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The Benefits of Early Work Experience for School Dropouts: Evidence from a Field Experiment*

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Abstract

This paper investigates whether work experience gained through a subsidized job program can improve the employment prospects of young school dropouts. Relying on a correspondence study field experiment conducted in France, we find that the chances to be invited for a job interview are more than doubled (from 7.6 percent to 19.3 percent) when youths signal a one-year job-related experience in their résumé – either in the private or public sector; either certified or not – compared to youths who remained mainly inactive after dropping out from high school. We show that this effect is fairly stable across firm, contract or labor market characteristics, and also when testing another channel of application where résumés were sent spontaneously to firms. Our results contrast with the overall negative evidence about the effectiveness of subsidized employment programs in improving the employment prospects of disadvantaged youth.

Keywords: School dropouts, Work experience, Subsidized employment, Job Interview, Field experiment

JEL codes: J08, J24, J71

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1 Introduction

The use of active labor market policies (ALMPs) to ease the integration of early school leavers into the labor market has been increasing in the past decades. Among these, subsidized employment is an important lever to encourage employers to hire young job seekers whose productivity might be considered insufficient. It is supposed to provide disadvantaged youth with initial work experience, thus improving their employability and avoiding the threatening effects of long-term unemployment. To further avoid potential skill mismatch, subsidized employment programs may be complemented by training and skill certification. Yet, whether it focuses on youths (Caliendo and Schmidl, 2016; Kluve et al., 2019) or not (Kluve, 2010; Card et al., 2018; Vooren et al., 2019) the evidence from meta-analyses is somewhat discouraging. Public work programs are almost unanimously reported as detrimental, or at best neutral, to participants' subsequent labor market trajectories. Results are more contrasted for wage subsidies in the private sector, which are more likely to have positive effects on employment outcomes, although they are small in magnitude and only appear in the longer term.

While meta-analyses are informative about what programs seem to work or not, it remains unclear why it is the case. In particular, the extent to which recruiters value work experience is arguably an important channel. Looking at college graduates (Baert et al., 2016; Nunley et al., 2016) found limited or no effect of student work on recruiters' callback. Focusing on high-school dropouts, Cahuc et al. (2019) found very mild benefits from having a three years job-related experience over a related volunteering activity of the same length.¹ Yet, these studies do not provide conclusive evidence on whether the work experience gained in subsidized employment can help the most disadvantaged youths - i.e. low educated youth without relevant work experience - trigger recruiters' interest. Filling this gap is particularly relevant for public policy as the aim of most subsidized employment schemes is precisely to help youths with very little or no previous work experience (Kluve et al., 2019). This is, for example, the objective of the Youth Guarantee scheme implemented by European countries in 2014 (Escudero and Mourelo, 2017), through which countries have committed to guaranteeing all young people who have left school without a diploma either a job or appropriate training.

In this article, we bring experimental evidence on the impact of job-related work experience - acquired through a subsidized job program - on the chances to get a callback from recruiters for young school dropouts. Our experimental setting allows us to test if recruiters value applicants' work experience in low-skilled occupations and analyze if this experience is valued differently according to (i) whether work experience has been acquired in the private or public sector, (ii) whether candidates report certified skills or not, and (iii) whether firm, contract, or labor market characteristics differ.

¹In particular, the authors found a premium associated with job-related work experience - either subsidized or not - only if there is also a training accompanied by skill certification and the unemployment rate is sufficiently low.

We rely on an audit study field experiment where we sent about 1,600 applications of fictitious candidates to real job offers posted online from January to July 2018. In addition, we sent about 5,400 spontaneous applications to (other) firms that already have employees in the targeted occupations. The fictitious applicants were young people aged 18 year-old who left the educational system after lower secondary school. While all of our fictitious applicants remained mainly inactive during the first year following school disengagement (from 16 to 17 year-old), their labor market experience during the second year (from 17 to 18 year-old) has been randomly assigned: on the one hand, a first pool of applicants remained inactive during this second year and serves as the control group and on the other hand, a second pool of applicants signal a one-year job-related experience via a subsidized job program and serves as the treatment group.²

The subsidized job program through which our fictitious applicants gained job-related experience is a program operating between 2012 and 2018 in France called “*Emploi d’Avenir*”. This program was targeted to young people aged between 16 and 25 without diploma or with low-qualification level. This was the main program under which firms and non-market structures should hire young people if they wanted to receive state subsidies, which ranged between 35% and 75% of the gross wage. Firms had also the possibility to provide complementary training to young people and certify their skills with a national diploma or other types of employer certificates. In accordance, we also randomized the certification status among the applicants with work experience.

In this experiment, we targeted two different occupations: cook and mason. Not only these two occupations are among the occupations where the share of school dropouts is the highest (both in France and in other European countries), but they are also among the set of occupations where the share of subsidized jobs is the highest. Since these two occupations can be found in private firms and public structures in France, we let the sector in which the applicants acquired their experience to be either the private or public sector. As the skills we indicated on the résumés are the same regardless of the sector and quite transferable across firms (Gathmann and Schönberg, 2010), this design allows us to test whether recruiters react differently whether the work experience has been acquired in the private or public sector.

We find that the average job interview rate for school dropouts who remained inactive before the application is about 7.6% whereas it is about 19.3% for school dropouts who signal job-related experience.³ Therefore, the chances to be invited for an interview are multiplied by about 2.5 when signaling a one-year job-related work experience on the résumé among

²To ensure credibility, we do not mention explicitly that work experience has been acquired through a subsidized employment program in the résumé but rather in the cover letter. Regarding potential negative stigma associated with this subsidized employment program, Cahuc et al. (2019) found no difference from an equivalent non-subsidized work experience.

³Results are the same if we use callback rate instead. Since both measures are close in our experiment, about 16.2% and 13.4% for callback and interview rate respectively, we decided to focus on the latter to make the interpretation more straightforward.

school dropouts. This result holds for both cooks and masons, for which the interview rate is multiplied by 2.6 and 2.1 respectively when signaling work experience. We find that this effect is the same irrespective of the sector (market and non-market) in which dropouts acquired their work experience. Skills certification by a national diploma or an employer certificate positively affect this premium but the difference is small and not statistically significant. Although the overall effect can be either reduced or magnified across firm, contract and local labor market characteristics, it remains quite stable and it is both economically and statistically significant in all the specifications we are able to consider.

To increase the spectrum of targeted firms, as well as to test another application channel, we also sent our fictitious *résumés* through spontaneous applications. From October to December 2018, we sent more than 4,000 applications of dropouts with and without job-related experience to firms that have already cook and mason employees. Although the overall interview rates are much lower than in the audit study - because those firms did not post any job vacancy -, it remains significantly higher when applicants signal job-related work experience (5.8%) compared to inactive profiles (3%). For masons, only work experience certified by a national diploma is found to have a statistically significant impact on the interview rate when applications are sent spontaneously.

The rest of the paper is organized as follows. Section 2 reviews the related literature more extensively and highlights our contributions. Section 3 introduces the institutional context. Section 4 describes the experimental design and its scope. Section 5 presents the main results and their sensitivity to various contextual factors. Section 6 discusses the policy implications of our results and concludes.

2 Related literature

Firstly, our paper relates to the extensive audit studies literature looking at how employers respond to various job candidate characteristics. In particular, we contribute to the literature focusing on the role of applicants' work history. Several studies have looked at the effect of current unemployment duration on callback probabilities and found mixed results.⁴ Oberholzer-Gee (2008) provided evidence from Switzerland that long unemployment spells (more than 2 years) negatively affect callback rate while shorter spells (up to one year) tend to have a positive effect (in comparison to a person who is currently employed). Looking at low-to middle-skill jobs in the United States, Kroft et al. (2013) found that the callback rate sharply declines in the first year of the unemployment spell and that duration dependence is stronger in tight labor markets. Eriksson and Rooth (2014) and Fremigacci et al. (2016)

⁴The effect of past unemployment spells has also been studied and existing studies (Eriksson and Rooth, 2014; Nunley et al., 2017) tend to find no effect on recruiters' interest when applicants have subsequent work experience.

found converging results for Sweden and France respectively with a negative effect of unemployment spells of at least 9 to 12 months. In contrast, [Farber et al. \(2016\)](#) and [Nunley et al. \(2017\)](#) did not find any relationship between unemployment duration and callback rate when considering spells up to one year of unemployment. Lastly, [Farber et al. \(2019\)](#) provided evidence consistent with negative duration dependence of callback rate but only after one year of unemployment.⁵

So far, few audit studies have examined the effect of work experience on recruiter interest with a dedicated experimental design.⁶ [Eriksson and Rooth \(2014\)](#) found that additional years of job-related experience increase callback rate mostly for relatively high skill jobs. Looking at the effect of student work [Baert et al. \(2016\)](#) find it has no effect on callback probabilities for former university students in Belgium. On the contrary, [Nunley et al. \(2016\)](#) found that internship experience increases the interview rate by 14% for recent college graduates in the United States. We complement this evidence by looking at the effect of job-related work experience coming from a subsidized job for high school dropouts, a population that is particularly relevant for public policy. Moreover, we study this effect at the margin of zero versus some experience (i.e. one year) which is different from [Eriksson and Rooth \(2014\)](#) where all applicants have at least one year of experience.

The paper of [Cahuc et al. \(2019\)](#) is the closest to ours. In their paper, the authors analyze the effect of previous work experience on recruiters' callback for school dropouts aged 24 in France. They find that only job-related experience with training delivering a national diploma has a positive effect on callback rates. Furthermore, this effect is entirely driven by areas where the local unemployment rate is the lowest, suggesting lower competition from external applicants. In contrast, we find that the impact of job-related experience on callback rate is strong, even in the absence of certification. We also observe that this effect slightly decreases with local labor market tightness but it remains both economically and statistically significant in all the specifications we are able to consider. Although the two studies share similar experimental designs, one central difference lies in the definition of the treatment and control groups. In their experiment, all applicants signal job-related skills, either via a 3-years full time contract (for the treatment groups) or a 3-year part-time volunteering activity (for the control group). On the contrary our control group is virgin of any job-related experience, as it is the case for most youths targeted by public policies. Thus, our experiment is the first to really assess the potential effect of work experience for the most disadvantaged youths. Our two studies also differ in terms of the choice of occupations (gardener and receptionist

⁵Regarding the effect of being currently employed when applying for a job, existing evidence tends to indicate a negative effect, especially when holding low quality jobs (e.g. interim or underemployment) or applying to relatively high-skilled position ([Kroft et al., 2013](#); [Nunley et al., 2017](#); [Farber et al., 2019](#)).

⁶In most of the studies cited above, applicants do have work experience but it does not differ across them and its effect on callback cannot be identified.

vs. cook and mason), the macroeconomic context, or the level of job tightness.⁷

Secondly, our paper relates to the literature on active labor market policies (ALMPs), and more specifically, to subsidized employment programs targeting undereducated youth. While people are still at school, apprenticeship training, which combines part-time schooling in a training center and part-time employment in a firm, has been found to yield positive effect on subsequent employment for young individuals (Wolter and Ryan, 2011). Yet, Cahuc and Hervein (2020) argue that the positive difference with respect to classroom vocational education is likely due to firm retention at the end of apprenticeship in countries where apprenticeship is developed within vocational education. Here we show that past work experience can alleviate the employment prospects of those who leave school before graduation.

When targeting youth out of the educational system, most public policies rely on vocational training and subsidized employment. These policies are expected to alleviate the market frictions during the matching process by allowing individuals to better signal their productivity and build their professional network. Overall, evidence from meta-analyses tends to indicate that subsidized employment has zero or even negative (“lock-in”) effects on the short run (i.e. less than a year) which progressively turn into a positive, though moderate, effect in the longer run (i.e. one to three years) (Kluve, 2010; Card et al., 2018; Vooren et al., 2019). Moreover, subsidized employment is found to be relatively ineffective at all time horizons when it takes the form of public sector employment programs. Focusing on youths, meta-analyses from Caliendo and Schmidl (2016); Kluve et al. (2019) yield similar conclusions. However, evidence is still scarce for the specific population of school dropouts even though they are particularly at-risk with respect to labor market integration. In the US, employment and training public programs have generally fail to improve the employment prospects of disadvantaged youths (LaLonde, 2003; Davis and Heller, 2020). One noticeable exception is the Job Corps program which has been found to positively affect educational attainment, (absence of) criminal activities, and earnings (Schochet et al., 2008).

From a methodological point of view, most of the articles that have studied the effectiveness of ALMPs in developed countries are based on non-experimental designs⁸, which makes it necessary to assume conditional independence from the observables. However, as noted by Caliendo and Schmidl (2016), the risk of bias due to unobserved heterogeneity is particularly pronounced when looking specifically at youth, for whom the labor market history we can control for is shorter. Thanks to our experimental setting, we can credibly identify how recruiters value early work experience for school dropouts and how it varies across several contextual

⁷In 2016, the share of recruiters who declare hiring difficulties was about 22% for gardeners and 35% for receptionist and related occupation in the hotel industry (32% for all occupations in 2016) whereas it was about 58% for masons and 61% for cooks in 2018 (44% for all occupations in 2018). Source: French employment agency (*Pôle Emploi*), *Enquête Besoins en Main-d’Œuvre 2021*, <https://statistiques.pole-emploi.org/bmo/bmo?la=0&pp=2021&ss=1> (accessed on the 12th January of 2022).

⁸It represents 81% of the papers analyzed by Card et al. (2018) and 93% of those in the review of by Vooren et al. (2019)

factors. This may explain one striking result we find in this paper. Indeed, contrary to most of previous studies, we show that job-related work experience acquired in the non-market sector has a strong and positive effect on employment probability (at least at the first stage of the procedure), as for work experience in the non-market sector. We mostly explain this difference by the fact that the population of job seekers and the set of occupations are generally different in these two sectors. Youth who end up to work in public sector subsidized jobs are in general more disadvantaged people than those who had access to subsidized employment in the private sector. Nevertheless, when the candidates have otherwise similar characteristics, recruiters do not seem to value the experience acquired either in the market sector or in the non-market sector differently. These results may be of importance for public policy since youth unemployment is a persistent problem in France but also in other developed countries as we see in the next section.

