

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

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Abstract

Employers do not necessarily view dropouts as completely lost causes, as they represent a heterogeneous group of young individuals actively seeking opportunities in the labor market. This raises the question of whether job-related work experience, especially in tight occupations, is sufficient to increase the employment opportunities of school dropouts in comparison with graduates. To answer this question, we conducted a correspondence study with 6,400 applications sent to real job offers and 8,200 unsolicited applications between January and December 2018. We found that dropouts have lower probabilities of being interviewed for job positions than graduates, but this gap is narrowed for dropouts who acquired job-related work experience and even more when skill certification is associated. Furthermore, sending unsolicited applications close the interview rate gap in slack labor markets for dropouts with job-related work experience.

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

JEL codes: J08, J24, J71

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1 Introduction

Young people who leave high school before graduation, known as school dropouts, are over-represented among those who are not in employment, education, or training (NEET). In 2021, the dropout rate among NEETs was 37% in the US, compared to 16% for high school graduates, and 36.9% in the OECD countries, compared to 14.3% respectively.¹

However, employers do not necessarily view dropouts as individuals who are completely adrift. Beyond the various factors that contribute to their decision to leave school, such as inadequate guidance after middle school (Hoxby and Avery, 2013; Arcidiacono et al., 2016; Guyon and Huillery, 2021), or an unsuitable specialization during their education (Kirkeboen et al., 2016; Clemens et al., 2021; Dahl et al., 2022), dropouts represent a heterogeneous group with diverse individual and professional experiences. Supporting this notion, a survey conducted in 2019 among French employers hiring young people in low-skilled occupations indicate that employers generally do not perceive dropouts negatively (Beffa and Broc, 2019). They generally do not see them as individuals who have experienced significant misfortune or who have not put in enough effort at school or lack fundamental skills such as writing, listening, or mathematics. Instead, two-thirds of employers view dropouts as young people seeking opportunities in the labor market and pursuing specific work experiences.

In line with this perspective, dropouts face higher unemployment and inactivity probabilities and lower employment probabilities compared to other job seekers who possess adequate skills, particularly recent graduates (Rumberger and Lamb, 2003; Clemens et al., 2021). This effect may be further exacerbated by the duration dependence of unemployment (Kroft et al., 2013; Eriksson and Rooth, 2014; Farber et al., 2019). Yet, the situation may be less severe in occupations where employers struggle to find suitable candidates.

This study examines whether an early job-related work experience is sufficient to enhance the employment opportunities of school dropouts relative to graduates. Given the widespread existence of public programs designed to support disadvantaged youth, it is of interest to determine the effectiveness of such initiatives as potential stepping stones for early school leavers. Notably, our study focuses on recruiters' perceptions as one of the key mechanisms through which work experience can shape the employment trajectories of school dropouts.

To investigate this question, we conducted a correspondence study field experiment in France. Between January and July 2018, we submitted approximately 6,400 applications from fictitious candidates to actual job vacancies posted online. Additionally, between October and December 2018, we sent around 8,200 unsolicited applications to other firms employing individuals in the same occupations. The fictitious applicants were 18-year-old young men who had either graduated from a two-year vocational education program relevant to the targeted occupations or left school after middle school. While all dropout applicants were

¹See the National Center for Education Statistics and Giret and Jongbloed (2021) for more details.

inactive during the first year after disengaging from school (at ages 16 to 17), their labor market experience during the second year (ages 17 to 18) was randomly assigned. One group of dropouts remained inactive during this second year, while the other group acquired one year of work experience in the targeted occupations.

Our experiment focused on two occupations, namely cook and mason. These occupations were selected based on their notable prevalence among vocational students and school dropouts, not only in France but also in other European countries. Moreover, these occupations are among those with a substantial percentage of workers who receive wage subsidies. In our experiment, our fictitious applicants possessed job-related experience gained through a national program called “Emploi d’Avenir”, which operated between 2012 and 2018. This program targeted young people aged 16 to 25 without diplomas or with low levels of qualifications. Firms and non-market structures were eligible for wage subsidies if they hired young people through this program.² They also had the option to provide vocational training to young people, leading to a diploma equivalent to the one obtained through vocational education. The certification status among dropouts with work experience was also randomized.

Both graduates and dropouts with job-related experience listed identical skills on their CVs, encompassing a blend of both soft and hard skills. This emphasis on diverse skills underscores their ability to function proficiently not only within their respective occupations but also in diverse professional environments. In their cover letters, applicants elaborated on the acquisition of these skills, whether through educational pursuits or job-related experience. Conversely, dropouts who remained inactive solely presented soft skills on their CVs and conveyed their enthusiasm to acquire hard skills through their first professional experience in their cover letters.

The results indicate that the average job interview rate for school graduates is approximately 25%, while it is 18% for school dropouts. However, there is heterogeneity among dropouts, with those who signal work experience having an interview rate of 20%, compared to only 8% for those who remained inactive. Furthermore, the interview rate significantly differs among dropouts with work experience, with a rate of 19% when there is no certification and 22% when dropouts signal a diploma. Consequently, the chances of being invited for an interview decrease by 67% when young people drop out of high school, remain inactive, and compete for jobs against peers who have completed vocational education. This gap narrows when young people gain job-related experience. Specifically, one year of job-related work experience reduces the interview penalty from 67% to 25%. Moreover, this penalty decreases to 12% when dropouts acquire a diploma to certify their skills.

These differences in interview rates are not uniform across all settings. We utilize various indicators to assess opportunities in different local labor markets, such as the unemployment

²Regarding potential negative stigma associated with this subsidized employment program, [Cahuc et al. \(2019\)](#) found no difference from an equivalent non-subsidized work experience.

rate, the level of occupational tightness, and the proportion of dropouts with work experience among all workers. Our findings indicate that the situation for dropouts deteriorates in tight labor markets but improves in slack labor markets. This suggests that employers face more challenges in hiring qualified and experienced workers in tight labor markets, whereas the larger applicant pool in slack labor markets allows them to screen more new employees.

This explanation is particularly relevant for occupations where employers struggle to find suitable candidates and where skills can be acquired through on-the-job training. The link between acquired skills and integration into vocational occupations is indeed significant. By comparing the career paths of young novice workers in low-skilled occupations, some of whom have received more or less direct training in the field while others have not, [Lainé \(2005\)](#) demonstrates that the latter group is less likely to remain employed, more frequently engaged in precarious contracts, and experiences lower wage progression. Similarly, [Girsberger et al. \(2022\)](#) reveal that low-ability workers who have acquired specific manual skills in occupations similar to cook and mason have witnessed a 10% increase in their wages and a 50% reduction in their unemployment risk.

Lastly, we find that school dropouts with job-related work experience who send unsolicited applications to firms, without responding to specific job vacancies, achieve interview rates on par with graduates in slack labor markets. This positive effect applies regardless of whether skills are certified. However, we do not observe any effect of sending unsolicited applications in tight labor markets. We discuss the policy implications of our findings in the conclusion.

Our paper contributes to the extensive literature on audit studies that examine how employers respond to different characteristics of job candidates. Specifically, we contribute to the literature focusing on the role of applicants' work history. Previous studies have investigated the effect of current unemployment duration on callback probabilities, with mixed results. [Oberholzer-Gee \(2008\)](#) provided evidence from Switzerland suggesting that long unemployment spells (more than 2 years) negatively affect callback rates, while shorter spells (up to one year) tend to have a positive effect compared to individuals currently employed. [Kroft et al. \(2013\)](#), studying low- to middle-skill jobs in the United States, found a sharp decline in callback rates in the first year of unemployment spells, with duration dependence being stronger in tight labor markets. [Eriksson and Rooth \(2014\)](#) and [Fremigacci et al. \(2016\)](#) found similar results for Sweden and France, respectively, with a negative effect of unemployment spells lasting at least 9 to 12 months. However, [Farber et al. \(2016\)](#) and [Nunley et al. \(2017\)](#) did not find a significant relationship between unemployment duration and callback rates when considering spells up to one year. [Farber et al. \(2019\)](#) provided evidence consistent with negative duration dependence of callback rates, but only after one year of unemployment.

To date, there have been limited audit studies that have specifically examined the effect of work experience on recruiter interest using a dedicated experimental design. [Eriksson and Rooth \(2014\)](#) found that additional years of job-related experience increase callback rates,

particularly for relatively high-skilled jobs. [Baert et al. \(2016\)](#), studying the effect of student work experience, found no significant effect on callback probabilities for former university students in Belgium. Conversely, [Nunley et al. \(2016\)](#) found that internship experience increased the interview rate by 14% for recent college graduates in the United States. [Cahuc et al. \(2019\)](#) analyzed the effect of formal job experience compared to part-time volunteering activities on recruiter callbacks for school dropouts aged 24 in France and found that only job-related experience with training leading to a national diploma had a positive effect on callback rates. This effect was primarily observed in areas with lower local unemployment rates. Our study adds to this existing body of evidence by investigating the effect of job-related work experience from a subsidized wage program targeting high school dropouts, a demographic crucial to public policy. Moreover, we concentrate on the marginal effect of having no experience versus some (i.e., one year), which is distinct from [Eriksson and Rooth \(2014\)](#) where all applicants have at least one year of experience. Contrary to the findings of [Cahuc et al. \(2019\)](#), our study uncovers that job-related experience has a substantial impact on callback rates, even without certification. This effect diminishes with local labor market tightness, but remains both economically and statistically significant across a range of specifications.

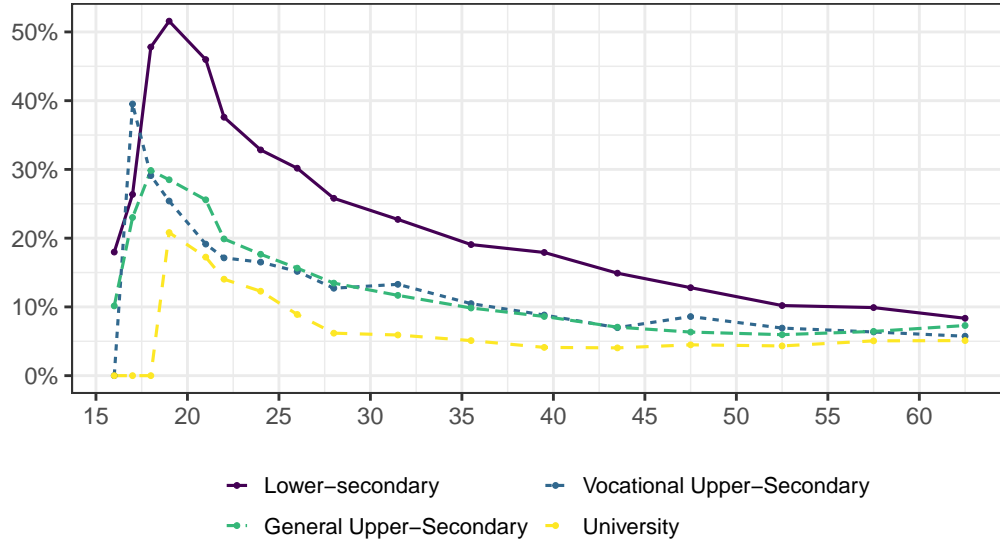
The remainder of the paper is structured as follows: Section 2 provides background information on the economic context. Section 3 describes the experimental design and its scope. Section 4 presents the main results and their sensitivity to various factors. Finally, Section 5 discusses the policy implications of our findings and concludes.

2 Background

Over the past 40 years, youth unemployment has been one of the most prominent features of the French labor market. In 2019, the unemployment rate for individuals aged between 15 and 24 years old was approximately 20% in France, systematically two to three times higher than the rest of the population. For comparison, the average youth unemployment rates were approximately 15% and 12% in EU and OECD countries, respectively, and about 8% in the United States. These figures rank France among the developed countries with the highest youth unemployment rate. However, the overall youth unemployment rate masks varied situations depending on the level of education.

