

# Unpacking the small effects of subsidized employment: the role of gender and parenthood<sup>1</sup>

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November 1, 2024

## Abstract

Subsidized employment has been widely used to tackle the prevalent problem of youth unemployment. In this study, we evaluate the impact of a subsidized employment program for disadvantaged youth in France and reveal significant gender differences in program effectiveness, hidden behind the average null effect. For men, the effects are significant and positive on all employment outcomes, on both extensive and intensive margins. In contrast, the program fails to improve the likelihood of employment for women. We identify two reasons for such differences in program effectiveness. First, women are more likely to have children during the program and drop out of it. Second, we observe gender-based sorting into different job types at the start of subsidized employment. Men tend to secure cognitive tasks in public administration and industry, while women are more likely to occupy routine non-cognitive roles in health and social services. Our results have important implications for future policy designs and evaluations.

**JEL Classification:** J21, J48, J12, J13

**Keywords:** Subsidized employment, Youth unemployment, Gender Gap, Childbirth

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<sup>1</sup>This project is partly funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy – EXC 2126/1-390838866. This project has also received funding from the Chaire de recherche sur la sécurisation des parcours professionnels. We thank Clémence Tricaud for sharing the data related to daycare availability.

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# 1 Introduction

Youth unemployment remains a persistent challenge for policymakers in developed countries (International Labor Organization, 2024). A common policy response is subsidized employment – an active labor market policy (ALMP) usually involving substantial public investment in wage subsidies, training, and mentoring. Despite the widespread use and high costs of these programs, most studies document null or very small positive effects for disadvantaged youth (Kluve et al., 2019).

In this study, we evaluate a subsidized employment program for disadvantaged youth in France and demonstrate that the modest average effects have limited informativeness and are driven by pronounced heterogeneity by gender. We find that, while male participants benefit through improved labor market attachment and employment outcomes, female participants experience considerably smaller effects. We further provide evidence that this gender differential in effects is likely to be driven by two mechanisms: young female participants are more likely to sort into lower-quality jobs and are more likely to have a child during the program.

Despite being a popular topic in labor economics, gender heterogeneity has received scant attention in the ALMP literature, and policymakers have similarly overlooked this aspect when designing and evaluating policies. Factoring in possible differences between genders is seldom a priority in the design of these policies (Muller and Kurtz, 2003; Berge-  
mann and van den Berg, 2008). Indeed, despite political initiatives in the '90s and substantial improvement of data quality, our knowledge about gender-specific effects of active labor market policies is still in a dismal state.<sup>5</sup> It is evident that gender-specific factors such as parenthood and the underlying mechanisms are lacking in existing studies, especially for youth (Card et al., 2018). Overlooking interactions with family responsibilities yields significant repercussions for women, potentially generating lasting income inequalities (Goldin et al., 2021).

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<sup>5</sup>The European Union acknowledged such threats in the '90s when designing the "European Employment Strategy", emphasizing the need to create equal opportunity for men and women. The EU further formalized this goal by developing guidelines in 1999. In particular, they stress the importance of balancing work and family life and urge to account for gender-specific effects when evaluating labor market policies.

In this paper, we aim to close this gap by evaluating a subsidized employment program implemented in France between 2012 and 2018, with a particular emphasis on examining how policy effects and their dynamics vary across genders. We study the effect of the *Emploi d'avenir* program – translated Jobs for the Future program (henceforth JFF). This program subsidized working contracts for unemployed workers 16 to 25 years old who have no or a low level of education and come from deprived areas. It was implemented in the context of a difficult transition between school and employment, reducing the probability of finding a full-time job (European Employment Observatory Report, 2010; Cour des Comptes Report, 2016). The subsidized contracts supported the employers by paying 35% to 75% of the wage of the targeted workers for up to three years. In exchange, employers committed to training young workers. This program is particularly suited for our study as it targeted both young men and women equally during a phase of life when they might be considering starting a family.

We start by conducting a descriptive analysis of the participants' trajectories and document two key patterns: (1) the Ashenfelter (1978)'s dip – the decrease in outcomes of participants in the year before enrollment into the program – exists only for individuals treated at a later age (i.e. closer to the age of 25 in our sample of youth); (2) this dip is more pronounced for male participants. These empirical facts indicate the importance of estimating the effects separately for cohorts (in terms of age at participation) and by gender. Taking it into account, we proceed to evaluate program effectiveness using dynamic Difference-in-Differences approach and exploiting eligibility criteria for the program. We document that subsidized employment is more effective for men and childless women, while mothers benefit less. We contribute to the literature by highlighting the role of gender, parenthood, and age at participation as crucial factors in the effectiveness of these subsidies – aspects previously overlooked in this context.

As for many policies, evaluating the JFF program raises the issue of choosing the right counterfactual: treated individuals are only observed in the treatment case (Heckman et al., 1999; Blundell and Costa Dias, 2000). We use this policy's eligibility criteria to construct a counterfactual. More precisely, we exploit the quasi-random variation in the distribution

around the age cutoff of 25 and apply the Difference-in-Differences method. We restrict our study to individuals between 24 and 26 for treated individuals and up to three years older than 26 for the control group. To bring more comparable individuals together, we restrict the control group to individuals having no or a low level of education and coming from deprived areas. The control group is thus made up of slightly older individuals who would have been eligible had such a policy existed for them. This allows us to compare the outcomes of participants to the typical life-cycle trajectory of comparable youth in terms of education and unemployment backgrounds – they meet the program’s eligibility criteria. We assume that participants would have followed a similar life-cycle trajectory if they had not had a bad year and then participated in the program. Building on the findings from descriptive analysis, we apply the estimator of De Chaisemartin and d’Haultfoeuille (2024), as it allows us to conduct the analysis by cohort (in terms of age at participation) and gender, accounting for heterogeneous effects along these two dimensions.

Using rich longitudinal administrative data, we identify workers benefiting from the JFF program and follow them before, during, and after the subsidy. We find that completing the program increases annual earnings and hours worked. In the medium run – 3 years after the program, beneficiaries raise their annual earnings by €2,000 and work 200 hours more annually. However, the average effect on the employment probability – the primary objective of these policies – is not significantly different from 0. Yet, we show that such null result hides great disparities by gender and parental status. We find significant and positive effects on all outcomes on extensive and intensive margins for men. They earn, on average, an additional €2,500 per year and are 6.5 percentage points more likely to be employed than their counterfactual. For women the program fails to enhance the likelihood of employment in a sustainable way.

As parenthood contributes significantly to the prevailing gender inequality within the labor market (Blau and Kahn, 2017), we also carry out heterogeneity analysis along these lines. Importantly, we find no systematic difference between the age at which female beneficiaries have their first child and their counterfactual have theirs. Then, we highlight that the event of childbirth and its timing are crucial within the context of this program. Earnings

and hours worked improve for all groups except mothers and even worsen for those giving birth during or after the program and, therefore, dropping out.

Moreover, we show that at the start of the subsidized contract, women sort into routine and non-cognitive occupations compared to men, who tend to work in public administration and construction doing more non-routine cognitive tasks. Furthermore, young female participants are over-represented in the healthcare and social sectors and often find employment in firms where most workers are female. These results indicate the gender-based sorting into jobs of different quality.

**Related literature.** This paper connects two strands of the literature: the ALMP and the gender literature. We contribute to the general ALMP literature by investigating the effects of subsidized employment combined with training and job-search support. Using a quasi-experimental framework, we evaluate the impact of such programs at different points in time. Evaluating such programs in the short and longer terms is crucial as lock-in effects are known to dominate in the short run, especially for policies with long training time (Fitzenberger and Völter, 2007; Lammers and Kok, 2021). Yet, evidence, in the long run, is limited (see for example the reviews of Crépon and van den Berg, 2016; Bergemann and van den Berg, 2008).

Concerning the effects of ALMPs on youth, evidence has been rather pessimistic on their employment prospects so far. In a recent study, Kluve et al. (2019) document that only one-third of the studies focusing on youth find small significant positive average effects. The authors emphasize that the specific design features, the country context, and the beneficiaries' characteristics are important for the effectiveness of a program. However, most studies limit their evaluation to the average treatment effect. We bring new dimensions to this literature by investigating the effect of such policy across gender but also parenthood.

The investigation by gender is not systematic in the ALMP literature. The little evidence highlights that ALMPs have rather positive effects on women, as summarized by Card et al. (2018). However, the literature focusing on young female workers is more nuanced. Some papers find that such programs were more favorable for girls, without being necessarily positive (e.g. Katz, 1996; Attanasio et al., 2011). Others find a limited effect for young women

(Centeno et al., 2009). This evidence rarely suggests mechanisms at play for the difference in effectiveness.

While the heterogeneous effects by gender have been only partly researched, the role of young parenthood remains understudied. Groh et al. (2012) highlight that subsidized contracts do not provide a stepping-stone to employment. This null effect is highly correlated with marriage.<sup>6</sup> Interestingly, programs combined with additional financial support to cover childcare expenses have strong and positive effects on women's outcomes (Attanasio et al., 2011).

In the French labor market, there have been several types of subsidized working contracts aiming to help youth. Roger and Zamora (2011) highlight that the "Youth-in-Business" policy failed to introduce school drop-outs to the labor market in a sustainable way.<sup>7</sup> We are aware of only two papers investigating the effects of the JFF program. Cahuc et al. (2021) and Hervein and Villedieu (2022) send fictitious résumés to real job postings in France and look at the callback rates of different young unemployed profiles. Cahuc et al. (2021) provide suggestive evidence that employers do not stigmatize JFF beneficiaries. Hervein and Villedieu (2022) find that the subsidized work experiment of school dropouts significantly increases the probability of job interviews. To the best of our knowledge, we are the first to evaluate the JFF program on earnings, hours worked, and the probability of being employed in the short, medium, and long runs, in addition to providing explanations for the average zero effect of the policy.

Overall, we add to the literature by showing that the average treatment effects of ALMPs can hide substantial heterogeneity across genders. By unpacking this average effect, we deepen our understanding of the success or failure of ALMPs by identifying a key factor, especially for women: the event of childbirth and its timing. Although policy evaluations are always context-specific, here we identify a feature inherent to any woman entering any job market. To our knowledge, we are the first to show that parenthood should be considered when evaluating and designing ALMPs, particularly for youth. Indeed, considering

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<sup>6</sup>Married women are significantly less likely to work, and marital status in the Jordanian context is likely to be tied to parenthood. 28% of the girls benefiting from the subsidized job quit for family reasons or dislike of the occupation. Employers report that 30% of the girls quit because of a competitive job offer or marriage.

<sup>7</sup>This is probably the closest policy to the JFF program. It was implemented from 2002 to 2008.

this factor while designing policies could be an additional instrument to promote gender equality in the labor market.

We also contribute to the literature on gender inequalities in the labor markets. Women tend to sort across different occupations and industries from men, usually opting for more flexible and less competitive positions and therefore less paying jobs (Blau and Kahn, 2017). Despite aiming to fight against gender sorting across industries, we observe that the JFF program further contributes to it: women are sorted into jobs where women account for 70% of the labor force. In addition, we identify that the event of childbirth and its timing is also critical for the effectiveness of ALMPs, at least in the case of disadvantaged youth. Our study therefore provides additional evidence of the mother penalty (e.g. Goldin et al., 2022; Adda et al., 2017), and in particular, the one that emerges in early working life.

**Outline.** The paper is organized as follows: Section 2 provides information about the institutional background; Section 3 describes and summarizes the data; Section 4 describes the identification strategy; Section 5 presents the results; Section 6 discusses potential mechanisms explaining our results; Section 7 concludes.

## 2 Institutional Setting

In this section, we outline the setting of the JFF subsidized employment policy. First, we detail the three profiles of eligible workers defined in the program. Second, we briefly explain the terms and conditions of the subsidized jobs.

### 2.1 Workers eligibility

Subsidized jobs have existed in France since the end of the 1970s, but their design has evolved. In 2010, a reform created a general framework for all subsidized jobs: the single inclusion contract (henceforth SIC).<sup>8</sup> Such contracts combine training and/or professional support for their beneficiaries and financial assistance for employers. They are targeted at

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<sup>8</sup>In French, Contrat Unique d'Insertion (CUI).

people having difficulties with finding a job. The JFF program is part of this framework but targets young people. It is complemented by close monitoring of the beneficiary by the unemployment agency. The main goal of the JFF policy is, in particular, to help young workers enter the labor market and gain experience and qualifications. The program was in place from October 2012 to December 2018. The last cohort exited the program in 2020. The program ended as it was depicted as inefficient.

To be eligible, young workers have to be 16-25 years old.<sup>9</sup> The required level of education depends on the time spent looking for a job and the place of residence. In this program, looking for a job was defined as periods during which young people work less than 78 hours/month. Eligible youths can be grouped into three profiles: (1) youths who left their initial education without a diploma; (2) youths with up to lower secondary level degree, looking for a job for at least 6 months during the last 12 months;<sup>10</sup> (3) youths with up to an undergraduate diploma, living in a deprived area and having looked for a job at least 12 months during the last 18 months. These three profiles are summarized in Table 1.

**Table 1: Profiles of eligible individuals**

| <b>Profile</b> | <b>Education</b>                       | <b>Location</b>    | <b>Job search duration</b>                     |
|----------------|--|--------------------|--|
| Profile 1      | no diploma                             | none               | none   |
| Profile 2      | vocational diploma in secondary school | none               | at least 6 months during in the last 12 months |
| Profile 3      | up to undergraduate diploma            | high-priority area | at least 12 months in the last 18 months       |

Notes: This table summarizes the eligibility criteria. All workers must be 16-25 years old and up to 30 years old if disabled.

The share that each profile represents among JFF beneficiaries is found in Appendix A, Table A.1. It is worth noticing that while youth living in deprived areas are explicitly iden-

<sup>9</sup>Eligible young workers are 16-25 years old at the date of the contract signature, meaning they can be 26 when they start working under such contracts. People with disabilities are eligible for up to 30 years old. However, we do not provide specific insights on the effect of the program on those individuals as the data do not allow us to identify disabled people in the control group.

<sup>10</sup>This means that they have up to 1 or 2 years professional training and left schools around 16.



tified only in the third profile, they are always given priority when they have profiles (1) or (2).<sup>11</sup> We identify that around 57% of the participants are likely to live in high-priority areas.<sup>12</sup>

Not all eligible workers were granted such subsidized working contracts. The decision was made by the French public unemployment agency and various local job agencies specializing in working with young people. Additional elements such as the personal situation and previous experiences could also be considered when choosing a young participant (who had to fall within the above-mentioned criteria).

## 2.2 Program characteristics

**Contract.** The JFF contracts last at least one year and up to three years. They are mainly full-time contracts – 35 working hours a week. Priority is always given to open-ended contracts, but only a small share of contracts are open-ended, especially for women (21.4% for all beneficiaries and 16.5% for women, see Table A.2 in Appendix A ). Overall, women are less likely to be employed on permanent, full-time contracts. Their contracts last, on average, fifty days less, and they are less likely to be employed in the private sector.

Training is a key element of the program. When the subsidized contract is signed, employers commit to a forecast training plan that includes, in particular, building transferable skills. Table A.2 in Appendix A lists the varying types of training provided and the proportion of contracts concerned. Financial supports are available and are sector-specific. Training

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<sup>11</sup>The government aimed at having at least 30% of these contracts granted to youth living in such areas.