3 Institutional context

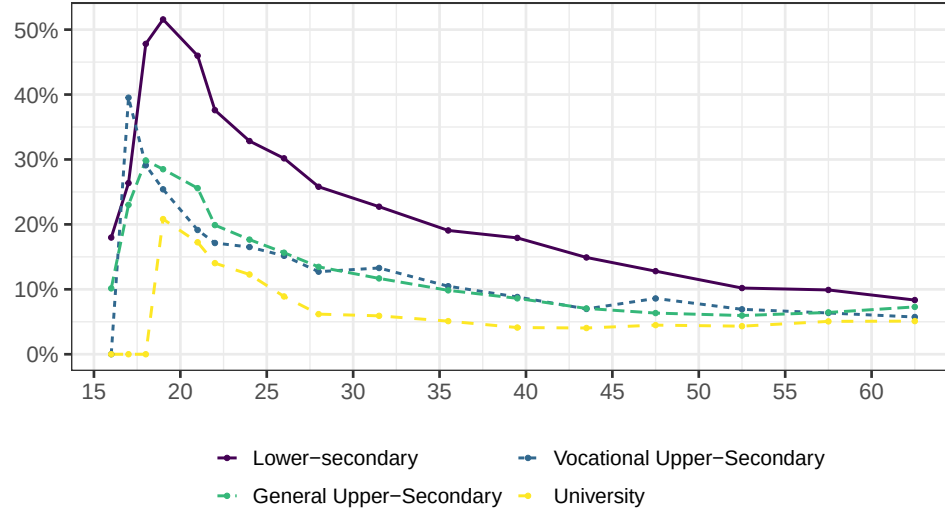
This section presents the French context of youth unemployment as well as the subsidized employment policy that we use to justify job-related work experience in our field experiment.

3.1 Youth unemployment

Over the last 40 years, youth unemployment is one the most striking feature of the French labor market. As depicted by Figure A.1.1 in Appendix A.1, from 1980 to 2021, youth (i.e. people aged 15 to 24 year-old) unemployment rate was systematically two to three times higher than for the rest of the population. It places France among the developed countries with the highest youth unemployment rate. In 2019, the unemployment rate of people aged between 15 and 24 year-old was about 20% in France, whereas it was about 15% and 12% on average in EU and OECD countries respectively, and about 8% in the United States (see Figure A.1.2 in Appendix A.1). Yet, the aggregate youth unemployment rate masks varied situations for young people, depending on their educational level.

Every year, around 820,000 pupils aged about 6 enter elementary schools in France. They learn the basics in several fields (French, mathematics, history, geography, etc.) up until 9th grade in middle school. At this stage, around 75% of pupils are aged about 15 and 25% are aged 16 due to repeated year. Since the legal age to leave the education system is 16 year-old in France, this is also the moment where youth may decide to leave the education system altogether to enter the labor market. Most of them continue their studies after middle school. During the last decade, around 60% of a generation followed a 3-year general upper-secondary diploma with the objective to pursue higher education, while 27% ended up in a (2- or 3-year) vocational upper-secondary track. Consequently, about 13% of young people left school before

Figure 1: Evolution of the unemployment rate over the life cycle in France (2013Q1-2018Q1)



Note: This figure shows the evolution of the unemployment rate over the life cycle for individuals with lower-secondary educational level in purple, for individuals with 2- or 3-year vocational upper-secondary educational level in blue, with general upper-secondary education level in green, and with a university degree in yellow.

Source: Enquête Emploi, authors' calculations.

the end of their curricula.

Bouhia et al. (2011) show that school dropouts are more likely to come from a disadvantaged social background and to experience difficult situations during their education. Unsurprisingly, these difficulties have often detrimental effects on their subsequent situations on the labor market. Figure 1 shows the evolution of the unemployment rate over the life cycle depending on the education attainment. High school dropouts clearly stand out with a probability of being unemployed rising from 18% at age 16 to 50% at age 20 and steadily declining thereafter. The pattern is similar for the other educational groups (from vocational education to university degree) but at lower levels.

Aside from the individual cost of being not in employment, education or training (NEET), the social cost is also high. A report from the Eurofound (2012) estimated an economic loss due to the non-participation of young people in the labor market, at European level, equal to $\approx 1.1\%$ of the gross domestic product (GDP). Moreover, this cost is likely underestimated since it does not include external effects, such as legal costs, health care, etc. Indeed, not only does experiencing non-employment after school reduces the chances of obtaining stable well-paid employment, it also increases the probability of mental and physical illness. It is not surprising therefore that successive governments have introduced various public policies trying to remedy the situation.

3.2 Subsidized jobs

Because the integration of school dropouts into the labor market is difficult, successive governments have decided to promote specific active labor market policies, especially with regard to vocational training and subsidized employment. Vocational training are mainly proposed by caseworkers in job centers (*Pôle emploi*). Training can be carried out variously through classroom training, on-the-job training, or in most cases a mixture of the two in any private or public training center within the French territory.

In parallel, the *Emploi d'Avenir* (EAv) subsidized program, operating between 2012 and 2018, was a program aimed at reducing the labor cost for firms when hiring unskilled youths aged between 16 and 25. Between 35% to 75% of the gross minimum wage was paid by the state and the contract could be either permanent or temporary - whose duration could be of one or three years. At this period, EAv was the main subsidized contract through which firms should employ youths if they wanted to receive state subsidies. One innovation compared to previous subsidized contracts in France was that employers had the possibility to offer complementary classroom training, whether by their own means or by allowing free time in an external training center. In order to ensure a follow-up of the job experience and that training was properly delivered, young people had to be registered at the youth center of their commuting zone. They should have an individual meeting with a professional caseworker according to a schedule planed by the two parties. Young people could also be registered at a job center to claim rights related to unemployment such as specific benefits or complementary training.

In total, more than 350,000 young people were in this program over this period. Table A.1.1 (in Appendix A.1) presents descriptive statistics related to young people at the time when they signed their first EAv contract.⁹ They were mostly French people (95%) with a lower- or 2-year vocational upper-secondary educational level (27% and 47% respectively). All young people were registered at a youth center and around 70% were registered at a job center. Before the signature of the subsidized contract, 60% of those registered at a job center were unemployed for less than a year. On average, they signed their first subsidized contract at 21.5 year-old. It appears that about three-quarters of these contracts were temporary, whose duration was one year for 60% and three years for 40%. Only a third of contracts seemingly led to a certified training, and in these cases, more than 70% of training programs were carried out in centers external to the firm.

The picture is quite similar when restricting the sample to young people aged below 18. Although, they are more likely to be males and, unsurprisingly, to only have a lower-secondary educational level. They are also less often registered at job centers, and tend to

⁹Youths can sign multiple EAv contracts within the same firm for a total duration of three years, and there is no limitation when they sign with different employers as long as they are under the age of 26.

work more in the market sector. Although some studies analyze the effectiveness of this policy in a descriptive way (Borel and Pichavent, 2021), no clear causal evaluation has been made. Consequently, we propose a field experiment in which we aim to compare the probability of having job interviews following job applications of otherwise identical young school dropouts, either with job-related experience acquired via a subsidized (EAv) contract or with only a few short-term jobs unrelated to the targeted occupations.

4 Field experiment

This section describes the experimental protocol of our audit study: the treatment groups, the targeted occupations, the profiles of the applicants, the process of application, the collection of data, and the limits inherent to correspondence studies.

4.1 Treatment groups

Our applicants are unemployed young adults who all finished lower-secondary school in June 2015 and decided to quit education to enter in the labor market. During the first following year, all young people were mostly inactive: they had two one-month temporary contracts,¹⁰ with no link to the occupations targeted in the audit study, and ten months of non-employment.¹¹ This year of non-employment (and short spells of employment) acts as a signal of dropping out when employers screen the applications because they indicate the lower-secondary school diploma but not the upper-secondary diploma (*Baccalauréat*) which is the first diploma recognized by the State to enter on the labor market.¹²

After this first year of inactivity, applicants exhibit different situations over the following year, as depicted in Figure 2. On the one hand, we constitute a first group of young dropouts who remained inactive for an additional year (i.e. two one-month temporary contracts over the year, unrelated to the occupations targeted). This group serves as the control group. On the other hand, we constitute a second group of young dropouts who had professional experience in the targeted occupations via the EAv subsidized job program. This professional experience could be associated either with an employer certificate, a national diploma, or no certification. Moreover, the professional experience - certified or not - could have been acquired either in the private sector or in the public sector. This group serves as the treatment group.

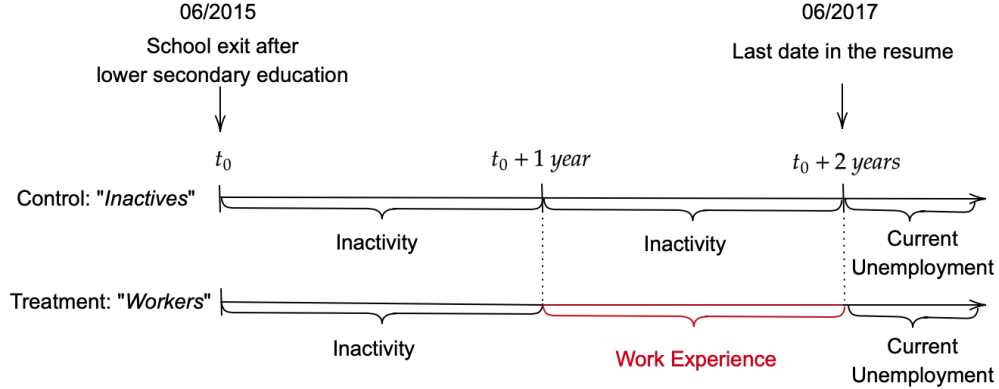
We stop the last line of résumés in June 2017 for all applicants to ensure that each group shared the same duration of current unemployment before applying to job vacancies.

¹⁰From the French labor force survey (2013-2018Q1), most of young dropouts aged 17/18 year-old worked less than two months in the year prior to the survey.

¹¹Even though this is not the conventional definition of inactivity, we refer to inactivity from the employer’s viewpoint of periods of non-employment.

¹²In 2018, 80.6% of a given age cohort are estimated to obtain the *baccalauréat*. Source: French ministry of education (accessed July 13th 2022): [link](#)

Figure 2: Diagram of applicant profiles



Note: This figure shows the different profiles created in the field experiment described in Section 4.1. The control group is constituted of young people who stayed mainly *inactive* for two years after dropping out of school, i.e. they had two one-month temporary contracts with no link to the occupations targeted in the audit study and ten months of non-employment each year. The treatment group is constituted by young people who were *inactive* for one year and had job-related experience during the second year via subsidized contract.

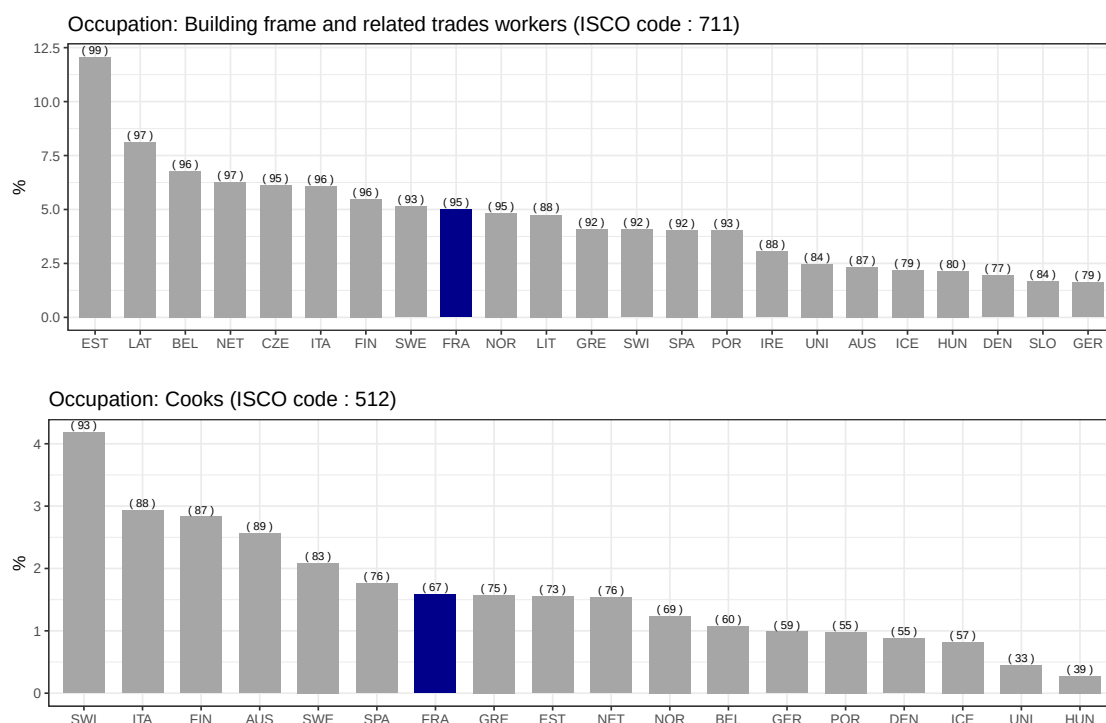
4.2 The occupations

The choice of occupations was based on several criteria: belonging to different industries, the existence of an official state certification for the diploma usually required for being hired, a sufficient proportion of school dropouts, being present in both market and non-market sectors, and enough employees under subsidized contracts. These criteria led us to a set of five possible occupations. In view of financial and organizational constraints, we finally selected the two occupations with the highest volume of job offers: cook and mason.¹³

Relying on pooled labor force surveys over 2011-2016, Figures 3 and A.1.3 (in Appendix A.1) provide evidence about the relevance of these two occupations regarding the population of school dropouts. Figure 3 shows how frequent these two occupations are among dropouts in France as well as in other European countries. In France, about 5% of employed dropouts are *building frame and trades related workers* (ISCO code 711), which makes this occupation more frequent among dropouts than 95% of the other occupations. Cooks (ISCO code 512) represent about 1.5% of employed dropouts, which makes the occupation more frequent among this population than 67% of the other occupations. Symmetrically, Figure A.1.3 (in Appendix A.1) show how common dropouts profile are among youths that are employed in these two occupations. In France, the share of dropouts is 20% and 12% respectively for masons and cooks over the period. Both occupations are ranked among those with relatively high dropout

¹³We used various sources, including the French Labor Force Survey (*Enquête emploi*, INSEE) and the *Répertoire National des Certifications Professionnelles* (RNCP) to verify the existence of national diploma, and the *Pôle emploi* database to assess the number of job offers.

Figure 3: Share of masons and cooks among early leavers from education and training who are employed in Europe



Note: In France, “building frame and related trades workers” represents about 5% of all youths who are early leavers from education and training, this occupation is more frequent among this population than 95 percent of other occupations. Youth are defined as individuals aged 15–29 years old. Shares are calculated on pooled 2011–2016 data. For Germany, they are calculated on pooled 2011–2013 data. Countries for which there are less than 20 observations are not reported.

Source: OECD calculations based on the European Union Labour Force Survey (EU-LFS) microdata

rates for France and most of European countries.