Each year, around 820,000 pupils aged about six enter elementary schools in France. They learn the basics in several fields such as French, mathematics, history, geography, etc., until the 9th grade in middle school. At this stage, approximately 75% of pupils are about 15 years old, and 25% are aged 16 due to repeated years. Since the legal age to leave the education system in France is 16 years old, this is also the moment when some youth may decide to leave the education system altogether and enter the labor market. However, the majority of them continue their studies after middle school. In the last decade, around 63% of a generation

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: French Labor Force Survey, authors' calculations.

pursued a three-year general upper-secondary diploma with the objective of pursuing higher education, while 27% ended up in a vocational upper-secondary track lasting 2 or 3 years. Consequently, about 10% of young people left school before completing their curricula.

School dropouts are more likely to come from a disadvantaged social background and to experience difficult situations during their education (Bouhia et al., 2011; Cayouette-Remblière and de Saint Pol, 2013). 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 educational 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.

Due to the difficulties faced by dropouts in finding employment, successive French governments have implemented active labor market policies aimed at promoting vocational training and wage subsidies. Vocational training is provided by training centers and it is delivered through classroom and on-the-job experiences, or a combination of the two (Guillon, 2019). Additionally, between 2012 and 2018, the *Emploi d'Avenir* program (EAV) was launched to reduce labor costs for companies when hiring unskilled youths aged between 16 and 25. The program subsidized between 35% to 75% of the gross minimum wage and allowed for a contract duration of one year, cumulative for up to three years. One notable innovation of the

Table 1: Correlations between labor market situations and being a dropout

OLS Estimates	Employment		Unemployment		Active Program	
	(1)	(2)	(3)	(4)	(5)	(6)
Dropout	-0.0394*** (0.0133)	-0.0285** (0.0134)	0.0835*** (0.0081)	0.0803*** (0.0080)	0.0027** (0.0013)	0.0024* (0.0014)
Constant	0.2340*** (0.0023)	0.2338*** (0.0023)	0.0221*** (0.0007)	0.0222*** (0.0006)	0.0016*** (0.0001)	0.0016*** (0.0001)
Observations	487,041	487,041	487,041	487,041	487,041	487,041
R-squared	0.0002	0.0657	0.0078	0.0341	0.0001	0.0048
Control Variables	No	Yes	No	Yes	No	Yes

Note: This table reports OLS estimates, where the dependent variable is the number of days experienced in employment by school dropouts in columns (1) and (2); in open unemployment in columns (3) and (4); and, in an active program (vocational training or subsidized job) in columns (5) and (6). “Dropout” is a dummy variable equal to one if the individual was recognized as a school dropout by legal authorities at some date. Unreported control variables in columns (2), (4), and (6) include dummies for gender, year of birth, department of birth, school level, literacy level, department of residency, and month-year fixed effects. Robust standard errors are clustered at the individual level and reported below coefficients in parentheses. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent.

Source: sample from TRAJAM (2015), authors’ calculations.

EAV compared to other subsidized contracts was that employers were required to provide complementary training. During the program’s six-year operation, more than 360,000 contracts were signed and 60% of the young beneficiaries enrolled in a certified training, making it the primary subsidized contract program for youths (Borel and Pichavent, 2021).

Table 1 displays the correlations between school dropout status and various labor market outcomes, including employment, open unemployment, and participation in an active program. The table shows that dropouts have a lower probability of being employed than non-dropouts in the following two years, and a higher probability of being in open unemployment or participating in an active program. To gain a deeper understanding of the specific challenges faced by school dropouts in successfully transitioning into employment, it is crucial to gather insights into employers’ hiring preferences. In the upcoming section, we will introduce a correspondence study designed to provide valuable information in this regard.

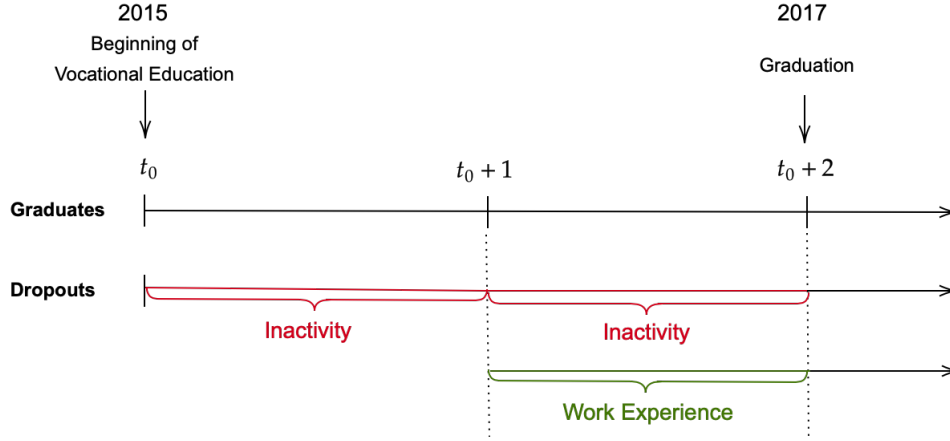
3 Field experiment

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.

3.1 Treatment groups

Our study focuses on a sample of unemployed youths who completed lower-secondary school at age 16 in June 2015. However, these individuals faced diverse situations over the next two years, as depicted in Figure 2. Some of them continued with a two-year vocational education

Figure 2: Diagram of profiles in the experiment



Note: This figure shows the different profiles created in the field experiment described in Section 3.1. 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.

path, either school-based or workplace-based, and graduated in June 2017.³ This group serves as the control group for young people facing academic difficulties since it follows the typical path within the education system. We refer to this first group as “Graduates”.

In contrast, the second group comprises a heterogeneous population of school dropouts who were subjected to different treatments. In the first year following their dropout, all participants were largely inactive, with two one-month temporary contracts unrelated to the occupations targeted in the audit study, and ten months of non-employment.⁴ This period of inactivity serves as an indication to employers that the applicant has dropped out of school, as it signifies that the individual possesses a lower-secondary school diploma but lacks any upper-secondary diploma, which is the first qualification for entering the labor market.

Following the initial year of inactivity, school dropouts exhibit diverse situations in the subsequent year, as depicted in Figure 2. A first group of young dropouts continues to experience inactivity, with the same two one-month temporary contracts unrelated to the targeted occupations and ten months of non-employment. This group is referred to as the “Dropout with inactivity” group. In contrast, a second group of young dropouts gains professional experience in targeted occupations through the EAV subsidized wage program. This experience may be accompanied by the acquisition of a national diploma through complementary

³Cahuc and Hervelin (2020) demonstrate that young people who compete for jobs after school-based education have equivalent chances to be called back for a job interview as those with the same diploma after workplace-based education but who were not retained by their training firm, which is the case here.

⁴Based on the French labor force survey (2013-2018Q1), more than 90% of young dropouts aged 17/18 worked for less than two months in the year prior to the survey.

training, and it could have been attained in either the private or public sectors. This group is referred to as the “Dropout with job-related work experience”.

To ensure that each group shared the same duration of current unemployment before applying to job vacancies, we stopped the last line of resumes in June 2017 for all applicants at age 18.

3.2 The occupations

The selection of occupations was guided by several criteria, including membership in different industries, the existence of a state certification for the required diploma, a sufficient proportion of school dropouts, presence in both market and non-market sectors, and a sufficient number of employees under subsidized contracts. These criteria led to a pool of five possible occupations, but due to financial and organizational constraints and a sufficient number of job vacancies, we ultimately chose the occupations of cook and mason.⁵

Figures A.1.1 and A.1.2 in Appendix A.1 provide evidence on the relevance of the chosen occupations with respect to the population of school dropouts, using pooled labor force surveys from 2011-2016.⁶ These figures show how frequently cooks and masons are employed among dropouts in France and other European countries, with the former representing 1.5% and the latter 5% of employed dropouts in France. Furthermore, Figures A.1.1 and A.1.2 demonstrate that both occupations have relatively high dropout rates compared to other occupations in France and across most European countries.

The study also considers the prevalence of subsidized contracts in the chosen occupations. Figure A.1.3 in Appendix A.1 shows that EAV contracts (the one-year contract program mentioned in the motivation letter of the dropouts) are not uncommon in both occupations. Cooks have a lower proportion of EAV contracts than masons, but both occupations have higher EAV contract rates than most other occupations. Additionally, Figure A.1.4 in Appendix A.1 shows that the selected occupations are more common among subsidized contracts than most other occupations. 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.

⁵We consulted various sources, including the French Labor Force Survey (Enquête emploi, INSEE), the Répertoire National des Certifications Professionnelles (RNCP), and the Pôle emploi job search database to verify the existence of national diplomas and assess the number of job offers.

⁶See Section II of Cahuc and Hervein (2020) for details and descriptive statistics about these two occupations in the French vocational education system. To sum-up, these two occupations include 20% to 25% of all vocational students and apprentices and they exhibit similar school-to-work transitions with all the others students and apprentices at the same educational level.

3.3 The applicants

The profiles of applicants for the two occupations, namely cooks and masons, were designed based on descriptive evidence presented in Table A.1.1 in Appendix A.1. The applicants were young men, aged 18 at the beginning of the application process and 19 at the end. We chose to focus on men as the majority of cooks and masons are male. Their first names, Théo and Alexis, were respectively the 9th and 13th most popular first names in 1999, as per the *Fichiers des prénoms* (INSEE). We selected these names randomly from the top 20 list. Similarly, we selected the surnames, Petit and Dubois, which were ranked 6th and 7th, respectively, according to the *Fichier patronymique* (INSEE). Thus, our applicants, *Alexis Dubois* and *Théo Petit*, have common names that prevent them from being easily identifiable on the internet.

The applicants' addresses were chosen to be located in the center of the administrative capital of the department where the job was posted. This was done to ensure that the candidates lived close enough to their potential future job and to prevent any geographic discrimination.⁷ Since the diploma is national, there is no information about the specific training center, and we did not provide the name of the vocational school or the apprenticeship center where the diploma was obtained. We also did not provide the address of firms where graduates or dropouts worked during their job-related professional experience to avoid detection of fictitious applications.⁸ The firms we selected were large and well-known in the private sector, and their addresses are not usually mentioned on résumés.⁹ The job-related experience could also be acquired in the public sector, specifically in public administrations.

Furthermore, our applicants possess a mix of soft and hard skills. The occupation-related skills for cooks include developing and maintaining kitchen facilities, maintaining hygiene rules HACCP, and respecting recipes. For masons, these skills include plumbing and leveling, setting up frame elements, manufacturing and installing casings, and pouring concrete and breeze block installation. Firm-related skills are the same regardless of the position and are signaled by either “good team integration” or “good relational skill”, depending on the layout.¹⁰ For dropouts with “inactivity”, who have never worked as a cook or mason, there were no occupation-related skills.

We did not emphasize the fact that the applicants dropped out of school after middle

⁷We collected and verified the addresses using *Google Maps*.

⁸This 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 3.6 which discusses the research limitations of our experiment.

⁹We 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.

¹⁰We obtained these skills from the *fiches métiers Pôle emploi*. More details [here](#) for cooks and [here](#) for mason.

school, as advised by caseworkers helping this population. Recruiters deduce this information by examining the education block in the résumé, as explained in Section 3.1. We only mentioned in their cover letters that dropouts with job-related work experience did it through a subsidized contract (EAV). We note that Cahuc et al. (2019) found no stigma effect in signaling professional experience via the EAV contract, in comparison with a similar experience via a classical temporary non-subsidized contract for young people. Finally, we pre-submitted our fictitious applications in cook and mason positions to actual workers and caseworkers who confirmed their credibility.

3.4 The applications

The application package consisted of a résumé, cover letter, and a brief email message. To avoid detection by potential employers and ensure that callbacks were not dependent on any specific presentation style, we created two templates each for résumés and cover letters. Examples of the résumés and cover letters can be found in Appendix A.2. The résumé templates were based on various samples obtained from the online library of the job center, a youth center sample, and Google searches.¹¹

We mainly identified job offers for both occupations using the French job center online platform, with some additional help from private job search websites when the number of offers available on the job center platform was too low. Only job offers that allowed direct contact with the recruiter via email were considered. Offers issued by temporary work agencies or other intermediaries were excluded, and we did not send any applications to about 2/3 of mason job vacancies managed by temporary work agencies during our experiment. To improve the validity of our results, we then used the spontaneous applications channel, as discussed in Section 4.5, where we sent over 8,000 unsolicited applications.

