Information and communication	0.465***	0.628***	2.981***
	−190.44	−403.82	−121.34
10. Financial	0.383***	0.567***	2.532***
	−99.24	−264.37	−107.22
11. Professional, scientific, and technical activities	0.477***	0.461***	2.988***
	−517.23	−201.81	−81.06
12. Administrative and support service activities	0.329***	0.494***	2.139***
	−126.09	−327.22	−172.21
13. Public, education, health, and entertainment	0.574***	0.735***	3.280***
	−409.72	−261.36	−97.21
14. Other service activities	0.0398**	0.0329***	0.328***
	−17.21	−36.65	−40.46
15. Domestic services	0.493***	−0.0138*	2.708***
	−423.13	(−9.57)	−520.65

	Have a wage job	Have a formal job	Income
Ref: men in Industry n			
Women with infant × Ind 2	0.287***	−0.129***	0.808***
	−164.04	(−174.11)	−64.82
Women with infant × Ind 3	0.149***	0.0926***	0.336***
	−128.66	−49.16	−40.73
Women with infant × Ind 4	−0.0426***	−0.193***	−0.380***
	(−45.72)	(−146.67)	(−60.50)
Women with infant × Ind 5	0.0720***	0.0691**	−0.127*
	−38.15	−29.51	(−9.13)
Women with infant × Ind 6	0.0503***	−0.0167**	0.0534**
	−98.73	(−17.47)	−17.38
Women with infant × Ind 7	0.664***	0.0883***	3.402***
	−266.69	−46.26	−302.09
Women with infant × Ind 8	0.105***	−0.0550***	0.309***
	−61.18	(−49.42)	−162.56
Women with infant × Ind 9	0.314***	0.172***	0.713**
	−102.34	−124.74	−23.32
Women with infant × Ind 10	0.183***	0.0550**	0.451**
	−117.28	−18.2	−27.07
Women with infant × Ind 11	0.187***	0.197***	0.578***
	−63.23	−150.84	−37.12
Women with infant × Ind 12	0.593***	0.130***	2.440***
	−125.85	−32.09	−60.17
Women with infant × Ind 13	0.138***	−0.0320**	0.386**
	−69.47	(−14.19)	−28.31
Women with infant × Ind 14	0.126***	0.0838***	0.478***
	−57.07	−61.98	−45.19
Women with infant × Ind 15	0.366***	0.0111*	1.368***
	−94.03	−9.91	−131.31
Women without infant × Ind 2	0.146***	0.0361**	0.495**
	−292.29	−24.14	−30.71
Women without infant × Ind 3	0.0995***	0.0439**	0.218***
	−75.59	−26.03	−41.24
Women without infant × Ind 4.	−0.0324***	−0.138***	−0.378**
	(−43.00)	(−327.75)	(−21.27)
Women without infant × Ind 5	0.126***	0.0890***	0.334***
	−319.11	−122.37	−93.24
Women without infant × Ind 6	−0.0217***	−0.0486***	−0.250***
	(−63.93)	(−266.11)	(−70.08)