Since the work experience of our treated applicants has been acquired through a one-year EAv contract, as mentioned in their motivation letter, it is also important that subsidized contracts are not unusual in our two selected occupations. Figure A.1.4 (in Appendix A.1) shows the share of subsidized contracts (EAv only; or both EAv and other subsidized contracts) among people employed in each of the two occupations over the period 2014-2017 in France as well as for the rest of the occupations. EAv contracts represent about 3.5% and 1.6% of all people aged 15 to 24 employed as mason and cook respectively. Considering the average share of EAv contracts among all other occupations which is about 1.7%, we can say that cook is quite representative of other occupations whereas mason appears to work on EAv contracts more frequently than in other occupations. In any case, it is clear that EAv contracts are not particularly unusual in either of the two selected occupations. Figure A.1.4 (in Appendix A.1) also shows that these conclusions holds when considering other type of subsidized contracts among subsidized jobs, although EAv contracts are more relevant than the others in the context of our two occupations.

Finally, Figure A.1.5 (in Appendix A.1) shows how frequent our two applications are among subsidized contracts in France over the period 2014-2017. In particular, among people aged 15 to 24 employed in EAv contract, about 4.4% are working as mason and 1.4% as cook. It makes these two occupations more frequent than 97% and 85% of other occupations among EAv contracts respectively.

Overall, and relative to other occupations, cooks and masons are quite frequent both among dropouts and people employed in subsidized jobs. Conversely, the share of dropouts and subsidized jobs among these two occupations are also relatively high compared to other occupations.

4.3 The applicants

The profiles of applicants were then designed for these two occupations. Applicants are young males aged 18 at the beginning of applications and 19 at the end. We focus on men because most of cooks and masons are male. Their names were chosen among those most commonly found in the French population. According to the *Fichiers des prénoms* (INSEE), the two first names used in the experiment, Théo and Alexis, were respectively the 9th and 13th most popular first names in 1999.¹⁴ The surnames, Petit and Dubois, were respectively ranked 6 and 7, according to the *Fichier patronymique* (INSEE).¹⁵ Thus our applicants, *Alexis Dubois* and *Théo Petit*, have names that are too general for them to be identified on the Internet.

Applicants' addresses were chosen to be in the center of whatever city is the administrative capital of the department in which the job was posted, in order to ensure that candidates live

¹⁴The first-names were chosen randomly among the top 20.

¹⁵The same method was done for surnames.

sufficiently close to their potential future job and to avoid geographic discrimination.¹⁶ Since the diploma is national, there is no information about the specific training center, as usual in résumés for this type of application. The address of firms where dropouts worked during their job-related professional experience is not provided, in order to avoid detection of fictitious applications.¹⁷ These training firms are large well-known firms in the private sector (*Flunch* and *Hyppopotamus* for cooks; *Bouygues Construction* and *Lafarge* for masons)¹⁸ for which the address of the establishment where one has been employed is not usually mentioned. And there are administrations in the public sector (*administrative restaurant of the city hall* and *administrative restaurant of the department* for cooks; *technical center of the departmental council* and *technical center of the city hall* for masons). We use the terms “firms” and “administrations” to signal to potential recruiters that the experience was acquired either in the private or public sector.

Moreover, our applicants have a mix of soft skills (the ones expected in a firm) and hard skills (the ones expected in the occupation).¹⁹ Except for dropouts in “inactivity” who have never worked as a cook or mason, there is no skill differences within the profiles with work experience.

Finally, we did not emphasize their dropping out after middle school, as advised by caseworkers helping this population. Recruiters deduce this information by looking at the education block in the résumé as explained in Section 4.1. We mentioned only in their cover letters that dropouts with work experience did it through a subsidized contract (EAv). Finally, we pre-submitted our fictitious applications in cook and mason positions to actual workers and caseworkers who confirmed their credibility.

4.4 The applications

All applications included a résumé and a cover letter. They were accompanied by a short email message. We created two templates for both résumés and cover letters. This was to avoid first detection by the firm, and second to ensure that callbacks did not depend on

¹⁶Addresses were collected and verified through *Google Maps*.

¹⁷This prevents us to capture any positive effect related to a potential recommendation by the previous employer, whether through a recommendation letter or simply by answering to the recruiter solicitation. From this perspective, our estimates of the effect of work experience on the chances to get an interview may be interpreted as a lower bound of the actual effect of work experience. We come back on this point in section 4.6 which discusses the research limitations of our experiment.

¹⁸We made sure by looking at their website that these firms were present in all the French departments and that they were used to hiring young people as temporary workers, with certification or not, among others.

¹⁹These skills were taken from the *fiches métiers Pôle emploi*. Occupation-related skills are developing and maintaining kitchen facilities, maintaining hygiene rules HACCP, and respecting recipes for cook. For mason, they are plumbing and leveling, setting up the frame elements, manufacturing and installing casings, and pouring concrete and breeze block installation. Firm-related skills are the same regardless of the position and signaled by either “good team integration” or “good relational skill” depending on the layout. More details [here](#) for cooks and [here](#) for mason.

employers’ preferences for a given presentation style.²⁰ Résumés’ templates were based on different samples taken from the job center online library, a youth center sample, and Google searches.²¹ Templates for cover letters each contained five paragraphs and were written in a similar way to avoid apparent differences in literacy between them.²²

Job offers for both occupations were mainly identified using the French job center online platform.²³ Applications were sent only when it was possible to contact the recruiter directly by email. Therefore job offers issued by temporary work agencies or other intermediaries were not considered.²⁴ Moreover, the same recruiter could never be contacted more than once, even if he posted different job positions in different French areas throughout the entire experiment period.²⁵ The same applied for offers providing only a *Pôle emploi* counselor email address. If a job vacancy met these criteria, one (and only one) pair of applications was sent. The name of the applicant, the applicant profile, and the layout type were all selected at random.

Thus, for each job vacancy, recruiters received one application from the pool {“Inactivity”; “Work experience”}.

4.5 Data collection

In total, 1,598 applications were sent from 22 January 2018 to 13 July 2018. This sample size largely satisfied our power calculations as shown in Figure A.3.1 in Appendix A.3. The overall sample size was chosen to detect a minimum effect of ± 4 percentage points between the baseline callback rate of applicants with an “Inactivity” signal and that of applicants signaling “Work Experience”, at a 5% significance level and power of 80%.

Replies from recruiters were collected up to the last recorded phone call and email message on 10 October 2018. A reply from a recruiter who stated that he did not select the application for the job vacancy is classified as a negative callback, along with the absence of callback. Any other reply is considered as a positive callback. Then, we consider two categories of positive callbacks. First, “callbacks”, which include requests for further information and interview propositions. Requests for further information could be quite vague, such as “*Please, call me back*”. They could also ask for more precise information about the candidates’ training or experience, their means of transport when the job was located some way from the candidates’

²⁰See Appendix A.2 for examples of résumés and cover letters.

²¹The public databank *Pôle emploi CVthèque* is available to help recruiters in selecting different available profiles. More details at [here](#).

²²We checked that the two different profiles were not correlated with the layout types so as to avoid the potential issue of template bias, addressed in [Lahey and Beasley \(2009\)](#).

²³A few private job search websites, such as *Le Bon Coin* or *Indeed* were also used when the number of offers available on the *Pôle emploi* platform was too low on a given day.

²⁴About 2/3 of mason job vacancies were managed by temporary work agencies during our experiment for which we did not send any application to avoid detection. We provide a robustness check for our results by testing spontaneous applications in Section 5.2.2.

²⁵We also used the spontaneous applications channel to improve the validity of our results, such as discussed in Section 5.2.2 with more than 4,000 applications.

address, and so on. We interpret these types of callback as positive, since it is likely that they are motivated by the recruiter’s potential interest in the candidate. Second, we use the category “interview” for callbacks which offer a job interview proposition only. When recruiters provided a positive answer to an application, an email was sent back to thank them and inform them that the applicant declined the proposition.

4.6 Research limitations

Before presenting our results, several aspects of our experiment deserve to be discussed and kept in mind.

First, as for every correspondence study, our experiment allows us to capture the effect of job-related work experience on the first stage of the hiring process, i.e. the chances of having a job interview. We are not able to determine the subsequent probability of success which mostly depends on the type of information and skills the employers want to highlight during the job interview. However, we think it is safe to assume that, on average, school dropouts without previous work experience are not performing better at the interview than those with job-related work experience. Thus, if anything, the effect of work experience should be amplified after the callback stage.

Second, we are not able to capture all the effects that job-related work experience may have on the application itself. In particular, one of the advantages of work experience could be the opportunity it gives to build a professional network and obtain (letters of) recommendation from previous employers. Although we are not able to measure their prevalence nor their magnitude, these network effects are likely to have an overall positive effect on the employment probability. For example, [Heller and Kessler \(2021\)](#) find that a letter of recommendation increases employment and earnings among youths who participated in summer employment programs. In this respect, our estimates can again be interpreted as a lower bound of the effect of previous work experience in a real-life setting. We are also leaving aside any aspect related to on-the-job search or wage bargaining. However, the program we analyze targets young people who face difficult school-to-work transitions and on-the-job search as well as wage bargaining. These features can be seen as second order concerns for this population whose priority is to reach (stable) employment first.

Third, our experiment targets firms that recruit by posting job offers. We leave aside other firms that recruit through other channels like private network, which could be of importance for low-skilled positions. We tried to mitigate this concern by running a second audit study by sending unsolicited applications to firms in late 2018. This second channel of applications confirms the main results obtained when applying to job offers.

Finally, our results might be specific to our two occupations (cook and mason) and more generally to some other features of our experimental design (time period, applicants profiles,

etc.). From our study, we observe at least that the effect of job-related work experience is mostly consistent across the two occupations and the different specifications we tested (see Section 5.2). Then, our results complement the findings of Cahuc et al. (2019) who focused on two different occupations - gardeners and receptionists - and found mild evidence in favor of formal work experience for school dropouts. We leave it to future research and dedicated experiments to understand more deeply the reasons why recruiters may value previous work experience differently across occupations.

5 Results

This section presents the main results of the field experiment and complementary analyses as robustness tests.

5.1 Overall

The mean callback rates by category of callback and by profile of applicant are displayed in Table 1. We can see that the average callback rate for all applications is 16.2% and that the interview rate is only slightly lower, equal to 13.5%. This result is mostly driven by the cook applications which are more numerous than the mason applications.²⁶ Still, the mean callback rate for all mason applications is 13.4% and the mean interview rate is 11.6%, thus the callback rates for mason are on average 3 percentage points (pp) lower than of for cook. These callback rates are in line with average callback rates found in previous studies looking at similar occupations (Challe et al., 2020; Petit et al., 2016b; Fremigacci et al., 2015).²⁷

These average callback rates hide different situations according to the profile of interest. The average callback rate for dropouts with “inactivity” is around 10% and the interview rate is 7.6%. It is much higher for dropouts who signal job-related work experience acquired via a one-year subsidized contract. Their average callback rate is 22.4% and the interview rate is 19.3%. These rates are again driven by cook applications, where callback rates for mason are 2 to 3 pp lower, irrespective of the applicant profile. Because the interview rate has a more straightforward interpretation than the callback rate and these two outcomes seem to behave similarly according to the profile or the occupation, we restrict our analysis to job interview propositions in the rest of the paper.²⁸

²⁶It turned out that a high share of open positions for mason were managed by temporary work agencies. We evaluated this share up to 65% during our experiment.

²⁷Challe et al. (2020) find callback rates around 25% in the restaurant industry for applications of waiters in 2018-2019 - with profiles similar to our cooks -, a period in which the situation of the French labor market was similar to that covered by our experiment. Petit et al. (2016a) find an average callback rate between 19.3% and 26.2% - depending on the location - for cook in France in 2011-2012. Fremigacci et al. (2015) find an average callback rate of 19.3% for young mason candidates aged 21 in France in 2011 when the unemployment rate was increasing, after the shock of the great 2008-2009 recession.

²⁸Results are both quantitatively and qualitatively similar when using the larger definition of callback rate.

Table 1: Callback rates descriptive statistics by profile

Profile	All (1)	Inactivity (2)	Work Experience (3)
Occupation	All		
Observations	1,598	799	799
Callback	.1621 (.0092)	.1001 (.0106)	.2240 (.0148)
Interview	.1345 (.0085)	.0764 (.0094)	.1927 (.0140)
Occupation	Cook		
Observations	1,278	639	639
Callback	.1682 (.0105)	.1049 (.0121)	.2316 (.0167)
Interview	.1393 (.0097)	.0783 (.0106)	.2003 (.0159)
Occupation	Mason		
Observations	320	160	160
Callback	.1375 (.0193)	.0813 (.0217)	.1938 (.0313)
Interview	.1156 (.0179)	.0688 (.0201)	.1625 (.0293)

Note: This table reports the number of observations per profile and the mean value of the primary dependent variables. A callback is equal to one if the fictitious candidate received a demand for complementary information or a job interview. Interview is equal to one if the recruiter asks only for a job interview. Standard errors of the mean are reported in parentheses.

Figure A.4.1 in Appendix A.4 show the survival curves of the applications in our experiment. Almost all the applications of dropouts with “inactivity” that received an interview proposition are called back by employers at most seven days after the applications were sent, while it is 20 days for dropouts with work experience. More than half of the interview propositions are made within the first five days after the applications were sent. The combination of the high callback rate levels and the quick delay for employers replies suggest that our occupations are quite tight. Figure A.5.1 in Appendix A.5 shows the number of applications sent across French administrative departments in Metropolitan France and the respective distribution of interview rate. While our experiment covers almost all departments, we can see that fewer applications were sent in the middle of the country, which is consistent with the level of economic activity.

To analyze more extensively the interview rate differences across profiles, we estimate the

Table 2: Effects of job-related work experience on job interview probability

Interview (0/1)	All Applicants			Cook	Mason
	(1)	(2)	(3)	(4)	(5)
Work experience	0.1164*** (0.0137)	0.1192*** (0.0133)	0.1191*** (0.0138)	0.1256*** (0.0157)	0.0966*** (0.0345)
Constant	0.0763*** (0.0097)	0.0750*** (0.0097)	0.0750*** (0.0069)	0.0866*** (0.0095)	0.0486** (0.0220)
Application characteristics	No	Yes	Yes	Yes	Yes
Month & Department FE	No	No	Yes	Yes	Yes
Observations	1,598	1,598	1,598	1,278	320
R-squared	0.0291	0.0330	0.1054	0.1254	0.3196

Note: This table reports OLS estimates of equation (1). The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Application characteristics include the sector of the firm for those with work experience, the type of layout, the name of the candidate, and the order at which the application was sent. Month and Department fixed effects refer to the calendar month and french administrative department associated to the job application. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

following linear probability model with Ordinary Least Squares (OLS) estimators:²⁹

$$y_{ij} = \alpha + \beta \text{Work experience}_i + \gamma X_i + \varepsilon_{ij} \quad (1)$$

where y_{ij} is a dummy variable equal to one if applicant i gets an interview proposition for job j . Work experience_i is a dummy variable equal to one if applicant i is a school dropout with job-related work experience, zero if it remained in inactivity as depicted in Section 4.1. X_i is a vector of control variables with application characteristics (including the type of layout, name of the candidate and order of the application³⁰) as well as month and department fixed effects. ε_{ij} is a residual term, which is by construction orthogonal to the treatment regressor.³¹ Consequently, our parameter of interest β measures the causal effect of signaling job-related work experience on the probability to get an interview proposition for job.