For each job vacancy that met our criteria, we sent one pair of applications selected at random from the pool of {"Graduate"; "Dropout with inactivity"} and the pool {"Dropout with job-related work experience"} with different applicant names and profiles, and different layout types for the cover letters.¹² We also ensured that the same recruiter could not be contacted more than once, even if they posted different job positions in different French areas throughout the entire experiment period.

¹¹The online library of the job center, namely *Pôle emploi CVthèque*, is available to help recruiters in selecting different available profiles. More details at [here](#).

¹²The pool of applications that included "Dropout with job-related work experience" could be either certified or not, in the market sector or in the non-market sector. As a consequence, there was only one application of "dropout with job-related work experience" in each pair to avoid firm detection.

3.5 Data collection

The study involved sending a total of 6,453 applications from 22 January 2018 to 13 July 2018. This sample size was chosen based on power calculations, which are shown in Figure A.3.1 in Appendix A.3, to detect a minimum effect of ± 2.5 percentage points between the baseline callback rate of applicants with “inactivity” and that of applicants with “graduate”, 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 stating that they did not select the application for the job vacancy is classified as a negative callback, along with the absence of callback. Positive callbacks are categorized as either “callbacks” or “interviews”. Callbacks include requests for further information and interview propositions. Requests for further information could be vague or ask for more precise information about the candidate’s training or experience. Callbacks are interpreted as positive since they are likely motivated by the recruiter’s potential interest in the candidate. Interviews are callbacks that 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.

We conducted randomization tests to ensure that job offer characteristics were not correlated with the different applicant profiles, and Table A.4.1 in Appendix A.4 presents the differences in means. The results indicate that the randomization was successful, and there were no significant correlations between any job characteristic and a specific applicant profile. This ensures that our treatment estimates are unbiased. Additionally, Table A.4.2 in Appendix A.4 reveals that none of the randomized application characteristics, including the name, layout, and order of sending, had any impact on the callback rate of the applicants, leaving aside any potential template bias (Lahey and Beasley, 2009).

3.6 Research limitations

We will now discuss the limitations of our experiment that should be considered when interpreting our results.

Firstly, similar to any correspondence study, our experiment only captures the impact of job-related work experience on the initial stage of the hiring process, specifically the likelihood of receiving a job interview invitation. We are unable to determine the subsequent probability of success, which is largely influenced by the skills and information employers value during the interview. However, we presume that, on average, applicants without prior work experience do not perform better than those with relevant job-related work experience during job interviews. Therefore, if anything, the effect of work experience on hiring outcomes should be even more significant after the initial callback stage.

Secondly, our study does not encompass all the effects that job-related work experience

may have on the job application itself. For instance, work experience can provide opportunities to build professional networks and obtain recommendations from previous employers. Although we cannot quantify the prevalence or magnitude of these network effects, they are likely to have an overall positive impact on employment probability. Previous research has shown that letters of recommendation increase employment and earnings among youths who participated in summer employment programs. Hence, our estimates may be interpreted as a conservative lower bound of the effect of previous work experience in a real-life setting. Furthermore, we do not consider aspects related to on-the-job search or wage bargaining. Nevertheless, our analysis focuses on young individuals who face challenging transitions from school to work, and on-the-job search and wage bargaining may be secondary concerns for this population, whose priority is to find employment.

Thirdly, our experiment targets firms that recruit through job postings. We do not include firms that utilize alternative channels, such as private networks, which could be significant for low-skilled positions. We attempted to mitigate this limitation by conducting a second audit study involving unsolicited applications to firms in late 2018. The findings from this second application channel support our primary results obtained from job offers.

Lastly, our results may be specific to the two occupations we analyzed (cooks and masons) and other features of our experimental design (time period, applicant profiles, etc.). However, our study demonstrates that the effect of job-related work experience is largely consistent across the two occupations and different specifications that we tested. Additionally, our results complement those of [Cahuc et al. \(2019\)](#), who focused on two different occupations (gardeners and receptionists) during another period (2016) and found some evidence supporting the value of formal work experience for school dropouts. We yet recognize that future research and dedicated experiments are necessary to understand why recruiters may assign different levels of importance to previous work experience across various occupations.

4 Results

This section presents the results of the field experiment, first by considering dropouts as one homogeneous group, and then by decomposing it into different relevant subgroups across alternative specifications.

4.1 The lower callback rate for school dropouts

The mean callback rates by the category of callback and by the profile of the applicant are presented in [Table 2](#). The average callback rate for all applications is 25%, and the interview rate is only slightly lower at 21%. These callback rates are consistent with those reported in previous studies that examined similar occupations ([Challe et al., 2020](#); [Petit et al., 2016b](#);

Table 2: Callback rates descriptive statistics by profile

	All	Graduate	Dropout
	(1)	(2)	(3)
Callback	0.25 (0.43)	0.30 (0.46)	0.22 (0.41)
Interview	0.21 (0.41)	0.25 (0.43)	0.18 (0.39)
Observations	6,453	2,567	3,886

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.

[Fremigacci et al., 2015](#)).¹³

The mean callback rates conceal different outcomes according to the profile of interest. The callback rate is 30% for graduate applicants, whereas it is only 22% for dropout applicants. This difference of 8 percentage points is in favor of graduates and is upheld when only job interview propositions are considered, although the interview rates are lower, with 25% for graduates and 18% for dropouts. As the interview rate has a more straightforward interpretation than the callback rate and these two outcomes behave similarly regarding the profile or the occupation, we limit our analysis to job interview propositions in the remainder of this paper.¹⁴

In addition to the mean callback rate, [Figure A.5.1](#) in [Appendix A.5](#) shows the survival curves of the applications in our experiment. Almost all the applications of dropouts that received an interview proposition are called back by employers at most two weeks after the applications were sent, while graduates are called back during the four weeks following their application. Interestingly, more than half of the interview propositions are made within the first ten days after the applications were sent. The combination of the high callback rate levels and the quick delay for employer replies suggest that our occupations are in high demand, and graduate applications are favored. However, some differences exist across departments. [Figure A.6.1](#) in [Appendix A.6](#) shows the ratio of graduate over dropout callback rates by departments. It appears that graduate applicants are favored over dropout applicants in 80%

¹³Specifically, [Challe et al. \(2020\)](#) found callback rates of approximately 25% for waiter applications in the restaurant industry in 2018-2019, which have profiles similar to our cooks, during a period when the French labor market's situation was comparable to that covered in our experiment. [Petit et al. \(2016a\)](#) reported an average callback rate between 19.3% and 26.2%, depending on the location, for cooks in France in 2011-2012. [Fremigacci et al. \(2015\)](#) discovered that young mason candidates aged 21 received an average callback rate of 19.3% in France in 2011, when the unemployment rate was increasing after the 2008-2009 crisis.

¹⁴Results are both quantitatively and qualitatively similar when using the larger definition of callback rate.

of the departments, leaving 20% of departments that favor dropout applicants.

Following the well-known critique of Heckman in the discrimination literature, it is possible that our results are biased due to employers' prior beliefs (Heckman, 1998). Heckman argues that imposing the same set of observable characteristics on employers may cause discrimination to go unnoticed when it exists and highlight it when it does not. This issue arises because the two populations have different real-life characteristics that are not equivalent but are made equal in the audit study for the purposes of experiment. Consequently, the average characteristics of the two populations are equivalent, leaving aside potential differences in variance.

This potential difference in our study exists because school dropouts are likely to differ from graduates not only in job-related skills but also in other dimensions such as writing a CV or cover letter. This potential bias can be accounted for using the statistical approach proposed by Neumark (2012), which involves estimating a heteroskedastic Probit model that allows the variance of the error term to vary across groups. To identify the model, at least one characteristic related to the job vacancy that affects the callback rate of both groups in a similar way must be controlled.

In our experiment, required experience is a characteristic that varies substantially across the sample and impacts the callback rate of both graduates and dropouts in a similar way. Additionally, this variable is significant in the hiring process since it can be used as an impartial criterion to distinguish candidates. Furthermore, this feature negatively impacts the interview rate of all applicants, which is necessary for identification. Table A.7.1 in Appendix A.7 displays the interview rate difference between graduate and dropout applicants obtained through a Probit model in Panel A and a heteroskedastic Probit model in Panel B, for all applications in columns (1) and (2), restricted to cooks in columns (3) and (4), and to masons in columns (5) and (6).¹⁵ Employers seem to view school dropouts as a more diverse group than graduates, with the marginal effect through variance being positive. This indicates that the difference in the interview rate is smaller than it should be, with a value of -7.5 percentage points instead of -11 percentage points on average. This result is not surprising as we decompose our group of school dropouts to determine whether their labor market experience impacted their callback rate.

4.2 The benefit of early work experience

To analyze more extensively the interview rate differences across profiles, we estimate the following linear probability model with Ordinary Least Squares (OLS) estimators.¹⁶

¹⁵During our experiment, we found that a high percentage of open positions for masons were managed by temporary work agencies, accounting for up to 65% of the observations during certain weeks and leading to a lower number of observations in comparison with cook positions.

¹⁶Results are equivalent to non-linear model estimates since our treatment variables are exogenous by design.

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

Interview (0/1)	All Applicants		
	(1)	(2)	(3)
Dropout with job-related work experience ($\hat{\beta}_W$)	-0.0491*** (0.0091)	-0.0489*** (0.0090)	-0.0495*** (0.0090)
Dropout with inactivity ($\hat{\beta}_I$)	-0.1711*** (0.0127)	-0.1703*** (0.0125)	-0.1719*** (0.0128)
Observations	6,453	6,453	6,453
R-squared	.0146	.0307	.0616
Graduate mean	.2517	.2517	.2517
Pval of $\beta_W = \beta_I$	0	0	0
Job offer characteristics	No	Yes	Yes
Month & Department FE	No	No	Yes

Note: This table reports OLS estimates of equation (1). The dependent variable is a dummy variable equal to one if the application gets a proposition for a job interview. Job offer characteristics include all the characteristics listed in Table A.4.1 in Appendix A.4. 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.

$$y_{ij} = \alpha + \beta_W \cdot \text{Worker Dropout}_i + \beta_I \cdot \text{Inactive Dropout}_i + \gamma X_j + \varepsilon_{ij} \quad (1)$$

where y_{ij} is a dummy variable equal to one if applicant i gets an interview proposition for job j . Worker Dropout_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 vocational education and graduated as depicted in Section 3.1. Similarly, $\text{Inactive Dropout}_i$ is a dummy variable equal to one if applicant i is a school dropout who remained in inactivity instead. X_j is a vector that control for the job offer characteristics, as well as month and department fixed effects. ε_{ij} is a residual term, which is by construction orthogonal to the treatment variables.

Results are shown in Table 3 by pooling all the applications together, introducing control variables progressively.¹⁷ In accordance with Table 2, the mean interview rate for a job position is around 25% for graduate applicants and the difference with dropout applicant now differ given their labor market experience.

The interview rate of dropouts with inactivity decreases by 17 percentage points on average. In other words, the chances of being interviewed for a job position is 67% lower for dropout applicants when they remain inactive for two years after middle school than for graduate applicants.

The other result is promising as it demonstrates that indicating a one-year job-related experience in the relevant occupation more than doubles the probability of school dropouts receiving a job interview, with the average interview rate increasing from 8% to 20%. However, it is important to note that their interview rate remains significantly lower than that of

¹⁷The results are quantitatively and qualitatively similar when disentangling the data by cook and mason positions. Although not shown here due to space constraints, they are available upon request.