	Have a wage job	Have a formal job	Income
Women without infant × Ind 7	0.225***	0.107***	0.999***
	−178.41	−100.57	−110.75
Women without infant × Ind 8	0.00758*	−0.0737***	−0.0915*
	−4.51	(−187.64)	(−6.19)
Women without infant × Ind 9	−0.0390**	−0.257***	−0.544***
	(−17.24)	(−594.90)	(−57.07)
Women without infant × Ind 10	0.155***	−0.0480**	0.745***
	−113.03	(−25.10)	−146.55
Women without infant × Ind 11	0.0319**	0.0715***	−0.171**
	−16.29	−60.99	(−12.11)
Women without infant × Ind 12	0.153***	−0.0813**	0.403**
	−52.61	(−28.09)	−21.77
Women without infant × Ind 13	0.0826***	−0.0573**	0.337***
	−67.62	(−23.12)	−41.68
Women without infant × Ind 14	0.175***	−0.0555***	0.736***
	−150.89	(−55.67)	−108.03
Women without infant × Ind 15	0.239***	−0.0245**	0.743***
	−52.85	(−12.69)	−154.07
Law × Ind 2	0.0469	0.144***	0.566
	−1.93	−38.12	−3.75
Law × Ind 3	0.0148	0.132**	0.469**
	−2.23	−11.77	−11.76
Law × Ind 4	−0.00713**	−0.0297	0.21
	(−10.68)	(−2.71)	−3.13
Law × Ind 5	−0.0212	0.0250**	0.371**
	(−2.81)	−30.46	−10.15
Law × Ind 6	0.0794*	0.0858*	0.611**
	−5.45	−6.44	−11.37
Law × Ind 7	0.0201	0.0756	0.227
	−1.31	−3.81	−2.72
Law × Ind 8	0.0408	−0.0054	0.365
	−1.03	(−0.92)	−2.11
Law × Ind 9	−0.113**	−0.120*	−0.445*
	(−16.95)	(−4.59)	(−7.47)
Law × Ind 10	−0.00602	−0.0221	0.348*
	(−0.50)	(−1.41)	−4.87
Law × Ind 11	−0.142**	0.0191	−0.474**
	(−10.91)	−1.6	(−10.15)
Law × Ind 12	0.0216	0.022	0.321
	−0.28	−0.31	−0.98

(continued)

	Have a wage job	Have a formal job	Income
Law × Ind 13	−0.0456**	−0.0380*	0.163
	(−17.70)	(−4.41)	−3.74
Law × Ind 14	−0.0533*	−0.0168	−0.134*
	(−5.15)	(−0.51)	(−9.83)
Law × Ind 15	0.153**	0.0396	1.059**
	−18.18	−0.85	−20.96
Women with infant × law × Ind 2	−0.283	−0.108	−1.567
	(−1.89)	(−4.02)	(−3.08)
Women with infant × law × Ind 3	0.0980**	0.0578	0.725*
	−10.07	−3.16	−6.35
Women with infant × law × Ind 4	0.207**	0.285***	0.882*
	−26.3	−42.37	−6.42
Women with infant × law × Ind 5	0.148*	0.0935	0.869**
	−9.1	−1.1	−12.25
Women with infant × law × Ind 6	−0.0744**	−0.0786***	−0.476***
	(−16.10)	(−39.03)	(−36.24)
Women with infant × law × Ind 7	−0.179**	0.275***	−1.260*
	(−10.58)	−232.37	(−4.58)
Women with infant × law × Ind 8	−0.026	−0.0132*	−0.0593
	(−1.80)	(−8.11)	(−1.04)
Women with infant × law × Ind 9	−0.0247	−0.0362	0.536*
	(−1.48)	(−1.13)	−9.6
Women with infant × law × Ind 10	−0.0568	−0.0948	0.0905
	(−0.68)	(−1.21)	−0.15
Women with infant × law × Ind 11	0.0385	−0.118	0.261
	−0.49	(−1.77)	−0.67
Women with infant × law × Ind 12	−0.446*	−0.175**	−1.900***
	(−7.89)	(−19.44)	(−34.30)
Women with infant × law × Ind 13	0.00908	−0.00801	0.0875
	−3.58	(−0.50)	−2.25
Women with infant × law × Ind 14	−0.00135	−0.0789**	0.0639
	(−0.03)	(−13.15)	−0.47
Women with infant × law × Ind 15	−0.167	0.0828	−0.568
	(−1.03)	−3.47	(−0.68)
Women without infant × law × Ind 2	−0.0913	−0.0138	−0.608
	(−1.10)	(−0.33)	(−1.00)
Women without infant × law × Ind 3	0.0441**	0.0478**	0.391**
	−21.05	−18.74	−28.42
Women without infant × law × Ind 4	0.0721*	0.0491*	0.356*
	−7.8	−9.6	−5.87

(continued)