Results are shown in Table 2. Columns (1) to (3) show the callback rate differences between dropouts with job-related work experience and those without for all the applicants, introducing control variables progressively. In accordance with Table 1, the constant - which

²⁹We also show the estimates with non-linear Probit models in Appendix A.7. Results are equivalent to OLS estimates. This fact holds true for all the estimations presented in the paper.

³⁰While all these three characteristics (layout, name of the candidate and order) were drawn at random in the experiment, the order of the application is, by construction, not fully balanced across “Worker” and “Inactive” profiles. This is because data we use in this study come from a larger correspondence study that includes other profiles and such that the “Inactive” profile was slightly more likely to be drawn as first applicant. As the difference is very small (“Inactives” are sent as first applicant 54% of the time in the data we use) and can be controlled for, this cannot bias our results.

³¹Table A.6.1 in Appendix A.6 provides balancing tests across the sub-profiles of applicants with work experience.

Table 3: Effects of sector job-related work experience on job interview probability

Interview (0/1)	All Applicants			Cook	Mason
	(1)	(2)	(3)	(4)	(5)
Work experience in the market sector	0.1212*** (0.0180)	0.1239*** (0.0179)	0.1214*** (0.0189)	0.1181*** (0.0197)	0.1242** (0.0544)
Work experience in the non-market sector	0.1116*** (0.0202)	0.1145*** (0.0197)	0.1169*** (0.0199)	0.1331*** (0.0241)	0.0720* (0.0372)
Constant	0.0763*** (0.0097)	0.0749*** (0.0097)	0.0750*** (0.0069)	0.0866*** (0.0095)	0.0499 (0.0352)
Application characteristics	No	Yes	Yes	Yes	Yes
Month & Department FE	No	No	Yes	Yes	Yes
Observations	1,598	1,598	1,598	1,278	320
R-squared	0.0292	0.0331	0.1054	0.1257	0.3220
P-value of $\beta_{\text{Market}} = \beta_{\text{Non-market}}$	0.7219	0.7251	0.8705	0.6265	0.3946

Note: This table reports OLS estimates of equation (1) by dis-aggregating the treatment variable (“Work experience”) according to whether job-related experience was acquired in the market sector or non-market sector. The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Application characteristics include the type of layout, the name of the candidate, and the order at which the application was sent. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

approximates the interview rate of dropouts with “inactivity” in column (1) - is around 7.5%. The interview rate of dropouts with work experience increases by +12 pp on average. In other words, signaling a one-year job-related experience in the occupation via a subsidized job program more than double the probability of having a job interview (i.e. increase by $\approx 150\%$). Column (4) restricts the sample to cook applicants and column (5) to mason applicants. The treatment effects of job-related work experience are of the same order of magnitude for the two occupations.

5.1.1 Market vs. non-market sector work experience

As stated in Section 4.1 and Section 4.3, job-related work experience of applicants could have been acquired either in the private sector or in the public sector.³² Given the current state of the literature about the differentiated effect of subsidized employment in market and non-market sectors (Kluve, 2010; Caliendo and Schmidl, 2016; Card et al., 2018; Vooren et al., 2019), it is possible that the positive effect of job-related experience is driven by applicants who acquired this experience in the private sector.

Table 3 shows the effect of job-related work experience in the market and non-market sectors. It is clear from all the specifications including all applicants that the effect of work experience more than double the interview rate of school dropouts, irrespective of the sector in which youths worked. Moreover, the difference between the effect of work experience in the market and in the non-market sector is not statistically different from zero. This result

³²We use the terms private and market, and public and non-market, interchangeably to refer to sectors where firms search for profit or not respectively.

Table 4: Effects of certified job-related work experience on job interview probability

Interview (0/1)	All Applicants			Cook	Mason
	(1)	(2)	(3)	(4)	(5)
Work experience with national diploma	0.1275*** (0.0222)	0.1314*** (0.0223)	0.1312*** (0.0228)	0.1333*** (0.0255)	0.1279* (0.0663)
Work experience with employer certificate	0.1136*** (0.0248)	0.1145*** (0.0243)	0.1143*** (0.0255)	0.1162*** (0.0288)	0.1311** (0.0598)
Work experience without no certification	0.1087*** (0.0238)	0.1123*** (0.0233)	0.1124*** (0.0231)	0.1271*** (0.0269)	0.0398 (0.0565)
Constant	0.0763*** (0.0097)	0.0749*** (0.0097)	0.0750*** (0.0069)	0.0865*** (0.0095)	0.0519** (0.0214)
Application characteristics	No	Yes	Yes	Yes	Yes
Month & Department FE	No	No	Yes	Yes	Yes
Observations	1,598	1,598	1,598	1,278	320
R-squared	0.0294	0.0333	0.1057	0.1256	0.3259
P-value of $\beta_{\text{Diploma}} = \beta_{\text{Certificate}}$	0.6741	0.6099	0.6206	0.6692	0.9683
P-value of $\beta_{\text{Diploma}} = \beta_{\text{No certificate}}$	0.5740	0.5645	0.5626	0.8571	0.3734
P-value of $\beta_{\text{Certificate}} = \beta_{\text{No certificate}}$	0.8858	0.9479	0.9562	0.7872	0.2491

Note: This table reports OLS estimates of equation (1) by dis-aggregating the treatment variable (“Work experience”) according to whether job-related experience is certified or not. The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Application characteristics include the sector of the *training* firm for “Workers”, the type of layout, the name of the candidate, and the order at which the application was sent. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

holds for both cook and mason applications, although the difference between sector is more pronounced for masons. Indeed, in this latter case, the effect of work experience in the market sector increases the interview rate of dropouts by +12 pp, while it is +7 pp when experience has been acquired in the non-market sector. Yet, it remains both economically and statistically significant in both cases.

5.1.2 The effect of skill certification

As described in Section 3.2, firms had the possibility to train their workers under subsidized contracts either by their own means or by allowing free time in an external training center. Given the spectrum of possible certification, we focused on two extreme types of certificates to some of our applicants. The first certificate is the lowest bound of certificate which is an employer certificate. It usually corresponds to an informal document signed by the employer declaring that the worker masters the skills related to the job. On the contrary, the second certificate is the highest one that workers can obtain since it is a national diploma that can be acquired only after passing some related exams.

To test if the positive effect of job-related work experience is driven by applicants who further signal a skill certification, we run equation (1) by disaggregating our treatment variable given the possibility that some applications displayed a certification in addition to the one-

year job-related experience.³³ More specifically, one-third of applicants with work experience signals a national diploma, one-third signals an employer certificate, and one-third signals no certification.

Table 4 shows the results of certified job-related work experience on job interview probability. Overall, it is clear that the effect of work experience *without any certification* still increases the chances of school dropouts to have job interviews by more than two (from 7.6% to 18.5%). The effect of skill certification, either the employer certificate or the national diploma, only slightly increases those chances ($\approx +1$ or $+2$ pp). However, the differences between work experience without and with certificates are not statistically different from zero. This non-effect might come from an insufficient number of observations to detect such small differences. Moreover, it seems that the results are driven by cook applications which account for most of the sample. Indeed, concentrating on mason positions, we see that the effect of work experience is positive but non-significant when there is no certification. Hence, most of the positive effect highlighted in the previous section comes from work experience certified with either a national diploma or an employer certificate (+12 pp in both cases), although results for mason position only are noisier due to the limited number of observations.

5.2 Robustness checks

This section presents robustness checks to verify the consistency of the main effect of job-related experience.

5.2.1 Sensitivity to different characteristics

We first test the sensitivity of the main results by splitting the sample according to some characteristics related to firms, contracts or the labor market conditions. Tables are presented in Appendix A.9.

Firm characteristics The results may differ given the size of the firm. It could be that applicants without job-related professional experience are less considered for job interview when the size of the firm increases. For instance, large firms may have centralized a human resources platform and discriminate applications according to impartial criteria like past job-related experience. This is what we see from columns (1) and (2) in Table A.9.1. The larger the firm size, the lower the interview rate of dropouts with “inactivity” (from 8% to 5%), although the effect of firm size is not statistically significant. The estimate associated to work experience does not change with the size of the firm, which means that the premium associated to work experience is higher, in relative terms, in large firm than in small firm.

³³We do not present the differences in interview rate by disentangling our profiles according to both the type of the sector and the presence of certification because of insufficient observations, especially for mason positions but our results remain qualitatively similar.

Another feature is the geographic distance separating the applicants from the jobs. It is likely that the longer the distance between jobs and candidates, the lower the interview rates. This is not what we observe from columns (3) and (4) in Table A.9.1. Although the mean/median distance to a job is about 30 km, both the interview rate of dropouts with job-related experience and of dropouts who remained inactive does not change with the distance to the job.

Contract characteristics Recruiters could also behave differently depending on the type of contract - temporary or permanent - related to the job offer. In particular, the separation cost associated to permanent contract being higher, recruiters may be more cautious when considering our applications. Moreover, the more attractive the job offer, the more applications outside from the ones we sent recruiters should receive and the better the average quality of these applications should be. Thus, we should observe a decline in the interview rate overall. This is what we observe from columns (1) and (2) in Table A.9.2. The interview rate of dropouts with “inactivity” decreases from 8% to 6.5% when applying from a temporary to a permanent contract. The premium associated with job-related experience also decreases from +13.7 pp to +9 pp. Nonetheless, in relative terms, the effect job-related work experience remains quite stable.

Another feature of the contract is the previous experience related to the job required by the firm. In our audit study, dropouts with job-related experience (certified or not) have one year of experience in the targeted occupation. Therefore, their chances of having job interview should sharply decline when the required experience is higher than a year. On the contrary, when no experience is required for the job one could expect the premium of work experience to decrease. Columns (3) and (4) in Table A.9.2 show that the required experience ask by the employer has a non-monotonous effect such that any required experience between zero and one year increases the premium of work experience. On the contrary, the higher the required experience for a position than one year, the lower the premium related to work experience which is set to one year in our experiment.

Labor market characteristics Finally, we consider the influence of local unemployment rate and job tightness on our results. As found in Cahuc et al. (2019), we can imagine that in areas where there is an excess of labor supply, the positive effect of signaling a job-related experience should decrease because of increased outside competition. Even though the occupations targeted by our study require no- or low-educational level, all of our applicants should suffer from more competition with other job seekers in areas with higher unemployment rates. From columns (1) and (2) in Table A.9.3, we observe a small (non-significant) effect of the local unemployment rate on job interview rates. More precisely, when the unemployment rate in the commuting zone of the job increases by +0.1 pp, the interview rate of dropouts

with “inactivity” decreases by -0.5 pp and the effect of job-related experience decreases by almost -1 pp.

To better account for the competition at the level of the job offer, we also interact the effect of job-related experience with the level of tightness operating in our targeted occupation at the commuting zone level. The average level of job tightness in cook (masonry) was about 2 (1.4) in 2018, meaning that there were approximately two (1.4) job vacancies for one job seeker on average. We see that the interview rate of dropouts with “inactivity” increases by +1 or +2 pp when job tightness increases by one unit. The premium associated to job-related experience is more sensitive to the variations of job tightness such that the lower the external competition for the vacancies, the higher the effect of past work experience, and conversely.

Summary To sum-up, the premium associated to job-related experience, certified or not, remains quite stable across the characteristics that are considered. Here we look at the premium given some firm, contract and local labor market characteristics and see that young people who remained inactive for two years after dropping out school are far less considered than young people who had job-related work experience. The job interview rate is multiplied by two when job-related experience is signaled.³⁴

5.2.2 Spontaneous applications

A high proportion of mason job vacancies were managed by temporary work agencies during the experiment as stated in Section 5.1. One feature of our occupations makes it also likely that workers are aware of a small but non-negligible number of job vacancies through network information or a word of mouth. Accordingly, we considered spontaneous applications as a second channel of application, that is to say, we send the profiles of applications to firms operating in these two occupations without answering to any job ads.

We scrapped a list of firms operating in these two occupations from the Internet.³⁵ We then refined the list to ensure that some firms did not receive a previous candidate from our initial testing. We also delete plants belonging to the same firm. At the same time, we used the same résumés and cover letters. We only changed some brief sentences in the cover letter and the email to better match a spontaneous application. We also randomized the profile, the template, and the name of fictitious applicant to be sent to a firm. We additionally drew a

³⁴Tables A.10.1 in Appendix A.10 and A.11.1 in Appendix A.11 provide robustness tests for the heterogeneous results. More specifically, Table A.10.1 in Appendix A.10 shows the results when standard errors are bootstrapped after 1,000 replications. While Table A.11.1 in Appendix A.11 shows randomization p-values à la Fisher after 1,000 replications. All the results presented in this section are robust to these two robustness tests.

³⁵We extracted various information such as the national id of the firm, the zip code, the phone number and email address from *Qualibat* and *La Bonne Boite* websites which indicate in what type of jobs those firm are able to hire.

Table 5: Effects of work experience on job interview probability for spontaneous applications

Interview (0/1)	All Applicants			Cook	Mason
	(1)	(2)	(3)	(4)	(5)
Panel A: Pooled work experience					
Work experience	0.0246*** (0.0057)	0.0246*** (0.0057)	0.0259*** (0.0060)	0.0330*** (0.0069)	0.0092 (0.0120)
Constant (ref: inactivity)	0.0303*** (0.0048)	0.0303*** (0.0048)	0.0294*** (0.0044)	0.0247*** (0.0051)	0.0427*** (0.0101)
Panel B: Work experience broken down by certification					
Work experience with national diploma	0.0336*** (0.0072)	0.0338*** (0.0073)	0.0341*** (0.0077)	0.0369*** (0.0093)	0.0284* (0.0162)
Work experience with employer certificate	0.0184** (0.0080)	0.0183** (0.0080)	0.0193** (0.0081)	0.0305*** (0.0100)	-0.0075 (0.0131)
Work experience without no certification	0.0216*** (0.0072)	0.0217*** (0.0072)	0.0244*** (0.0073)	0.0316*** (0.0080)	0.0074 (0.0175)
Constant (ref: inactivity)	0.0303*** (0.0048)	0.0303*** (0.0049)	0.0293*** (0.0045)	0.0247*** (0.0052)	0.0423*** (0.0101)
Application characteristics	No	Yes	Yes	Yes	Yes
Month & Department FE	No	No	Yes	Yes	Yes
Observations	5,426	5,426	5,426	3,853	1,573

Note: This table reports OLS estimates of equation (1) for spontaneous applications. The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Application characteristics include the type of layout and the name of the candidate. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

random date and time of sending.³⁶ Here, each firm received one, and only one, application. We ended up sending 4,052 spontaneous applications to firms in October 2018 for mason positions and in November and December 2018 for cook positions.