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

Interview (0/1)	All Applicants		
	(1)	(2)	(3)
Dropout with job-related work experience certified	-0.0287** (0.0142)	-0.0294** (0.0141)	-0.0259* (0.0144)
Dropout with job-related work experience non-certified	-0.0590*** (0.0099)	-0.0585*** (0.0099)	-0.0612*** (0.0101)
Dropout with inactivity	-0.1711*** (0.0127)	-0.1703*** (0.0125)	-0.1719*** (0.0128)
Observations	6,453	6,453	6,453
R-squared	.0153	.0313	.0625
Graduate mean	.2517	.2517	.2517
Pval of $\beta_{W,C} = \beta_{W,NC}$	.0492	.0594	.0289
Pval of $\beta_{W,C} = \beta_I$	0	0	0
Pval of $\beta_{W,NC} = \beta_I$	0	0	0
Job offer characteristics	No	Yes	Yes
Month & Department FE	No	No	Yes

Note: This table reports OLS estimates of equation (1) by dis-aggregating the (“Worker Dropout”) variable according to whether job-related experience was certified with a national diploma or not. The dependent variable is a dummy variable equal to one if the application gets a proposition for a job interview. Job offer characteristics include all the characteristics listed in Table A.4.1 in Appendix A.4. 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.

vocational school graduates, with a difference of approximately 5 percentage points. We attribute this disparity to the fact that graduates not only acquire job-related experience through internships or apprenticeships during their two years of education but also signal to employers their successful completion of the curriculum with a diploma.

4.3 The premium associated to skill certification

As described in Section 3.1, school dropouts who obtain job-related work experience may choose to pursue additional training programs to obtain a national diploma and certify their skills, as was possible under the EAV program discussed in Section 2. In order to examine the impact of skill certification on the callback rate of school dropouts, we estimate equation (1) by disaggregating our treatment variable to account for the possibility that some applications display a certification in addition to one year of job-related experience.

Table 4 presents the results of certified and non-certified job-related work experience on the probability of job interviews. Overall, work experience *without certification* still significantly increases the probability of school dropouts receiving job interviews by more than two-fold (from 8% to 19%) compared to inactive school dropouts. Furthermore, the effect of skill certification further elevates the job interview probabilities of school dropouts to 22%, which is 3 percentage points higher than the interview rate of dropouts with job-related work experience but without certification. This increase corresponds to a treatment effects of skill certification of 14%.

Our findings align with the main result of the 2016 experiment analyzed by [Cahuc et al. \(2019\)](#), indicating that work experience gained through the EAV program has a stronger effect on the likelihood of obtaining a job interview when accompanied by a vocational training period leading to a diploma. The authors also find that the effect of the diploma obtained through training is greater when the experience was acquired in the non-market sector. They attribute this result to firms perceiving additional training in the non-market sector as more credible compared to the market sector. Notably, a recent study by the French Ministry of Labor, which primarily provides a descriptive overview of the EAV program, demonstrates that the training obligation imposed on employers was generally met and that access to training was indeed more prevalent in the non-market sector (89% of young people) compared to the market sector (65%) ([Borel and Pichavent, 2021](#)).

Consequently, we further investigate whether the work experience and skills acquired in the market sector yield different impacts compared to those acquired in the non-market sector. [Table A.8.1](#) in [Appendix A.8](#) presents the effect of certified and non-certified job-related work experience in both the market and non-market sectors. Across all specifications, including all applicants, the results remain consistent regardless of the sector in which school dropouts gained their experience. In our case, and given the specific occupations, skill certification proves to be a more influential factor in improving the job search process compared to the sector in which the experience was acquired.

Lastly, it should be noted that recruiters still exhibit a slight preference for school graduates, despite the equivalent certification signaled by dropouts. In theory, both populations possess the same set of certified skills, but because dropouts acquired them within a shorter duration of one year instead of the two-year vocational education, employers may consider graduates to have a better mastery of these skills.

4.4 The impact of local labor market conditions

We proceed to examine the robustness of our main findings by considering various characteristics related to labor market conditions. Despite the overall tightness of the occupations to which we sent the applications, there are variations in tightness across territories, and employers' requirements may differ based on the pool of available candidates. Consequently, we explore the differences in interview rates within labor markets that vary in terms of unemployment rates, job tightness, and the proportion of dropouts working in low-skilled occupations.¹⁸ This analysis is conducted at the commuting zone level.

The effects of certified job-related work experience on the probability of job interviews in different labor markets are presented in [Table 5](#). To examine the impact of each labor market

¹⁸We calculate the dropout share by taking the ratio of the number of dropouts who have their first-ever work experience in occupations with the same educational level as cooks and masons to the total number of workers in those specific occupations.

characteristic, we divide our sample into two groups based on whether the observations belong to commuting zones with values below or above the median value for each characteristic.¹⁹

Consistent with the findings of Cahuc et al. (2019), we anticipate that in areas with an excess labor supply, the positive effect of signaling job-related experience may decrease due to increased competition from an external pool of applicants. Although the occupations targeted in our study require no or low educational qualifications, all applicants are likely to face greater competition from other job seekers in areas with higher unemployment rates.

The results are displayed in Table 5.²⁰ Irrespective of the characteristic considered, we observe that the average interview rate of graduates declines in labor markets with a higher number of job seekers or a greater share of dropouts in employment. Furthermore, school dropouts who remained inactive are consistently given less consideration compared to graduates, regardless of the labor market conditions. The situation remains unchanged for dropouts who signal job-related work experience without certification compared to the overall scenario. However, it differs significantly when they present an additional diploma certifying their skills.

Columns (1), (4), and (5), corresponding to areas with tight labor markets or a lower share of dropouts in employment, reveal that dropouts with certified job-related work experience receive fewer callbacks for job interviews than graduates, experiencing a decline of approximately 4 percentage points, corresponding to a 15% decrease. The premium associated with skill certification, compared to those with only work experience, also disappears. Conversely, in slack labor markets (columns (2), (3), and (6)), the premium related to skill certification increases to +25%, surpassing the overall situation where it was +14%. These findings may appear contradictory to those discussed in Cahuc et al. (2019), but they align with other correspondence studies analyzed by Cahuc and Hervein (2020) and Kroft et al. (2013). In tighter labor markets, employers face higher competition for qualified and experienced workers, which diminishes the positive signal associated with one-year job-related experience and the diploma obtained by the applicants.²¹

4.5 Results from unsolicited applications

A significant proportion of mason job vacancies were handled by temporary work agencies during the experiment, as mentioned in Section 4.1. Additionally, a characteristic of our chosen occupations is that workers are likely to be aware of a small yet notable number of job openings through networking or word of mouth. Consequently, we considered spontaneous

¹⁹The median values in our sample are 8.7% for the unemployment rate, 1.7 for job tightness (defined as the ratio of job vacancies to job seekers in cook or mason positions), and 3.7% for the share of dropouts.

²⁰As a robustness test, we also interact our treatment variables with these characteristics, as shown in Table A.9.1 in Appendix A.9, yielding similar results.

²¹According to the French employment agency, the share of recruiters who declare hiring difficulties was about 58% for masons and 61% for cooks in 2018, while the average share was 44% for all occupations in 2018 and 32% for all occupations in 2016.

applications as a second application channel. In other words, we submitted application profiles to firms operating in these two occupations without responding to specific job advertisements.

We compiled a list of firms engaged in these occupations from various online sources.²² We then refined the list to ensure that no firms had received a candidate from our initial testing phase. Additionally, we excluded duplicate entries from the same parent company. Simultaneously, we utilized the same resumes and cover letters, with minor alterations to the cover letter and email content to suit the nature of spontaneous applications. We randomized the applicant’s profile, template, and fictitious name for each firm. Furthermore, we randomly selected a date and time for submission.²³ Each firm received only one application, resulting in a total of 8,208 spontaneous applications sent to firms in October 2018 for mason positions and in November and December 2018 for cook positions.

Table A.10.1 in Appendix A.10 illustrates that both the callback rate and the interview rate are considerably lower when applications are sent spontaneously, as opposed to applying for online job vacancies. The average callback rate for graduates is 7.8%, with an average interview rate of 6.6%. The differences in interview rates between dropouts and graduates are smaller compared to the results presented in Sections 4.1 and 4.3. Nevertheless, it is evident that dropouts who remained inactive face a penalty of -3.5 percentage points, corresponding to a decline of 53%. This penalty is less severe for dropouts with job-related work experience, as their interview rate is only 1.5 percentage points lower than that of graduates. Notably, this represents a relative decline of 22%, which is comparable in magnitude to the findings of the main correspondence study described in Section 4.3. Only dropouts with job-related work experience and a certification diploma manage to catch up to the interview rate of graduates.

To supplement the analysis conducted in Section 4.4, we encountered limitations in our sample due to the unavailability of commuting zone data for half of the firms. Consequently, this introduces a potential sample bias, as indicated by the higher callback and interview rates observed in columns (2) and (4) of Table A.10.1 compared to the rates obtained with the full samples in columns (1) and (3), respectively. Furthermore, the difference in interview rates between graduates and dropouts with non-certified work experience is no longer statistically significant, although the magnitude remains within the range of the results obtained with the full sample.

Given this limitation, we aggregated all the applications, including both unsolicited and directed applications to job vacancies, and examined the variations in interview rates across different labor markets. Table 6 presents the results in a format similar to Table 5. Notably, we observe that sending unsolicited applications reduces the callback rate for graduate

²²We extracted relevant information, such as the firm’s national ID, department of location, zip code when available, phone number, and email address, from the *Qualibat* and *La Bonne Boite* websites, which provide details about the types of jobs firms are capable of hiring for.

²³The date was randomly chosen from Monday to Friday, and the time was randomly selected between 8 am and 9 pm, consistent with the initial correspondence study.

applicants, irrespective of the labor market conditions although the reduction is higher in tight labor markets. Interestingly, unsolicited applications appear to bridge the gap between graduate applicants and dropouts with work experience in slack labor markets. We interpret this outcome as evidence that job-related experience on its own is sufficiently attractive to employers when the competition for qualified workers is less intense among firms, as they have the flexibility to callback alternative candidates in the future if the current applicant is deemed less suitable.

Overall, regardless of the occupation, specification, and sample, our results consistently demonstrate that employers distinctly prioritize young applicant profiles as follows:

$$\underbrace{\text{Inactives} \prec \text{Workers} \prec \text{Workers with certification}}_{\text{Dropouts}} \preceq \text{Graduates}$$

Table 5: Effects of certified job-related work experience on job interview probability in different labor markets

Interview (0/1)	Unemployment Rate		Job Tightness		Share of dropouts	
	(1)	(2)	(3)	(4)	(5)	(6)
Dropout with job-related work experience certified	-0.0403* (0.0203)	-0.0061 (0.0200)	-0.0061 (0.0220)	-0.0460** (0.0192)	-0.0440** (0.0194)	-0.0074 (0.0214)
Dropout with job-related work experience non-certified	-0.0657*** (0.0140)	-0.0568*** (0.0145)	-0.0507*** (0.0138)	-0.0708*** (0.0145)	-0.0718*** (0.0154)	-0.0495*** (0.0126)
Dropout with inactivity	-0.2081*** (0.0166)	-0.1257*** (0.0162)	-0.1410*** (0.0171)	-0.2059*** (0.0199)	-0.2079*** (0.0166)	-0.1294*** (0.0166)
Observations	3,526	2,927	3,229	3,224	3,296	3,133
R-squared	0.0781	0.0596	0.0799	0.0828	0.0676	0.0527
Market mean	7.5315	10.7436	1.224	2.6158	.0272	.0596
Graduate mean	.2899	.2060	.2154	.2868	.2874	.2151
Pval of $\beta_{W,C} = \beta_{W,NC}$	.2845	.0216	.0534	.2735	.2155	.0768
Pval of $\beta_{W,C} = \beta_I$	0	0	0	0	0	0
Pval of $\beta_{W,NC} = \beta_I$	0	.0007	0	0	0	.0001
Job offer characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Month & Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Sample restriction (Below vs Above median)	Below	Above	Below	Above	Below	Above