	Have a wage job	Have a formal job	Income
Women without infant × law × Ind 5	−0.0152*	−0.0448*	0.0108
	(−9.56)	(−7.96)	−0.5
Women without infant × law × Ind 6	−0.0643*	−0.0478*	−0.467**
	(−9.18)	(−4.58)	(−9.95)
Women without infant × law × Ind 7	−0.0144	0.126*	0.0198
	(−1.64)	−6.44	−2.88
Women without infant × law × Ind 8	0.000998	0.00957	−0.0328
	−0.1	−0.95	(−0.63)
Women without infant × law × Ind 9	0.129	0.233*	0.952
	−3.13	−5.3	−2.47
Women without infant × law × Ind 10	−0.131**	−0.0193	−0.877**
	(−17.67)	(−1.04)	(−16.75)
Women without infant × law × Ind 11	0.138**	0.0186	0.800**
	−16.73	−0.82	−17.38
Women without infant × law × Ind 12	−0.0207	0.0488	0.137
	(−0.29)	−0.55	−0.62
Women without infant × law × Ind 13	−0.0164	−0.00724	−0.131*
	(−1.30)	(−3.21)	(−8.65)
Women without infant × law × Ind 14	−0.0566	0.0355*	−0.223
	(−1.24)	−7.96	(−0.86)
Women without infant × law × Ind 15	−0.166*	0.0682	−0.287*
	(−6.69)	−1.09	(−5.25)
Age of member	0.00645	0.000681	0.0159
	−3.87	−0.77	−1.16
Age squared	−0.000171*	−0.0000373*	−0.000554
	(−8.72)	(−6.35)	(−2.92)
Ref: education less than primary			
Primary	−0.0669**	−0.00609	−0.299*
	(−10.27)	(−3.42)	(−7.74)
Secondary	−0.112**	0.00684	−0.475*
	(−10.89)	−2	(−8.06)
High school	−0.0576*	0.128**	0.0486
	(−6.49)	−19.65	−0.5
College higher education	0.0573*	0.341***	1.201**
	−4.94	−271.6	−11.42
Ethnicity (1 = Kinh; 0 = others)	0.03	0.00807	0.305**
	−3.78	−1.42	−13.62
Urban	0.0174	0.0332*	0.301**
	−3.36	−7.06	−30.67

(continued)

	Have a wage job	Have a formal job	Income
Share children 1–4 years old	−0.0153	0.00423	−0.0305
	(−2.45)	−2.89	(−0.78)
Share children 5–14 years old	−0.00466	−0.00858*	−0.0209
	(−1.33)	(−7.85)	(−1.72)
Constant	0.427**	0.0302	1.677*
	−14.21	−1.28	−9
N	58,738	58,738	58,738
R^2_a	0.354	0.555	0.455

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A4: The extended maternity leave and gender employment gap by industries

	Have a wage job	Have a formal job	Income
Ref: male workers			
Women of childbearing age	−0.148***	−0.00608*	−0.641**
	(−184.84)	(−5.96)	(−31.25)
Women not of childbearing age	−0.120***	0.0251*	−0.529**
	(−31.73)	(4.49)	(−11.29)
Law2012	0.0303**	0.00208	0.337*
	(10.07)	(1.38)	(8.21)
Women of childbearing age × Law2012	−0.00789	−0.00356	−0.188**
	(−2.16)	(−4.16)	(−10.35)
Women not of childbearing age × Law2012	−0.00376	−0.00245	0.0869*
	(−0.88)	(−1.42)	(5.12)
Ref: agriculture			
2. Mining and quarrying	0.486***	0.487***	3.239***
	(152.80)	(1838.97)	(346.09)
3. Manufacturing	0.320***	0.302***	2.012***
	(123.56)	(812.39)	(400.92)
4. Water supply	0.526***	0.710***	3.363***
	(125.19)	(309.13)	(254.38)
5. Construction	0.598***	0.0978***	3.467***
	(230.84)	(147.34)	(327.21)
6. Wholesale and retail trade	−0.0428**	0.0495***	0.00897**
	(−11.29)	(41.38)	(10.30)
7. Transportation and storage	0.114**	0.102***	1.004***
	(25.81)	(66.99)	(248.89)
8. Accommodation and food service activities	0.00279	0.0956***	0.237**
	(0.91)	(100.62)	(30.56)
9. Information and communication	0.465***	0.632***	2.982***
	(152.86)	(369.42)	(149.53)
10. Financial	0.383***	0.570***	2.537***
	(88.40)	(222.16)	(128.86)
11. Professional, scientific, and technical	0.478***	0.465***	2.994***
	(339.35)	(197.27)	(95.19)
12. Administrative and support service	0.329***	0.496***	2.141***
	(108.03)	(291.05)	(226.96)
13. Public, education, health, entertainment	0.575***	0.737***	3.285***
	(335.93)	(220.72)	(108.20)