<sup>12</sup>Urban deprived areas are usually limited to a few neighborhoods of a city, but we have only the location of individuals at the municipality level. Therefore, we identify people living in a municipality with at least a deprived neighborhood. The classification into a high-priority area is made at the government's discretion in collaboration with local authorities. There are two types of priority areas: the Sensitive Urban Area (*Zone Urbaine Sensible – ZUS*) and the Priority rural development areas (*Zone de Revitalisation Rurale – ZRR*). Sensitive Urban Areas are neighborhoods facing economic and social difficulties due to a dense population, a high share of young people, a high unemployment rate, and a large share of low-skilled workers. In 2015, this was replaced by Priority neighborhoods (*Quartier Prioritaire de Ville – QPV*), for which the share of inhabitants earning less than 11,250 euros annually is the only relevant criterion. This change added neighborhoods to the list of high-priority areas rather than removing some. We can check this in the data. Only 9% of the priority municipalities had neighborhoods reclassified out of the priority areas. Priority rural development areas are declining regions located in the countryside. They are characterized by some of these criteria: a decreasing number of inhabitants, a shrinking share of workers, and/or a very large share of farmers among the working population. There are no precise thresholds above which the areas become priority places. While this second type of area encompasses a whole municipality, the Sensitive Urban Area covers usually only a few neighborhoods of a city.

can take place before the start and at the beginning of the subsidized job to get the worker ready for the position (pre-qualifying, refresher, or adaptation training), or during the contract to equip them with new skills and make them more employable in general (qualifying training or providing new skills). The training might but is not required to provide an official certification.

In addition, young workers can be assigned to a tutor, either an employee of the French public employment agency, the local job center, or the employer. This tutor provides career guidance, supports integration at the workplace, helps search and apply for additional training, and prepares the exit of the subsidized contract. In any case, the implementation of the program is highly monitored: meetings with the participants take place three months after the hiring, at the mid-terms, and two months before the end of the contract.

**Subsidies.** Employers receive, on average, a subsidy covering 35% of the minimum hourly gross wage in the for-profit sector and 75% of it in the non-profit sector.<sup>13</sup> For example, for an employee working full-time paid at the minimum wage rate, the monthly gross earning is €1,425 in 2012, and the monthly cost for the employer in the non-profit sector after the subsidy is €355 and €925 for a private employer. In 2015, the cost of the program was estimated at 1.3 billion euros for 121,672 beneficiaries throughout the year – resulting in a unit cost of about €11,000, out-of-exemptions from social security contributions and training expenses (according to Cour des Comptes Report, 2016). Employers can also apply for additional funding to finance the training scheme.

**Eligible establishments.** While eligibility for non-profit firms is straightforward, it is more restricted to for-profit firms. Private entities must belong to the priority sectors defined in the regional development plan or identified in national agreements – making them eligible within the territory. Nonetheless, most JFF contracts are made with employers in the public sector, such as non-profit organizations, regional and local authorities, or hospital establishments and medico-social services. The system is open to other employers in a limited way. In addition, for the private sector, priority is given to open-ended contracts.

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<sup>13</sup>About 80% of youth benefiting from such contracts earn exactly the minimum wage.

### 3 Data sources and descriptive statistics

In this section, we present the data sources used for our evaluation and the treated and control groups obtained. In subsection 3.1, we detail the three data sets used and the merge of the data sets done to identify recipients of the JFF program and give some descriptive statistics on those two groups.

#### 3.1 Data

**Data on JFF contracts.** We have access to the exhaustive list of JFF contracts that started between 2012 (the start of the policy) and 2015 (*Emplois d’Avenir* – JFF). This source contains information on the beneficiaries: gender, date of birth, municipality of residence and workplace, initial qualification, and the unemployment duration at the hiring date. Additional information is available on the contract and the employer such as the amount of subsidy granted for the contract, the beginning and end date of the contract, and the firm and establishment identifiers (*siren* and *siret*, respectively). The training plan, as well as the additional support provided, are detailed.

**Social security and census data.** We rely primarily on administrative linked employer-employee data which come from the French annual declaration of social security (*Déclaration Annuelle des Données Sociales* – DADS). It is a mandatory procedure that any employer has to fulfill every year. For each job-year spell, firms must state the wage paid, the number of hours worked, the dates of the beginning and the employment spell, the type of contract (fixed term or open-ended contract as well as whether this is a subsidized contract), and the occupational classification, among other job characteristics.

To carry out the analysis at the employee level, we use the panel version of DADS matched with the permanent demographic sample (*Echantillon Démographique Permanent* – EDP). This panel is a random sample of the standard DADS source, covering about 4% of the French workforce. In addition to information on labor market outcomes, this data source provides the date of birth, marital status, and birth dates of children. It includes a unique individual identifier enabling us to follow people across the years. Using the identifier, we

aggregate yearly information at the individual level, summing variables when numerical and taking characteristics of the main occupation.<sup>14</sup> Therefore, the main outcomes of interest are the annual total net earnings and the total number of hours worked. We also compute the probability of being employed and of having an open-ended contract. These are dummy variables.

It should be noted that the panel's coverage depends on employment. When an individual is not in the panel during a year, she can be unemployed or self-employed; we do not have this information. Therefore, we do not include the unemployment indicator in our outcomes, and we only assess how much the policy affects labor outcomes from a salary occupation. We assume that individuals dropping out of the sample are unemployed and, therefore, put their outcomes to 0.

**Demographic data.** We complement the data with regional characteristics such as the unemployment rate and the share of people living in a deprived area at the municipal level. These data are publicly available on the French Statistical Office website, INSEE. As the finest location information in the panel of workers is the municipality, we can only say whether an individual is located in a municipality with neighborhoods classified as a Sensitive Urban Area, which serves as a proxy for the conditions of the local labor market.

**Construction of the panel of analysis.** We do not have a unique employee identifier allowing us to merge social security and census data with data on JFF contracts. Therefore, to identify the recipients in the DADS panel, we use the date of birth, gender, municipal identifier of residence, firm identifier, types of contracts, and the date of the beginning of the contract. We identify around 5,315 treated individuals (about 2.5% of the overall treated) in the panel of workers.<sup>15</sup>

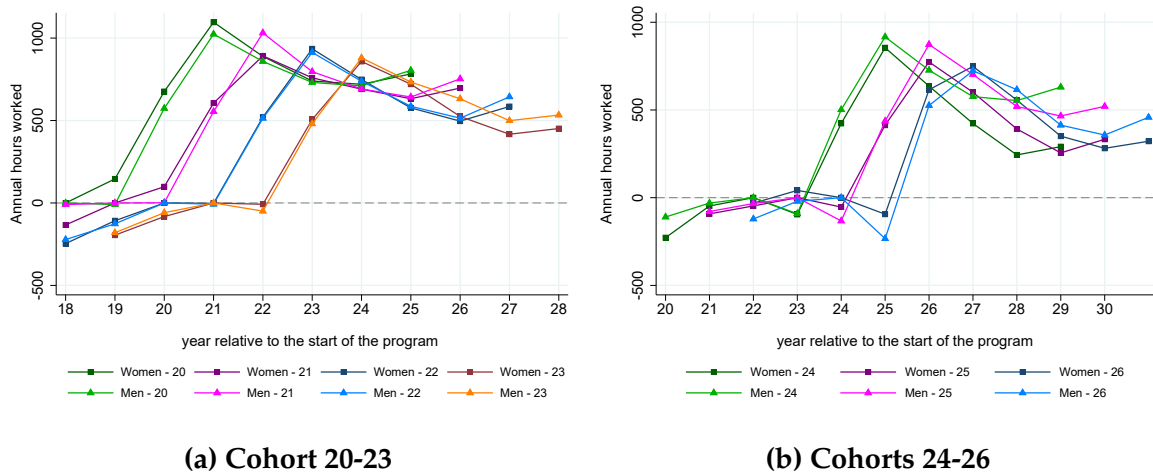
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<sup>14</sup>The main occupation is defined as the one providing the largest income and the highest number of hours worked.

<sup>15</sup>Only beneficiaries born between January 2nd and 5th, April 1st and 4th, July 1st and 4th, or October 1st and 4th are likely to be in the panel of workers – the scope of the DADS panel merged with the EDP. 19,000 JFF contracts signed between 2012 and 2015 involve an individual born on one of those days. Overall, 224,204 individuals benefited from JFF contracts between 2012 and 2015.

### 3.2 Descriptive statistics

We start with a descriptive analysis of participants' outcomes. For this part, we restrict the sample to participants between 20 and 26 to have enough observations for obtaining cohort-specific effects.<sup>16</sup> This provides us with important insights into the employment trajectories of beneficiaries. We start with simple averages over the life cycle by cohort and normalize these averages to two years before they enter the program. In Figure 1, we plot the average annual hours worked over the life cycle by gender for each cohort. Four patterns stand out.



**Figure 1: Average hours worked over the life cycle by cohort and gender**

Notes: These figures plot the average hours worked over the life cycle by age at treatment and gender. The averages are normalized to two years before entering the treatment. The cohort treated between 20 and 23 are on panel (a), and those treated between 24 and 26 are on panel (b).

First, we observe that the older individual enter the program, the worse their situation in the year before entering. For cohorts treated between 20 and 23, individuals have a relatively stable situation before starting the program. In contrast, for the cohorts treated at 24 or later, we observed a "dip" in labor market outcomes before entering the program. This "dip" is a well-known phenomenon in the literature – the so-called Ashenfelter (1978) dip. The dip represents the selection into the active labor market policy out of experiencing worse labor market outcomes, such as unemployment. Here, we show that individuals entering the program at older ages seem to have a larger dip, suggesting the situation before joining the program worsens with age. Second, the Ashenfelter (1978)'s dip appears to be more severe

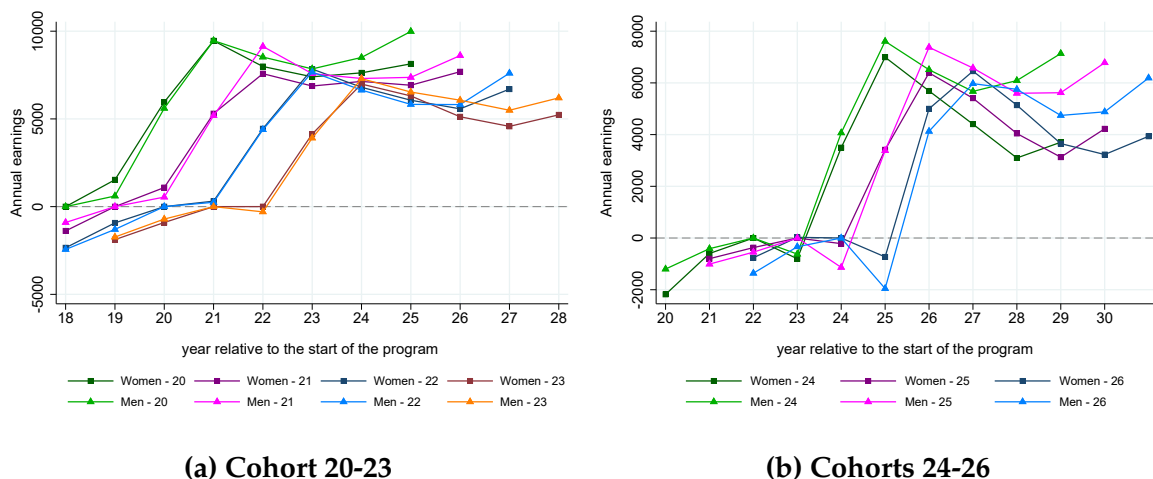
<sup>16</sup>Cohorts of participants outside of this range are too small.

for men than women. Men tend to enter the program with worse employment histories than women.

Third, the effectiveness of the program varies by age at treatment. Focusing on the average 3-4 years after the start of the program (the average end of the subsidized contract), we observe that the number of hours worked slightly diminishes but is still significantly higher than pre-treatment. This improvement, however, diminishes with age at treatment. Cohorts treated at 20-21 work on average 700 hours after the program. In contrast, older cohorts tend to work less than 500 hours.

Fourth, the effectiveness of the policy differs by gender for older cohorts. While we observe hardly any differences between men and women for the cohorts treated between 20 and 22, we observe some differences for cohorts treated at 23 or later. The gap between men and women at the end of the program seems to widen with age at treatment. It is worth noting that there are no significant differences between men and women during the program regarding hours worked and earnings (see Figure 2).

This exercise offers key insights into participant trajectories. It suggests that women do not benefit from the program as much as men, even though men typically start subsidized employment from a more disadvantaged position. The differences between men and women appear to be linked to the age at which women are more likely to become mothers.



**Figure 2: Average annual earnings over the life cycle by cohort and gender**

Notes: These figures plot the average annual earnings over the life cycle by age at treatment and gender. The averages are normalized to two years before entering the treatment. The cohort treated between 20 and 23 are on panel (a), and those treated between 24 and 26 are on panel (b).

One may wonder whether these differences by gender stem from initial differences in the training and support individuals get during the subsidized contract. When describing the JFF program in the Section 2.2, we noted differences between men and women regarding the probability of having an open-ended contract and working in the private sector. Women are also less likely to have such contracts in this subsample (see Tables A.10 and A.11). This could arguably affect the effectiveness of the policy. We come back to this in the Section 6. Men tend to have more support at the program's start, potentially because they have a worse background. There are otherwise no substantial differences between men and women regarding the JFF package.

## **4 Empirical strategy**

In Subsection 4.1, we explain our empirical strategy based on the age cut-off and eligibility criteria and give our baseline specification of a dynamic Difference-in-Differences model. With this approach, we assume that treated individuals would have had the life-cycle trajectory of youth with similar educational levels and unemployment history, had they not experienced Ashenfelter dip at a certain age. Under this assumption, the estimated effect of the program reflects both the recovery from this dip and any additional gains in employment outcomes relative to the life-cycle trajectory of a comparable control group (which was eligible but slightly too old to participate in the program by the year of its introduction). In Subsection 4.2, we further relax this assumption and employ matching method to bring together more comparable – i.e. all experiencing the Ashenfelter dip at a certain age – individuals in treated and control groups and isolate the effectiveness of the program conditional on experiencing Ashenfelter dip (in progress).

### **4.1 Differences-in-Differences at the age cut-off**

As discussed previously, the JFF program is targeted at youth not older than 25, in addition to the criteria of low educational levels, long-term unemployment experience, or residency in deprived areas (Table 1). Hence, among the youth having one of these profiles, the age

restriction and the year of policy introduction generate a sharp cut-off (of being 26 years old in 2013). The main idea is to compare treated individuals to a control group of slightly older individuals who would have been eligible had such a policy existed. For example, among the people meeting the criteria, someone aged 26 in 2013 is not eligible only because she is already too old. In contrast, another person aged 25 in 2013 can participate just because she was born one year later.<sup>17</sup>

Therefore, we use a Differences-in-Differences approach, exploiting the cut-off by age in the year of introduction. However, the younger or the older the individuals are to this threshold, the less comparable the treated and control groups become. Hence, we restrict our sample to individuals close to the cut-off. Namely, we compare treated individuals being 24-26 years old when they started the JFF contract (in 2013, 2014, or 2015) to individuals who had one of the three profiles when they were aged 24 to 26 but were 27-29 in 2013 – the start of the policy implementation.<sup>18</sup>

As we have seen that age at treatment matters for the effectiveness of the program, we focus primarily on the age dimension rather than the calendar year. Formally, we regress the outcome  $y_{i,t}$  of the individual  $i$  at age  $t$  on dummies  $\mathbb{1}_{k(i)}$  equal to  $k$  years before/after the individual  $i$  starts working under the subsidized contract. The model is the following:

$$y_{i,t} = \sum_{k=-4}^5 \beta_k \mathbb{1}_{k(i)} \times \mathbb{1}_{treated_i} + \gamma_i + \lambda_t + \epsilon_{i,t} \quad (1)$$

We allow for constant differences over age between the two groups using age fixed effects ( $\lambda_t$ ). Using individual fixed effects ( $\gamma_i$ ), we control for time-invariant individual characteristics and potential unobservable factors.  $\epsilon_{i,t}$  denotes the error term. We cluster standard errors at the individual level, accounting for potential correlations across periods. As the individuals are treated at different ages (between 24 and 26), we use the estimator of

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<sup>17</sup>We choose the year cutoff of 2013 because only 0.6% of the JFF contracts were granted between October 2012 and December 2012. These were, in addition, granted to people younger than 24 when starting.