Note: This table reports OLS estimates of equation (1) by dis-aggregating the ("Worker Dropout") variable according to whether job-related experience was certified with a national diploma or not, and by splitting the sample according to local labor market characteristics. The dependent variable is a dummy variable equal to one if the application gets a positive callback to a job offer. Job offer characteristics listed in Table A.4.1 in Appendix A.4. 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 6: Effects of certified work experience on job interview probability in different labor markets with unsolicited applications

Interview (0/1)	Unemployment Rate		Job Tightness		Share of dropouts	
	(1)	(2)	(3)	(4)	(5)	(6)
Unsolicited application	-0.1508*** (0.0459)	-0.1232*** (0.0343)	-0.1121*** (0.0358)	-0.1635*** (0.0492)	-0.1572*** (0.0410)	-0.0974*** (0.0355)
Dropout with job-related work experience certified	-0.0443** (0.0218)	-0.0074 (0.0194)	-0.0036 (0.0219)	-0.0477** (0.0189)	-0.0438** (0.0192)	-0.0080 (0.0218)
Dropout with work experience certified × Unsolicited	0.0122 (0.0286)	0.0265 (0.0223)	0.0047 (0.0251)	0.0323 (0.0264)	0.0299 (0.0244)	0.0087 (0.0233)
Dropout with job-related work experience non-certified	-0.0636*** (0.0151)	-0.0594*** (0.0133)	-0.0527*** (0.0138)	-0.0688*** (0.0140)	-0.0715*** (0.0150)	-0.0498*** (0.0126)
Dropout with work experience non-certified × Unsolicited	0.0442** (0.0188)	0.0577*** (0.0158)	0.0498*** (0.0170)	0.0511*** (0.0180)	0.0593*** (0.0180)	0.0391** (0.0173)
Dropout with inactivity	-0.2078*** (0.0183)	-0.1376*** (0.0147)	-0.1416*** (0.0165)	-0.2031*** (0.0197)	-0.2074*** (0.0165)	-0.1321*** (0.0170)
Dropout with inactivity × Unsolicited	0.1509*** (0.0232)	0.0956*** (0.0192)	0.1103*** (0.0201)	0.1425*** (0.0236)	0.1622*** (0.0201)	0.0785*** (0.0210)
Observations	5,497	5,345	5,432	5,410	5,668	5,139
R-squared	0.0932	0.0629	0.0773	0.0921	0.0886	0.0625
Market mean	7.4067	10.5799	1.222	2.6259	.0278	.0595
Graduate mean	.2177	.1583	.1600	.2160	.2095	.1656
Pval of $\beta_{W,C} = \beta_{W,NC}$	.4455	.012	.0327	.3309	.197	.0804
Pval of $\beta_{W,C} = \beta_I$	0	0	0	0	0	0
Pval of $\beta_{W,NC} = \beta_I$	0	0	0	0	0	0
Job offer characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Month & Department FE	Yes	Yes	Yes	Yes	Yes	Yes
Sample restriction (Below vs Above median)	Below	Above	Below	Above	Below	Above

Note: This table reports OLS estimates of equation (1) by disaggregating the ("Worker Dropout") variable according to whether job-related experience was certified with a national diploma or not, and by splitting the sample according to local labor market characteristics. The dependent variable is a dummy variable equal to one if the application gets a proposition for a job interview. Job offer characteristics include all the characteristics listed in Table A.4.1 in Appendix A.4. 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.

5 Conclusion

This study investigates whether job-related work experience can enhance the employment opportunities of school dropouts relative to graduates, particularly in occupations facing labor market shortages. Through a correspondence study field experiment conducted in France, we submitted approximately 6,400 applications from fictitious candidates to actual job vacancies and sent around 8,200 unsolicited applications to other firms. The experiment focused on two low-skilled occupations with high proportions of vocational students and school dropouts: cook and mason.

Results show that, on average, school graduates have a job interview rate of 25%, while school dropouts with work experience have an interview rate of 20% and it is only 8% for those who remain inactive. Gaining one year of job-related work experience reduces the interview penalty for dropouts from 67% to 25%, and acquiring a diploma further decreases it to 12%. The study also reveals that differences in interview rates between dropouts and graduates vary based on labor market conditions. In tight labor markets, this difference increases, while in slack labor markets, it decreases. Lastly, dropouts with work experience who send unsolicited applications achieve interview rates on par with graduates in slack labor markets, regardless of certification. However, sending unsolicited applications does not close the interview rate gap with graduates in tight labor markets. These findings have several policy implications.

One policy implication to be drawn from the study is the importance of informing middle school students on the negative impact of dropping out of school, or conversely, providing better counseling on the benefits of vocational high-school education. By doing so, it is possible to reduce the number of dropouts and increase the number of students who are able to acquire the necessary skills to enter the job market (Cratty, 2012; van der Steeg et al., 2015; Bonilla, 2020). Such counseling should be provided in collaboration with coaches, alumni, or caseworkers from job centers, local businesses and employers to ensure that students are aware of the available opportunities in the labor market.

Given that there will always be school dropouts, public authorities could also target occupations where employers have hiring difficulties and offer temporary wage subsidies to bring dropouts into employment. Although the evidence is mixed for an adult population, it seems more beneficial for young people in difficulty (Caliendo and Schmidl, 2016). This could help bridge the skills gap between dropouts and graduates and provide opportunities for dropouts to acquire the necessary skills and work experience to become more competitive in the labor market. A complementary policy implication is to favor skill certification with a national diploma (LaForest, 2023), either through complementary classroom training to subsidized wages or via a simplified system similar to “*validation des acquis de l’expérience*” (VAE) as in France.²⁴ This would help ensure that dropouts who do not have a diploma are still able

²⁴The VAE program in France is a system that allows individuals, regardless of their age or level of education,

to acquire skills that are recognized by employers, thereby increasing their employability and competitiveness in the labor market.

Finally, the study suggests that young people should look for job opportunities by reaching out to companies even if there are no vacancies posted online. By doing so, they can increase their chances of finding employment, especially if they have relevant job-related work experience or certifications. It is important for young people to be proactive in their job search and to explore all available options for gaining work experience and skills.

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to have their professional experience recognized and certified through a diploma or qualification. This can be done through a portfolio of evidence, an interview, or a combination of both. Once their skills and knowledge have been assessed, individuals can obtain a diploma or qualification that is recognized by employers and the education system. Yet, there are limitations to the program that should be considered. The program may not be well-known or accessible to everyone, it may not be available for all types of certifications or diplomas, and the process can be lengthy and require a significant amount of time and effort from the applicant.

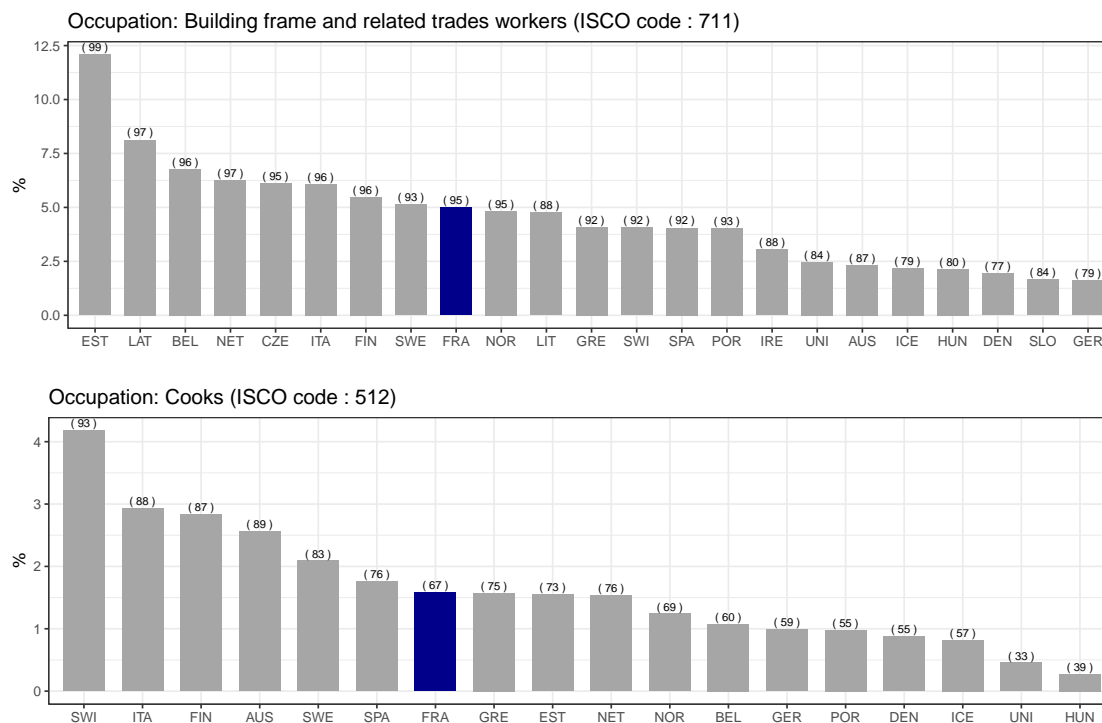
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A Appendix

A.1 The choice of occupations

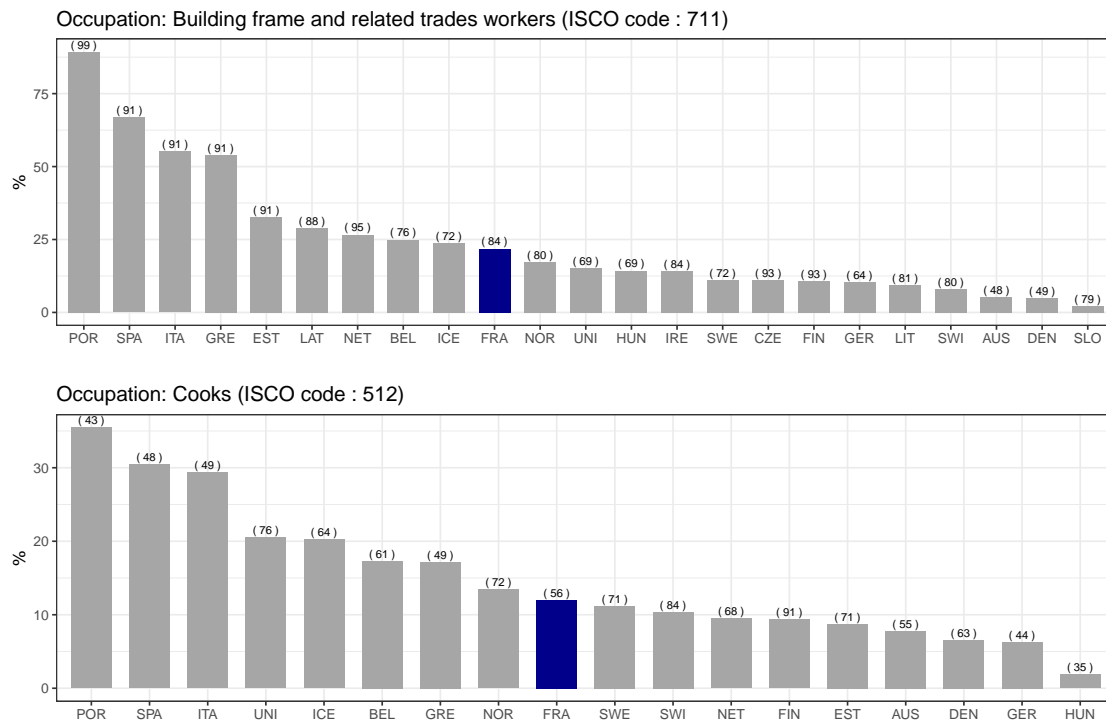
Figure A.1.1: Share of masons and cooks among early leavers from education and training who are employed in Europe



