

Vocational Bachelor Graduates in France: Labour Market Integration and Social Mobility

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Summary

In France, the vocationalisation of the higher education at the university have resulted in increasing numbers of graduates and created new opportunities. The influx of these vocational Bachelor graduates on the labour market raises the issue of their professional prospects amid changing economic and social circumstances. This communication will focus on the labour market transition of the vocational Bachelor graduates in a period of economic crisis, especially on the social benefit of this diploma in France: What were the impacts of changing economical conditions and influx of vocational Bachelor graduates on their transition and on their chance for an upward social mobility?

1. Introduction

In France, the vocational Bachelor degrees (*licence professionnelle*) created in 1999 reflect the first level of the European harmonized structure of higher education diplomas defined in the Sorbonne and Bologna declarations as a three-cycles *licence/master/doctorat* (LMD = Bachelor/Master/Doctorate). Of the 739,000 young people leaving education in 2007, nearly 24,900 are vocational Bachelor graduates. Ever-increasing numbers of vocational Bachelor graduates are entering the French labour market and this influx raises the issue of their professional prospects amid changing economic and social circumstances (Agulhon, 2007). Since the Eighties, transition from university to work has worsened in France even if a tertiary diploma still remains a relative advantage for access to employment (Giret *et alii*, 2006; Giret *et alii*, 2011).

From a theoretical point of view, one can wonder whether the development of vocationalisation in higher education could modify the graduates' transition into the labour market and protect them from a degradation of their working conditions, particularly during these last years. On the one hand, vocationalisation aims to transform the academic knowledge of the young people into attitudes and skills closer to the requirements of companies (McMahon, 1988), reducing the qualification mismatch between supply and demand. General university courses have been strongly criticized in France for their distance from the needs of the labour market (Godet, 1993): the time to make the graduates university employable in the firms would be too long and thus a source of inefficiency for the employers. For Thurow (1974), firms privilege young people who have the fastest capacity to be trained, the others being kept at the bottom of the queue for employment. In the case of France, companies with large internal labour market, often privilege the *Grandes Écoles* graduates who are often considered more adaptable and polyvalent (Falcoz, 2003). So the young people leaving general programmes of universities are more frequently excluded from access to the most stable segments of the labour market. They are more likely to be on external markets, generally secondary segment, where their competences in connection with their training remain very limited (Arulampalam and Booth, 1998).

On the other hand, massification of higher education in France allowed an access to university for young people from modest social backgrounds (Béaud, 2003; Duru-Bellat, 2008). The

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vocationalisation can bring to the young people a social capital for some persons without this asset or just a very little. The vocational education implied a multiplication of placements in a company during the cursus even in tertiary education. Moreover these vocational trainings also implicated much more often the involvement and participation of people coming from the professional world. We could expect that vocational courses can bring them social networking and ties (Granovetter, 1973). Indeed, the access to the networks is a major element to find an employment in France: a third of the young people reached their first employment by their networks from relations and 10% *via* their training establishment (Joseph, Lopez, Ryck, 2008). One of the questions is however to know if the selection process at the entry into these vocational courses at the university will support the most modest young people of social origins and lead them an access to professional networks necessary for their transition.

In addition, the school leavers are overrepresented among the candidates at the time of recruitment, which place them in first line vis-à-vis any tension of the economic situation. Two effects were thus highlighted by Fondeur and Minni (2004) in the line of the labour queue theory. The first, *effect of inertia*, are related to the nature of the employments: the most graduates are more likely to reach qualified jobs, on which everlastingness is dependent on the economic risks. The second, *effect of the economic downgrading*, appears in period of shortage of the employments: the companies choose the most graduate candidates with the risk of a downgrading. Do these effects appear among the vocational Bachelor graduates in the last economic downturn?

This article is focused on the higher education outcomes in France, especially on the employability of the vocational Bachelor graduates and the social benefit of this diploma that correspond to the three sections in this document. We will examine firstly the state of art of the vocational tertiary education, then the transition to work for the vocational Bachelor graduates and their changes over time, thirdly the comparison with the other tertiary graduates of their situation in the labour market and their opportunity of a social mobility.