<sup>18</sup>As explained before, the maximum age to be eligible for the program is 25. Eligible individuals are no older than this age at the date of the contract signature but maybe 26 when they start working under such contracts. Moreover, the age in our database is not observed to the nearest month, so individuals may be in their 26th year and have started their contract before reaching the age of 26. Therefore, the individuals in our treatment group can be up to 26 years old.



De Chaisemartin and d’Haultfoeuille (2024) which takes effects heterogeneity across cohorts treated at different ages into account.<sup>19</sup>

To address the Ashenfelter dip in our DiD design, we assume that parallel trends assumption holds from the -2 period (two years before program entry and one year before Ashenfelter dip) and use it as a reference point. This allows us to compare the outcomes of participants to the typical trajectory of comparable youth with similar education and unemployment backgrounds, i.e. the ones who would have met the program’s eligibility criteria. The control group consists of individuals who would have qualified for the program if they had been born a few years later, representing the likely path participants would have followed without the dip and program enrollment. The key coefficient,  $\beta_k$ , estimates the program’s impact on helping participants recover from the Ashenfelter dip and return to (or surpass) the expected trajectory of comparable youth in the  $k^{th}$  period after the program starts.

**Sample.** As we want to compare individuals benefiting from the program to the older ones who could not participate, we restrict the sample to recipients relatively close to the age threshold of 26 when starting the program. More precisely, from the 5,315 treated individuals identified, we keep only those between 24 and 26 years old at the start of their subsidized contract. This leaves us with 1,159 treated young workers.

The descriptive statistics on this sample before the program starts are given in Table A.3 in Appendix A. Due to the target of the policy, most of the treated individuals have a vocational or professional degree, and 56% lived in a municipality with deprived areas. Women are relatively more educated than men, a well-known difference in the literature (Di Paola et al., 2023). The shares of women with a bachelor’s and professional A-level are significantly higher than men’s. Conversely, the shares of men with a vocational certificate or minimum schooling are higher than those of women. Regarding the unemployment history of individuals, there is hardly any gender difference. Before the program, 76.6% were employed but worked on average only 500 hours annually and earned €4,632 per year, and gender differences were not statistically significant at 5%.

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<sup>19</sup>We use the command `did_multiplygt_dyn` available on Stata.

The average JFF package they benefit from is described in Table A.4 in Appendix A; virtually all participants have received some training and professional support, and 88% received training providing new skills. The average contract duration is about three years. Women are more often employed in the non-market sector than men, and they are also less often employed. We note again that men are more likely to be in the private sector and access open-ended contracts thanks to the program. Comparing treated women and men regarding family background, we observe that the share of ever-married women is higher than that of married men. Women get married and also have a first child earlier (see Table A.5 in Appendix A), which is also observed in population-based statistics. So, there are no apparent differences in the package or the program duration between men and women. In short, the main difference between men and women lies in the family background and the access to open-ended contracts thanks to the program.

The control group is composed of individuals between 27 and 29 years old in 2013.<sup>20</sup> In addition, we require them to have met the eligibility criteria – i.e., have one of the three profiles described in Table 1– when they were between 24 and 26 and the JFF program didn't exist. This leaves us with a control group of 30,663 individuals. Descriptive statistics of the control group in 2012 can be found in Tables A.6 and A.7 in Appendix A. The sample is mainly composed of individuals with a low level of education. In 2012, around 41% of control individuals had a vocational secondary school diploma, 62% had been looking for work for at least 6 months. We, therefore, managed to select people away from the labor market in the control group. Individuals in the control group are likelier to have a kid, but this can be because they are older. We report average outcomes over the life cycle for treated and control group and by gender in Figure B.1.

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<sup>20</sup>One might be concerned about the comparability of the control group and the 2015 treated cohort. However, the absence of a pre-trend, in addition to the age-fixed effect, provides evidence that individuals are comparable, although the age gap widens.

## 4.2 Matching treated and control individuals – *in progress*

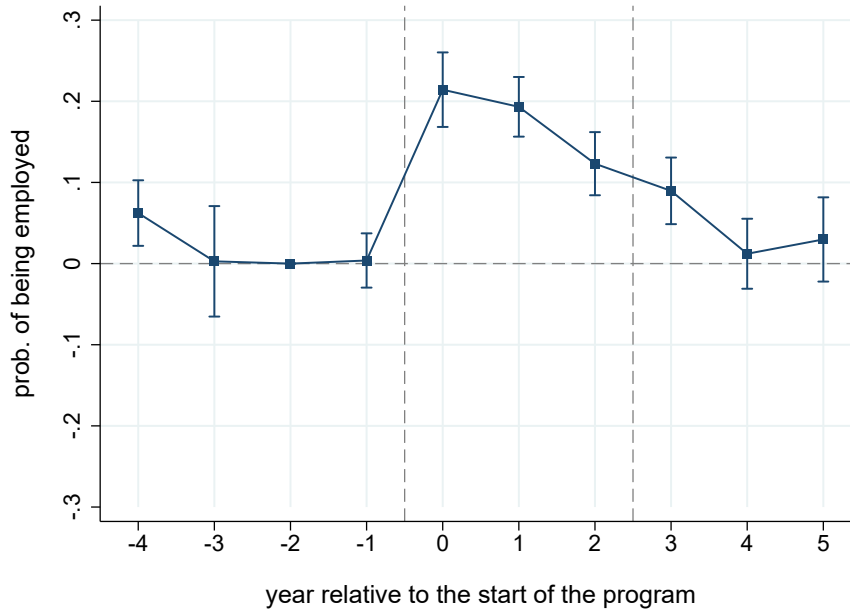
# 5 Results

## 5.1 The limited average effects of the subsidized job

**Employment probability.** As the primary goal of ALMPs is to help people with low employment prospects find a job, we start by investigating the effect of the JFF contracts on the probability of employment. This probability equals 1 when a positive wage is reported and 0 otherwise. In Figure 3, we plot the coefficients  $\beta_k$  resulting from the estimation of the model (1). We normalize the coefficients and set  $\beta_{-2}$  to 0.

To causally interpret the post-period coefficients, we should first assess the plausibility of the parallel assumption – the absence of pre-trend in this setting. Focusing on the pre-period coefficients (-4 to -1), we note that most coefficients are not significantly different from 0. Only the coefficient in period -4 is significant. However coefficient from -3 to -1 are not different from 0 and flat, so we believe that we are comparing similar individuals and can plausibly assess the causal effect of the JFF program on the probability of being employed.

As expected, in Figure 3, we notice that the program significantly increases the probability of being employed in the short run by about 20 percentage points, with coefficients remaining positive and large in periods 1 and 2, when subsidized employment occurs. This 20 percentage points increase represents a rise of 31% compared to the average probability of being employed by the control group 2 years before the start of the program. Effects are not constant across periods 0, 1, and 2 because the subsidized workers have different contract duration (going from 1 to 3 years). The effect starts shrinking in period 3 due to the phasing out of the program and its potential lock-in effect. In period 4, the positive effect on employment vanishes. In the medium run, the JFF program does not significantly increase the probability of employment: the effects on extensive margin become close to zero after the subsidized employment ends. These results align with the literature for subsidized employment, and public one in particular (Card et al., 2018; Kluve et al., 2019). Nevertheless,



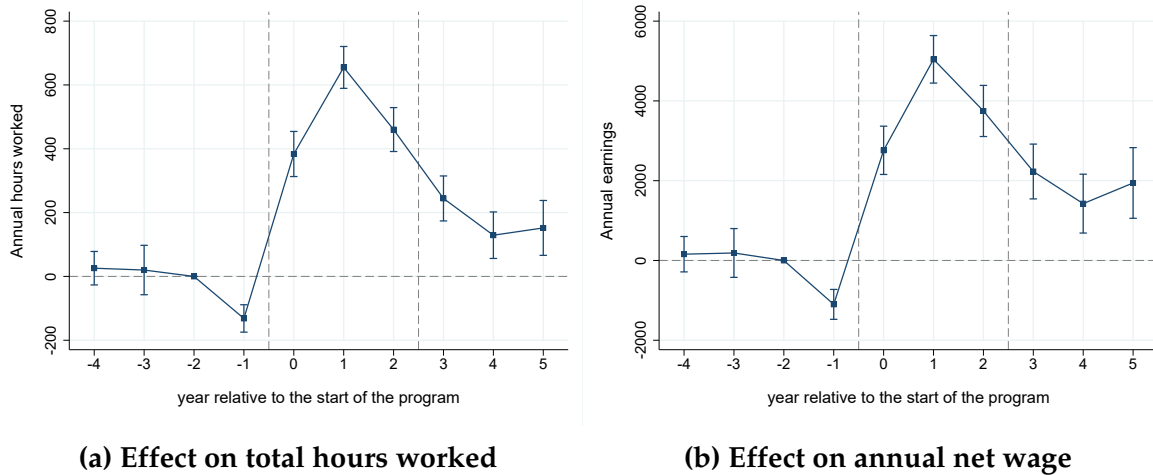
**Figure 3: Effect on the probability to be employed**

Notes: This figure plots the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1). Coefficients are normalized to period -2. The dependent variable is the probability of being employed. The first vertical line highlights the start of the program, and the second is the average end of the program in the sample.

these findings could be considered puzzling since this program also includes training and job search assistance, which are known to have at least small positive effects in the medium to long run.

**Hours worked and earnings.** To causally interpret the post-period coefficients, we should again assess the plausibility of the parallel assumption – the absence of pre-trend in this setting. Focusing on the pre-period coefficients (-4 to -2), we note that most coefficients are not significantly different from 0. Control and treated individuals evolved in the same manner until treated individuals find themselves in a bad economic situation and enter the program. This materializes with a significant and negative coefficient in period -1. In this case, we estimate the combination of helping the participants get out of the Ashenfelter dip and benefiting from the program. As shown in Figure 4a, in the first two post periods, the amount of hours worked in the year increases by 600 hours. This is unsurprising, as the program was usually directed toward full-time contracts – 1820 hours per year. Then, the effects fade, but contrary to the probability of employment, remain positive and significant in the medium

run. The total annual earnings follow a similar pattern. In the short term – one year after the beginning of the JFF – the annual earnings increase by just up to €5,000 due to the larger amount of hours worked, an increase of 68% on the average annual earnings of the control group in 2012. In the medium run, the effect is smaller – €2,000 or 27% – but stable over time.



**Figure 4: Effect on total hours worked and annual net wage**

Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1). Coefficients are normalized to period -2. The dependent variable is on panel (a) the total number of hours worked in the year and on panel (b) the total annual net wage. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

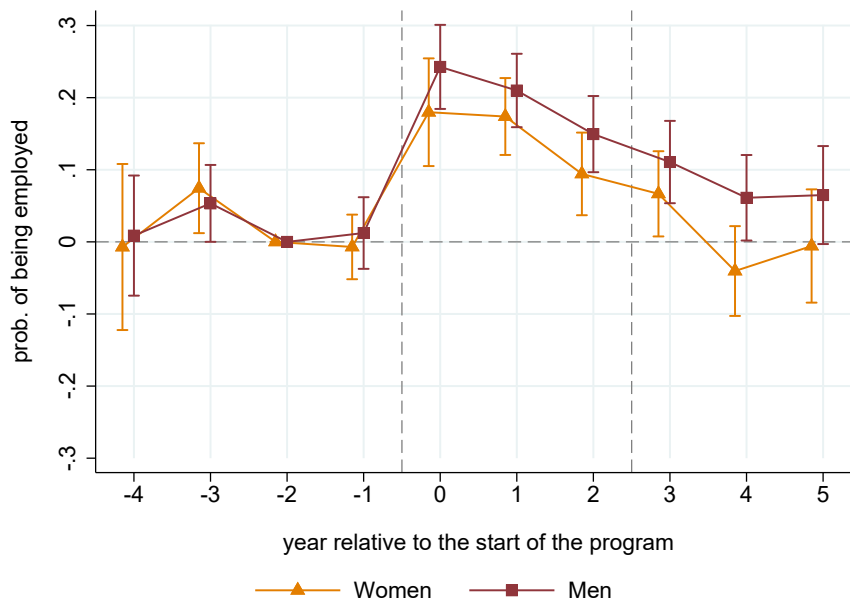
We verify the robustness of our results using different age bandwidths. More precisely, we change our baseline bandwidths by (i) extending the age bandwidth of the control group by one year, from 27-29 in 2013 to 27-30 in 2013, and (ii) restricting the age bandwidths of the treated and control groups, from 23-26 to 25-26 and from 27-29 to 27-28, respectively. Results are reported in Figure B.2. They are similar, underlining that our findings are not the result of the definition of the age bandwidth.

## 5.2 Gender heterogeneity in policy effectiveness

As motivated in the introduction, we observe discrepancies in the unemployment rate of young women and men. In the descriptive statistics, we have further seen that there seem to be differences in the program's effectiveness by gender. We therefore want to investigate whether a difference in the effectiveness of subsidized employment could partly explain

this. In this section, we, therefore, carry out heterogeneity analysis along the gender dimension using a fully interacted model.

**Employment probability.** The baseline effects are a weighted average of marginally positive effects for men and null effects for women (see Figure 5). The coefficients for men remain positive and significant after the end of subsidized employment (see Table A.8). In contrast, the effects for women are not significantly different from zero, driving the average zero result presented in the previous section. Testing whether the coefficients of men are significantly larger than that of women in the fourth period, we find a p-value equal to 0.010; in the fifth period, a p-value of 0.09.