(Continued)

14. Other service activities	0.0399**	0.0357***	0.331***
	(13.45)	(89.93)	(61.93)
15. Domestic services	0.493***	−0.0121**	2.708***
	(481.87)	(−11.83)	(610.55)

Ref: men in industry n

Women of childbearing age × Ind 2	0.156***	0.0265**	0.510**
	(326.32)	(10.25)	(19.98)
Women of childbearing age × Ind 3	0.127***	0.0832***	0.356***
	(124.34)	(110.80)	(35.57)
Women of childbearing age × Ind 4	−0.0196**	−0.130***	−0.279***
	(−19.87)	(−100.66)	(−44.54)
Women of childbearing age × Ind 5	0.144***	0.0995***	0.415***
	(112.90)	(57.99)	(62.38)
Women of childbearing age × Ind 6	−0.0149***	−0.0416***	−0.203***
	(−39.35)	(−92.76)	(−178.22)
Women of childbearing age × Ind 7	0.296***	0.161***	1.409***
	(829.73)	(228.63)	(130.94)
Women of childbearing age × Ind 8	0.0203**	−0.0626***	−0.0156
	(10.84)	(−327.37)	(−1.27)
Women of childbearing age × Ind 9	0.0502**	−0.160***	−0.119*
	(23.44)	(−311.61)	(−8.96)
Women of childbearing age × Ind 10	0.187***	0.00349	0.830***
	(128.18)	(1.92)	(75.03)
Women of childbearing age × Ind 11	0.0810***	0.125***	0.0687*
	(47.20)	(494.49)	(6.90)
Women of childbearing age × Ind 12	0.183***	0.0127**	0.548**
	(64.56)	(13.89)	(24.91)
Women of childbearing age × Ind 13	0.0793***	−0.0421**	0.284**
	(75.27)	(−24.29)	(28.74)
Women of childbearing age × Ind 14	0.156***	−0.0249***	0.674***
	(152.43)	(−53.89)	(152.33)
Women of childbearing age × Ind 15	0.259***	−0.0241**	0.843***
	(76.63)	(−30.71)	(124.95)

Ref: men in industry n

Women not of childbearing age × Ind 2	0.368***	−0.0757**	1.240***
	(92.04)	(−19.13)	(190.96)
Women not of childbearing age × Ind 3	−0.0269***	−0.200***	−0.657***
	(−51.42)	(−345.78)	(−116.28)
Women not of childbearing age × Ind 4	−0.161***	−0.282***	−1.638***
	(−82.21)	(−603.17)	(−107.88)

(Continued)