To provide insights into these issues, we will use surveys conducted by Céreq (French Center for Research on Education, Training and Employment) which represent one of the major sources of information concerning the youth transition to work. Our objective is to compare the labour market situation for diverse Bachelor graduates cohorts, before and during the current economic crisis. So we will exploit three longitudinal surveys called 'Generation' conducted by Céreq on higher education leavers, interviewed in 2004, 2007 and in 2010, three years after their graduation (*see* Box 1 below). We will estimate by econometric models the effect of vocational courses 'all other things being equal', incorporating a range of individual characteristics. We will focus on four dependant variables in 2010: the probability of being employed, the probability to secure a long-term employment, the probability of being employed in a managerial/professional position and the probability of an upward social mobility three years after graduation.

Box 1. Data and Methodology

Data drawn from two Céreq's surveys are used to answer this issue. From March to July 2010, Céreq (the French Center for Research on Education, Training and Employment) surveyed by phone a sample of 25,000 young people who graduated from their initial education in 2007, from all levels, representative of 739,000 who left the educational system in France for the first time. This survey, called 'Generation 2007', aimed to analyze the first three years of active life after initial education. It includes useful information on young people's characteristics (family's socio-economic status, age, highest grade completed, job during their study, internship...). In our sample, 2,495 respondents left higher education with a Bachelor degree: 769 are graduated from a vocational Bachelor. The employment situation of Bachelor graduates will be compared with the other tertiary graduates entering the labour market in 2007 during the first years of active life, using econometric models (probit models). By definition, the survey does not interview the graduates who continue their studies after graduation. It also focuses on young people living in France three years after leaving the education system.

2. An Overview of the French Vocational Higher Education

Efforts to bring the professional world closer to the educational system, to promote the transition to work for students and to respond to the skills required for entering the labour market are just some of the reasons used to justify the development of vocational courses in French higher education

(Dupeyrat, 2002). The decrease in employment opportunities in the public service and the increase in tertiary enrolments pushed university to change their scope (Giret, 2011). The tertiary education offer indeed strongly diversified courses. In 2008, 42% of the students are enrolled in a vocational training within the university system. The passage to the LMD (3-5-8) thus consolidates the inescapable character of the vocationalisation movement at the university.

Until 1960, the French higher education was characterized by a dual and hierarchical opposition between the *Grandes Écoles* and the Universities. During the sixties, two technological degrees have been created in order to provide a more vocational oriented program in tertiary education (short vocational tracks): the *Brevet de Technicien Supérieur (BTS)*, higher education vocational courses operated by secondary school institutions (*lycée*) and the *Diplôme Universitaire de Technologie (DUT)*, operated by autonomous university institute. While recent studies conducted in a range of countries have emphasized the academic drift of higher education (Teichler, 2007), French higher education appears currently to be driven by an opposite trend. In the last three decades, universities have offered new vocational courses: *DESS*, *Miage*, *IUP*, *Magisters*, and (more recently) vocational Bachelor degrees. The purpose of these courses was to offer vocational training in universities that included work placements and interventions by professionals. This was part of an attempt to improve a university system widely criticized for being too theoretical and academic and for producing a growing number of unemployed tertiary graduates (Aguilhon, 2007).

Currently, with the exception of universities, French tertiary institutions are based on distinct rules and recruitment policies and apply various selection criteria (educational record, interview, entrance exam, test, etc.). In France the *baccalauréat* is the standard - the final diploma of upper secondary education - and the gateway for accessing to higher education. The *baccalauréat* is the only requirement for enrolling in a first-year undergraduate course at a university, and the number of university diplomas is not fixed. At the university, the Bachelor degree (*licence*) is awarded after three years of studies in higher education. Students can choose a general (*licence générale*) or a vocational Bachelor degree (*licence professionnelle*).

Table 1. Development of tertiary diplomas in France

	2000	2004	2008
<i>BTS</i>	95,530	108,839	106,025
<i>DUT</i>	47,478	47,018	46,714
General Bachelor (<i>Licence</i>)	135,017	137,307	124,289
Vocational Bachelor		17,159	37,665
<i>Maîtrise</i>	93,304	94,146	1,915
<i>DEA</i>	23,428	26,339	7
<i>DESS</i>	32,612	47,351	110
Master (Vocational)		2,443	65,111
Master (Research)		2,247	22,133
Master (others)		581	7,069
<i>Grandes Écoles</i>	42,966	51,996	50,865
Doctorate	9,991	8,931	10,678

Source: Ministry of Education, *Repères et statistiques*.