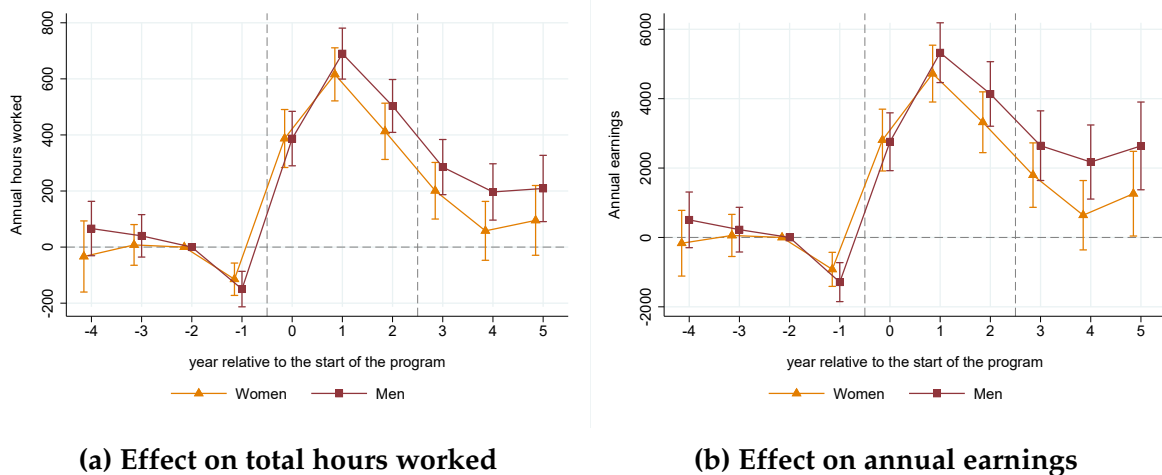


**Figure 5: Effect on the probability to be employed by gender**

Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with the gender dummy. Coefficients are normalized to period -2. In red, we observe the effects for men, and in orange for women. The dependent variable is the probability of being employed. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

**Hours worked and earnings.** In Figure 6, we estimate the gender-specific effects of participating in the program. In the short run, the program promotes both women and men to similar positions in terms of earnings and hours worked. Coefficients in periods 0 and 1 do not significantly differ for each gender. From period two onward, the gap starts widening

at the end of the program. The effect for women in the medium run is null, while it is still positive and significant for men. At the end of the program, men work 200 hours more and earn up to €2600 more than had they not participated (see Table A.8). The coefficient for women in period 5 is significant, but the gap between men and women remains significant: men earn about €1200 more than women.



**Figure 6: Effect on total hours worked and annual net wage by gender**

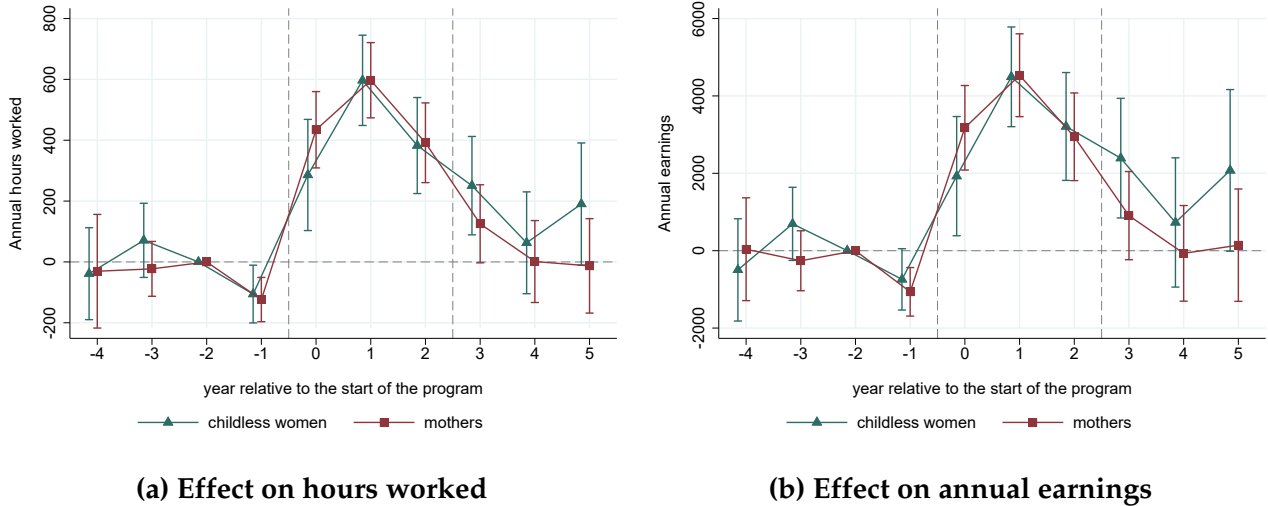
Notes: Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with the gender dummy. Coefficients are normalized to period -2. The dependent variable is on panel (a) the total number of hours worked in the year and on panel (b) the annual earnings. The first vertical line highlights the program's start, and the second is the average end of the program in the sample. In red, we observe the effects for men, and in orange for women. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

### 5.3 Parental status and policy effectiveness

Since childbirth is considered to be the main factor for the remaining gender inequality in the labor market (Goldin et al., 2022), we look into the consequences of becoming young parents interacted with participation in the program. This time, we restrict the sample to men or women and interact the model with a dummy indicating whether the individual became a parent at some point. We do not observe much heterogeneity in terms of parental status for men (see Figure B.4). However, in Figure 7, we observe that the program has a positive effect on hours worked and earnings for childless women (the coefficient in period 5 is significantly different from 0 at 10% confidence level; see Table A.9). We do not find

significant differences in the probability of being employed by parenthood for women (see Figure B.3).

**Figure 7: Effect on total hours worked and annual net wage for women by parental status**



Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with a dummy equal to 1 if the woman is ever a parent in the period we observe. Coefficients are normalized to period -2. The dependent variable is on panel (a) the total number of hours worked in the year and on panel (b) the annual earnings. The first vertical line highlights the program's start, and the second is the average end of the program in the sample. In red, we observe the effects for mothers, and in green for childless women. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

It is important to note here that these effects are not driven by the systematic age differences between the control and treatment groups at the date of birth of the first child (see Figure B.5 in Appendix B). In particular, for women, we cannot reject the null hypothesis according to which the distributions are the same: using a Mann–Whitney Test, we find a p-value of .901. In Figure B.6, we further show that women benefiting from the program are less likely to have a child during subsidized employment.

## 6 Mechanisms

We have seen that the program's effectiveness differs substantially by gender; women benefit less, and mothers do not manage to take advantage of this program. In this Section, we aim to identify plausible mechanisms explaining why women do not perform as well



as men in section 6.1 and why mothers do not benefit from the program at the end of it in section 6.2.

## 6.1 Explaining the gender heterogeneity: differences in occupations

Table 2 displays the average share of JFF beneficiaries by gender and industries at the start of their subsidized contract. It also displays the average share of women in their workplace. In addition, it also shows indicators related to tension in the labor market for the occupation and the task content of the occupation during subsidized employment.<sup>21</sup> There are three takeaways from this Table. First, during the subsidized contract, women are employed in firms where most workers are female, partly explained by their over-representation in the healthcare and social sectors. Women are three times more likely to work in the Health and social sectors than men. In contrast, men are likelier to be in the Public Administration and Art sectors. Second, men are more likely to work in jobs with higher hiring intensities and a higher link between training and the occupation – meaning that replacing such a worker is potentially more costly. On the other hand, women are in jobs with more labor shortages, which suggests an intense workload. Third, women are more likely to be assigned to jobs with a high routine index, while men are more likely to have non-routine cognitive tasks as well as manual ones.

Altogether, this suggests that despite aiming to fight against gender sorting across industries, we observe that the JFF program actually further contributes to it for women.<sup>22</sup> In addition, the program does not seem to provide the same opportunities for men and women, as they first do not introduce them to equivalent occupations. The source of the sorting remains, however, ambiguous for now. It could stem from the employee's preferences, the employer's decisions, or the recommendations provided by the caseworker.

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<sup>21</sup>For the indicators related to the tensions in the labor market, these are provided by the French Ministry of Labor and are derived by region\*occupation. These indicators do not cover occupations in the public sector and are sometimes not reported when the quality of the indicator is considered low. We use the measures adapted to the French occupational classification by Le Barbanchon and Rizzotti (2020) for the task content indexes, unfortunately not all position matched the task content.

<sup>22</sup>See <https://www.gouvernement.fr/action/les-emplois-d-avenir> on the objective to fight against gender sorting: "Priority is also given to those whose jobs contribute to balancing the gender ratio in a sector of activity."

**Table 2: Characteristics of the subsidized employment by gender**

|                                    | Women |         | Men   |         | Diff      |
|------------------------------------|-------|---------|-------|---------|-----------|
|                                    | Mean  | Nb. obs | Mean  | Nb. obs |           |
| Share of female colleagues         | 0.686 | 578     | 0.422 | 573     | 0.263***  |
| Public sector                      | 0.479 | 582     | 0.390 | 577     | 0.089***  |
| <i>Industry</i>                    |       |         |       |         |           |
| G-Trade                            | 0.052 | 582     | 0.069 | 577     | -0.018    |
| N-Admin services                   | 0.072 | 582     | 0.094 | 577     | -0.021    |
| O-Public Admin.                    | 0.216 | 582     | 0.314 | 577     | -0.097*** |
| Q-Health&Social                    | 0.328 | 582     | 0.106 | 577     | 0.222***  |
| R-Art&Show                         | 0.041 | 582     | 0.080 | 577     | -0.038*** |
| S-Other Services                   | 0.069 | 582     | 0.059 | 577     | 0.010     |
| <i>Tension in the LM</i>           |       |         |       |         |           |
| high hiring intensity              | 0.297 | 461     | 0.397 | 443     | -0.100*** |
| high labor shortage                | 0.228 | 461     | 0.093 | 443     | 0.135***  |
| high unsustainable empl.           | 0.833 | 461     | 0.822 | 443     | 0.011     |
| high training-empl. link           | 0.134 | 461     | 0.228 | 443     | -0.094*** |
| high bad working cond.             | 0.471 | 461     | 0.560 | 443     | -0.089*** |
| high geographic mismatch           | 0.223 | 461     | 0.309 | 443     | -0.086*** |
| high tightness                     | 0.130 | 461     | 0.115 | 443     | 0.015     |
| <i>Task content of the JFF job</i> |       |         |       |         |           |
| high Routine index                 | 0.719 | 392     | 0.652 | 417     | 0.067**   |
| high Routine cognitive             | 0.385 | 392     | 0.365 | 417     | 0.021     |
| high Routine manual                | 0.610 | 392     | 0.741 | 417     | -0.131*** |
| high Non-routine analytic          | 0.102 | 392     | 0.132 | 417     | -0.030    |
| high Non-routine cognitive         | 0.161 | 392     | 0.360 | 417     | -0.199*** |
| high Non-routine manual            | 0.564 | 392     | 0.791 | 417     | -0.228*** |

Notes: Sector and type of firms treated women and men were employed in during the JFF. *Share of female* is the average share expressed as a percentage of the firm workforce. All the other characteristics are expressed as a share of women or men. Characteristics related to the tension in the labor market and the task content are dummies equal to one when the value of the index is above the median of the occupations. These statistics are made on the treated group, obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d'Avenir*.

## 6.2 Understanding the motherhood effects

**No self-selection into motherhood.** When describing the sample of estimations, we have seen that treated women are more likely than treated men to have a kid. However, mothers do not seem to self-select into the treatment. The age distribution at first birth does not differ between treated mothers and their contractual (see Figure B.5). On top of that, women are less likely to have a kid after entering the program. In Figure B.6, we estimate that treated women are less likely to have a kid after starting subsidized employment.

**Effects of daycare.** The availability of childcare is an important determinant of women’s participation in the labor market (see e.g., Bauernschuster and Schlotter, 2015). Mothers may reduce their labor participation due to increasing opportunity costs after giving birth. To verify whether this hypothesis holds in our setting, we study the effect of the availability of daycare spots in the place of residence in 2013 – or at the start of the program when treated, on mothers’ employment rates and hours worked. We define a municipality as a location with high availability when the number of spots per thousand inhabitants exceeds the sample’s median.<sup>23</sup> We then conduct a heterogeneity analysis using the baseline model fully interacted with a dummy equal to 1 if the availability is high – above the median. The results suggest that mother beneficiaries do not reduce their labor supply because of a high opportunity cost due to a lack of daycare (see Figure B.8 in Appendix B). The number of hours worked remains the same regardless of the availability of daycare spots.

**The timing of childbirth matters.** To better understand how childbirth is associated with the program’s ineffectiveness for mothers, we explore how the timing of the first childbirth changes the effects of the policy for women. We restrict the sample to women and estimate the interacted model with parental status and the timing of childbirth – before, during, or after participation in the program – as interaction variables. To investigate the effect of the timing of parenthood relative to the start of the program, we also need to define a timeline for the control group. Therefore, we take the age of 25 as a reference point. Individuals of the control group giving birth before 25 years old serve as the control for the evaluation of the effect of having a kid before the start of the program, between 25 and 30 for those having a kid during and more than 30 for those having a kid after.

Results can be found in Figure B.7. The employment probability of mothers having their child during or right after subsidized employment barely improves during the subsidized contract and becomes negative at the end of it. The effects on childless women and mothers who had their children before the program are null.

The positive effects on hours worked and earnings are driven by women who have no kids or before the start of the program. Women having kids later see no improvement in any

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<sup>23</sup>We use the daycare facilities data from Tricaud (2021).

of their outcomes. Women entering the program with a child may have already organized the daycare for their child. In contrast, women having a kid during the program may not have solutions readily available, and the program may not have been designed to ease such situations. Women having a kid during the program might have no solution but dropping out. This program presumably fails to introduce young mothers to the labor market in a permanent way.

## 7 Conclusion

In this paper, we have analyzed the effects of subsidized employment with training and assistance on the labor market outcomes of disadvantaged youth by studying the case of the “Jobs for Future” program in France. We use a Differences-in-Differences approach, exploiting the cut-off by age 25 in the policy. Estimating average effects, we document that the JFF program fails to improve the employment prospects of beneficiaries in the medium run and that those who manage to stay employed after the program, on average, work 200 hours more per year and raise their annual net earnings by €2,000. However, we highlight that those average effects hide heterogeneity between men and women.

While subsidized employment significantly improves employment probability for men, women do not experience higher rates of employment after the end of the program. Even if the effect is significantly positive for hours worked and earnings, male beneficiaries perform better than women again. This difference seems to be driven by women who become mothers during the program, who do not experience this positive effect.

Therefore, our findings suggest that policymakers should take gender heterogeneity and young parenthood into account when active labor market policies targeted at youth are designed. We also document pronounced gender-based sorting into different occupations in terms of job type and quality. Therefore, the effectiveness of the policy could be potentially increased by supporting beneficiaries who become parents and accounting for the sorting. Further research can also be done on whether the event and timing of childbirth have simi-

lar consequences on the effectiveness of ALPMs targeted at older workers with low employment prospects.