Women not of childbearing age × Ind 5	0.0327**	0.0380**	−0.283**
	(13.29)	(25.45)	(−17.28)
Women not of childbearing age × Ind 6	0.00323	−0.0576***	−0.229***
	(2.62)	(−82.39)	(−59.03)
Women not of childbearing age × Ind 7	0.0358**	−0.205***	−0.289**
	(12.13)	(−111.93)	(−15.43)
Women not of childbearing age × Ind 8	0.0183**	−0.101***	−0.129**
	(30.65)	(−127.47)	(−10.40)
Women not of childbearing age × Ind 9	−0.172***	−0.350***	−1.595***
	(−51.69)	(−79.77)	(−81.17)
Women not of childbearing age × Ind 10	0.0397**	−0.207***	0.176*
	(19.75)	(−377.98)	(8.08)
Women not of childbearing age × Ind 11	−0.199***	−0.210***	−1.393***
	(−64.80)	(−86.59)	(−71.14)
Women not of childbearing age × Ind 12	0.582***	−0.504***	2.318***
	(274.38)	(−508.65)	(171.59)
Women not of childbearing age × Ind 13	0.164***	−0.0916***	0.726***
	(74.46)	(−64.28)	(47.58)
Women not of childbearing age × Ind 14	0.274***	−0.0490**	0.924***
	(225.30)	(−17.55)	(99.19)
Women not of childbearing age × Ind 15	0.235***	−0.0333**	0.729***
	(47.34)	(−24.21)	(46.13)
Ref: agriculture			
law × Ind 2	0.0468	0.145***	0.565
	(1.90)	(37.82)	(3.72)
Law × Ind 3	0.0144	0.132**	0.466**
	(2.24)	(11.76)	(11.98)
Law × Ind 4	−0.00706**	−0.0293	0.210
	(−10.18)	(−2.52)	(3.17)
Law × Ind 5	−0.0216	0.0249**	0.368**
	(−2.84)	(28.79)	(10.03)
Law × Ind 6	0.0793*	0.0863*	0.610**
	(5.49)	(6.41)	(11.50)
Law × Ind 7	0.0204	0.0762	0.230
	(1.33)	(3.79)	(2.76)
Law × Ind 8	0.0405	−0.00470	0.363
	(1.02)	(−0.78)	(2.10)
Law × Ind 9	−0.113**	−0.118*	−0.452*
	(−15.84)	(−4.58)	(−7.18)

(Continued)

Law × Ind 10	−0.00665	−0.0209	0.343*
	(−0.53)	(−1.33)	(4.60)
Law × Ind 11	−0.143**	0.0196	−0.479**
	(−11.01)	(1.70)	(−10.28)
Law × Ind 12	0.0210	0.0234	0.319
	(0.28)	(0.33)	(0.98)
Law × Ind 13	−0.0458**	−0.0371*	0.162
	(−17.70)	(−4.48)	(3.71)
Law × Ind 14	−0.0538*	−0.0166	−0.137**
	(−5.21)	(−0.51)	(−10.02)
Law × Ind 15	0.153**	0.0383	1.064**
	(18.97)	(0.81)	(21.39)
Ref: men in industry n			
Women of childbearing age × law × Ind 2	−0.117	−0.0660	−0.674
	(−3.04)	(−3.05)	(−1.74)
Women of childbearing age × law × Ind 3	0.0705***	0.0754**	0.646***
	(32.15)	(22.69)	(36.23)
Women of childbearing age × law × Ind 4	0.0894	0.0897*	0.431
	(3.28)	(7.02)	(4.10)
Women of childbearing age × law × Ind 5	−0.0258*	−0.0340	0.0196
	(−8.21)	(−2.18)	(2.06)
Women of childbearing age × law × Ind 6	−0.0514*	−0.0380	−0.357*
	(−8.68)	(−3.82)	(−6.82)
Women of childbearing age × law × Ind 7	0.0118	0.187*	0.206**
	(0.79)	(6.11)	(28.83)
Women of childbearing age × law × Ind 8	−0.00107	0.00780	−0.00382
	(−0.05)	(0.67)	(−0.04)
Women of childbearing age × law × Ind 9	0.127	0.239*	0.786
	(3.54)	(9.47)	(2.61)
Women of childbearing age × law × Ind 10	−0.118**	−0.0258	−0.623*
	(−10.93)	(−1.76)	(−5.68)
Women of childbearing age × law × Ind 11	0.108	−0.0209	0.745
	(3.70)	(−0.52)	(4.24)
Women of childbearing age × law × Ind 12	−0.0193	0.00125	0.285
	(−0.24)	(0.02)	(1.19)
Women of childbearing age × law × Ind 13	−0.00373	−0.00640	−0.0391*
	(−0.44)	(−1.83)	(−7.15)
Women of childbearing age × law × Ind 14	−0.0654	0.0114	−0.185
	(−1.67)	(2.84)	(−0.97)
Women of childbearing age × law × Ind 15	−0.208**	0.0674	−0.528*
	(−17.70)	(1.20)	(−9.69)