Reading note: The number of vocational Bachelor graduates was 17,159 in 2004 and 37,665 in 2008.

The introduction of vocational Bachelor degrees in 1999 was designed to extend the vocationalisation of French university education. Previous to 1999, universities only offered a purely academic, general Bachelor degree based on subject-specific teaching and training. The award of the Bachelor degree was conditional on passing three years of university study (in humanities, science and technology, engineering, law and economics). Before, the Bachelor diploma was not considered to be an appropriate standard for leaving higher education and entering the labour market, except to enter competitive administrative and teacher recruitment exams. By establishing a close partnership with potential employers in the conception of projects, the vocational Bachelor degree was designed to provide a specific response to the local demands of high-level vocational training, particularly in the private companies. Nearly 37,700 students had vocational Bachelor graduation in 2008 (Table 1). The vocational Bachelor degree is a one-year training course proposed to holders of a diploma awarded after two years of university education. It is job-oriented and includes a 12 to 16 weeks work

placement in a company. 77% of vocational Bachelor graduates have completed a placement lasting at least three months, as opposed to just 30% of general Bachelor graduates (Calmand *et alii*, 2009).

The Master degree (vocational or research) is awarded to students who have successfully completed five years of study after the *baccalauréat*. In France it was introduced for the first time in the academic year 2002/2003. This degree replaced the *Diplôme d'Études Supérieures Spécialisées* (DESS, vocational) and the *Diplôme d'Études Approfondies* (DEA, research). The implementation of the new *LMD* system also encouraged the *Grandes Écoles* to reflect the general trend. The diplomas currently awarded by *Grandes Écoles* are usually regarded as Masters-level qualifications. Some *Grandes Écoles* encourage students to obtain a university diploma as well. The creation of the *LMD* system was accompanied by an increased imbalance in favour of the former between vocational Masters courses (65,100 graduates in 2008, *see* Table 1) and research Masters (22,100 graduates in 2008). Common Masters programmes (i.e. research and vocational with 7,100 graduates) were created to compensate for the declining numbers of students wishing to pursue a career in research. Access to doctoral studies is increasingly open to holders of vocational Masters degrees, which may result in an increasing number of students bypassing research Masters degrees and possibly in a gradual disappearance of this type of diploma.

In 2008-2009, the number of tertiary students in France levelled out at 2,232,000, ending two years of continued decline (Ministry of Education, *Note d'Information*, 2009). The number of students in universities (roughly 1,400,000) marginally declined, while the number of students in private training courses increased (private *BTS* and business schools). In universities, 56% of students are studying towards a Bachelor degree, while 39% are enrolled in Masters courses and 5% are undertaking a Doctorate. Increasingly, only vocational courses have seen their numbers growing in universities, while the number of students in general university courses (particularly in the first years of the Bachelor degree) is declining.

3. The Vocational Graduates: Specific Patterns

Unlike general education at university level, French vocational higher education is always characterised by a restricted entry. Selection is based on students' educational record and on evidence of a professional project. Another major difference with education degree at university level is the type of applicant. The process of selection and orientation at every stage of pupils' or students' educational career involves a combination of educational, social, economic and geographical factors.

3.1. Gender and Social Origins

In terms of the choice of tertiary courses, students tend to be differentiated according to their social origin: *Grandes Écoles* and science degrees (particularly medical studies) for the children of managerial/professional parents; technological and two-year vocational courses for the children of working-class parents, with more modest backgrounds. A number of reports and studies have strongly challenged the idea of an increasing democratization of higher education (Merle, 2000; Prost, 1986). In *La Reproduction*, Bourdieu and Passeron (1970) had already issued a warning against the idea of the growing numbers of students in tertiary education as a sign of increasing democratization. More recently, Albuy and Tavan (2008) show that democratisation in the French higher education mainly concerns short higher education programmes. They suggest that social inequalities have taken on a different form and now concern the nature of the course attended. A comparison between the French and the German Education system show that social inequality plays a greater role before the end of the secondary education in Germany whereas the influence of social origin is stronger in the French higher education system (Duru-Bellat, Kieffer, Reimer, 2010).