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## A Additional Tables

Table A.1: Characteristics of participants to the JFF program

|                                  | All     |       | Women   |       | Men     |       | Diff. in mean<br>Women - Men |
|----------------------------------|---------|-------|---------|-------|---------|-------|------------------------------|
|                                  | Mean    | Sd.   | Mean    | Sd.   | Mean    | Sd.   |                              |
| Share of men                     | 0.481   | 0.500 | 0.000   | 0.000 | 1.000   | 0.000 | -1.000                       |
| Municipality with deprived area  | 0.574   | 0.495 | 0.582   | 0.493 | 0.565   | 0.496 | 0.017***                     |
| Age at JFF start                 | 22.837  | 1.723 | 22.852  | 1.724 | 22.820  | 1.722 | 0.032***                     |
| <i>Degree</i>                    |         |       |         |       |         |       |                              |
| non certified skills             | 0.000   | 0.020 | 0.000   | 0.017 | 0.000   | 0.022 | -0.000**                     |
| Master degree                    | 0.000   | 0.007 | 0.000   | 0.008 | 0.000   | 0.005 | 0.000                        |
| Bachelor                         | 0.034   | 0.180 | 0.047   | 0.211 | 0.019   | 0.137 | 0.028***                     |
| Professional bachelor            | 0.040   | 0.195 | 0.051   | 0.220 | 0.027   | 0.163 | 0.024***                     |
| A-level                          | 0.056   | 0.231 | 0.059   | 0.235 | 0.054   | 0.226 | 0.005***                     |
| Professional A-level             | 0.149   | 0.356 | 0.167   | 0.373 | 0.129   | 0.335 | 0.038***                     |
| Vocational training              | 0.099   | 0.298 | 0.081   | 0.273 | 0.118   | 0.322 | -0.037***                    |
| Vocational degree                | 0.375   | 0.484 | 0.384   | 0.486 | 0.366   | 0.482 | 0.017***                     |
| <i>Unemployment history</i>      |         |       |         |       |         |       |                              |
| Less than 6 months               | 0.296   | 0.457 | 0.292   | 0.455 | 0.300   | 0.458 | -0.008***                    |
| 6-11 months                      | 0.270   | 0.444 | 0.262   | 0.440 | 0.278   | 0.448 | -0.016***                    |
| 12-23 months                     | 0.234   | 0.423 | 0.234   | 0.424 | 0.233   | 0.423 | 0.001                        |
| 24+ months                       | 0.117   | 0.322 | 0.115   | 0.320 | 0.119   | 0.324 | -0.003**                     |
| Not reported                     | 0.083   | 0.276 | 0.096   | 0.294 | 0.069   | 0.254 | 0.026***                     |
| <i>Eligibility criteria</i>      |         |       |         |       |         |       |                              |
| Profile 1                        | 0.160   | 0.367 | 0.132   | 0.338 | 0.191   | 0.393 | -0.059***                    |
| Profile 2                        | 0.225   | 0.417 | 0.235   | 0.424 | 0.214   | 0.410 | 0.022***                     |
| Profile 3                        | 0.549   | 0.498 | 0.552   | 0.497 | 0.546   | 0.498 | 0.006***                     |
| Not matched                      | 0.066   | 0.248 | 0.081   | 0.273 | 0.050   | 0.218 | 0.031***                     |
| <i>Start of the JFF contract</i> |         |       |         |       |         |       |                              |
| 2012                             | 0.004   | 0.064 | 0.004   | 0.066 | 0.004   | 0.062 | 0.001*                       |
| 2013                             | 0.282   | 0.450 | 0.285   | 0.452 | 0.279   | 0.449 | 0.006***                     |
| 2014                             | 0.274   | 0.446 | 0.276   | 0.447 | 0.272   | 0.445 | 0.003*                       |
| 2015                             | 0.200   | 0.400 | 0.195   | 0.396 | 0.205   | 0.404 | -0.010***                    |
| Observations                     | 224,204 |       | 116,251 |       | 107,953 |       | 224,204                      |

Notes: Demographic and employment characteristics of all the JFF beneficiaries and for women and men separately. All the characteristics except for the *Age at JFF start* are expressed as a share of the JFF beneficiaries. *Municipality with deprived area* identifies JFF beneficiaries living in a Priority rural development area (*Zone de Revitalisation Rurale – ZRR*) or in a city with deprived neighborhoods (*Zone Urbaine Sensible – ZUS* or *Quartier Prioritaire de Ville – QPV*). The three profiles for *Eligibility criteria* are described in subsection 2.1. These statistics are from the data source listing all the JFF contracts created during the period 2012-2015 (*Emplois d’Avenir – EA*) restricted to individuals benefiting from the program when they are between 20 and 26. Column (4) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively.



**Table A.2: Characteristics of the JFF packages**

|                                     | All      |          | Women    |          | Men      |          | Diff. in mean<br>Women - Men |
|-------------------------------------|----------|----------|----------|----------|----------|----------|------------------------------|
|                                     | Mean     | Sd.      | Mean     | Sd.      | Mean     | Sd.      |                              |
| Duration of the JFF package in days | 751.173  | 357.320  | 725.768  | 357.738  | 778.531  | 354.842  | -52.762***                   |
| Early termination                   | 0.357    | 0.479    | 0.337    | 0.473    | 0.380    | 0.485    | -0.043***                    |
| Monthly gross wage in euros         | 1401.678 | 1403.827 | 1370.806 | 1358.354 | 1434.993 | 1450.570 | -64.188***                   |
| Adapt position to the worker        | 0.823    | 0.382    | 0.810    | 0.392    | 0.836    | 0.371    | -0.025***                    |
| Learning accreditation              | 0.028    | 0.164    | 0.031    | 0.172    | 0.024    | 0.154    | 0.006***                     |
| <i>Contract type</i>                |          |          |          |          |          |          |                              |
| Fulltime                            | 0.829    | 0.376    | 0.772    | 0.420    | 0.891    | 0.312    | -0.119***                    |
| Open ended                          | 0.214    | 0.410    | 0.164    | 0.370    | 0.269    | 0.443    | -0.105***                    |
| Private sector                      | 0.247    | 0.431    | 0.165    | 0.371    | 0.336    | 0.472    | -0.171***                    |
| <i>Support</i>                      |          |          |          |          |          |          |                              |
| Social support                      | 1.000    | 0.000    | 1.000    | 0.000    | 1.000    | 0.000    | 0.000                        |
| Back to work                        | 0.254    | 0.436    | 0.243    | 0.429    | 0.267    | 0.442    | -0.023***                    |
| Position                            | 0.841    | 0.366    | 0.828    | 0.378    | 0.855    | 0.352    | -0.027***                    |
| Project                             | 0.500    | 0.500    | 0.516    | 0.500    | 0.482    | 0.500    | 0.034***                     |
| Skill                               | 0.510    | 0.500    | 0.507    | 0.500    | 0.513    | 0.500    | -0.006***                    |
| Job search                          | 0.226    | 0.418    | 0.222    | 0.416    | 0.229    | 0.421    | -0.007***                    |
| <i>Training</i>                     |          |          |          |          |          |          |                              |
| Pre-qualifying                      | 0.080    | 0.272    | 0.095    | 0.293    | 0.065    | 0.246    | 0.030***                     |
| Refresher                           | 0.091    | 0.288    | 0.089    | 0.285    | 0.093    | 0.291    | -0.004***                    |
| New skills                          | 0.884    | 0.321    | 0.885    | 0.319    | 0.882    | 0.323    | 0.004***                     |
| Qualifying                          | 0.301    | 0.459    | 0.298    | 0.457    | 0.305    | 0.460    | -0.007***                    |
| Certifying                          | 0.056    | 0.231    | 0.056    | 0.230    | 0.057    | 0.231    | -0.001                       |
| Observations                        | 224,204  |          | 116,251  |          | 107,953  |          | 224,204                      |

Notes: Characteristics of the JFF contracts for all beneficiaries and for women and men separately. The wage is expressed in deflated euros. Except for *Duration of the JFF package*, all the other characteristics are expressed as a share of JFF contracts. *Early termination* identifies JFF contracts that ended before the end date provided at the beginning of the contract. These statistics are from the data source listing all the JFF contracts created during the period 2012-2015 (*Emplois d'Avenir* – EA) restricted to individuals benefiting from the program when they are between 20 and 26. Column (4) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively.

**Table A.3: Treated individuals before the start of the subsidized job**

|                                 | (1)<br>All |          | (2)<br>Women |          | (3)<br>Men |          | (4)<br>Diff. in mean<br>Women - Men |
|---------------------------------|------------|----------|--------------|----------|------------|----------|-------------------------------------|
|                                 | Mean       | Sd.      | Mean         | Sd.      | Mean       | Sd.      |                                     |
| <b>General characteristics</b>  |            |          |              |          |            |          |                                     |
| Share of men                    | 0.498      | 0.500    | 0.000        | 0.000    | 1.000      | 0.000    | -1.000                              |
| Age                             | 23.680     | 0.718    | 23.643       | 0.696    | 23.718     | 0.737    | -0.075*                             |
| Municipality with deprived area | 0.557      | 0.497    | 0.595        | 0.491    | 0.518      | 0.500    | 0.076***                            |
| <i>Degree</i>                   |            |          |              |          |            |          |                                     |
| Non certified skills            | 0.003      | 0.051    | 0.002        | 0.041    | 0.003      | 0.059    | -0.002                              |
| Bachelor                        | 0.022      | 0.148    | 0.022        | 0.148    | 0.023      | 0.149    | -0.000                              |
| 22.0000                         | 0.002      | 0.042    | 0.003        | 0.059    | 0.000      | 0.000    | 0.003                               |
| 23.0000                         | 0.015      | 0.120    | 0.022        | 0.148    | 0.007      | 0.083    | 0.015**                             |
| Professional bachelor           | 0.053      | 0.223    | 0.077        | 0.267    | 0.028      | 0.164    | 0.050***                            |
| A-level                         | 0.057      | 0.232    | 0.069        | 0.253    | 0.045      | 0.208    | 0.024*                              |
| Professional A-level            | 0.119      | 0.324    | 0.143        | 0.350    | 0.095      | 0.294    | 0.047**                             |
| Vocational training             | 0.118      | 0.323    | 0.084        | 0.278    | 0.153      | 0.360    | -0.068***                           |
| Vocational degree               | 0.388      | 0.488    | 0.404        | 0.491    | 0.373      | 0.484    | 0.031                               |
| <b>Employment history</b>       |            |          |              |          |            |          |                                     |
| Age at JFF start                | 24.680     | 0.718    | 24.643       | 0.696    | 24.718     | 0.737    | -0.075*                             |
| Prob. of being employed         | 0.766      | 0.423    | 0.787        | 0.410    | 0.745      | 0.436    | 0.042*                              |
| Annual earnings                 | 4632.789   | 5034.156 | 4556.877     | 4699.340 | 4709.358   | 5353.713 | -152.480                            |
| Annual hours worked             | 501.473    | 537.632  | 505.895      | 518.845  | 497.012    | 556.354  | 8.883                               |
| Average hourly wage             | 7.159      | 6.775    | 7.107        | 4.792    | 7.210      | 8.314    | -0.103                              |
| <i>Unemployment duration</i>    |            |          |              |          |            |          |                                     |
| less than 6 month               | 0.251      | 0.434    | 0.241        | 0.428    | 0.262      | 0.440    | -0.021                              |
| 6-11 months                     | 0.274      | 0.446    | 0.259        | 0.439    | 0.289      | 0.454    | -0.030                              |
| 12-23 months                    | 0.252      | 0.434    | 0.258        | 0.438    | 0.246      | 0.431    | 0.012                               |
| 24+ months                      | 0.141      | 0.348    | 0.149        | 0.357    | 0.132      | 0.338    | 0.018                               |
| Not reported                    | 0.082      | 0.274    | 0.093        | 0.290    | 0.071      | 0.257    | 0.022                               |
| <i>Eligibility criteria</i>     |            |          |              |          |            |          |                                     |
| Profile 1                       | 0.182      | 0.386    | 0.122        | 0.328    | 0.243      | 0.429    | -0.121***                           |
| Profile 2                       | 0.215      | 0.411    | 0.225        | 0.418    | 0.205      | 0.404    | 0.021                               |
| Profile 3                       | 0.504      | 0.500    | 0.527        | 0.500    | 0.480      | 0.500    | 0.047                               |
| Not matched                     | 0.099      | 0.299    | 0.125        | 0.331    | 0.073      | 0.260    | 0.053***                            |
| Observations                    | 1,159      |          | 582          |          | 577        |          | 1,159                               |

Notes: Characteristics of all JFF workers and of women and men separately, in our sample of analysis one year before the start of their subsidized job. Earnings are expressed in net deflated euros. Ages are expressed in years. All the other characteristics are expressed as a share of JFF workers. *Municipality with deprived area* identifies JFF beneficiaries living in a Priority rural development area (*Zone de Revitalisation Rurale – ZRR*) or in a city with deprived neighborhoods (*Zone Urbaine Sensible – ZUS* or *Quartier Prioritaire de Ville – QPV*). These statistics are made on a sample of people between 24 and 26 years old at the start of their subsidized contract, obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d’Avenir*. Column (4) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively.

Table A.4: Treated individuals in the first year of the subsidized job

|   | (1)<br>All |          | (2)<br>Women |          | (3)<br>Men |          | (4)<br>Diff. in mean<br>Women - Men |
|---|------------|----------|--------------|----------|------------|----------|-------------------------------------|
|   | Mean       | Sd.      | Mean         | Sd.      | Mean       | Sd.      |                                     |
| Annual earnings                         | 9172.420   | 4545.200 | 8777.957     | 4354.507 | 9570.301   | 4700.080 | -792.344***                         |
| Annual hours worked                     | 1068.601   | 506.727  | 1028.689     | 494.308  | 1108.860   | 516.260  | -80.171***                          |
| Average hourly wage                     | 8.230      | 1.107    | 8.203        | 1.076    | 8.258      | 1.138    | -0.054                              |
| Duration JFF (years)                    | 3.069      | 1.080    | 3.086        | 1.078    | 3.052      | 1.082    | 0.034                               |
| Early termination                       | .308       | .462     | .288         | .453     | .329       | .470     | -0.040                              |
| Private sector                          | 0.248      | 0.432    | 0.182        | 0.386    | 0.315      | 0.465    | -0.133***                           |
| Municipality with deprived area         | 0.586      | 0.493    | 0.622        | 0.485    | 0.549      | 0.498    | 0.073**                             |
| leaning accreditation                   | .033       | .178     | .031         | .174     | .034       | .183     | -0.003                              |
| Adapt position                          | 0.843      | .363     | 0.835        | .371     | 0.851      | .356     | -0.016                              |
| <i>Contract</i>                         |            |          |              |          |            |          |                                     |
| Open ended                              | .212       | .409     | .175         | .385     | 0.249      | 0.433    | -0.74**                             |
| Full time                               | .890       | .312     | .845         | .361     | .936       | .916     | -0.09***                            |
| <i>Cohort</i>                           |            |          |              |          |            |          |                                     |
| 2013                                    | 0.346      | 0.476    | 0.352        | 0.478    | 0.340      | 0.474    | 0.013                               |
| 2014                                    | 0.375      | 0.484    | 0.376        | 0.485    | 0.374      | 0.484    | 0.002                               |
| 2015                                    | 0.279      | 0.449    | 0.271        | 0.445    | 0.286      | 0.452    | -0.014                              |
| <i>Occupation</i>                       |            |          |              |          |            |          |                                     |
| Not observed - no salaried work         | 0.006      | 0.078    | 0.005        | 0.072    | 0.007      | 0.083    | -0.002                              |
| Farmers, craftsmen, business owners     | 0.000      | 0.000    | 0.000        | 0.000    | 0.000      | 0.000    | 0.000                               |
| Managerial and professional occupations | 0.005      | 0.072    | 0.007        | 0.083    | 0.003      | 0.059    | 0.003                               |
| Intermediate professions                | 0.115      | 0.319    | 0.113        | 0.317    | 0.116      | 0.321    | -0.003                              |
| Employees                               | 0.616      | 0.487    | 0.761        | 0.427    | 0.470      | 0.500    | 0.291***                            |
| Workers                                 | 0.258      | 0.438    | 0.113        | 0.317    | 0.404      | 0.491    | -0.290***                           |
| <i>Support</i>                          |            |          |              |          |            |          |                                     |
| Social support                          | 0.112      | 0.316    | 0.101        | 0.302    | 0.123      | 0.329    | -0.022                              |
| Back to work                            | 0.243      | 0.429    | 0.220        | 0.415    | 0.267      | 0.443    | -0.047*                             |
| Position                                | 0.851      | 0.357    | 0.845        | 0.362    | 0.856      | 0.351    | -0.011                              |
| Project                                 | 0.478      | 0.500    | 0.478        | 0.500    | 0.478      | 0.500    | -0.001                              |
| Skill                                   | 0.521      | 0.500    | 0.536        | 0.499    | 0.506      | 0.500    | 0.030                               |
| Job search                              | 0.224      | 0.417    | 0.201        | 0.401    | 0.248      | 0.432    | -0.047*                             |
| <i>Training</i>                         |            |          |              |          |            |          |                                     |
| Pre-qualifying                          | 0.068      | 0.252    | 0.081        | 0.273    | 0.055      | 0.229    | 0.025*                              |
| Refresher training                      | 0.103      | 0.304    | 0.108        | 0.311    | 0.097      | 0.296    | 0.011                               |
| New skills                              | 0.882      | 0.323    | 0.885        | 0.319    | 0.879      | 0.327    | 0.006                               |
| Qualifying                              | 0.298      | 0.457    | 0.275        | 0.447    | 0.321      | 0.467    | -0.046*                             |
| Observations                            | 1,159      |          | 582          |          | 577        |          | 1,159                               |

Notes: Characteristics of the JFF contracts and JFF workers retained in our sample of analysis in the first year of their subsidized job, for all the beneficiaries and women and men separately. Earnings are expressed in net deflated euros and duration in years. All the other characteristics are expressed as a share of JFF workers. The three profiles for *Eligibility criteria* are described in subsection 2.1. Column (4) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively. These statistics are made on a sample of people between 24 and 26 years old at the start of their JFF contract. They are obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d'Avenir*.