Results are shown in Table 5.³⁷ Panel A shows replicated results of Table 2 in Section 5.1. Although applying spontaneously for certain jobs seem to be less successful than applying to a job offer, as suggested by lower callback rates, the effect of job-related work experience remains significant. Indeed, the average interview rate for dropouts with “inactivity” is around 3% as measured by the constant, while it is about 2.5 pp higher for applicants with work experience. In line with the results presented in Section 5.1, job-related experience multiplies the job interview rate by a factor of two on average. However, from columns (4) and (5), we can see that the effect is driven by cook positions, while the point estimates is non-significant and closer to zero for mason positions.

We see with Panel B of Table 5 the replication of Table 4 when disaggregating our profiles

³⁶The date was randomly drawn from Monday to Friday and the time was randomly drawn from 8 am to 9 pm, as in the initial audit study.

³⁷The spontaneous study included profiles with work experience in cook and mason positions only in private firms so we are not able to disentangle the profiles according to the private/public sector distinction as in Section 5.1.1.

according to the type of certificate. Results are again in accordance with those described in Section 5.1.2 where certification, either a national diploma or an employer certificate, is associated with work experience. For cook positions, which drive the results for the whole sample, national diploma increases the interview rate of work experience with no certification by 1 pp on average, while employer certificate does not provide this advantage. Still, work experience with no certification significantly increases the spontaneous interview rate of inactive dropouts by two. On the contrary for mason positions, only applicants who signal work experience with a national diploma are more considered than school dropouts who remained in inactivity by increasing the interview rate by $\approx 50\%$ on average. As in the initial audit study, signaling work experience without certification does not seem to provide a strong advantage in the hiring process for mason positions.

Overall, these results are consistent with those of the job-offer audit study according to which young school dropouts who signal job-related experience (via a subsidized job program) are more often considered for job interview than school dropouts who remained inactive.³⁸

6 Conclusion

This paper presents the results of an audit study investigating whether work experience gained through a subsidized job program can improve the employment prospects of young school dropouts. We find that the chances to be invited for an interview are more than doubled (from 7.6% to 19.3%) when applicants signal a one-year work experience in their résumé, in comparison with youths who remained mainly inactive after dropping out from high school. We show that this effect is partially driven by applicants with work experience associated to a certification for mason positions but not overall, and that it is not driven by the sector where this experience was acquired (private vs public). This effect is fairly stable across firm, contract or labor market characteristics. Finally, the effect of job-related work experience on interview rate remains strong and statistically significant when we sent spontaneous applications to firms.

These results complement the literature on ALMPs, especially on the effect of work experience acquired through subsidized job programs. While existing empirical evidence depicts a rather negative picture of such programs, we find it can have large positive effects at the first stage of the hiring process. Some features of our experiment can be highlighted to guide public policy. First, the two occupations targeted in our experiment, namely cook and mason positions, were relatively tight occupations in France at the time of the experiment. Consistent with the findings of Cahuc et al. (2019), we find that work experience does matter

³⁸Our results are consistent with both human capital and/or signaling theories. We discuss further the potential underlying mechanisms in Appendix A.12, whereas it only serves as suggestive evidence as our experiment was not designed to disentangle them properly.

when job tightness is relatively high. Second, the skills needed to work as a mason or cook are rather job-specific than firm-specific (Gathmann and Schönberg, 2010) and each of these two professions rely on specific technical skills. This is arguably an important dimension to explain both why work experience is particularly beneficial in our study and why the sector (private vs. public) in which this experience was gained is not.

To assess the overall effect of work experience on employment probability, and ultimately the effectiveness of subsidized employment programs, many other factors would need to be accounted for. On the one hand, work experience may (positively) affect applicants' professional network as well as their ability to succeed at the interview stage. On the other hand, the potential displacement effects of ALMPs are well known, and subsidized employment programs are no exception. Finally, the more attractive conditions offered by subsidized jobs may also attract young people to the labor market who would not otherwise have participated. As in previous correspondence studies, accounting for these factors is beyond the scope of this article and remains an important avenue for future research.

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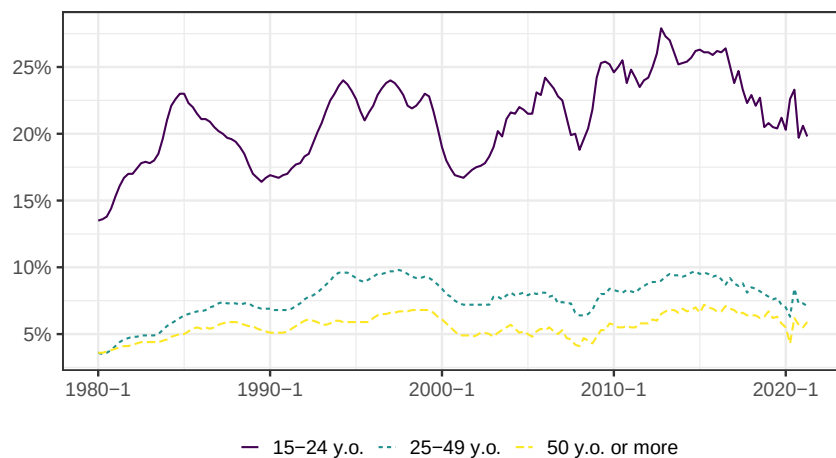
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A Appendix

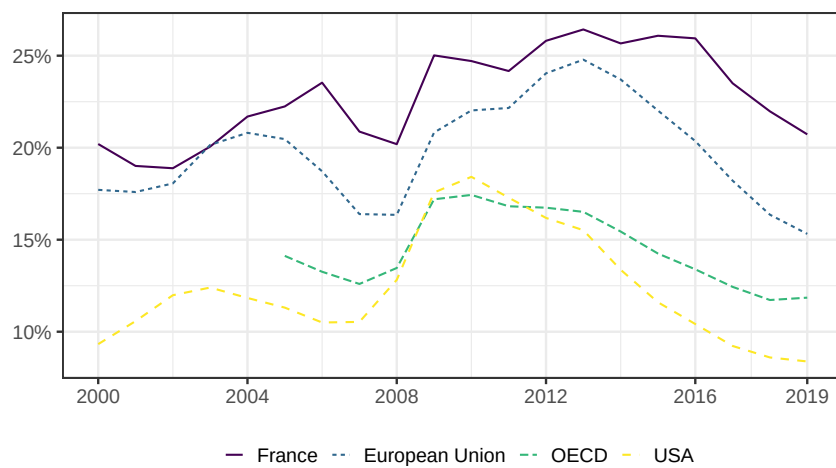
A.1 Background

Figure A.1.1: Evolution of the quarterly unemployment rate in France from 1980 to 2021 by age group



Note: This figure shows the evolution of the unemployment rate in France from 1980 to 2021 for individuals aged between 15 and 24 year-old in purple, for individuals aged between 25 and 49 year-old in green, and for people aged 50 year-old or older in yellow.
Source: Insee, Enquête Emploi.

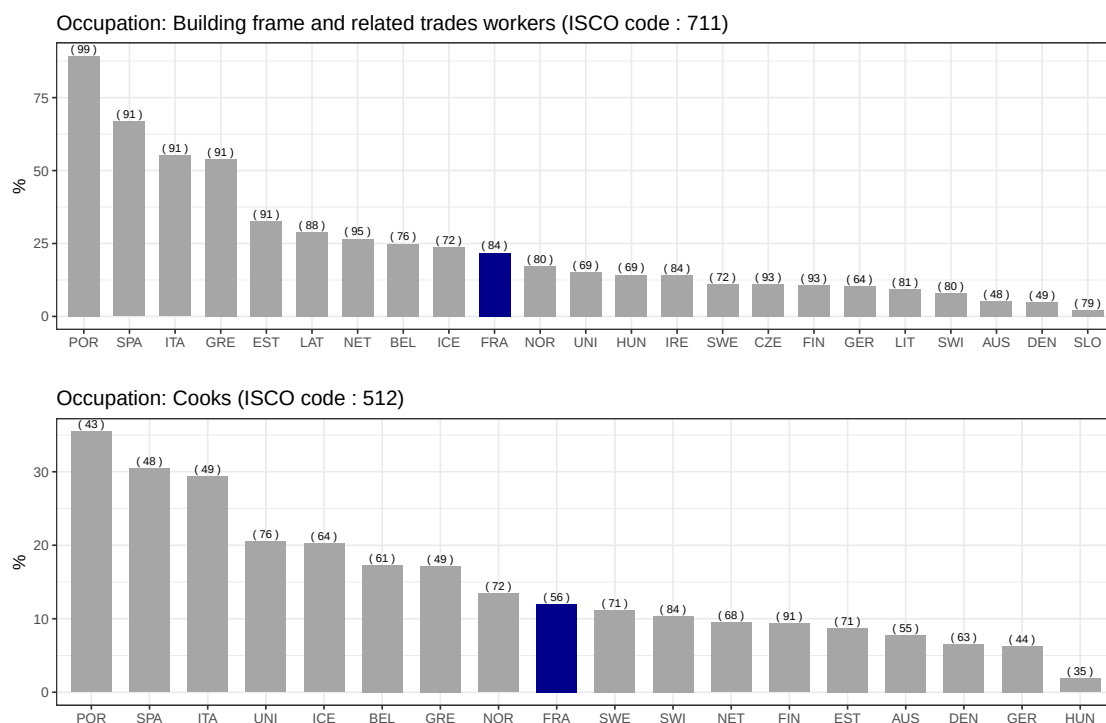
Figure A.1.2: Evolution of the youth unemployment rate in France, US, European Union and OECD countries from 2000 to 2019



Note: This figure shows the evolution of the unemployment rate from 2000 to 2019 for France (in blue), US (in yellow), European Union (in purple) and OECD countries (in green).

Source: OECD (2021)

Figure A.1.3: Share of early leavers from education and training among masons and cooks



Note: In France, early leavers from education and training represents about 22% of “building frame and related trades workers”, the share of dropouts in this occupation is higher than 84 percent of the other occupations. Youth are defined as individuals aged 15–29 years old. Shares are calculated on pooled 2011–2016 data. For Germany, they are calculated on pooled 2011–2013 data. Countries for which there are less than 20 observations are not reported.

Source: OECD calculations based on the European Union Labour Force Survey (EU-LFS) microdata

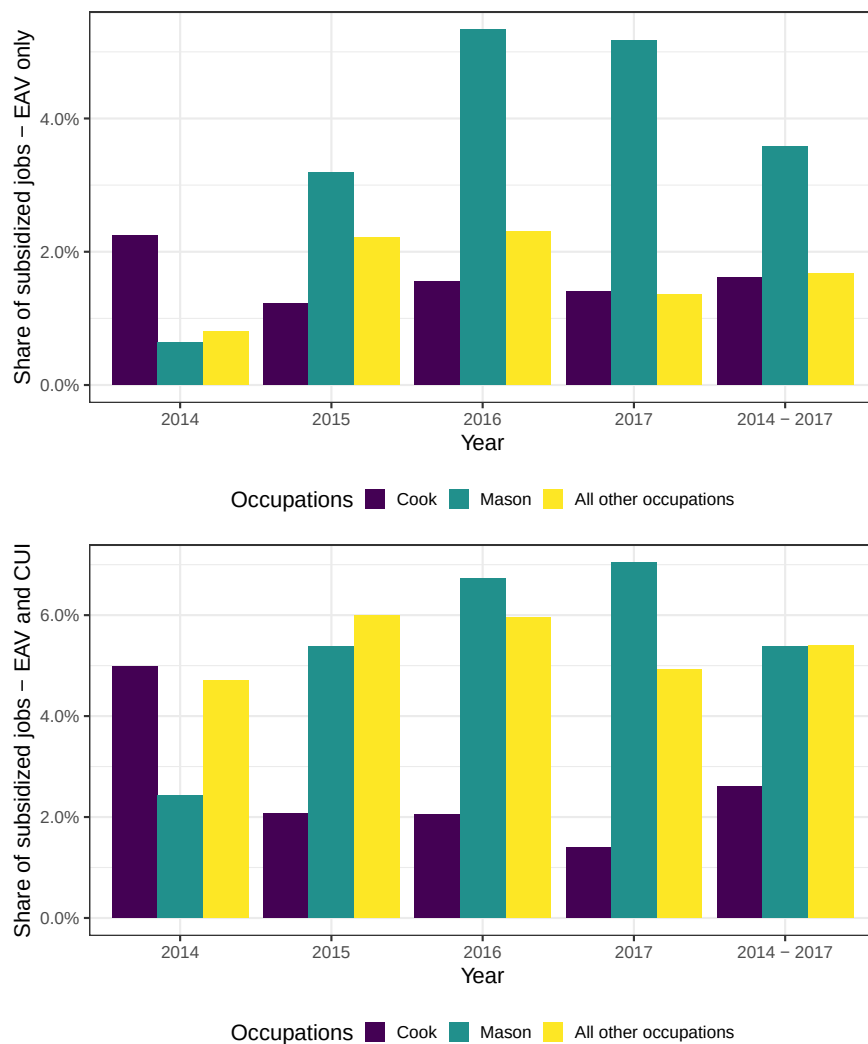
Table A.1.1: Descriptive statistics on subsidized jobs (EAv) recipients

Characteristics	All	Under 18 yo (1.26%)		
		All	Cook	Mason
	(1)	(2)	(3)	(4)
Sex (<i>Male</i>)	50.11%	62.60%	74.26%	100.0%
Nationality (<i>French</i>)	95.07%	97.61%	97.79%	95.83%
School level				
<i>Lower-secondary</i>	27.39%	59.89%	38.24%	60.42%
<i>2-year vocational upper secondary</i>	47.39%	37.44%	61.76%	39.58%
<i>3-year upper secondary</i>	20.59%	02.63%	00.00%	00.00%
<i>University</i>	04.63%	00.03%	00.00%	00.00%
Youth center registration	100%	100%	100%	100%
Job center registration	69.73%	35.21%	36.03%	37.50%
Last duration in unemployment				
<i>Less than 6 months</i>	30.06%	60.42%	53.06%	83.33%
<i>From 6 to 11 months</i>	28.71%	27.91%	32.65%	16.67%
<i>From 12 to 23 months</i>	27.81%	10.95%	14.29%	00.00%
<i>More than 23 months</i>	13.42%	00.67%	00.00%	00.00%
Mean age (at entry)	21.6 yo	16.9 yo	16.9 yo	16.8 yo
Temporary contract	75.60%	65.06%	35.29%	50.00%
Contract duration				
<i>≤ 1 year</i>	57.23%	57.17%	52.08%	70.83%
<i>≤ 3 years</i>	42.77%	42.83%	47.92%	29.17%
Hours of work (per week)	33.6 h	33.2 h	34.2 h	35.1 h
Market sector	29.25%	49.41%	80.88%	87.50%
Firm size				
<i>Small</i>	34.48%	53.93%	72.97%	80.00%
<i>Medium</i>	45.36%	39.55%	25.23%	17.50%
<i>Large</i>	20.16%	06.52%	01.80%	02.50%
W/ certified training	30.07%	32.55%	30.15%	35.42%
<i>In center</i>	74.04%	78.45%	82.93%	94.12%

Note: This table reports descriptive statistics on French subsidized jobs (EAv). Column (1) reports the statistics for the whole population in subsidized employment (234,910 young people), while columns (2) to (4) restrict the sample for individuals aged below 18 years-old (2,965 young people, i.e 1.26%). Column (3) further restrict the sample to individuals who worked as cook. Column (4) restrict the sample to individuals who worked as masons.