The social origin of students in vocational tracks is comparatively more modest than in research courses. Vocational Bachelor programmes allow a greater access of students coming from a more diverse range of social backgrounds: 27% of fathers were in managerial/professional positions (Table 3) and 13% of them had a parent in associate professional occupation. More than 45% had a parent as an employee or a worker (working-class). As comparison children whose parents' occupations were managers/professionals were more represented in the *Grandes Écoles* and Doctorate courses (51%).

According to gender differentiation, women have long accounted for the majority of higher education students in France. Ten years ago, they represented 54% of students in tertiary education, and this trend has continued to this day. However, the specific distribution of students remains unchanged and a balanced mixing of sexes is still a distant prospect. In addition, for women, as Albouy and Tavan (*op. cit.*) noted it, the period of rapid growth in higher education went hand in hand with increasing social polarisation in the different subject areas. If we focus on the Bachelor level, our survey shows that the proportion of women varies between 45% for vocational Bachelor graduates to 71% among general Bachelor graduates.

These students have usually undertaken two short vocational courses in succession (a *BTS* or *DUT* followed by a vocational degree) before directly entering the labour market. Generally the young vocational Bachelor graduates had obtained also a *BTS* or a *DUT* diploma (Isced5). These new Bachelor degrees have become a way of extending training for students who have already completed a post-*baccalauréat* vocational track. While students from general courses are reluctant to pursue such training, graduates from *BTS* and *DUT* tracks generally view it as further vocational development and as a condition for securing a more highly qualified job.

3.2. Transition to Work for Three Bachelor Graduates cohorts

Of the 739,000 young people leaving education in 2007 in France, nearly 307,000 were higher education graduates. Bachelor graduates represented just 23% of the total number of these tertiary graduates. The youth transition is a process structured by the supply and demand for a job, the development of employments. But the young people are also taken with the trap in another temporality that is the economic and financial events of the country at the time of their entry in the active life (Guégnard, 2008). We propose to initially study the education-to-work transition for three cohorts of Bachelor graduates starting their active life at three more or less favourable periods of the economic situation. Thus, the Generation 2001, began their active life during one contrasted period, favourable first of all, and was confronted with a significant downturn economic which weight negatively on their path in the summer 2003 (Marchal *et alii*, 2004). The Generation 2004 left the school in a difficult economic context which improved towards the end 2006 with favourable economic period (Céreq, 2007). Contrary, the Generation 2007 profited from a particularly favourable circumstances during the first year on the labour market, until summer 2008 and thereafter, the downturn economic was wicked related to the international crisis.

Table 2. Transition to work among graduates three years after leaving higher education

	Employment rate	Unemployment rate	Professional & manager	Stable employment	Median net mensual wage	Economical context
Graduates 2007						
Vocational Bachelor	88%	7%	17%	80%	€1,600	Favourable until
General Bachelor	74%	13%	17%	70%	€1,400	2008 summer
Graduates 2004						
Vocational Bachelor	91%	5%	15%	80%	€1,514	Difficult until
General Bachelor	81%	7%	17%	70%	€1,411	2006 end year
Graduates 2001						
Vocational Bachelor	86%	9%	17%	78%	€1,380	Favourable till
General Bachelor	79%	12%	22%	67%	€1,300	2003 summer

Source: Céreq's 'Generation 2007', 'Generation 2004' and 'Generation 2001' surveys.

Reading note: the rate of unemployment for vocational Bachelor graduates in 2010 was 7% and 13% for general Bachelor graduates, three years later in a favourable economic context until 2008 summer then in unfavourable circumstances.