**Table A.5: Family background of treated women and men**

|                                | (1)    |       | (2)    |       | (3)           |
|--------------------------------|--------|-------|--------|-------|---------------|
|                                | Women  |       | Men    |       | Diff. in mean |
|                                | Mean   | Sd.   | Mean   | Sd.   |               |
| Nb. of marriages               | 0.235  | 0.441 | 0.149  | 0.356 | 0.086***      |
| Nb. of children                | 1.031  | 1.016 | 0.678  | 0.915 | 0.353***      |
| Ever married                   | 0.229  | 0.420 | 0.149  | 0.356 | 0.079***      |
| Ever parenting                 | 0.619  | 0.486 | 0.447  | 0.498 | 0.171***      |
| Age at first marriage          | 25.707 | 2.915 | 26.523 | 2.660 | -0.816**      |
| Age at first child             | 24.300 | 3.708 | 25.837 | 3.243 | -1.537***     |
| <i>Timing of the first kid</i> |        |       |        |       |               |
| Before JFF                     | 0.316  | 0.465 | 0.137  | 0.344 | 0.179***      |
| During JFF                     | 0.129  | 0.335 | 0.128  | 0.335 | 0.001         |
| After JFF                      | 0.174  | 0.379 | 0.182  | 0.386 | -0.008        |
| Observations                   | 582    |       | 577    |       | 1,159         |

Notes: Family background of women and men JFF workers retained in our sample throughout the analysis. The number of weddings and children report the number over the period. Ages are expressed in years. All the other characteristics are expressed as a share of JFF workers. Column (3) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively. These statistics are made on a sample of people between 24 and 26 years old, obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d'Avenir*.

**Table A.6: Characteristics of the control group**

|  | (1)                   |          | (2)                     |          | (3)                             |
|--|-----------------------|----------|-------------------------|----------|---------------------------------|
|  | Control group<br>Mean | Sd.      | Treatment group<br>Mean | Sd.      | Diff. in mean<br>Contol-Treated |
| <b>General characteristics</b>           |                       |          |                         |          |                                 |
| Share of men                             | 0.522                 | 0.500    | 0.498                   | 0.500    | 0.024                           |
| Age                                      | 27.000                | 0.810    | 22.747                  | 1.026    | 4.252***                        |
| Municipality with deprived area          | 0.530                 | 0.499    | 0.545                   | 0.498    | -0.016                          |
| <i>Completed degree</i>                  |                       |          |                         |          |                                 |
| Not observed                             | 0.280                 | 0.449    | 0.003                   | 0.051    | 0.277***                        |
| Elementary school                        | 0.000                 | 0.000    | 0.106                   | 0.308    | -0.106***                       |
| Secondary School - general               | 0.041                 | 0.198    | 0.121                   | 0.326    | -0.080***                       |
| Secondary School - vocational            | 0.411                 | 0.492    | 0.515                   | 0.500    | -0.104***                       |
| Gen./Voc./Tech. A-level                  | 0.161                 | 0.367    | 0.179                   | 0.383    | -0.018                          |
| Bachelor degree                          | 0.108                 | 0.310    | 0.054                   | 0.225    | 0.054***                        |
| Graduate                                 | 0.000                 | 0.000    | 0.023                   | 0.149    | -0.023***                       |
| <b>Employment history</b>                |                       |          |                         |          |                                 |
| Prob. of being employed                  | 0.648                 | 0.478    | 0.763                   | 0.426    | -0.115***                       |
| Annual earnings                          | 7301.207              | 8191.409 | 5068.125                | 5254.068 | 2233.082***                     |
| Annual hours worked                      | 730.581               | 774.312  | 568.987                 | 589.821  | 161.594***                      |
| Average hourly wage                      | 6.186                 | 7.064    | 6.714                   | 4.348    | -0.528**                        |
| Public sector                            | 0.125                 | 0.330    | 0.193                   | 0.395    | -0.069***                       |
| <i>Occupation</i>                        |                       |          |                         |          |                                 |
| not observed - no salaried work          | 0.353                 | 0.478    | 0.244                   | 0.430    | 0.109***                        |
| Farmers, craftsmen, business owners      | 0.001                 | 0.030    | 0.000                   | 0.000    | 0.001                           |
| Managerial and professional occupations  | 0.014                 | 0.119    | 0.007                   | 0.083    | 0.007**                         |
| Intermediate professions                 | 0.073                 | 0.260    | 0.071                   | 0.257    | 0.002                           |
| Employees                                | 0.282                 | 0.450    | 0.410                   | 0.492    | -0.128***                       |
| Workers                                  | 0.276                 | 0.447    | 0.268                   | 0.443    | 0.008                           |
| <i>Working contract</i>                  |                       |          |                         |          |                                 |
| Open-ended                               | 0.305                 | 0.460    | 0.186                   | 0.390    | 0.118***                        |
| Fixed-term                               | 0.167                 | 0.373    | 0.299                   | 0.458    | -0.132***                       |
| Temporary                                | 0.089                 | 0.285    | 0.115                   | 0.319    | -0.026***                       |
| Apprenticeship and internship            | 0.003                 | 0.055    | 0.038                   | 0.191    | -0.035***                       |
| Subsidized jobs                          | 0.021                 | 0.144    | 0.076                   | 0.265    | -0.055***                       |
| Others                                   | 0.000                 | 0.006    | 0.000                   | 0.000    | 0.000                           |
| No contract                              | 0.042                 | 0.201    | 0.035                   | 0.185    | 0.007                           |
| Not working                              | 0.352                 | 0.478    | 0.237                   | 0.426    | 0.115***                        |
| Missing                                  | 0.021                 | 0.143    | 0.014                   | 0.117    | 0.007                           |
| <i>Unemployment duration</i>             |                       |          |                         |          |                                 |
| Looking for a job for at least 6 months  | 0.624                 | 0.485    | 0.726                   | 0.446    | -0.103***                       |
| Looking for a job for at least 12 months | 0.479                 | 0.500    | 0.443                   | 0.497    | 0.037**                         |
| Observations                             | 30,663                |          | 1,159                   |          | 31,822                          |

Notes: Characteristics in 2012 of people in the control group retained in our sample of analysis. Earnings are expressed in net deflated euros. Age is expressed in years. All the other characteristics are expressed as a share of people in the sample. *Municipality with deprived area* identifies JFF beneficiaries living in a Priority rural development area (*Zone de Revitalisation Rurale – ZRR*) or in a city with deprived neighborhoods (*Zone Urbaine Sensible – ZUS* or *Quartier Prioritaire de Ville – QPV*). Column (3) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively. These statistics are made on the control group obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d’Avenir*.

**Table A.7: Descriptive statistics of the control and treatment group in 2012**

|                                | (1)                   |       | (2)                     |       | (3)                             |
|--------------------------------|-----------------------|-------|-------------------------|-------|---------------------------------|
|                                | Control group<br>Mean | Sd.   | Treatment group<br>Mean | Sd.   | Diff. in mean<br>Contol-Treated |
| Nb. marriages                  | 0.280                 | 0.468 | 0.192                   | 0.403 | 0.088***                        |
| Nb. children                   | 1.382                 | 1.245 | 0.855                   | 0.982 | 0.526***                        |
| Ever married                   | 0.272                 | 0.445 | 0.189                   | 0.392 | 0.083***                        |
| Ever parenting                 | 0.684                 | 0.465 | 0.533                   | 0.499 | 0.151***                        |
| Age at first marriage          | 27.081                | 4.006 | 26.027                  | 2.840 | 1.054***                        |
| Age at first child             | 26.127                | 4.145 | 24.942                  | 3.599 | 1.186***                        |
| <i>Timing of the first kid</i> |                       |       |                         |       |                                 |
| Before JFF or 25               | 0.259                 | 0.438 | 0.227                   | 0.419 | 0.032**                         |
| During JFF or 25-29            | 0.263                 | 0.440 | 0.129                   | 0.335 | 0.135***                        |
| After JFF or after 29          | 0.162                 | 0.368 | 0.178                   | 0.382 | -0.016                          |
| Observations                   | 30,663                |       | 1,159                   |       | 31,822                          |

Notes: Family background of people in the control group retained in our sample throughout the analysis. The number of weddings and children report the number over the period. Ages are expressed in years. All the other characteristics are expressed as a percentage of the entire sample. Column (3) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively. These statistics are made on the control group obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d'Avenir*

**Table A.8: Dynamic differences-in-differences estimates by gender**

|    | Employment Probability |                    | Annual Hours Worked |                    | Annual Earnings     |                      |
|----|------------------------|--------------------|---------------------|--------------------|---------------------|----------------------|
|    | (1)<br>Women           | (2)<br>Men         | (3)<br>Women        | (4)<br>Men         | (5)<br>Women        | (6)<br>Men           |
| F4 | -0.0071<br>(0.0587)    | 0.0087<br>(0.0425) | -33.50<br>(64.72)   | 66.18<br>(49.48)   | -166.95<br>(483.18) | 506.59<br>(409.45)   |
| F3 | 0.0745<br>(0.0318)     | 0.0534<br>(0.0272) | 7.74<br>(37.03)     | 40.11<br>(38.60)   | 57.35<br>(309.59)   | 224.40<br>(328.66)   |
| F2 | 0<br>(.)               | 0<br>(.)           | 0<br>(.)            | 0<br>(.)           | 0<br>(.)            | 0<br>(.)             |
| F1 | -0.0070<br>(0.0229)    | 0.0123<br>(0.0253) | -114.68<br>(29.44)  | -149.79<br>(32.28) | -920.01<br>(250.39) | -1290.00<br>(286.52) |
| L0 | 0.1798<br>(0.0381)     | 0.2427<br>(0.0297) | 387.27<br>(52.75)   | 387.01<br>(49.55)  | 2806.31<br>(454.56) | 2757.95<br>(425.34)  |
| L1 | 0.1739<br>(0.0272)     | 0.2099<br>(0.0260) | 616.09<br>(48.29)   | 690.05<br>(46.37)  | 4722.37<br>(417.79) | 5325.16<br>(439.77)  |
| L2 | 0.0943<br>(0.0292)     | 0.1495<br>(0.0270) | 412.92<br>(51.22)   | 503.38<br>(48.10)  | 3320.32<br>(447.13) | 4135.75<br>(474.58)  |
| L3 | 0.0667<br>(0.0301)     | 0.1107<br>(0.0291) | 200.96<br>(51.50)   | 285.34<br>(50.20)  | 1796.84<br>(473.93) | 2644.99<br>(512.10)  |
| L4 | -0.0404<br>(0.0318)    | 0.0612<br>(0.0302) | 57.91<br>(53.57)    | 196.71<br>(51.26)  | 640.46<br>(510.12)  | 2173.78<br>(544.87)  |
| L5 | -0.0057<br>(0.0401)    | 0.0649<br>(0.0347) | 95.23<br>(63.49)    | 209.04<br>(60.31)  | 1261.47<br>(622.76) | 2638.24<br>(645.14)  |

Notes: This table reports coefficient and standard errors in parentheses of the estimated differences-in-differences model fully interacted with a gender dummy. Coefficients are normalized to period F2.

**Table A.9: Dynamic differences-in-differences estimates by parenthood for women**

|    | Employment Probability |                     | Annual Hours Worked |                    | Annual Earnings      |                      |
|----|------------------------|---------------------|---------------------|--------------------|----------------------|----------------------|
|    | (1)<br>Childless       | (2)<br>Mothers      | (3)<br>Childless    | (4)<br>Mothers     | (5)<br>Childless     | (6)<br>Mothers       |
| F4 | -0.0495<br>(0.0752)    | 0.0193<br>(0.0849)  | -38.66<br>(77.08)   | -30.62<br>(95.29)  | -496.53<br>(674.20)  | 37.81<br>(677.82)    |
| F3 | 0.0853<br>(0.0466)     | 0.0681<br>(0.0416)  | 70.92<br>(62.17)    | -22.70<br>(45.98)  | 692.81<br>(482.12)   | -260.50<br>(395.27)  |
| F2 | 0.0000<br>(0.0000)     | 0.0000<br>(0.0000)  | 0.00<br>(0.00)      | 0.00<br>(0.00)     | 0.00<br>(0.00)       | 0.00<br>(0.00)       |
| F1 | 0.0090<br>(0.0355)     | -0.0152<br>(0.0300) | -105.60<br>(48.44)  | -123.74<br>(37.16) | -740.90<br>(404.54)  | -1060.00<br>(319.89) |
| L0 | 0.1202<br>(0.0610)     | 0.2150<br>(0.0490)  | 285.79<br>(93.20)   | 434.43<br>(64.00)  | 1926.75<br>(785.95)  | 3176.42<br>(557.34)  |
| L1 | 0.1011<br>(0.0412)     | 0.2175<br>(0.0360)  | 596.87<br>(75.69)   | 597.18<br>(63.09)  | 4493.50<br>(657.21)  | 4534.55<br>(546.14)  |
| L2 | 0.0694<br>(0.0429)     | 0.1046<br>(0.0396)  | 382.58<br>(80.53)   | 391.71<br>(66.84)  | 3210.10<br>(711.34)  | 2944.14<br>(578.01)  |
| L3 | 0.0662<br>(0.0442)     | 0.0630<br>(0.0409)  | 250.70<br>(82.50)   | 125.30<br>(65.48)  | 2391.25<br>(788.51)  | 906.04<br>(581.45)   |
| L4 | -0.0523<br>(0.0482)    | -0.0421<br>(0.0423) | 62.93<br>(85.39)    | 1.32<br>(68.69)    | 729.99<br>(852.39)   | -69.07<br>(630.63)   |
| L5 | 0.0500<br>(0.0555)     | -0.0443<br>(0.0551) | 190.41<br>(102.36)  | -12.93<br>(79.19)  | 2075.11<br>(1065.86) | 142.93<br>(740.92)   |

Notes: This table reports coefficient and standard errors in parentheses of the estimated differences-in-differences model fully interacted with a dummy equal to 1 if the individual has at least a kid at some point. The sample is restricted to women. Coefficients are normalized to period F2.