Ref: men in industry n			
Women not of childbearing age × law × Ind 2	−0.212	0.228	−1.115
	(−1.54)	(1.79)	(−1.20)
Women not of childbearing age × law × Ind 3	−0.0160	−0.0880	−0.372
	(−0.75)	(−3.41)	(−2.69)
Women not of childbearing age × law × Ind 4	0.210	0.125	1.646*
	(1.11)	(1.28)	(4.61)
Women not of childbearing age × law × Ind 5	0.200*	0.0392	1.043*
	(5.45)	(1.40)	(6.21)
Women not of childbearing age × law × Ind 6	−0.0854**	−0.0767**	−0.585***
	(−28.31)	(−16.14)	(−181.70)
Women not of childbearing age × law × Ind 7	−0.00191	0.0338	−0.147
	(−0.07)	(0.77)	(−0.80)
Women not of childbearing age × law × Ind 8	0.0208	0.0184***	0.0579
	(0.80)	(48.67)	(0.57)
Women not of childbearing age × law × Ind 9	0.0962	0.00535	2.446*
	(3.77)	(0.04)	(7.50)
Women not of childbearing age × law × Ind 10	−0.0770	−0.0141	−0.711
	(−0.63)	(−0.10)	(−0.91)
Women not of childbearing age × law × Ind 11	0.370	0.223	1.426
	(4.24)	(3.03)	(2.70)
Women not of childbearing age × law × Ind 12	−0.572***	0.283*	−2.887**
	(−94.32)	(7.10)	(−10.00)
Women not of childbearing age × law × Ind 13	−0.0246	0.0194	−0.0967
	(−1.36)	(2.95)	(−3.71)
Women not of childbearing age × law × Ind 14	0.0403	0.0624	0.206
	(0.27)	(2.68)	(0.27)
Women not of childbearing age × law × Ind 15	−0.0954*	0.0801	−0.0167
	(−4.85)	(1.41)	(−0.40)
Age of member	0.00757*	0.000404	0.0241
	(4.92)	(0.51)	(1.82)
Age squared	−0.000187**	−0.0000310*	−0.000675
	(−10.67)	(−6.27)	(−3.63)
Ref: education Less than primary			
Primary	−0.0665**	−0.00686	−0.299*
	(−10.92)	(−3.25)	(−8.20)
Secondary	−0.112**	0.00469	−0.483*
	(−11.65)	(1.10)	(−8.90)

(Continued)

High school	−0.0591*	0.124**	0.0331
	(−7.00)	(16.41)	(0.38)
College higher education	0.0568*	0.337***	1.196**
	(5.46)	(200.04)	(12.34)
Ethnicity (1 = Kinh; 0 = others)	0.0307	0.00471	0.298**
	(3.71)	(0.97)	(11.71)
Urban	0.0165	0.0326*	0.296**
	(3.19)	(7.64)	(26.98)
Share children 1–4 years old	−0.0185	0.00335	−0.0467
	(−2.89)	(2.72)	(−1.18)
Share children 5–14 years old	−0.00393	−0.00885*	−0.0172
	(−1.23)	(−8.36)	(−1.68)
Constant	0.410**	0.0347	1.572*
	(13.95)	(1.50)	(8.69)
N	58,738	58,738	58,738
R^2_a	0.355	0.562	0.458

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A5: The extended maternity leave and gender employment gap: women with infant vs single men