The same trends were highlighted in the previous surveys conducted by Céreq in France (Giret *et alii*, 2006). Vocational Bachelor graduates still tend to secure a steady job more rapidly and to be paid marginally more than holders of general Bachelor degree (*see* Table 2). Three years after leaving higher education, their employment rates were nearly 90% (compared with 74% in 2010 and 81% in 2007 for the general Bachelor graduates). And 80% of the vocational Bachelor graduates had secured a long-term employment, as opposed to 70% of general Bachelor graduates for the 2001, 2004, 2007 cohorts. Their rate of unemployment is also lower, whatever the year under review and whatever the economical situation. Three years after completing their studies, 7% of vocational Bachelor graduates and 13% of general Bachelor graduates were unemployed in 2010. General Bachelor's degrees do not

appear to be a similar asset to vocational Bachelor's degrees at the point of entering the labour market. However the vocational Bachelor graduates had more difficulties to get manager or professional occupations: the most common job opportunities were technical and intermediate positions. The proportion of young people securing an executive position has remained unchanged at nearly 17% over the years (See Table 2), predominantly in the industrial sector. The general Bachelor graduates remained to get jobs in public sector mainly in education for teaching (nearly 50% in 2010 and 62% in 2007), while only 10% of the vocational Bachelor graduates had find jobs in public sector.

The access to the networks remains a major element to find an employment in France. A third of the Bachelor graduates reached their job in 2010 by their networks from relations as the other tertiary graduates (Table 3). The spontaneous applications sent to the companies also make possible for 20% to be engaged. An important distinction: nearly 30% of the vocational Bachelors graduates quoted their training institution in obtaining a job; this contrasts with the quarter of the general Bachelor graduates. The vocational establishments thus play an important part, as is already the case with the holders of vocational diploma (as the healthcare and social work, Isced 5).

The financial and economic international crisis of 2008-2009 confirms the particular sensitivity of the employment of the youth to the downturn economic. In France, the education leavers in 2007 profited from a context rather favourable until the first quarter 2008 (Céreq 2011). A few months later, following the financial crisis, the economic U-turn was brutal and the access to employment was difficult until 2010: the rate of unemployment increase to 18% after three years of active life. This is four points moreover than for the previous leavers of 2004. However, in spite of the crisis, 85% of the tertiary graduates secured a job in 2010, with nuances according to the diploma: 80% for the Bachelors, 90% for Masters, PhD and *Grandes Écoles* graduates, and with an unemployment rate of 9% three years after their graduation (Table 3). The majority of them have never experienced unemployment and the average period of job search was very short: 2 months for Bachelor graduates.

According to the last survey of Céreq, the higher education graduates were more likely protected than the others (Céreq, 2011). These results highlight the first *effect of inertia* (Fondeur & Minni, 2004): the most graduates maintained their chances of access to employment whatever the economic situation. At the other end of the scale, young people with no diplomas are highly exposed to unemployment: 40% were still unemployed after three years on the labour market in 2010. For the most part, tertiary graduates enjoyed enviable professional prospects and had secured employment (67%). The majority of Bachelor graduates did not have important degradations of their professional condition, as the whole of higher education leavers. Thus, 80% of vocational Bachelor graduates secured a long-term job (67% for all tertiary graduates).

Moreover, their level of wage slightly increased whereas the wages of the young people in private firms undergo fluctuations, strongly hierarchical according to the level of diploma. That is partly explained by the companies, for the recruiting of the most graduates, which offer one year wages different to the other for the same occupation, according to the tensions and on the level of unemployment. Part of the cyclic sensitivity of the beginners' wages passes by a phenomenon of downgrading at the time of recruitment: to occupy a less qualified employment, and thus less remunerated, is much related to the economic context (Fondeur & Minni, 2006). The risk of *the economic downgrading* should be here to be moderated. Overall, vocational Bachelor graduates experienced fewer difficulties in seeking to enter the labour market in difficult economic circumstances. Compared with graduates from shorter higher education courses, job opportunities for vocational Bachelor graduates tend to be more stable and better paid.

Levels of wages were also higher among vocational Bachelor graduates despite the fact that they have completed the same number of years of study in higher education: vocational Bachelor graduates earned on average €200 more per month than general Bachelor graduates. In 2010, a vocational Bachelor graduate earned a monthly median salary of €1,600 as opposed to €1,400 for a general Bachelor graduate. For the Generation 2007, this tendency seems to have been accentuated to the advantage of vocational Bachelor graduates. However among vocational Bachelor graduates, women tend to begin their professional career with lower wages than men, and the gap remained throughout the three years. Gender-related differences remain significant among higher education graduates and

continue to account for a significant proportion of income disparities; they earned 15% less than their male counterparts.