Source: IMILO (2013-2017), 234,910 observations, authors' calculations.

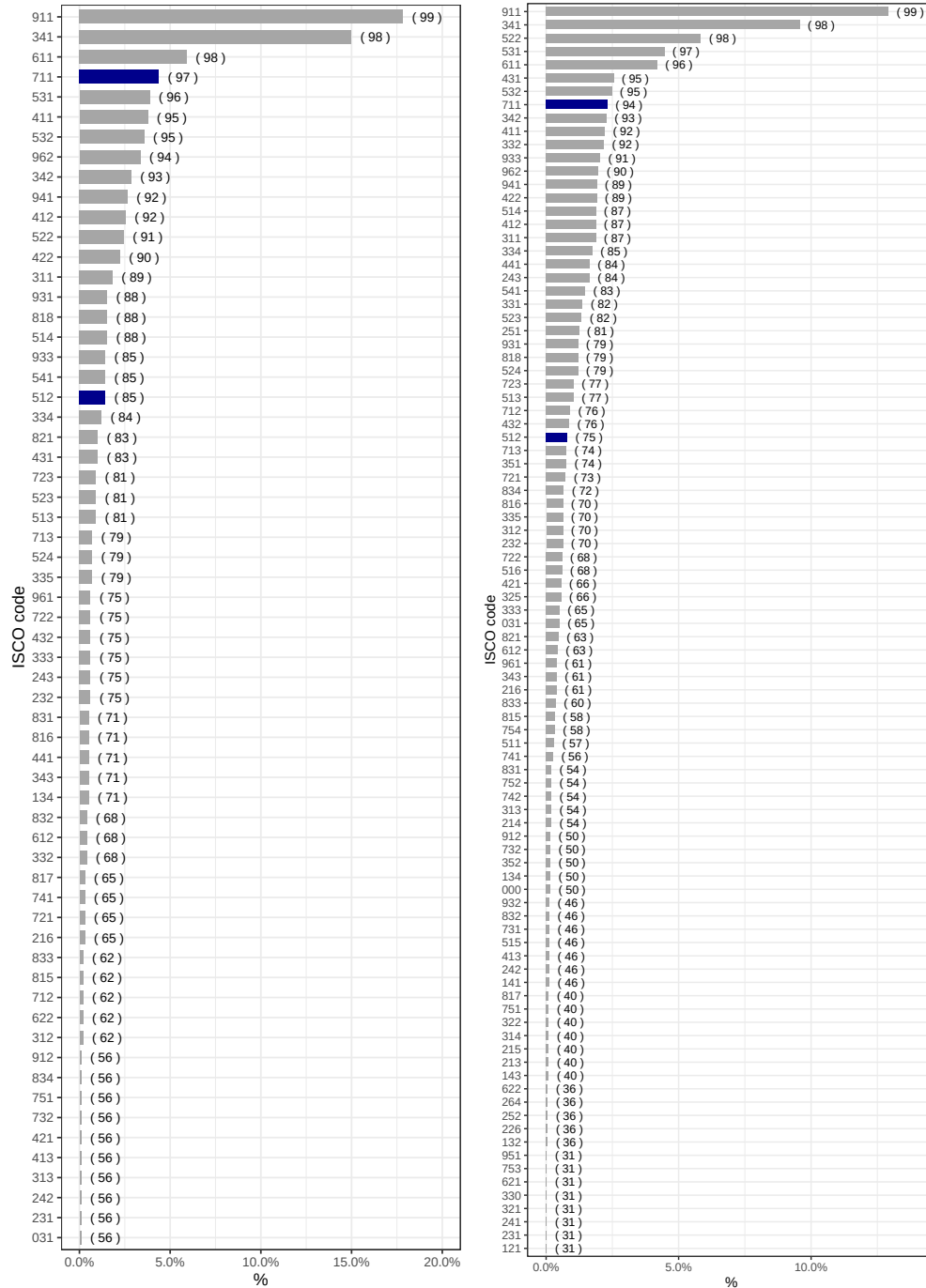
Figure A.1.4: Share of subsidized jobs in the two selected occupations compared to others



Note: In France, on average over the period 2014 to 2017, about 3.6% of people working as masons are employed through an *Emploi d'Avenir* (EAv), and about 5.4% through either an *Emploi d'Avenir* or *Contrat Unique d'Insertion* (CUI). Youth are defined as individuals aged 15–24 years old. The occupation of “Masons” is defined by the ISCO code 711 and “cooks” corresponds to the ISCO code 512.

Source: Labour Force Survey (*Enquête Emploi*)

Figure A.1.5: Share of each occupations among EAv (left) and all subsidized (right) contracts



Note: In France, “building frame and related trades workers” (ISCO code 711) represents about 4.4% of all Emplois d’Avenir (EAv), EAv jobs are more frequent in this occupation than 97 percent of the other occupations. Youth are defined as individuals aged 15–24 years old. Data are pooled over the period 2014-2017.

Source: Labour Force Survey (Enquête Emploi)

A.2 Examples of documents for applications

Application email messages (by layout)

For type 1 applications, the email message was the following:

Object: Application job offer n°XXX

Attached files: Curriculum_Vitae.pdf, Lettre_Motivation.pdf

Dear Madam, Sir,

With reference to your advertisement XXX for the position of YYY, I wish to submit my application.

Please find enclosed my cover letter and my resume.

May I assure you, Madam, Sir, of my sincere gratitude.

First name, Last name

Phone number

For type 2 applications, the email message was the following:

Object: Application (job ads XXX)

Attached files: CV.pdf, LM.pdf

Dear Madam, Sir,

I am pleased to submit my application for the position of YYY following your advertisement XXX published on the website Pôle emploi.

I am sending you in the attachment my resume and my cover letter.

May I assure you, Madam, Sir, that I remain faithfully yours.

First name, Last name

Phone number

Application reply email messages (by candidate)

For Alexis Dubois application reply, the email message was the following:

Greetings,

Thank you for your consideration of my application. However, I am unable to respond favorably. Indeed, I have accepted another offer.

With kind regards,
Alexis Dubois

For Théo Petit application reply, the email message was the following:

Good morning,

I thank you for your answer regarding my application. Nevertheless, I have just accepted another offer.

Sincerely,
Théo Petit

Figure A.2.1: Example of CV and Cover Letter (Cook with inactivity - layout 2)

Alexis Dubois 19, rue Jean Jacques Rousseau 51000 Châlons-en-Champagne Phone : 06 47 70 17 47 Email : alexis.dubois0299@gmail.com Single Driving Licence Category B	Phone: 06 47 70 17 47 Email: alexis.dubois0299@gmail.com
EDUCATION 2015 French Certificate of general education	
WORK EXPERIENCE 6/17 Self-Service worker Conforama - temporary contract 1/17 Non-alimentary department employee Carrefour - temporary contract 5/16 Self-Service worker Conforama - temporary contract 11/15 Non-alimentary department employee Carrefour - temporary contract	
KEY SKILLS Rigorous Good team integration Self-reliance Professional conscience Dynamic	LANGUAGES English Good notions (written and oral)
COMPUTER SKILLS Internet browser, Word, Excel	
HOBBIES Handball Musique International cooking	

Alexis Dubois
19, rue Jean Jacques Rousseau
51000 Châlons-en-Champagne
Phone : 06 47 70 17 47
Email : alexis.dubois0299@gmail.com

Object: Reply to a job offer [Cook] - [name of the company] [(offer n°)]

[Date],

Dear Madam, Sir,

Recently, I learned of your need for a [cook] and I would be happy to respond to your request. After I obtained my French Certificate of general education in 2015, I benefited from professional experiences as a department employee at Carrefour, then as a seller at Conforama. I developed a great capacity of self-reliance and I know the rigor of a working environment.

Then, I found myself interested toward jobs related to cooking. I have decided to work in such jobs thanks to various discussions I had with experienced workers. I now wish to obtain the necessary skills to perform as a [cook] such as running a facility, keeping track of the food stocks, elaborate a working plan, preparing fruits, vegetables, meats and fishes, and plates garnishing.

I am very motivated to pursue in this direction and to work in your team. I hope, dear Madam, Sir, that you will give some considerations to my request.

Yours, sincerely,

Alexis Dubois

Figure A.2.2: Example of CV and Cover Letter (Cook with work experience - layout 1)

Alexis Dubois 19, rue Jean Jacques Rousseau 51000 Châlons-en-Champagne 06 47 70 17 47 alexis.dubois0299@gmail.com	15/02/1999 Single Driving Licence Category B
SKILLS Developping and maintaining kitchen facilities, maintaining hygiene rules HACCP, respecting recipes, good relational skill	
WORK EXPERIENCE Jul 2016 - Jun 2017: Flunch, Cook (Temporary contract) Apr 2016: Lederc, Self-service worker (Temporary contract) Oct 2015: Décathlon, Collective sport section employee (Temporary contract)	
EDUCATION 2015: French Certificate of general education	
LANGUAGES English: educational level (read + ; written + ; oral +)	
COMPUTER SKILLS Desktop tools: Word, Excel, Internet browsers	
ACTIVITIES AND INTERESTS Cooking and pastry-making Cinema Sport	

Alexis Dubois 19, rue Jean Jacques Rousseau 51000 Châlons-en-Champagne 06 47 70 17 47 alexis.dubois0299@gmail.com	[Date], Object: Reply to a job offer [Cook n° [offer] - (name of the company)] Dear Madam, Sir, I am writing to you regarding the job offer as a [cook] that your company is proposing. After I obtained my French Certificate of general education in 2015, I worked as a cook for Flunch restaurant via the Emploi d'avenir subsidized program. I learned much from this experience. For instance, I've learned the hygiene rules HACCP, to respect technical instructions, to keep track of the food stocks, to elaborate a working plan, to prepare fruits, vegetables, meats and fishes, and to garnish plates. I acquired dynamism and a great professional conscience thanks to the professional experiences I had previously as a seller at Décathlon, then as an employee at the Lederc self-service section. I can assure you of my motivation to be a [cook]. I thank you in advance for your consideration of my willingness to work in your company and make myself available for interviews at your convenience. Yours sincerely, Alexis Dubois
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A.3 Power tests

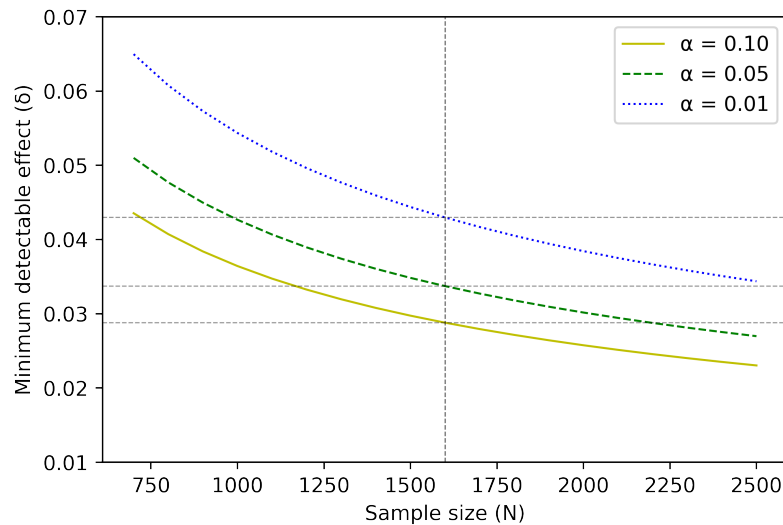
We use the single-level trials with binary outcomes formula from [Djimeu and Houndolo \(2016\)](#) to compute the minimum detectable effect of our experiment:

$$\delta = (t_1(\alpha) + t_2(\beta)) \times \sqrt{\left(\frac{P(1-P)}{T(1-T)N} \right)} \quad (\text{A.2})$$

where:

Parameter	Definition	Value
δ	Minimum detectable effect	0.04
α	Desired significance level	0.05
β	Desired power of the design	0.80
P	Proportion of control group with outcome=1	0.08
T	Proportion randomly assigned to the treatment group	0.50
N	Total sample size	1,600

Figure A.3.1: Minimum detectable effect given the sample size

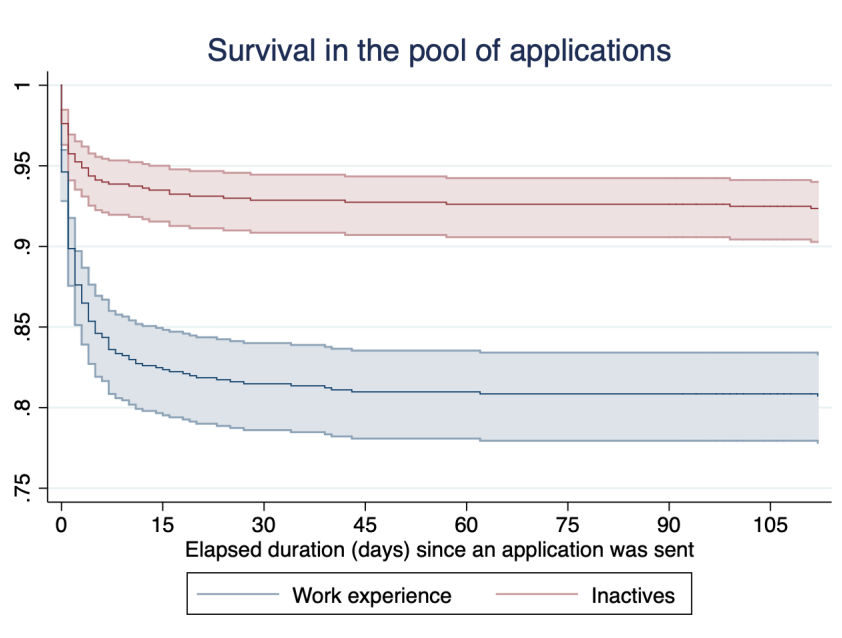


Note: This figure reports the minimum detectable effect from equation (A.2) by comparing the outcomes of the control group with “Inactivity” vs the treatment group with “Work experience” as described in Section 4.1.