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

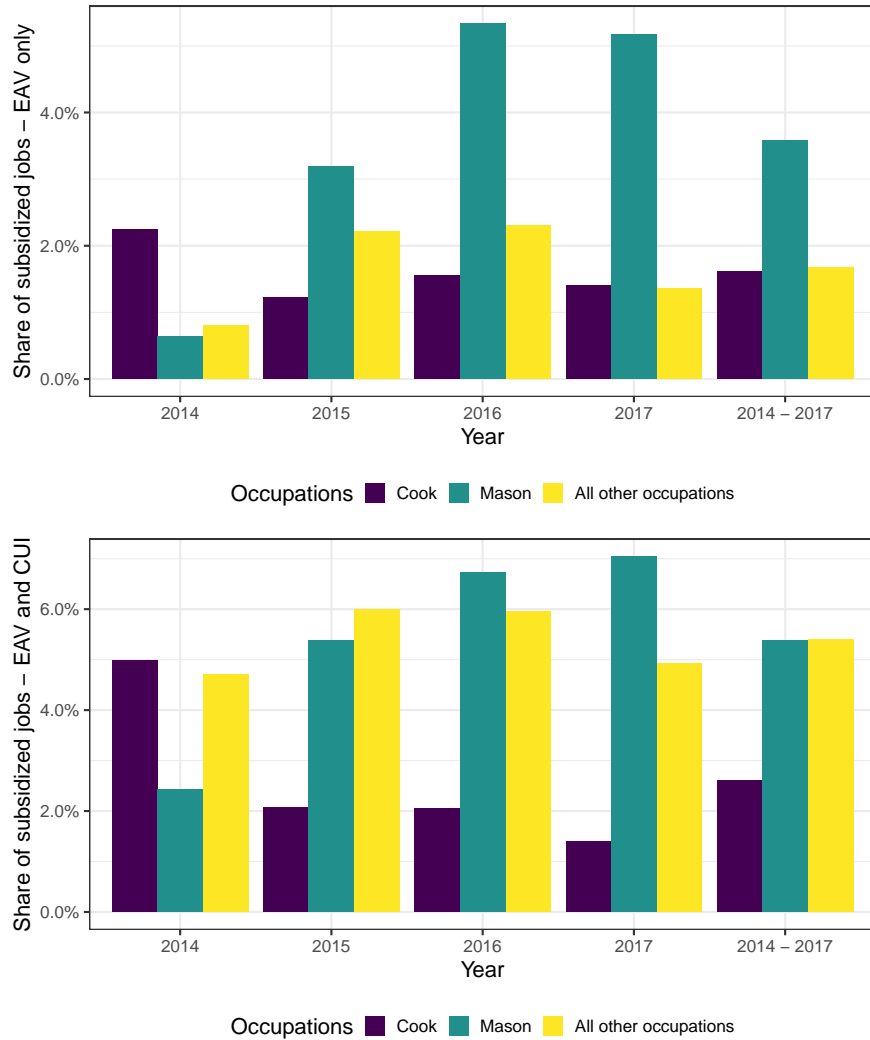
Figure A.1.2: Share of early leavers from education and training among masons and cooks



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.

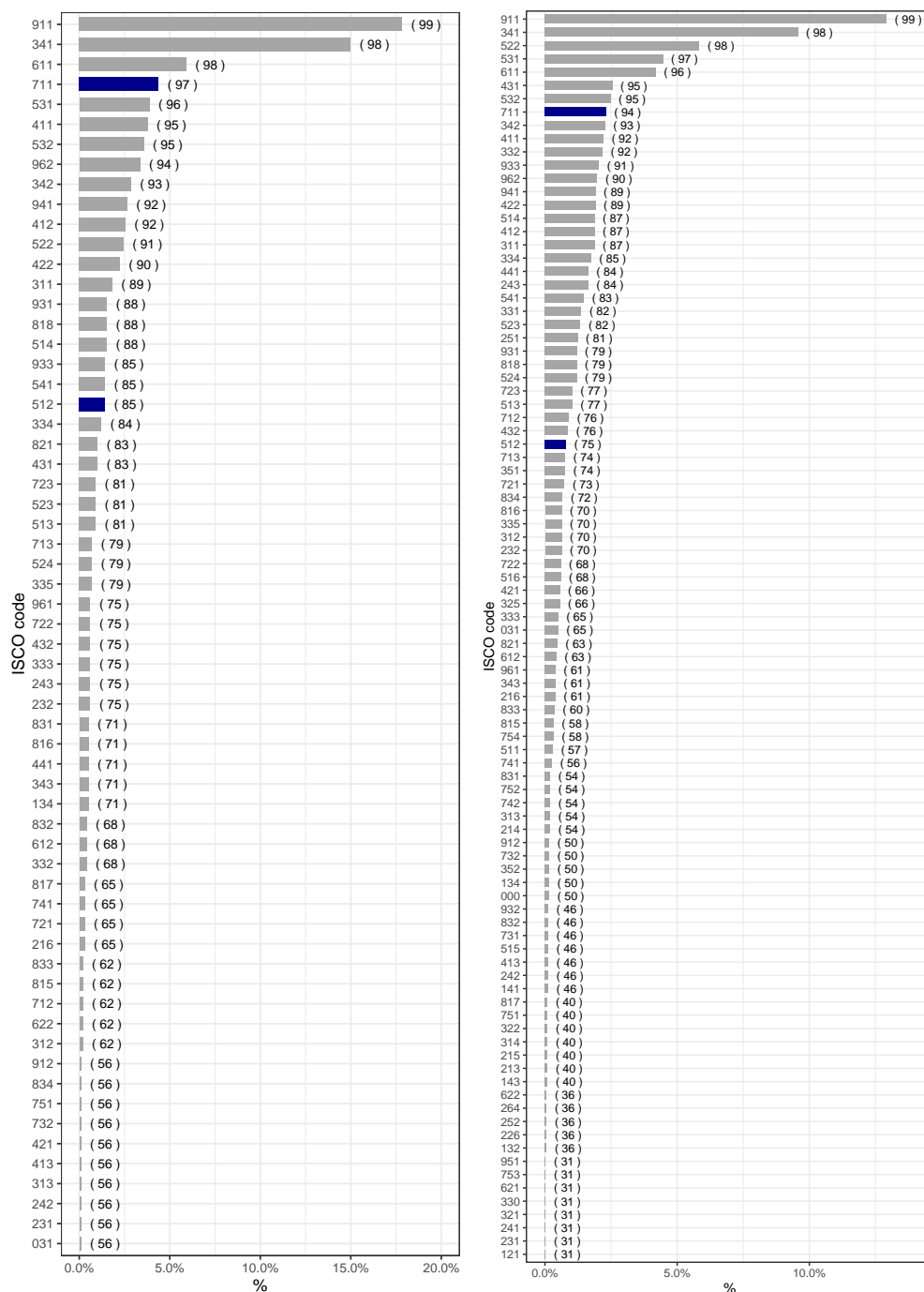
Source: OECD calculations based on the European Union Labour Force Survey (EU-LFS) microdata

Figure A.1.3: 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.1.4: 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)

Table A.1.1: Descriptive statistics on EAV subsidized jobs

Characteristics	All (1)	Under 18 yo (1.26%)		
		All (2)	Cook (3)	Mason (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 the French “EAV” subsidized jobs program described in Section 2. 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 restricts the sample to youths who worked as cook and column (4) as masons.

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

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: Sample of résumés from graduate and dropout applicants

(a) Graduate

Alexis Dubois 15/02/1999
 19, rue Jean Jacques Rousseau Célibataire
 51000 Châlons-en-Champagne
 06 47 70 17 47 Permis B
 alexis.dubois0299@gmail.com

COMPÉTENCES PROFESSIONNELLES

Préparation des aliments et repas, suivre l'état des stocks, règles d'hygiène HACCP, respect des fiches de recettes, bon relationnel

EXPÉRIENCES PROFESSIONNELLES

Mai - Juin 2017 : Flunch, Stagiaire cuisinier (Stage)
 Juin 2016 : Flunch, Stagiaire cuisinier (Stage)

FORMATIONS

2017 : Diplôme CAP "Cuisine", lycée professionnel
 2015 : Brevet des collèges

LANGUES ÉTRANGÈRES

Anglais : niveau scolaire (lu + ; écrit + ; parlé +)

INFORMATIQUE

Outils bureautiques généraux : traitement de texte, tableur, internet

CENTRES D'INTÉRÊTS

Cuisine et pâtisserie
 Cinéma
 Sport

(b) Dropout, Work, Certified

Alexis Dubois 15/02/1999
 19, rue Jean Jacques Rousseau Célibataire
 51000 Châlons-en-Champagne
 06 47 70 17 47 Permis B
 alexis.dubois0299@gmail.com

COMPÉTENCES PROFESSIONNELLES

Préparation des aliments et repas, suivre l'état des stocks, règles d'hygiène HACCP, respect des fiches de recettes, bon relationnel

EXPÉRIENCES PROFESSIONNELLES

Juil 2016 - Juin 2017 : Flunch, Cuisinier (CDD)
 Avr 2016 : Leclerc, Employé libre service Drive (CDD)
 Oct 2015 : Décathlon, Vendeur rayon sports collectifs (CDD)

FORMATIONS

2017 : Diplôme CAP "Cuisine", formation emploi d'avenir
 2015 : Brevet des collèges

LANGUES ÉTRANGÈRES

Anglais : niveau scolaire (lu + ; écrit + ; parlé +)

INFORMATIQUE

Outils bureautiques généraux : traitement de texte, tableur, internet

CENTRES D'INTERÊTS

Cuisine et pâtisserie
 Cinéma
 Sport

(c) Dropout, Work

Alexis Dubois 15/02/1999
 19, rue Jean Jacques Rousseau Célibataire
 51000 Châlons-en-Champagne
 06 47 70 17 47 Permis B
 alexis.dubois0299@gmail.com

COMPÉTENCES PROFESSIONNELLES

Préparation des aliments et repas, suivre l'état des stocks, règles d'hygiène HACCP, respect des fiches de recettes, bon relationnel

EXPÉRIENCES PROFESSIONNELLES

Juil 2016 - Juin 2017 : Flunch, Cuisinier (CDD)
 Avr 2016 : Leclerc, Employé libre service Drive (CDD)
 Oct 2015 : Décathlon, Vendeur rayon sports collectifs (CDD)

FORMATIONS

2015 : Brevet des collèges

LANGUES ÉTRANGÈRES

Anglais : niveau scolaire (lu + ; écrit + ; parlé +)

INFORMATIQUE

Outils bureautiques généraux : traitement de texte, tableur, internet

CENTRES D'INTÉRÊTS

Cuisine et pâtisserie
 Cinéma
 Sport

(d) Dropout, Inactivity

Alexis Dubois 15/02/1999
 19, rue Jean Jacques Rousseau Célibataire
 51000 Châlons-en-Champagne
 06 47 70 17 47 Permis B
 alexis.dubois0299@gmail.com

COMPÉTENCES PROFESSIONNELLES

Conscience professionnelle, dynamisme, autonomie, rigueur, travail en équipe

EXPÉRIENCES PROFESSIONNELLES

Juin 2017 : Décathlon, Vendeur rayon sports collectifs (CDD)
 Nov 2016 : Leclerc, Employé libre service Drive (CDD)
 Avr 2016 : Leclerc, Employé libre service Drive (CDD)
 Oct 2015 : Décathlon, Vendeur rayon sports collectifs (CDD)

FORMATIONS

2015 : Brevet des collèges

LANGUES ÉTRANGÈRES

Anglais : niveau scolaire (lu + ; écrit + ; parlé +)

INFORMATIQUE

Outils bureautiques généraux : traitement de texte, tableur, internet

CENTRES D'INTERÊTS

Cuisine et pâtisserie
 Cinéma
 Sport

Figure A.2.2: Sample of cover letters from graduate and dropout applicants

(a) Graduate

Alexis Dubois
19, rue Jean Jacques Rousseau
51000 Châlons-en-Champagne
06 47 70 17 47
alexis.dubois299@gmail.com

[Date].

Subject: Response to Job Offer for [Cook] No. [Job Number] - ([Company Name])

Dear Sir/Madam,

I am writing to apply for the position of [Cook] that you are offering. I have successfully completed a CAP (Certificate of Professional Aptitude) in "Cuisine" at my vocational high school. During my training and internships at the Flunch restaurant, I gained professional experience in maintaining and operating kitchen equipment, adhering to HACCP hygiene regulations, monitoring food supplies to stay up-to-date with menus, preparing and cooking meats, fish, and vegetables, as well as plating dishes.