Table 3. Situation in the Labour Market in 2010

		General Bachelor	Vocational Bachelor	Vocational diploma Isced5	<i>Maîtrise</i> Master1	Research Master2	Vocational Master2	<i>Grandes Écoles</i>	Doctorate
Part of graduates leaving tertiary education	%	14	9	38	5	3	15	14	3
Female graduates	%	71	45	55	69	54	56	34	44
Father in professional position	%	29	27	20	34	47	37	51	51
To find job: networks	%	35	35	30	25	23	21	27	28
establishment	%	23	28	29	20	23	19	25	24
Employment rate in 2010	%	74	88	87	82	83	87	90	89
Unemployment rate in 2010	%	13	7	9	11	10	10	7	8
Period from graduation to 1 st employment (in months)	Mean	2,2	2,1	2,3	2,7	3,1	2,3	2,5	2,3
	Median	2	0	0	1	0	0	0	0
Duration of job search from 2004 to 2007 (in months)	Mean	3,1	3,8	3,5	3,7	4,5	4,0	2,7	4,0
	Median	0	0	0	0	0	1	0	0
Net income (month in 2007 in Euros)	Mean	1,373	1,645	1,525	1,634	1,887	1,888	2,134	2,179
	Median	1,400	1,600	1,474	1,600	1,841	1,825	2,200	2,123
Managerial/Prof. occupation	%	17	17	7	45	59	52	75	80
Associate occupation	%	58	59	63	42	32	39	22	19
Long-term employment	%	70	80	75	73	70	77	91	68
Full time employment	%	81	96	93	89	90	94	99	93

Source: Céreq's 'Generation 2007' survey. Reading note: The vocational Bachelor graduates represented 9% of the leavers from tertiary education in 2007. Three years later, 88% had an employment and 80% had a permanent contract.

4. Labour Market Situations for Tertiary Graduates

The hierarchy of the tertiary diplomas is not called into question, in terms of access to employment or risk of unemployment, as well in period of recession as of economic revival. This section will introduce what the Bachelor graduates chances are of securing positions that make full use of their skills and potential, compared with the other tertiary graduates.

4.1. The Pecking Order of Tertiary Graduates

In order to have the actual outcomes of tertiary diplomas, we selected to analyze it 'all other things being equal'. First, we focused on three dependent variables: the probability in 2010 to be employed three years after graduation, to secure a permanent job, to get a managerial/professional position. Probit models were first estimated because the dependent variables are dichotomous (See Table 4.A.). However, bivariate probit models were also used because the choice of the vocational track could be endogenous with education-to-work transition (Table 4.B). As independent variables, we chose to include the gender, the social and national origins, the field of study and diploma. Four vocational diplomas are included as independent variables: vocational Bachelor, other vocational degrees (Isced5) and vocational Master degrees. For the social origin, we integrated the professional occupation of the father.

Given similar social origins and individual characteristics, results of the probit estimates (Table 4.A.) show a strong effect of the vocationalisation in all the models. Vocational Bachelor graduates were more likely employed than *Maîtrise*/Master1 graduates (model 1). The model 2 indicates also that holders of vocational Bachelor were more likely in a stable employment or in a long-term contract. However vocational Bachelor graduates had a lower probability to get a managerial/professional occupation three years after graduation (model 3). A high effect of the level of education appears (in the model 3). The executive profession seems to be reserved for the *Grandes Écoles* graduates and Doctorate or Master graduates. Other result: significant gender effect comes to light on the probability to be employed, but there is a negative impact for the access to executive profession. Most managers' positions are still held by men (Guégnard *et alii*, 2008). In fact, with the recession of employment in

industry, due to the last crisis, the recruiting of the men dropped, and the professional occupations offered into the industry sector too. Social origin plays an expected role: the likelihood of obtaining a manager/professional occupation is higher among people with a high level of social capital. On the contrary, the negative impact of parents born abroad remains significant in the models.