	Have a wage job	Have a formal job	Income
Ref: single male workers			
Women with infant	−0.145***	0.0484*	−0.723***
	(−33.51)	(5.52)	(−16.65)
Women without infant	−0.122***	0.0418**	−0.694***
	(−22.89)	(6.38)	(−14.03)
Law2012	0.0226	0.0435	0.283
	(1.45)	(2.04)	(1.98)
Women with infant × Law2012	0.00555	−0.0225	−0.00340
	(1.17)	(−2.08)	(−0.05)
Women without infant × Law2012	0.0189	0.00105	0.129
	(1.50)	(0.07)	(1.35)
Age	0.0461***	0.00693**	0.212***
	(23.30)	(10.88)	(14.06)
Age squared	−0.000648***	−0.000151**	−0.00282***
	(−28.77)	(−10.25)	(−14.44)
Ref: education less than primary			
Primary	−0.00969	0.00255	0.0626
	(−1.20)	(2.48)	(0.95)
Secondary	−0.0664*	0.0339**	−0.103
	(−4.00)	(8.08)	(−0.86)
High school	−0.00693	0.267***	0.481
	(−0.35)	(28.06)	(2.59)
Higher education	0.393***	0.691***	3.242***
	(90.30)	(25.93)	(32.35)
Ethnicity (1 = Kinh; 0 = others)	0.0474***	0.0840*	0.385***
	(14.02)	(5.11)	(31.87)
Urban	0.0108	0.0784**	0.303***
	(1.41)	(10.72)	(21.03)
Share children 1–4 years in house	0.00675	0.00258	0.0975
	(1.00)	(0.50)	(2.09)
Share children 5–14 years in house	−0.00892**	−0.0165**	−0.0397*
	(−11.04)	(−10.29)	(−3.99)
Constant	−0.327**	−0.0673*	−1.976**
	(−8.19)	(−3.90)	(−6.00)
N	62,745	47,553	62,745
R2-a	0.143	0.345	0.193

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A6: The extended maternity leave and gender employment gap: women of childbearing age vs men

	Have a wage job	Have a formal job	Income
Ref: Single male workers			
Women of childbearing age	−0.127***	0.0375**	−0.701***
	(−23.23)	(6.19)	(−16.59)
Women not of childbearing age	−0.0807*	0.0733**	−0.442
	(−5.62)	(11.80)	(−2.51)
Law2012	0.0229	0.0437	0.285
	(1.46)	(2.05)	(1.98)
Women of childbearing age × Law2012	0.0160	0.00664	0.0856
	(1.41)	(0.57)	(1.27)
Women not of childbearing age × Law2012	0.00974	−0.0356	0.148
	(0.91)	(−2.01)	(0.60)
Age	0.0487***	0.00772**	0.229***
	(26.47)	(11.63)	(16.44)
Age squared	−0.000694***	−0.000165***	−0.00313***
	(−32.51)	(−12.94)	(−17.67)
Ref: education less than primary			
Primary	−0.00918	0.00293*	0.0632
	(−1.17)	(3.87)	(0.96)
Secondary	−0.0653*	0.0344**	−0.100
	(−4.11)	(8.35)	(−0.85)
High school	−0.00732	0.267***	0.474
	(−0.39)	(28.00)	(2.57)
Higher education	0.390***	0.689***	3.226***
	(78.85)	(26.07)	(33.67)
Ethnicity (1 = Kinh; 0 = others)	0.0488***	0.0843*	0.390***
	(15.43)	(5.03)	(29.59)
Urban	0.0114	0.0787**	0.307***
	(1.52)	(10.71)	(21.87)
Share children 1–4 years in house	0.00305	0.00159	0.0796
	(0.49)	(0.33)	(1.74)
Share children 5–14 years in house	−0.00740**	−0.0159**	−0.0326
	(−10.61)	(−9.49)	(−2.89)
Constant	−0.361**	−0.0779**	−2.196**
	(−9.63)	(−8.87)	(−7.02)
N	62,745	47,553	62,745
R2-a	0.143	0.345	0.193

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A7: The extended maternity leave and gender employment gap: women with young children vs men