In addition, I am energetic and possess a strong work ethic. I can assure you of my utmost motivation to pursue a career as a [cook], due to my genuine interest in this field.

Thanking you in advance for considering my application, I am available for an interview at your convenience. Please feel free to contact me.

Yours sincerely,

Alexis Dubois

(b) Dropout, Work, Certified

Alexis Dubois
19, rue Jean Jacques Rousseau
51000 Châlons-en-Champagne
06 47 70 17 47
alexis.dubois299@gmail.com

[Date].

Subject: Response to Job Offer for [Cook] No. [Job Number] - ([Company Name])

Dear Sir/Madam,

I am writing to apply for the position of [Cook] that you are offering. After obtaining my certificate in 2015, I had the opportunity to work as a cook on a fixed-term contract through an employment program at the Flunch restaurant. This experience was highly beneficial to me as it coincided with a training program where I obtained a CAP (Certificate of Professional Aptitude) in "Cuisine." I learned how to maintain and operate kitchen equipment, adhere to HACCP hygiene regulations, manage food inventory to ensure menu compliance, prepare and cook meats, fish, and vegetables, as well as plate dishes.

Additionally, I am dynamic and possess a strong work ethic, which I have developed through my previous positions as a salesperson at Décathlon and a shelf stacker at Leclerc. I can assure you of my utmost motivation to pursue a career as a [cook], driven by my genuine interest in the field.

Thanking you in advance for considering my application, I am available for an interview at your convenience. Please feel free to contact me.

Yours sincerely,

Alexis Dubois

(c) Dropout, Work

Alexis Dubois
19, rue Jean Jacques Rousseau
51000 Châlons-en-Champagne
06 47 70 17 47
alexis.dubois299@gmail.com

[Date].

Subject: Response to Job Offer for [Cook] No. [Job Number] - ([Company Name])

Dear Sir/Madam,

I hereby submit my application for the position of [Cook] that you are offering. After obtaining a vocational certificate in 2015, I had the opportunity to work as a cook on a fixed-term contract through an employment program at the Flunch restaurant. This experience has been highly beneficial to me. I have learned how to maintain and operate kitchen equipment, adhere to HACCP hygiene regulations, manage food inventory to ensure menu compliance, prepare and cook meats, fish, and vegetables, as well as plating dishes.

In addition, I am dynamic and possess a strong work ethic, which I have developed through my previous positions as a salesperson at Décathlon and a shelf stacker at Leclerc. I can assure you of my utmost motivation to pursue a career as a [cook], driven by my genuine interest in the field.

Thanking you in advance for considering my application, I am available for an interview at your convenience. Please feel free to contact me.

Yours sincerely,

Alexis Dubois

(d) Dropout, Inactivity

Alexis Dubois
19, rue Jean Jacques Rousseau
51000 Châlons-en-Champagne
06 47 70 17 47
alexis.dubois299@gmail.com

[Date].

Subject: Response to Job Offer for [Cook] No. [Job Number] - ([Company Name])

Dear Sir/Madam,

I am writing to apply for the position of [Cook] that you are offering. After obtaining my middle school certificate in 2015 and gaining several professional experiences as a salesperson at Décathlon and a shelf stacker at Leclerc, I have carefully considered my options and consulted with professionals, leading me to decide to pursue a career as a [cook].

I am now eager to acquire the necessary skills for the role of [cook], including maintaining and operating kitchen equipment, managing food inventory to stay up-to-date with menus, preparing and cooking meats, fish, and vegetables, as well as plating dishes.

I am a dynamic individual with a strong work ethic, which I have developed through my previous positions. I can assure you of my utmost motivation to excel in the field of [cooking], driven by a genuine passion for this profession.

Thanking you in advance, I am available for an interview at your convenience. Please feel free to contact me.

Yours sincerely,

Alexis Dubois

A.3 Power tests

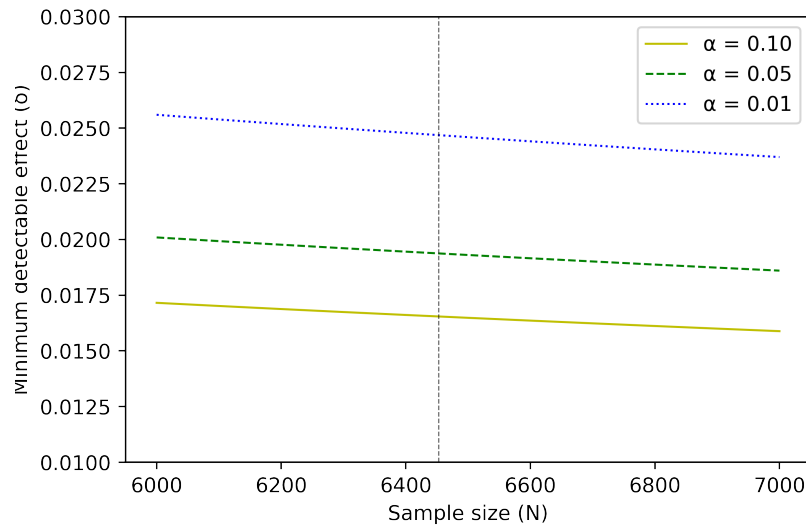
We use the single-level trials with binary outcomes formula from [Djimeu and Houndolo \(2016\)](#) to compute the minimum detectable effect of our experiment:

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

where:

Parameter	Definition	Value
δ	Minimum detectable effect	?
α	Desired significance level	0.05
β	Desired power of the design	0.80
P	Proportion of control group with outcome=1	0.18
T	Proportion randomly assigned to the treatment group	0.40
N	Total sample size	6,400

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 “graduate” group vs the “dropout” group as described in Section 3.1.

Lecture: The minimum detectable effect (without covariate) is ± 2 pp when the total sample size is 6,450 at the 95% significance level.

A.4 Randomization tests

Table A.4.1: Randomization tests

	Graduate		Dropout				
	(1)	All		w/ inactivity		w/ work experience	
		(2)	(3)	(4)	(5)	(6)	(7)
	Sample mean	Sample mean	Difference (2)-(1)	Sample mean	Difference (4)-(1)	Sample mean	Difference (6)-(1)
Cook	0.822 (0.383)	0.813 (0.390)	-0.009 (0.372)	0.795 (0.404)	-0.027 (0.109)	0.817 (0.387)	-0.005 (0.619)
Market	0.927 (0.261)	0.926 (0.262)	-0.001 (0.865)	0.924 (0.265)	-0.003 (0.810)	0.926 (0.262)	-0.001 (0.908)
Permanent contract	0.425 (0.494)	0.425 (0.494)	-0.000 (0.974)	0.427 (0.495)	0.002 (0.925)	0.424 (0.494)	-0.001 (0.945)
Full time	0.938 (0.241)	0.940 (0.238)	0.002 (0.777)	0.944 (0.231)	0.006 (0.585)	0.939 (0.239)	0.001 (0.886)
Required experience	0.426 (0.495)	0.426 (0.495)	0.000 (0.977)	0.427 (0.495)	0.001 (0.953)	0.426 (0.495)	0.000 (0.990)
Male recruiter	0.621 (0.485)	0.624 (0.484)	0.003 (0.803)	0.628 (0.484)	0.007 (0.752)	0.623 (0.485)	0.002 (0.855)
Observations	2,567	3,886	6,453	658	3,225	3,228	5,795

Note: This Table reports means across subsamples of the experimental sample as described in Section 3.1 and presents randomization tests based on comparing the associated means. Column (3), (5) and (7) present mean differences with respect to column (1) and the standard error of the mean below them in parentheses. * significant at 10 percent, ** significant at 5 percent, *** significant at 1 percent.

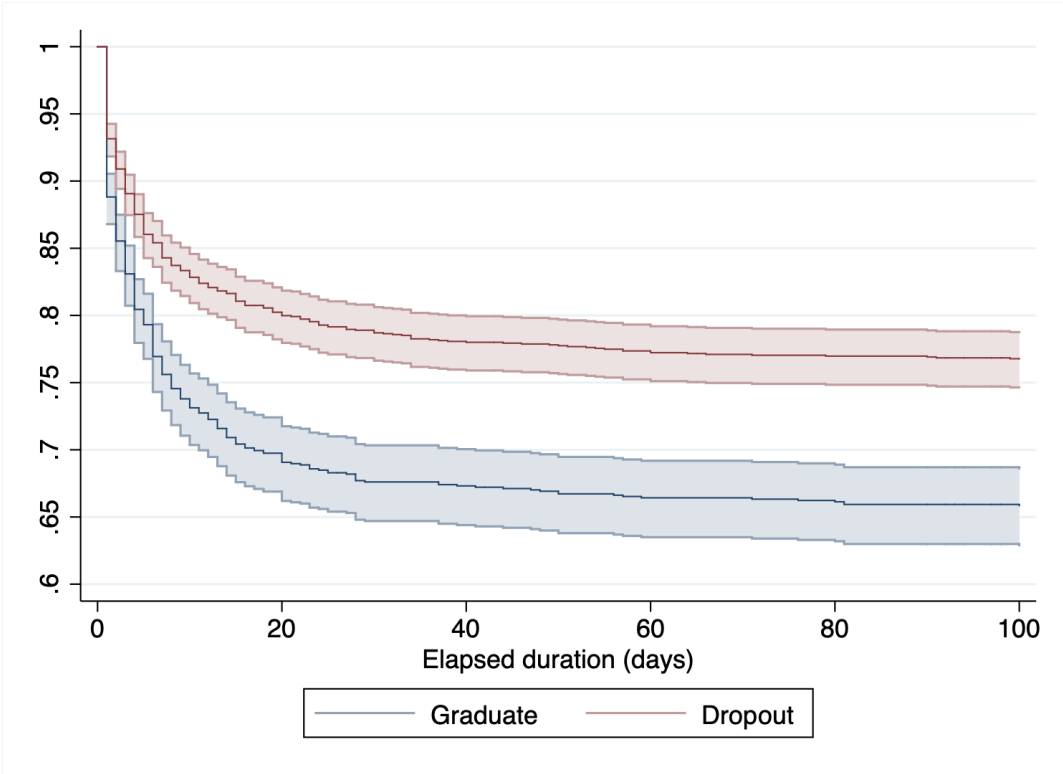
Table A.4.2: Interactions between the treatment profile and features of the applications

	Callback	Interview
	(1)	(2)
Dropout	-0.1044*** (0.0352)	-0.0877*** (0.0328)
Name	-0.0175 (0.0357)	-0.0389 (0.0313)
Dropout × Name	0.0676 (0.0520)	0.0598 (0.0456)
Layout	0.0112 (0.0357)	0.0127 (0.0348)
Dropout × Layout	-0.0157 (0.0462)	-0.0287 (0.0448)
Name × Layout	-0.0689 (0.0474)	-0.0468 (0.0423)
Dropout × Name × Layout	0.0291 (0.0697)	0.0130 (0.0604)
Order	0.0114 (0.0358)	-0.0137 (0.0326)
Dropout × Order	0.0360 (0.0464)	0.0430 (0.0391)
Name × Order	-0.0157 (0.0571)	0.0039 (0.0508)
Dropout × Name × Order	-0.0564 (0.0699)	-0.0563 (0.0579)
Layout × Order	0.0211 (0.0551)	0.0324 (0.0528)
Dropout × Layout × Order	-0.0377 (0.0679)	-0.0253 (0.0602)
Name × Layout × Order	0.0396 (0.0754)	0.0141 (0.0706)
Dropout × Name × Layout × Order	-0.0300 (0.1073)	-0.0198 (0.0925)
Constant	0.3085*** (0.0277)	0.2730*** (0.0263)
Observations	6,453	6,453
R-squared	0.0124	0.0119