Table 4.A. Professional situation in the labour market (probit Models)

Probit Model	Model 1	Model 2	Model 3
Probability to be:	Employed	Stable position	Manager occupation
Man (ref. woman)	-0.132*** (-4.51)	-0.0214 (0.91)	0.283*** (9.97)
Father Manager/Professional	-0.00757 (-0.24)	-0.00255 (-0.10)	0.151*** (5.11)
Parents born abroad	-0.223*** (-4.62)	-0.187*** (-4.51)	0.0847 (-1.74)
Diploma (ref. <i>Maitrise</i>/Master1)			
Vocational Bachelor	0.352*** (4.28)	0.288*** (4.19)	-0.592*** (-7.77)
General Bachelor	-0.110 (-1.66)	-0.130* (-2.22)	-0.571*** (-8.89)
Other vocational diploma (Isced 5b)	0.386*** (6.23)	0.143*** (2.71)	-1.181*** (-19.53)
Research Master2 + <i>DEA</i>	-0.0921 (0.96)	-0.133 (-1.642)	0.273** (3.25)
Vocational Master2 + <i>DESS</i>	0.257*** (3.77)	0.112 (1.92)	0.267*** (4.44)
<i>Grandes Écoles</i>	0.613*** (7.65)	0.872*** (12.89)	0.849*** (13.03)
Phd	0.321*** (4.29)	-0.0368 (-0.59)	0.983*** (14.99)
Field of study: industrial	0.209*** (7.15)	0.143*** (5.99)	-0.137*** (-4.78)
_cons	0.826*** (13.34)	0.114*** (2.13)	-0.584*** (-10.28)
N	12923	12923	12923

Source: Céreq's 'Generation 2007' survey.

* p<0.05, **p<0.01, *** p<0.001

Reading note: All things being equal, a vocational Bachelor graduate has a higher probability of being employed in a stable position (positive and significant coefficient), and a lower probability of being a manager/professional (negative and significant coefficient) compared with a *Maitrise*/Master1 graduate.

Results of the bivariate probit models are quite similar. In the three models, firstly we estimated the probability of being graduated in a vocational tertiary track and secondly, we calculated the probability of being in a specific situation in the labour market. The estimation of holding a vocational diploma in higher education is explained by the gender, social origins, type of *baccalauréat* obtained in secondary education. Thus, there is a positive correlation between the unobserved terms that affect the decision to choose a vocational track and the labour market situations.²

As expected, results show that being graduated from a vocational higher education degree is not random (*see* Table 4.B.). The access of a student to vocational track is linked to previous accomplishment at the secondary level, its type of the *baccalauréat*. Compared with holders of a technological *baccalauréat*, general *baccalauréat* graduates have fewer probabilities to be enrolled into a vocational unlike holders of a vocational *baccalauréat*. Men are less likely holders of a vocational diploma than women, especially in social and health high schools. In addition, a small but significant effect of father position appears: children of modest social origins have a higher probability to be graduated from vocational higher education. On the contrary, students from two parents born abroad are fewer holders of vocational tertiary degrees. The access to vocational higher education involves a complex process of admission and refusal by institutions according to origin. For example, the gap between preferences and enrolment is significantly wider among youths of Maghreb origins: nearly 60% applied for a vocational track and only 38% were enrolled the following year (Brinbaum & Guégnard, 2011).

² However, we must be prudent concerning the validity of our instruments in the first equation, from theoretical and empirical points of view.

Table 4.B. Professional situation in the labour market (bi-probit Models)