	Have a wage job	Have a formal job	Income
Ref: male workers			
Women with young child	−0.193***	−0.00110	−0.936***
	(−114.45)	(−0.27)	(−91.95)
Women without young child	−0.161***	−0.0109**	−0.866***
	(−39.15)	(−6.78)	(−23.40)
Law2012	0.0311	0.0209	0.419
	(3.00)	(2.25)	(2.62)
Women with young child × Law2012	0.00855*	0.00424	−0.0808**
	(3.80)	(0.71)	(−12.53)
Women without young child × Law2012	0.00662	0.0182**	−0.0247
	(1.36)	(9.37)	(−0.59)
Age	0.0490***	0.00705***	0.225***
	(36.48)	(30.22)	(21.22)
Age squared	−0.000678***	−0.000132***	−0.00297***
	(−44.70)	(−20.78)	(−19.56)
Ref: education less than primary			
Primary	−0.0144	0.00819*	0.0152
	(−3.01)	(3.77)	(0.34)
Secondary	−0.0489*	0.0450***	−0.0540
	(−4.76)	(30.70)	(−0.67)
High school	0.0158	0.276***	0.610*
	(1.45)	(29.07)	(4.46)
Higher education	0.369***	0.712***	3.200***
	(46.38)	(32.62)	(40.93)
Ethnicity (1 = Kinh; 0 = others)	0.0482***	0.0676*	0.480***
	(26.45)	(4.69)	(36.55)
Urban	0.00913	0.0898***	0.352***
	(1.88)	(19.68)	(39.53)
Share children 1–4 years in house	0.0185*	0.00354	0.158*
	(3.87)	(1.06)	(4.28)
Share children 5–14 years in house	−0.00542	−0.0127**	−0.0189
	(−2.63)	(−7.56)	(−1.88)
Constant	−0.356***	−0.0506*	−2.192**
	(−13.54)	(−4.53)	(−7.68)
N	95,276	78,605	95,276
R^2-a	0.154	0.335	0.207

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.

Table A8: The extended maternity leave and gender employment gap: women with young children vs single men

	Have a wage job	Have a formal job	Income
Ref: single male workers			
Women with young child	−0.153***	0.0453*	−0.763**
	(−21.04)	(5.69)	(−11.62)
Women without young child	−0.120***	0.0418**	−0.687***
	(−24.12)	(6.22)	(−14.50)
Law2012	0.0225	0.0435	0.282
	(1.45)	(2.04)	(1.98)
Women with young child × Law2012	0.0179	−0.0134	0.0646
	(1.74)	(−1.17)	(0.60)
Women without young child × Law2012	0.0153	−0.000303	0.115
	(1.30)	(−0.02)	(1.30)
Age	0.0462***	0.00696**	0.212***
	(23.21)	(10.83)	(14.04)
Age squared	−0.000649***	−0.000151**	−0.00282***
	(−28.71)	(−10.20)	(−14.42)
Ref: education less than primary			
Primary	−0.00975	0.00259	0.0624
	(−1.20)	(2.51)	(0.94)
Secondary	−0.0666*	0.0339**	−0.104
	(−3.99)	(8.08)	(−0.87)
High school	−0.00716	0.267***	0.480
	(−0.36)	(28.11)	(2.57)
Higher education	0.392***	0.690***	3.240***
	(85.98)	(25.95)	(32.15)
Ethnicity (1 = Kinh; 0 = others)	0.0476***	0.0842*	0.386***
	(14.90)	(5.11)	(31.89)
Urban	0.0109	0.0784**	0.303***
	(1.44)	(10.73)	(21.27)
Share children 1–4 years in house	0.0139	0.00277	0.118
	(2.21)	(0.42)	(2.55)
Share children 5–14 years in house	−0.00890**	−0.0164**	−0.0394*
	(−11.65)	(−9.97)	(−3.66)
Constant	−0.328**	−0.0681*	−1.980**
	(−8.15)	(−3.94)	(−5.98)
N	62,745	47,553	62,745
R^2-a	0.143	0.345	0.193

Note: the sample selection includes people of working age. Standard errors are clustered at the survey-year level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: authors' calculations based on VHLSS 2008–16.