Lecture: The minimum detectable effect (without covariates) is ± 3.5 pp when the total sample size is 1,600 at the 5% confidence level.

A.4 Survival of applications

Figure A.4.1: Survival of applications

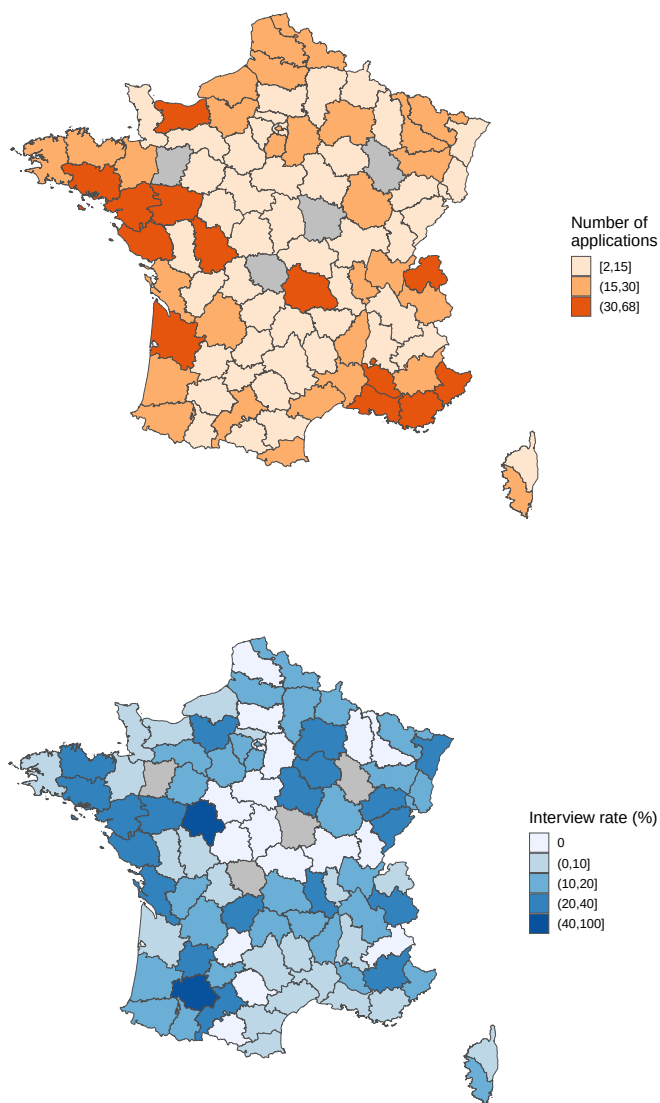


Note: The event of non-survival is being called back for a job interview. The timeline is in days.

Lecture: About 15% of applicants with work experience were called back about 5 days after their application being sent.

A.5 Geographic distribution of applications and interview rates

Figure A.5.1: Number of applications sent and interview rate by department



Note: Departments where no application was sent are filled in grey.

A.6 Randomization tests

Table A.6.1: Randomization tests

	Inactivity	Work experience									
		Market		Non-market		No certificate		Employer certificate		National diploma	
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Sample mean	Sample mean	p-value (2)-(1)	Sample mean	p-value (4)-(1)	Sample mean	p-value (6)-(1)	Sample mean	p-value (8)-(1)	Sample mean
Application characteristics											
Layout (1 vs 2)	.4906	.5325	.1717	.4862	.8860	.4911	.9887	.5348	.2167	.5038	.7112
Name (Alexis Dubois vs Théo Petit)	.4993	.4750	.4264	.5263	.3798	.4982	.9735	.4922	.8424	.5115	.7336
Firm and job characteristics											
Cook (vs Mason)	.7997	.8100	.6741	.7894	.6775	.7900	.7279	.8062	.8216	.8038	.8859
For-profit (vs not-for-profit)	.9288	.9278	.9496	.9298	.9492	.9261	.8846	.9268	.9149	.9335	.7967
Primary sector	.0013	.0025	.6233	.0000	.4823	.0037	.4382	.0000	.5746	.0000	.5637
Secondary sector	-	-	-	-	-	-	-	-	-	-	-
Tertiary sector	.8213	.8298	.7198	.8126	.7190	.8104	.6882	.8347	.6350	.8203	.9692
Construction sector	.1773	.1675	.6789	.1873	.6786	.1858	.7533	.1652	.6677	.1796	.9316
Small firm (vs large firm)	.6181	.5988	.5540	.6371	.5554	.5840	.3547	.6342	.6709	.6392	.5754
Permanent contract (vs temporary)	.4040	.3984	.8545	.4095	.84545	.3736	.3716	.4747	.0460	.3667	.2875
Full-time job (vs part-time)	.9446	.9423	.8798	.9469	.8685	.9395	.7485	.9492	.7794	.9457	.9473
No required experience	.3906	.3803	.7315	.4010	.7310	.3942	.9153	.4156	.4777	.3618	.4103
1-year required experience	.1871	.1964	.6982	.1776	.6931	.1756	.6710	.1960	.7507	.1906	.8992
> 1-year required experience	.4222	.4231	.9758	.4113	.9756	.4301	.8196	.3882	.3380	.4474	.4783
Male recruiter (vs female recruiter)	.6259	.6026	.4445	.6492	.4423	.6022	.4945	.6385	.7218	.6385	.7218

Note: This Table reports means across subsamples of the experimental sample and presents randomization tests based on comparing the means across subsamples. Column (3) displays the p-values for the tests $H_0 : \{\Delta = \text{mean_callback}[\text{work experience}] - \text{mean_callback}[\text{inactivity}] = 0\}$ vs $H_1 : \{\Delta \neq 0\}$ and column (5) for certified workers.

A.7 Probit model

Table A.7.1: Effects of work experience on job interview probability

Interview (0/1)	All Applicants			Cook	Mason
	(1)	(2)	(3)	(4)	(5)
Work experience	0.1173*** (0.0138)	0.1158*** (0.0177)	0.1339*** (0.0189)	0.1297*** (0.0205)	0.0615* (0.0353)
Application characteristics	No	Yes	Yes	Yes	Yes
Month & Department FE	No	No	Yes	No	No
Observations	1,598	1,598	1,430	1,278	320

Note: This table reports Probit marginal effect estimates of equation (1). The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Application characteristics include the type of layout, the name of the candidate, and the order at which the application was sent. Month and department fixed effects are not included in the occupation level regressions (column 4 and 5) to avoid perfect predictions of the outcome due to the high number of regressors compared to the number of observations. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

A.8 Neumark decomposition

Following the well known Heckman critic in the discrimination literature, it is possible that our results are biased due to other priors of employers (Heckman, 1998). The argument of Heckman postulates that imposing the same set of observable characteristics delivered to the employers may hinge discrimination when it is present, and highlight discrimination when it is absent. This troubling result arises because the two populations have characteristics in real life that are not equivalent, while they are set to equality in the audit study for those that are displayed in the application. By doing so, the average characteristics of the two populations are equivalent, leaving aside potential differences in variance.

This difference does potentially exist in our study since young people who signal job-related experience (via the subsidized job program) likely differ from those who remain inactive after dropping out of school. Table A.1.1 shows that only 1.26% of the 320,000 young people who participated in the subsidized job program had less than 18 years old. Because this profile is quite rare among the pool of very young job seekers, there is a threat that we over-estimate the interview rate of those with work experience in comparison with “Inactives”.

It is possible to retrieve this potential bias following the statistical procedure proposed by Neumark (2012). This approach requires estimating an heteroskedastic probit model, since this model allows the variance of the error term to vary across groups. For identification purposes, the model must control for at least one characteristic related to the job vacancy that affects the callback rate of the two groups in a similar way.

In our experiment, the required experience is one characteristic that both shows substantial variation across the sample and impacts the callback rate of both the control and treatment groups in a similar way. Moreover, this variable is one of the few that is consequential in the hiring process since it can be used as an impartial criteria by employers to separate those with one-year experience and those with zero experience. Moreover, this feature impacts negatively the interview rate of all the applicants, which is necessary for identification.

Table A.8.1 shows the interview rate difference between “Inactivity” and “Work experience” obtained via a Probit model in Panel A, and via an heteroskedastic Probit model as suggested by Neumark (2012) in Panel B. It appears that, controlling for the required experience, signaling job-related work experience increases the interview probability of young people by +11.8 pp on average with Probit estimates and by +11.1 pp with heteroskedastic Probit estimates. The similarity of estimates translates into an equivalent perception of employers in the variance of unobserved characteristics for the two populations. This is confirmed by the standard deviation of unobservables which is not statistically different from one.³⁹

³⁹The low number of observations for mason positions does not allow us to properly estimate the marginal effect of job-related work experience by occupation.

Table A.8.1: Taking variance-based statistical discrimination into account

Interview (0/1)	All Applicants (1)
Panel A: Probit model	
Work experience vs Inactivity	0.1183*** (0.0133)
Panel B: Heteroskedastic Probit model (required experience)	
Work experience vs Inactivity	0.1071*** (0.0370)
Marginal effect through level	0.1798
Marginal effect through variance	-0.0727
Standard deviation of unobservables	0.7301
Wald test statistic (p-value)	.6203
Observations	1,582

Note: This table reports marginal effects from Probit or heteroskedastic Probit regressions of equation (1). The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. The marginal effects are evaluated at sample means. Regression in Panel A controls for the required professional experience (in years). Regression in Panel B allows for the variance of unobserved characteristics to change between “Work experience” and “Inactivity”. Robust standard errors are clustered at the department level and reported below the coefficients in parentheses. The null hypothesis associated to the Wald test statistic poses that ratio of standard deviations equals one. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

A.9 Sensitivity tests

Table A.9.1: Job interview probabilities given firm characteristics

Interview (0/1)	Size		Distance	
	(1)	(2)	(3)	(4)
Work experience	0.1226*** (0.0186)	0.1255*** (0.0193)	0.1119*** (0.0202)	0.1139*** (0.0207)
Large firm	-0.0336 (0.0207)	-0.0274 (0.0233)		
Large firm $\times$ Work experience	0.0019 (0.0260)	0.0002 (0.0271)		
Distance			-0.0046 (0.0197)	-0.0242 (0.0223)
Distance $\times$ Work experience			0.0083 (0.0258)	0.0097 (0.0267)
Constant	0.0841*** (0.0130)	0.0807*** (0.0127)	0.0788*** (0.0141)	0.0880*** (0.0133)
Application characteristics	No	Yes	No	Yes
Month & Department FE	No	Yes	No	Yes
Observations	1,346	1,346	1,598	1,598
R-squared	0.0352	0.1271	0.0291	0.1060

Note: This table reports OLS estimates of equation (1) by interacting the treatment variable (“Work experience”) with the firm size (=1 if more than 10 employees, 0 otherwise) or the distance to the firm (in kilometers). The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

Table A.9.2: Job interview probabilities given contract characteristics

Interview (0/1)	Type of contract		Required experience	
	(1)	(2)	(3)	(4)
Work experience	0.1368*** (0.0186)	0.1390*** (0.0188)	0.1331*** (0.0270)	0.1321*** (0.0274)
Permanent contract	-0.0086 (0.0201)	-0.0154 (0.0209)		
Permanent contract $\times$ Work experience	-0.0499* (0.0278)	-0.0485* (0.0284)		
≤ 1 year experience			-0.0114 (0.0245)	-0.0277 (0.0257)
≤ 1 year experience $\times$ Work experience			0.0105 (0.0488)	0.0173 (0.0502)
> 1 year experience			-0.0313 (0.0243)	-0.0266 (0.0255)
> 1 year experience $\times$ Work experience			-0.0453 (0.0368)	-0.0406 (0.0374)
Constant	0.0800*** (0.0130)	0.0813*** (0.0106)	0.0927*** (0.0199)	0.0936*** (0.0178)
Application characteristics	No	Yes	No	Yes
Month & Department FE	No	Yes	No	Yes
Observations	1,594	1,594	1,598	1,598
R-squared	0.0328	0.1092	0.0360	0.1096

Note: This table reports OLS estimates of equation (1) by interacting the treatment variable (“Work experience”) with the type of contract (=1 if permanent, 0 otherwise) or the required experience (in years). The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

Table A.9.3: Job interview probabilities given local labor market characteristics

Interview (0/1)	Unemployment rate		Job tightness	
	(1)	(2)	(3)	(4)
Work experience	0.2053*** (0.0616)	0.2040*** (0.0616)	0.0741** (0.0302)	0.0741** (0.0315)
Unemployment rate	-0.0053 (0.0044)	-0.0028 (0.0132)		
Unemployment rate $\times$ Work experience	-0.0092 (0.0064)	-0.0088 (0.0064)		
Job tightness			0.0240 (0.0145)	0.0121 (0.0197)
Job tightness $\times$ Work experience			0.0261* (0.0142)	0.0273* (0.0147)
Constant	0.1310*** (0.0407)	0.1116 (0.1194)	0.0381 (0.0263)	0.0628 (0.0392)
Application characteristics	No	Yes	No	Yes
Month & Department FE	No	Yes	No	Yes
Observations	1,444	1,444	1,444	1,444
R-squared	0.0346	0.1281	0.0403	0.1301

Note: This table reports OLS estimates of equation (1) by interacting the treatment variable (“Work experience”) with the local unemployment rate (in %) or the local job tightness (v/u : number of job vacancies in the occupation over the number of job seekers looking for this occupation). Here, “local” corresponds to the commuting zone of the area where the job is located. The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. Robust standard errors are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