**Table A.10: Profiles of treated individuals of descriptive statistics**

|                                  | Women  | Men    | Diff in mean |
|----------------------------------|--------|--------|--------------|
| Municipality with deprived area  | 0.594  | 0.532  | 0.061***     |
| Age at JFF start                 | 22.238 | 22.143 | 0.095        |
| <i>Unemployment history</i>      |        |        |              |
| less than 6 month                | 0.274  | 0.280  | -0.006       |
| 6-11 months                      | 0.277  | 0.307  | -0.029**     |
| 12-23 months                     | 0.239  | 0.234  | 0.005        |
| 24+ months                       | 0.105  | 0.104  | 0.000        |
| missing                          | 0.104  | 0.075  | 0.030***     |
| <i>Degree</i>                    |        |        |              |
| non certified skills             | 0.000  | 0.001  | -0.001       |
| bachelor                         | 0.029  | 0.016  | 0.013***     |
| Professional bachelor            | 0.048  | 0.017  | 0.031***     |
| A-level                          | 0.075  | 0.058  | 0.017**      |
| Professional A-level             | 0.131  | 0.091  | 0.040***     |
| vocational training              | 0.097  | 0.166  | -0.069***    |
| vocational degree                | 0.386  | 0.382  | 0.004        |
| <i>Start of the JFF contract</i> |        |        |              |
| 2013                             | 0.371  | 0.373  | -0.002       |
| 2014                             | 0.378  | 0.361  | 0.018        |
| 2015                             | 0.250  | 0.266  | -0.016       |
| <i>Eligibility criteria</i>      |        |        |              |
| Profile 1                        | 0.143  | 0.221  | -0.078***    |
| Profile 2                        | 0.205  | 0.221  | -0.016       |
| Profile 3                        | 0.516  | 0.486  | 0.030*       |
| Not matched                      | 0.136  | 0.072  | 0.064***     |
| Observations                     | 4059   |        |              |

Notes: Characteristics of all JFF workers and of women and men separately, in our sample of analysis one year before the start of their subsidized job. Earnings are expressed in net deflated euros. Ages are expressed in years. All the other characteristics are expressed as a share of JFF workers. *Municipality with deprived area* identifies JFF beneficiaries living in a Priority rural development area (*Zone de Revitalisation Rurale – ZRR*) or in a city with deprived neighborhoods (*Zone Urbaine Sensible – ZUS* or *Quartier Prioritaire de Ville – QPV*). These statistics are made on a sample of people between 20 and 26 years old at the start of their subsidized contract, obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d’Avenir*. Column (3) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively.

**Table A.11: Packages of treated individuals of descriptive statistics**

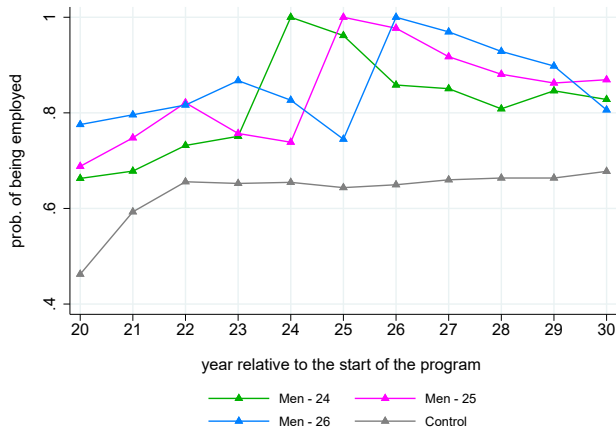
|                       | Women | Men   | Diff in mean |
|-----------------------|-------|-------|--------------|
| Share of men          | 0.000 | 1.000 | -1.000       |
| Early termination     | 0.310 | 0.339 | -0.029*      |
| Open ended lea        | 0.170 | 0.245 | -0.075***    |
| JFF in private sector | 0.181 | 0.313 | -0.132***    |
| Adapt position        | 0.821 | 0.845 | -0.024**     |
| leaning accreditation | 0.038 | 0.025 | 0.013**      |
| <i>Support</i>        |       |       |              |
| Social support        | 0.109 | 0.120 | -0.010       |
| Back to work          | 0.234 | 0.273 | -0.039***    |
| Position              | 0.825 | 0.860 | -0.034***    |
| Project               | 0.527 | 0.498 | 0.028*       |
| Skill                 | 0.506 | 0.516 | -0.010       |
| Job search            | 0.224 | 0.255 | -0.031**     |
| <i>Training</i>       |       |       |              |
| Pre-qualifying        | 0.113 | 0.070 | 0.043***     |
| refresherF            | 0.106 | 0.114 | -0.008       |
| New skills            | 0.889 | 0.881 | 0.008        |
| Qualifying            | 0.273 | 0.308 | -0.035**     |
| Certified goal        | 0.053 | 0.069 | -0.017**     |
| Observations          | 4059  |       |              |

Notes: Characteristics of the JFF contracts and JFF workers retained in our sample of analysis in the first year of their subsidized job, for all the beneficiaries and women and men separately. Earnings are expressed in net deflated euros and duration in years. All the other characteristics are expressed as a share of JFF workers. The three profiles for *Eligibility criteria* are described in subsection 2.1. Column (3) reports the differences between the mean of women and men, as well as the significance level of this difference resulting from a t-test. \*\*\*, \*\* and \* denote significance at 1%, 5% and 10%, respectively. These statistics are made on a sample of people between 20 and 26 years old at the start of their JFF contract. They are obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d'Avenir*.

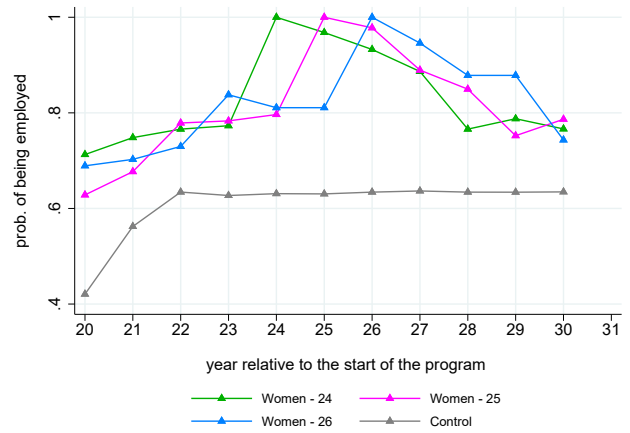


## B Additional Figures

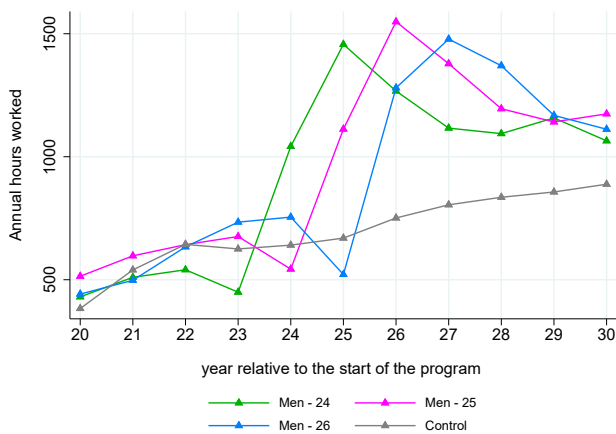
Figure B.1: averages outcomes over the life cycle by treated cohort and gender



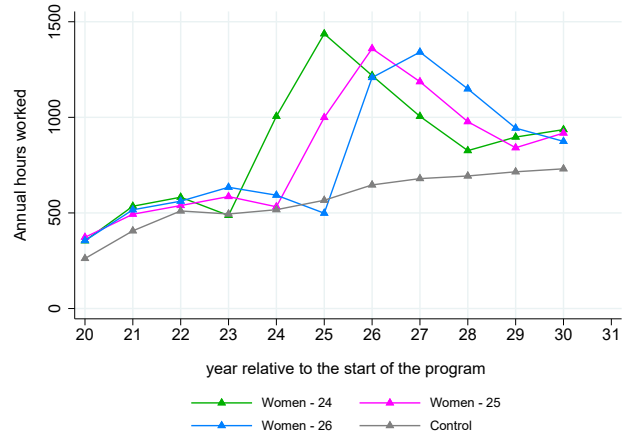
(a) Employment probability – men



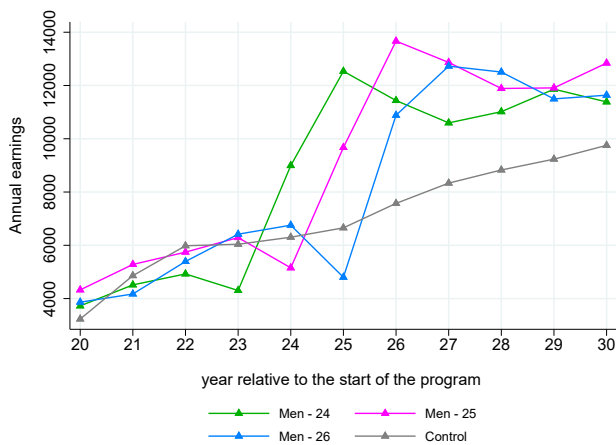
(b) Employment probability – women



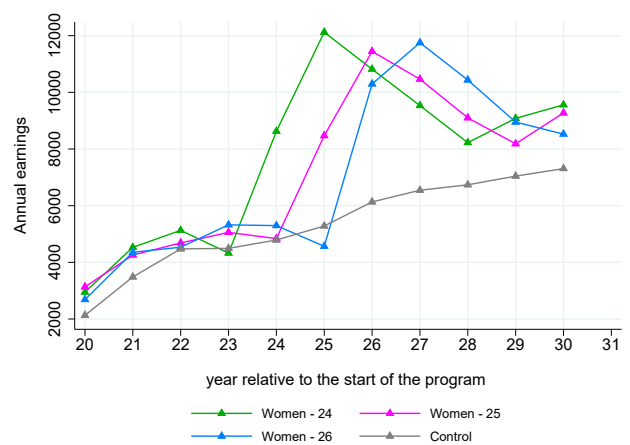
(c) Hours worked – men



(d) Hours worked – women



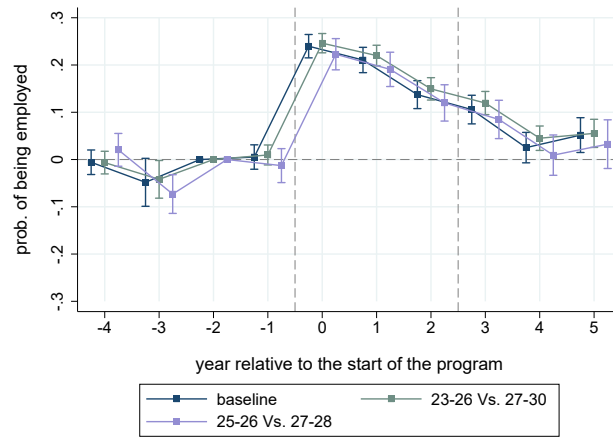
(e) Earnings – men



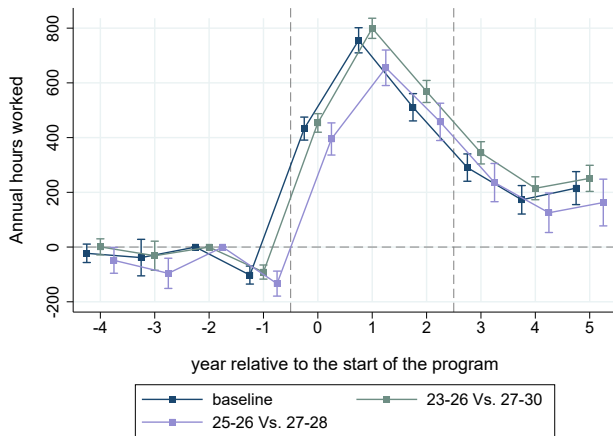
(f) Earnings – women

Notes: These figures plot averages over the life cycle for the treated cohorts and the control group. The dependent variable on panel (a) and (b) is the probability of being employed, panel (c) and (d) the total number of hours worked in the year, and panel (d) and (e) the annual earnings.

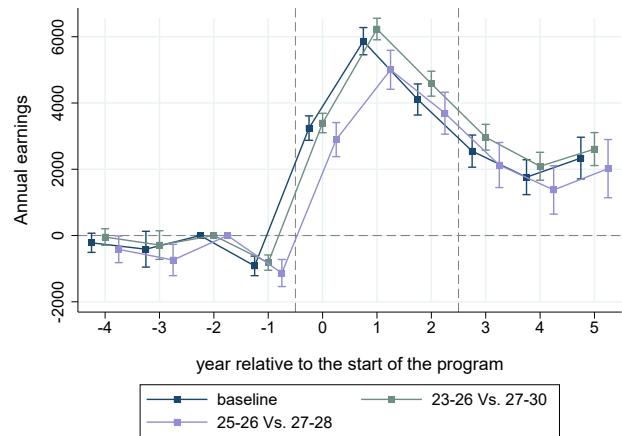
**Figure B.2: Robustness: Effect of the program for different samples of treated and control groups**



**(a) Effect on the probability to be employed**

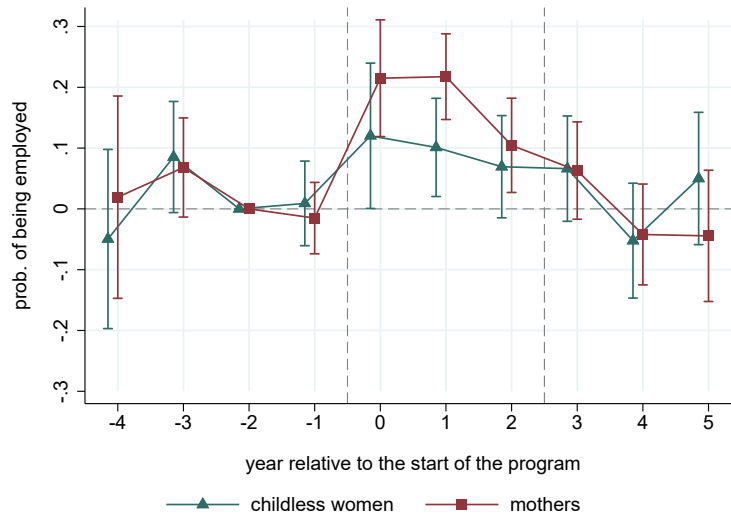


**(b) Effect on total hours worked**



**(c) Effect on annual net wage**

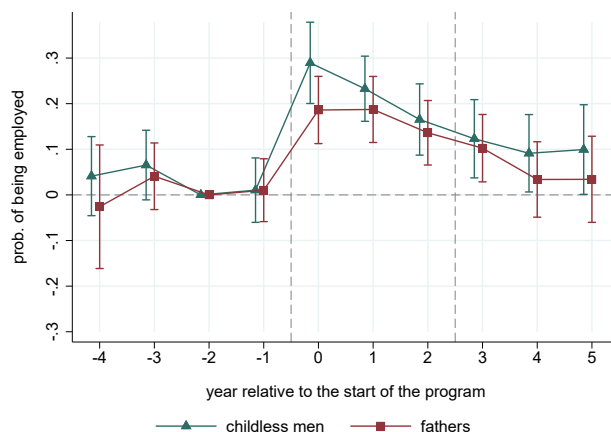
Notes: This figure plots the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1). Coefficients are normalized to period -2. The baseline is plotted in blue, the larger bandwidths in green, and the smaller in violet. The dependent variable is the probability of being employed in panel (a), the total hours worked in panel (b), and the annual net wage in panel (c). The first vertical line highlights the start of the program, and the second is the average end of the program in the sample.