Note: This table reports OLS estimates of equation (1) by interacting the “dropout” variable as defined in Section 3.1 with randomized features of applications: the name of the applicant (“Name”=1 if the name was Alexis Dubois, 0 if Théo Petit), the layout of the application (“layout”=1 if the template was the first, 0 if the second), and the order of sending (“Order”=1 if the application was sent in the first position, 0 if second). The dependent variable is a dummy variable equal to one if the application gets a positive callback to a job offer in column (1) and only a job interview in column (2). 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.5 Survival of applications

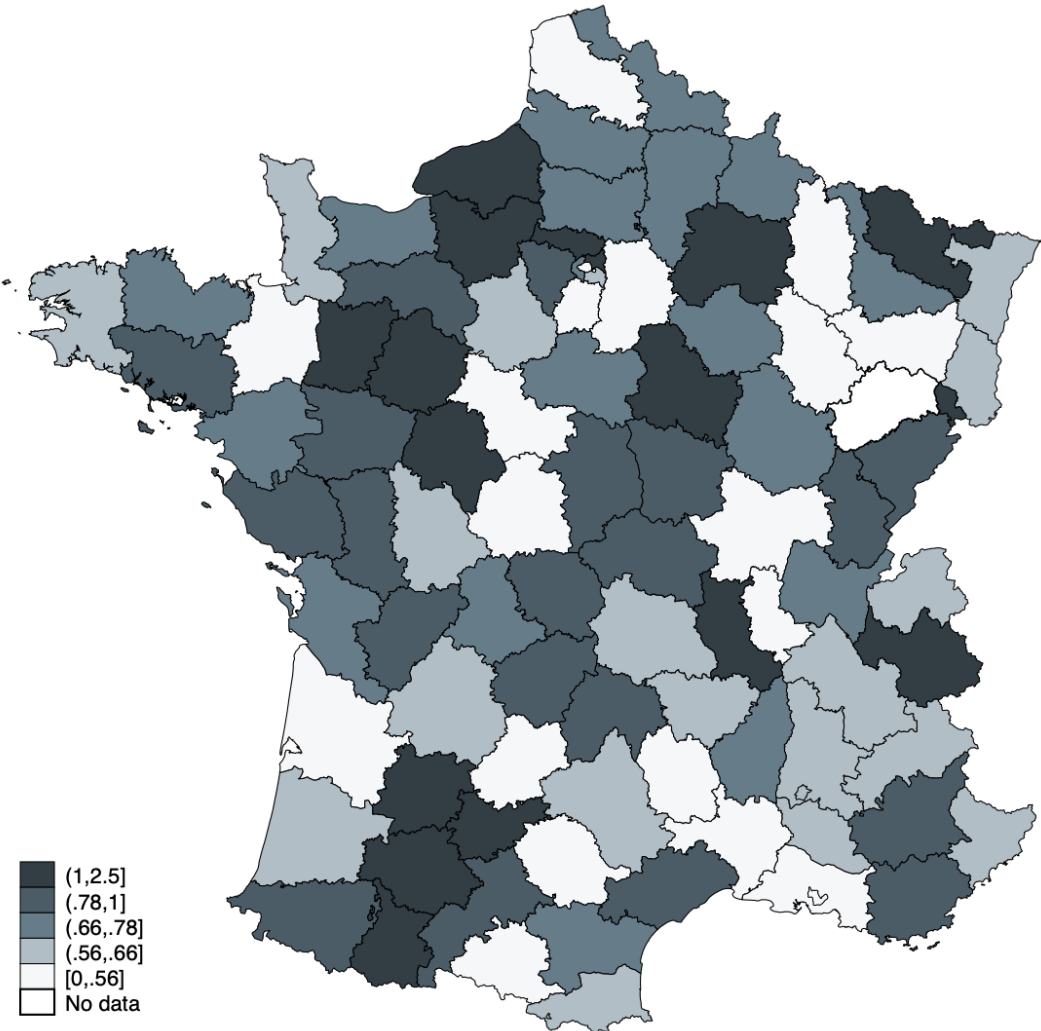
Figure A.5.1: Survival of applications



Note: The event of non-survival is being called back for a job position.

A.6 Geographic distribution of callback rate ratios

Figure A.6.1: Ratio of graduate over dropout callback rates by department



Note: Each department received at least one application of graduate and one of dropout.

A.7 Probit models and Neumark decomposition

Table A.7.1: Probit and Heteroskedastic Probit estimates

	All		Cook		Mason	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Probit model						
Dropout (vs Graduate)	-0.0817*** (0.0086)	-0.0703*** (0.0086)	-0.0868*** (0.0102)	-0.0738*** (0.0097)	-0.0594*** (0.0227)	-0.0545*** (0.0218)
Panel B: Heteroskedastic Probit model (required experience)						
Dropout (vs Graduate)	-0.0749*** (0.0102)	-0.0616*** (0.0112)	-0.0820*** (0.0109)	-0.0652*** (0.0107)	-0.0519*** (0.0273)	-0.0492*** (0.0274)
Marginal effect through level	-0.1116	-0.1140	-0.1055	-0.1168	-0.1022	-0.0853
Marginal effect through variance	0.0366	0.0523	0.0234	0.0516	0.0502	0.0361
Standard deviation of unobservables	1.1823	1.2482	1.1160	1.2476	1.2400	1.1613
Wald test statistic (p-value)	.3237	.2875	.4793	.2438	.6416	.7726
Observations	6,453	6,453	5,270	5,270	1,183	1,183
Outcome	Callback	Interview	Callback	Interview	Callback	Interview

Note: This table reports marginal effects from Probit and heteroskedastic Probit regressions of equation (1) in Panel A and Panel B respectively. The dependent variable is a dummy variable equal to one if the application gets a positive callback for a job position in columns (1), (3) and (5), while only interview propositions are considered in columns (2), (4) and (6). The marginal effects are evaluated at sample means. Regressions in Panel A control for the required professional experience (in years). Regression in Panel B allows for the variance of unobserved characteristics to change between “Graduate” and “Dropout” as developed in [Neumark \(2012\)](#). 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.8 The effect of the sector of the training firm

Table A.8.1: Effects of certified work experience in different training firms on job interview probability

Interview (0/1)	All Applicants		
	(1)	(2)	(3)
Dropout with work experience certified in market sector	-0.0296 (0.0217)	-0.0329 (0.0218)	-0.0264 (0.0225)
Dropout with work experience certified in non-market sector	-0.0278 (0.0195)	-0.0261 (0.0194)	-0.0255 (0.0192)
Dropout with work experience non-certified in market sector	-0.0509*** (0.0149)	-0.0493*** (0.0150)	-0.0520*** (0.0154)
Dropout with work experience non-certified in non-market sector	-0.0670*** (0.0122)	-0.0675*** (0.0121)	-0.0701*** (0.0121)
Dropout with inactivity	-0.1711*** (0.0127)	-0.1703*** (0.0125)	-0.1719*** (0.0128)
Observations	6,453	6,453	6,453
R-squared	0.0154	0.0314	0.0626
Graduate mean	.2517	.2517	.2517
Pval of $\beta_{W,C,M} = \beta_{W,C,NM}$	.9510	.8218	.9766
Pval of $\beta_{W,C,M} = \beta_{NC,M}$	.4001	.5215	.3361
Pval of $\beta_{W,C,M} = \beta_{W,NC,NM}$	.1305	.1659	.0893
Pval of $\beta_{W,C,M} = \beta_I$	0	0	0
Pval of $\beta_{W,C,NM} = \beta_{NC,M}$	.2921	.2868	.2239
Pval of $\beta_{W,C,NM} = \beta_{W,NC,NM}$	.0744	.0592	.043
Pval of $\beta_{W,C,NM} = \beta_I$	0	0	0
Pval of $\beta_{W,NC,M} = \beta_{W,NC,NM}$	.3887	.3323	.3391
Pval of $\beta_{W,NC,M} = \beta_I$	0	0	0
Pval of $\beta_{W,NC,NM} = \beta_I$	0	0	0
Job offer characteristics	No	Yes	Yes
Month & Department FE	No	No	Yes

Note: This table reports OLS estimates of equation (1) by dis-aggregating the (“Worker Dropout”) variable according to whether job-related experience was certified with a national diploma or not and by the sector in which the training firm operated (market sector vs non-market sector). The dependent variable is a dummy variable equal to one if the application gets a proposition for a job interview. Job offer characteristics include all the characteristics listed in Table A.4.1 in Appendix A.4. 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.9 Robustness on the effect of labor market characteristics

Table A.9.1: Effects of certified work experience on job interview probability in different labor markets

Interview (0/1)	Unemployment rate	Job tightness	Share of dropouts
	(1)	(2)	(3)
Dropout with job-related work experience certified	-0.0396* (0.0203)	-0.0055 (0.0218)	-0.0438** (0.0191)
Dropout with work experience certified \times Above Median	0.0297 (0.0282)	-0.0399 (0.0293)	0.0361 (0.0286)
Dropout with job-related work experience non-certified	-0.0656*** (0.0138)	-0.0488*** (0.0139)	-0.0717*** (0.0155)
Dropout with work experience non-certified \times Above Median	0.0095 (0.0199)	-0.0243 (0.0195)	0.0221 (0.0199)
Dropout with inactivity	-0.2073*** (0.0160)	-0.1347*** (0.0166)	-0.2073*** (0.0167)
Dropout with inactivity \times Above Median	0.0792*** (0.0224)	-0.0764*** (0.0264)	0.0766*** (0.0234)
Observations	6,453	6,453	6,429
R-squared	0.0640	0.0635	0.0631
Graduate mean	.2517	.2517	.2517
Pval of $\beta_{W,C} = \beta_{W,NC}$	.2705	.0588	.208
Pval of $\beta_{W,C} = \beta_I$	0	0	0
Pval of $\beta_{W,NC} = \beta_I$	0	0	0
Job offer characteristics	Yes	Yes	Yes
Month & Department FE	Yes	Yes	Yes

Note: This table reports OLS estimates of equation (1) by dis-aggregating the (“Worker Dropout”) variable according to whether job-related experience was certified with a national diploma or not, and by interacting those variable with local labor market characteristics separately for the unemployment rate in column (1), the level of job tightness in column (2), and the share of dropouts among workers in column (3). These characteristics are defined identically to Table 5 in Section 4.4. The dependent variable is a dummy variable equal to one if the application gets a positive callback to a job offer. Job offer characteristics include all the characteristics listed in Table A.4.1 in Appendix A.4. 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 Unsolicited applications

Table A.10.1: Effects of certified job-related work experience on job interview probability with unsolicited applications

Outcome	Callback		Interview	
	(1)	(2)	(3)	(4)
Dropout with job-related work experience certified	-0.0054 (0.0071)	-0.0152 (0.0114)	-0.0025 (0.0069)	-0.0076 (0.0117)
Dropout with job-related work experience non-certified	-0.0199*** (0.0062)	-0.0176* (0.0091)	-0.0149** (0.0057)	-0.0091 (0.0088)
Dropout with inactivity	-0.0329*** (0.0070)	-0.0483*** (0.0106)	-0.0354*** (0.0065)	-0.0498*** (0.0095)
Observations	8,208	4,424	8,208	4,424
R-squared	0.0242	0.0429	0.0242	0.0426
Graduate mean	.0780	.0934	.0661	.0786
Pval of $\beta_{W,C} = \beta_{W,NC}$	.0495	.8173	.0881	.8991
Pval of $\beta_{W,C} = \beta_I$	.0009	.0064	0	.0004
Pval of $\beta_{W,NC} = \beta_I$	.0747	.0026	.0022	0
Month & Department FE	Yes	Yes	Yes	Yes
Sample restriction	No	Yes	No	Yes

Note: This table reports OLS estimates of equation (1) by dis-aggregating the (“Worker Dropout”) variable according to whether job-related experience was certified with a national diploma or not. It further includes a dummy variable indicating if the application was sent spontaneously to firms. The dependent variable is a dummy variable equal to one if the application gets a positive callback in columns (1) and (2), or a proposition for a job interview only in columns (3) and (4). Applications were sent spontaneously to firms as depicted in Section 4.5. 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.