A.10 Bootstrap standard errors

Table A.10.1: Job interview probabilities given different characteristics

Panel A – Firm characteristics	Size		Distance	
	< 10 emp.	≥ 10 emp.	< 31.5 km	≥ 31.5 km
	(1)	(2)	(3)	(4)
Work experience	0.1226*** (0.0181)	0.1245*** (0.0212)	0.1131*** (0.0199)	0.1272*** (0.0193)
Constant (ref: inactivity)	0.0841*** (0.0133)	0.0506*** (0.0147)	0.0736*** (0.0135)	0.0762*** (0.0164)
Panel B – Contract characteristics	Type		Required experience	
	Temporary	Permanent	≤ 1 year	> 1 year
	(1)	(2)	(3)	(4)
Work experience	0.1368*** (0.0192)	0.0870*** (0.0203)	0.1379*** (0.0186)	0.0928*** (0.0212)
Constant (ref: inactivity)	0.0800*** (0.0127)	0.0714*** (0.0149)	0.0875*** (0.0139)	0.0569*** (0.0123)
Panel C – Labor market characteristics	Unemployment rate		Job tightness	
	< 9%	≥ 9%	Below median	Above median
	(1)	(2)	(3)	(4)
Work experience	0.1388*** (0.0177)	0.1010*** (0.0221)	0.1129*** (0.0197)	0.1340*** (0.0219)
Constant (ref: inactivity)	0.0886*** (0.0139)	0.0759*** (0.0175)	0.0676*** (0.0141)	0.0989*** (0.0189)

Note: 31.5 kilometers is the mean distance between a candidate and a firm in kilometers. 9% is the mean local unemployment rate observed during the experiment. The dependent variable is a dummy variable equal to one if the application gets an invitation for a job interview. All columns report OLS linear probability model estimates. Robust standard errors are obtained after bootstrapping the sample 1,000 times with replacement. They are clustered at the department level and reported below the coefficients. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

A.11 Randomization inference p-values

Table A.11.1: Job interview probabilities given different characteristics

Panel A – Firm characteristics	Size		Distance	
	< 10 emp.	≥ 10 emp.	< 31.5 km	≥ 31.5 km
	(1)	(2)	(3)	(4)
$\beta_{\text{Inactivity}} = \beta_{\text{Work experience}}$	0.0000***	0.0000***	0.0000***	0.0002***
Panel B – Contract characteristics	Type		Required experience	
	Temporary	Permanent	≤ 1 year	> 1 year
	(1)	(2)	(3)	(4)
$\beta_{\text{Inactivity}} = \beta_{\text{Work experience}}$	0.0000***	0.0008***	0.0000***	0.0001***
Panel C – Labor market characteristics	Unemployment rate		Job tightness	
	< 9%	≥ 9%	Below median	Above median
	(1)	(2)	(3)	(4)
$\beta_{\text{Inactivity}} = \beta_{\text{Work experience}}$	0.0000***	0.0003***	0.0000***	0.0000***

Note: Fisher exact p-values are obtained by counting the simulated mean differences between the interview probability of “Workers” and “Inactives”, with respect to the observed mean differences as shown in Table 1. P-values are obtained after 1,000 simulations. 31.5 kilometers is the mean distance between a candidate and a firm in kilometers. 9% is the mean local unemployment rate observed during the experiment. Fisher exact p-values are obtained by counting the simulated mean differences between the interview probability of the different profiles, with respect to the observed mean differences. P-values are obtained after 1,000 simulations. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

A.12 Discussion about the potential mechanisms

A natural question that arises when looking at our results is why applicants with job-related work experience are preferred by recruiters. We can think of two different explanations. On the one hand, recruiters would value the *human capital* that applicants may have acquired during their work experience. On the other hand, recruiters could use the information about work experience as a signal indicating a higher probability for the applicant to suit for the job, independently of the skills she may have because of work experience. Of course, these two channels are not mutually exclusive but knowing their prevalence is of primary interest for public policy. We investigate this question by showing how the effect of work experience varies with the share of school dropouts without previous work experience among all employees in the corresponding sector and department of a given job offer.

Let's assume that part of the positive effect of work experience on job interview probability is explained by statistical discrimination. It means that, aside from the skills provided by work experience, recruiters assume that having job-related work experience is positively correlated with suitability for the job. Accordingly, recruiters assign inactive dropouts a negative stigma, fearing a lack of motivation for example.⁴⁰ Thus, if we consider a context where the negative stigma against inactive dropouts is mitigated, the premium attributed to work experience should also be lower. For example, in local labor markets where employers are more used to hire people similar to our inactive dropout applicants, we can expect the positive effect of work experience on job interview probability to decrease. To proxy how likely it is that a given recruiter in our experiment have already hired individuals similar to our inactive dropout applicants, for each job offer we calculated the share of school dropouts aged 18 to 29 years old who are employed in the corresponding department and industry.⁴¹ To ensure that these individuals did not acquire job-related work experience prior to their current job we only counted the cases where the current job was their first work experience. Our indicator has been computed using the French labor force survey on pooled years 2017 to 2019.

Table A.12.1 presents how the effect of work experience on job interview probability varies with the share of employed dropouts in the department where the job offer was posted. It appears clearly that the higher the prevalence of former unemployed dropouts in the same industry and department of the job offer, the lower the gap in job interview probability between dropouts with and without work experience. It goes from +16.1 pp (increase by $\approx +220\%$) when the share of dropouts represents about 1.4% of all employed individuals (1st quartile) to +7.8 pp (increase by $\approx +110\%$) when the share of dropouts is about 9.4% (4th quartile). The premium associated to work experience is thus divided by two when moving from the first to third tercile. Table A.12.2 in Appendix A.12 further complements these findings by showing that the differences in the effect of work experience across the various level of school dropouts prevalence are statistically significant when comparing the third tercile to the first.

As mentioned above, it is yet possible that the share of first time employed school dropouts is correlated to some local labor characteristics such that the interpretation of our estimates to be spurious. In table A.12.3 in Appendix A.12, we show the estimates of work experience in those different areas given various labor market characteristics. Columns (1) and (2) show the estimates in

⁴⁰The survey that we ran in France in 2019 among employers in our two occupations provide consistent evidence with the presence of a negative stigma against school dropouts, as shown in Figure A.12.1. In particular, more than 1/2 of recruiters think that school dropouts did not work enough while at school.

⁴¹This is to ensure that the share of dropouts is based on a sufficient number of observations (i.e. more than 30), that is why we were not able to compute this share at the job level.

Table A.12.1: Job interview probabilities given the share of employed dropouts in the sector and department of the job offer

Interview (0/1)	Share of 1 st time employed dropouts		
	T1	T2	T3
	(1)	(2)	(3)
Work experience	0.1615*** (0.0240)	0.1116*** (0.0239)	0.0784*** (0.0204)
Constant (ref: inactivity)	0.0731*** (0.0137)	0.0797*** (0.0195)	0.0706*** (0.0165)
Average share of 1 st time employed dropouts	0.014	0.037	0.081
Application characteristics	No	No	No
Month & Department FE	No	No	No
Observations	520	502	510
R-squared	0.0501	0.0266	0.0157

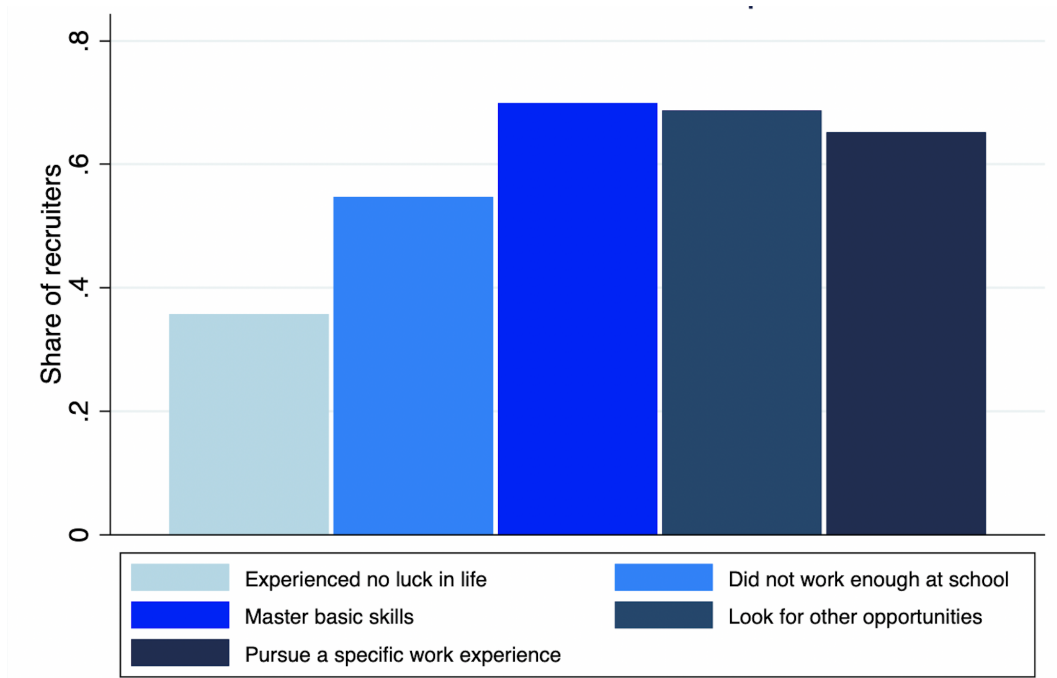
Note: This table reports OLS estimates of equation (1) by splitting the sample according to the share of 1st time employed dropouts in the sector and the department corresponding to the job offer. Each column corresponds to a separate regression where the sample is restricted to the observations which lies in the given tercile of the share of dropouts. For a given industry and department, the share of employed dropouts is defined as the share of young dropouts (18-29 y.o.) who are employed in their first job. It was computed from the French labor force survey pooling the years 2017 to 2019. The total number of observations (column (1) to (3)) is slightly lower compared with previous tables because we removed observations for which the share of dropouts was computed on less than 30 observations from the survey. Workers corresponds to a dummy equal to one if the applicant has work experience in the job. Robust standard errors are clustered at the department level and reported below the coefficients in parentheses. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

areas where the local unemployment rate is below or above the median, while columns (3) and (4) show the estimates in areas where job tightness is below or above the median respectively. Overall, it exhibits the same pattern, the premium associated to work experience decreases in areas where the share of employed school dropouts (in the same sector as our occupations) increases.

To the question of the channels which lead recruiters to favor applicants with work experience in the job, these results suggest that inactive dropouts do suffer from a negative stigma. Yet, the effect of work experience remains economically and statistically significant in most of the situations which indicates that recruiters also value the set of skills that applicants may have acquired during their previous job experience.

All in all, both signaling and human capital could play a role in explaining the positive effect of job-related work experience on recruiters' callback. Further research and dedicated experimental design will be needed to investigate this issue further.

Figure A.12.1: Recruiters' view about school dropouts



Note: This figure shows the answers from more than 1,000 recruiters, working in firms operating in cook or mason occupations, to the following question: “For each of the following statements, would you say that they correspond somewhat well or somewhat poorly to your idea of a young person dropping out of school?”

- “had no luck? Yes/No” (Experienced no luck in life)
- “not working enough at school? Yes/No” (Did not work enough at school)
- “wants to enter the job market directly? Yes/No” (Pursur a specific work experience)
- “has no plans? Yes/No” (Look for other opportunities)
- “can’t read, write and count well? Yes/No” (Master basic skills)

Source: ViaVoice survey (2019), 1,010 observations, authors’ calculations

Table A.12.2: Job interview probabilities depending on the share of 1st time employed dropouts in the sector and department of the job offer

Interview (0/1)	All applicants		
	(1)	(2)	(3)
Work experience	0.1615*** (0.0239)	0.1624*** (0.0265)	0.1638*** (0.0272)
Work experience $\times$ T2	-0.0500 (0.0353)	-0.0523 (0.0344)	-0.0523 (0.0354)
Work experience $\times$ T3	-0.0831*** (0.0310)	-0.0829*** (0.0313)	-0.0829** (0.0321)
Constant (ref: inactivity)	0.0731*** (0.0136)	0.0727*** (0.0157)	0.0479 (0.0337)
Application characteristics	No	Yes	Yes
Month & Department FE	No	No	Yes
Observations	1,532	1,532	1,532
R-squared	0.0353	0.0400	0.1011

Note: This table reports OLS estimates of equation (1) where the dummy *Workers* - equal to one if the applicant has work experience in the job - is interacted with a variable indicating the tercile of the share of 1st time employed dropouts. The column (2) and (3) adds controls and month and department fixed effects to the previous column respectively. For a given industry and department, the share of employed dropouts is defined as the share of young dropouts (18-29 y.o.) who are employed in their first job. It was computed from the French labor force survey pooling the years 2017 to 2019. The total number of observations is slightly lower compared with previous tables because we removed observations for which the share of dropouts was computed on less than 30 observations from the survey. Robust standard errors are clustered at the department level and reported below the coefficients in parentheses. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

Table A.12.3: Job interview probabilities depending on the share of 1st time employed dropouts in the sector and department of the job offer given local labor market characteristics

Interview (0/1)	Unemployment rate		Job tightness	
	Below median	Above median	Below median	Above median
	(1)	(2)	(3)	(4)
Work experience	0.1912*** (0.0359)	0.1406*** (0.0398)	0.1868*** (0.0428)	0.1350*** (0.0424)
Work experience × T2	-0.0475 (0.0453)	-0.0360 (0.0531)	-0.0840 (0.0591)	-0.0094 (0.0447)
Work experience × T3	-0.0870 (0.0522)	-0.0573 (0.0418)	-0.0561 (0.0441)	-0.1029* (0.0576)
Constant (ref: inactivity)	0.0496 (0.0528)	0.0302 (0.0459)	0.0006 (0.0521)	0.1550*** (0.0479)
Application characteristics	Yes	Yes	Yes	Yes
Month & Department FE	Yes	Yes	Yes	Yes
Observations	657	725	687	695
R-squared	0.2119	0.1374	0.1907	0.1977

Note: This table reports OLS estimates of equation (1) where the dummy *Workers* - equal to one if the applicant has work experience in the job - is interacted with a variable indicating the tercile of the share of 1st time employed dropouts. The column (2) and (3) adds controls and month and department fixed effects to the previous column respectively. For a given industry and department, the share of employed dropouts is defined as the share of young dropouts (18-29 y.o.) who are employed in their first job. It was computed from the French labor force survey pooling the years 2017 to 2019. The total number of observations is slightly lower compared with previous tables because we removed observations for which the share of dropouts was computed on less than 30 observations from the survey. Robust standard errors are clustered at the department level and reported below the coefficients in parentheses. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.