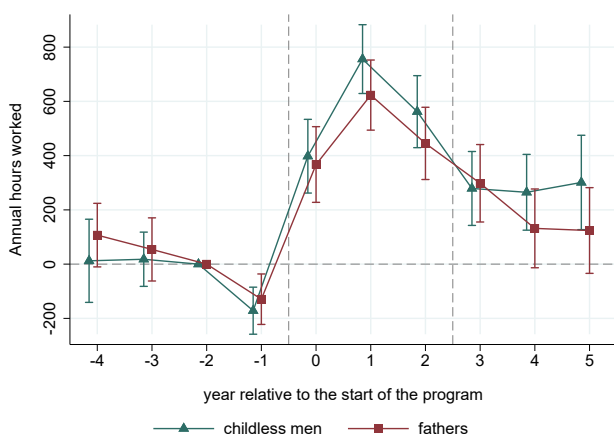
**Figure B.3: Effect on the probability to be employed of women by parenthood**

Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with a dummy equal to 1 if the individual is ever a parent in the period we observe. Coefficients are normalized to period -2. The dependent variable is the probability of being employed. In red, we observe the effects for mothers, and in green for childless women. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

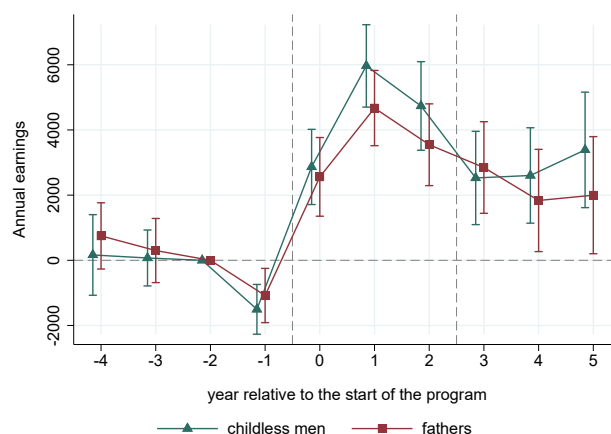
**Figure B.4: Effect of the program for men by parental status**



**(a) Effect on the probability to be employed**



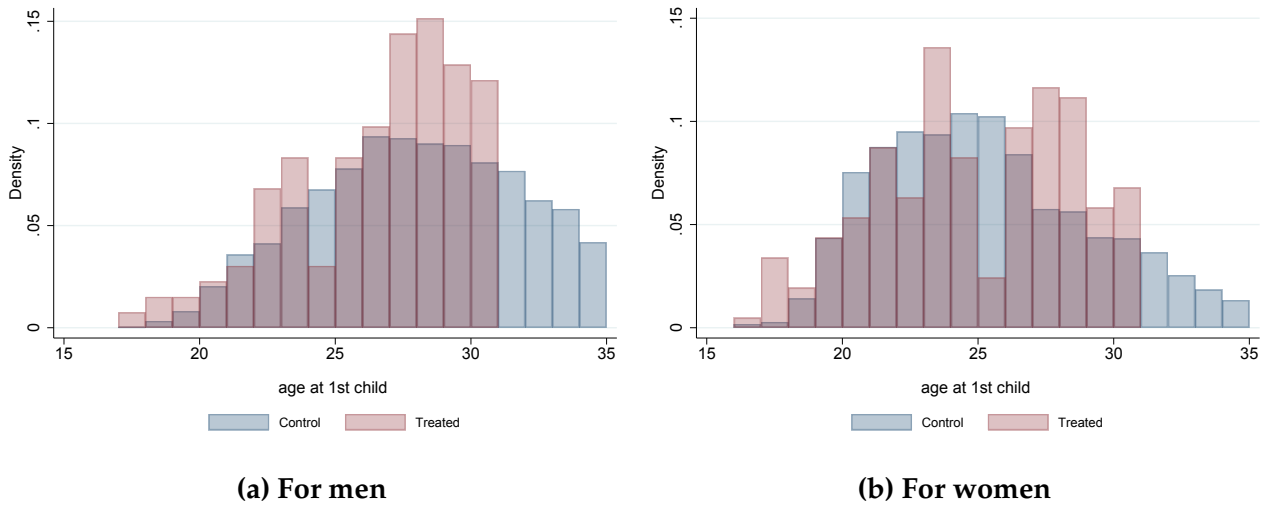
**(b) Effect on hours worked**



**(c) Effect on annual earnings**

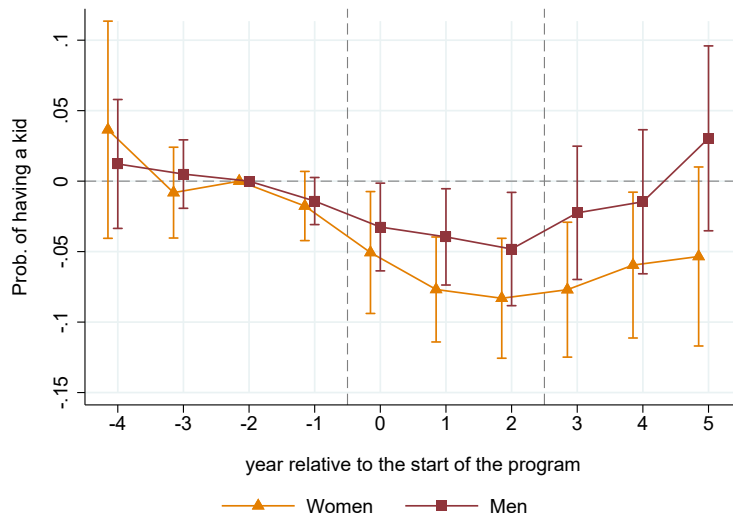
Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with a dummy equal to 1 if the individual is ever a parent in the period we observe. Coefficients are normalized to period -2. The dependent variable on panel (a) is the probability of being employed, panel (b) the total number of hours worked in the year, and panel (c) the annual earnings. The first vertical line highlights the program's start, and the second is the average end of the program in the sample. In red, we observe the effects for fathers and in green for men. The first vertical line highlights the program's start, and the second is the average end of the program in the sample.

**Figure B.5: Distribution of age at first childbirth**



Notes: These figures plot the distributions of age at the birth of the first kid by treatment status for both men – panel(a) – and women – panel(b). The age distribution ends at 31 for treated individuals as we do not observe them for a longer period. These statistics are made on the treated and control groups obtained by merging the databases *Panel tous salariés-EDP* and *Emplois d’Avenir*.

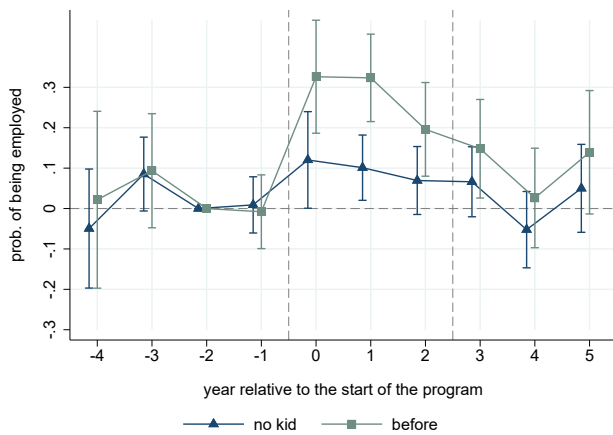
**Figure B.6: Effect on the probability of having a child by gender**



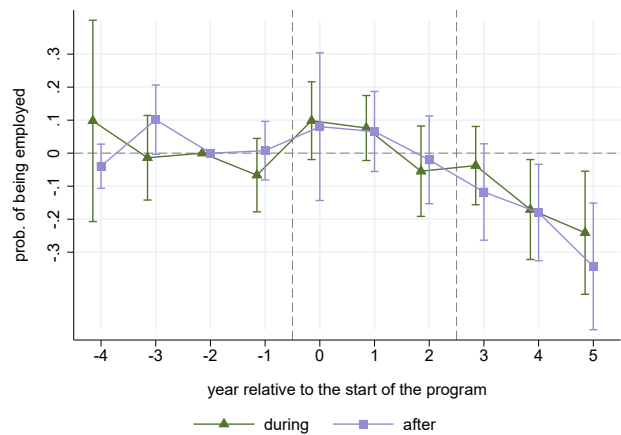
Notes: This figure plots the event study estimates  $(\beta_k + \lambda_k)$  and corresponding 95 percent confidence bands of the interacted specification (??). The model is interacted with the gender dummy. In red, we observe the effects for men, and in orange for women. The dependent variable is the probability of having a first kid. The first vertical line highlights the start of the program, and the second is the average end of the program in the sample.



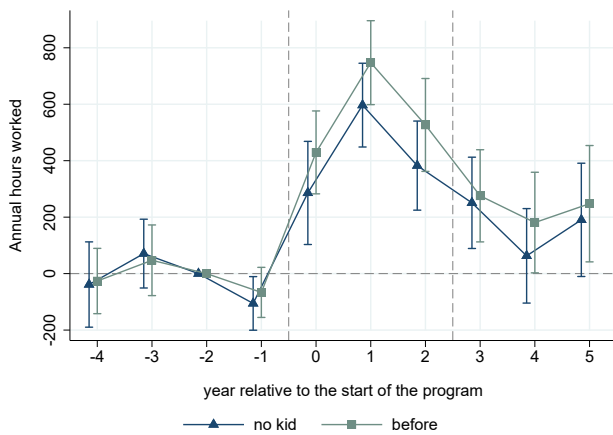
**Figure B.7: Effect of the program on women's outcomes by the timing of parenthood**



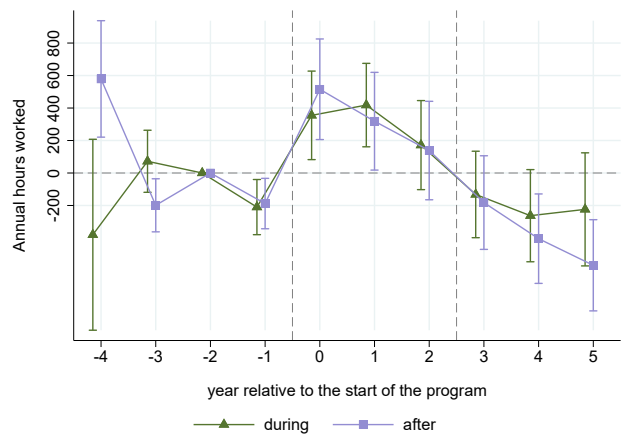
**(a) Effect on hours worked - No kid or before**



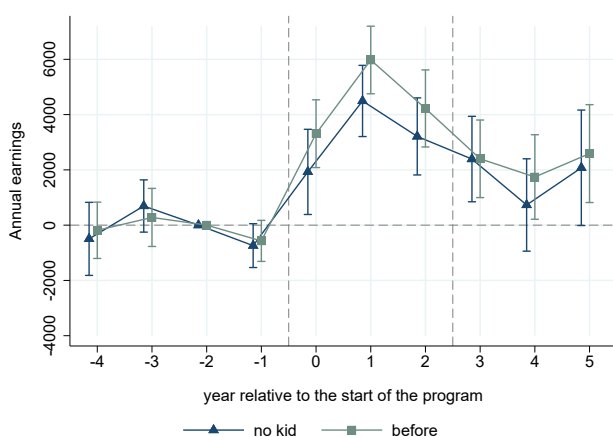
**(b) Effect on hours worked - During or after**



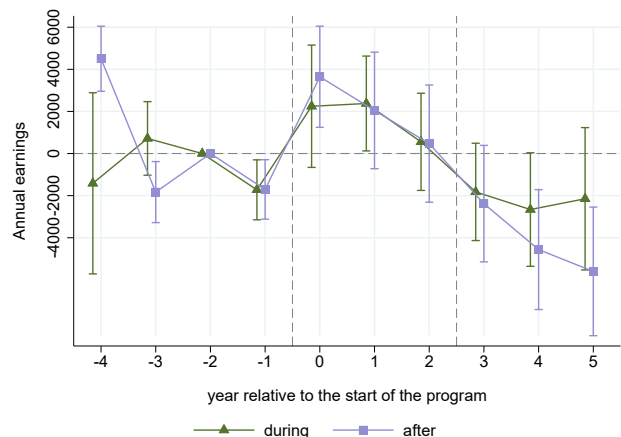
**(c) Effect on employment - No kid or before**



**(d) Effect on employment - During or after**



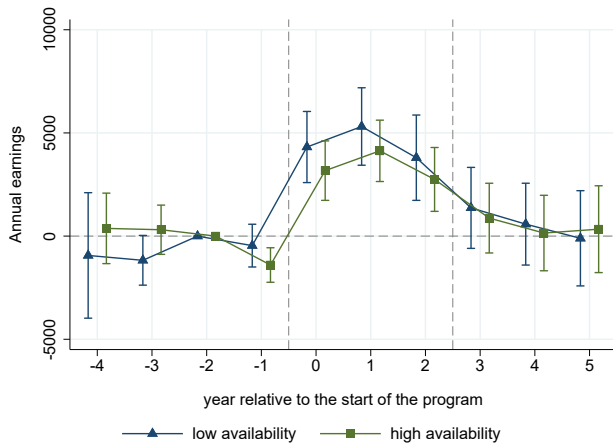
**(e) Effect on wage - No kid or before**



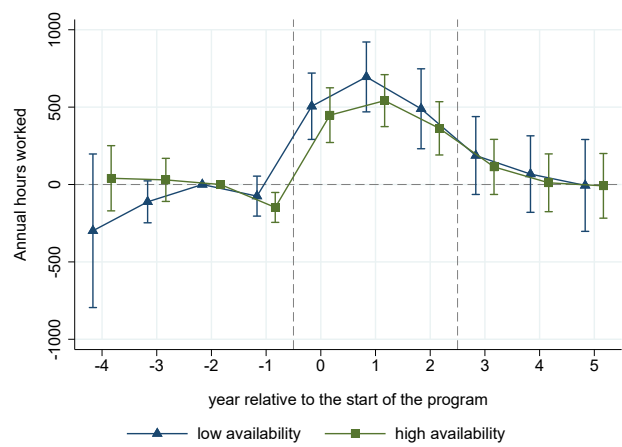
**(f) Effect on wage - During or after**

Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the specification (1) fully interacted with dummies, accounting for the timing of the birth of the first child to the program (no kid, before, during, or after). Coefficients are normalized to period -2. The dependent variable on panel (a) and (b) is the probability of being employed, panel (c) and (d) the total number of hours worked in the year, and panel (d) and (e) the annual earnings. It is estimated on the sample of women.

**Figure B.8: Effect on the probability to be employed and total hours worked for mothers by daycare spots availability**



**(a) Effect on the probability to be employed**



**(b) Effect on hours worked**

Notes: These figures plot the event study estimates ( $\beta_k$ ) and corresponding 95 percent confidence bands of the interacted specification (1). The model interacts with the municipal daycare spot availability in 2013. In yellow, we observe the effects for people living in a municipality with a number of daycare spots below the median and in green above the median. The dependent variable is on panel (a) the probability of being employed and on panel (b) the total number of hours worked in the year. The first vertical line highlights the start of the program, and the second is the average end of the program in the sample.