Bi-probit Model - Probability to be graduated in a vocational track	Model 1	Model 2	Model 3
Man (ref. woman)	-0.215*** (-8.99)	-0.215*** (-2.48)	-0.212*** (-8.87)
Father in professional position	-0.256*** (-10.15)	-0.256*** (-10.11)	-0.266*** (-10.53)
Parents born abroad	-0.356*** (-8.34)	-0.358*** (-8.42)	-0.352*** (-8.33)
Baccalauréat (ref. Technological)			
General <i>Baccalauréat</i>	-1.020*** (-32.83)	-1.019*** (-32.75)	-1.016*** (-32.58)
Vocational <i>Baccalauréat</i>	0.419*** (4.66)	0.424*** (4.73)	0.423*** (4.70)
Other Diploma	-0.130 (-0.79)	-0.113 (-0.69)	-0.100 (-0.61)
_cons	1.247*** (40.26)	1.245*** (40.18)	1.245*** (40.18)
Second Model - Probability to be:	Employed	Stable position	Manager occupation
Man (ref. woman)	-0.126*** (-4.26)	-0.0162 (-0.68)	0.269*** (9.31)
Diploma (ref. <i>Maîtrise</i>/Master1)			
Vocational Bachelor	0.480*** (4.17)	0.435*** (4.66)	-0.854*** (-7.76)
General Bachelor	-0.101 (-1.53)	-0.126* (-2.17)	-0.561*** (-8.75)
Other vocational diploma (Isced 5b)	0.508*** (5.11)	0.284*** (3.52)	-1.435*** (-14.95)
Research Master2 + <i>DEA</i>	0.0992 (1.04)	-0.126 (-1.55)	0.276*** (3.31)
Vocational Master2 + <i>DESS</i>	0.392*** (3.44)	0.271** (2.93)	-0.0186 (-0.17)
<i>Grandes Écoles</i>	0.628*** (7.89)	0.883*** (13.12)	0.853*** (13.23)
Phd	0.324*** (4.34)	0.0415 (0.67)	0.983*** (14.95)
Field of study: industrial	0.215*** (7.36)	0.148*** (6.24)	-0.137*** (-4.83)
_cons	0.716*** (8.89)	0.00072 (0.01)	-0.358*** (-4.59)
Athrho _cons	-0.0766 (-1.91)	-0.0931* (-2.07)	0.178** (2.97)
N	12923	12923	12923

Source: Céreq's 'Generation 2007' survey.

* p<0.05, **p<0.01, *** p<0.001

Reading note: All things being equal, a vocational Bachelor graduate has a higher probability of being employed in a stable position (positive and significant coefficient), and a lower probability of being a manager/professional (negative and significant coefficient) compared with a *Maîtrise*/Master1 graduate.

4.2. Social mobility

The access to vocational higher education is often considered as an opportunity to provide a tertiary training to students from modest origins. Our previous results show that students from lower social background seem to have a higher probability to be graduated from vocational higher education and vocational higher education gives good career prospect during the first year of active lives. However does vocational higher education lead them to an upward social mobility? In order to answer this question we created a social mobility variable using social variables contained in the Céreq database. The general principle of our analysis was to assign mobility to each individual by comparing the position of their father and the actual position of respondents three years after leaving higher education. Exactly, we took into account only the father position. For example, a young graduate is employed as a manager or professional and his father is an employee, we considered that as an upward mobility. Inversely if one respondent is a worker and his father is a professional, we considered that as a downward mobility. Finally we created a variable of social mobility with three modalities: three quarters of the tertiary graduates had no social mobility, 25% had an upward mobility and 11% a

downward mobility (See Table 5). The situation of mobility is close to this average for the vocational Bachelor graduates.

Table 5. Diploma and Social Mobility

Type of diploma	Type of social mobility		
	Downward mobility	No mobility	Upward Mobility
General Bachelor	14%	66%	20%
Vocational Bachelor	16%	60%	24%
Other vocational diploma (Isced 5b)	11%	62%	27%
<i>Maitrise</i> /Master1	9%	67%	24%
Research Master2 + <i>DEA</i>	12%	66%	22%
Vocational Master2 + <i>DESS</i>	12%	60%	28%
<i>Grandes Écoles</i>	8%	68%	24%
Doctorate	8%	69%	23%
Total	11%	64%	25%

Source: Céreq's 'Generation 2007' survey.

Reading note: 60% of vocational Bachelor graduates had no social mobility, 24% had an upward mobility and 16% a downward mobility

The second step of our analysis was to create a model in order to estimate the probability to have an upward mobility. As the variable mobility had three items, we used an ordered probit. Results presented in Table 6 show that the social mobility strongly depends of the level of the diploma. Only vocational Masters and *Grandes Écoles* graduates were likely to have an upward mobility. In fact, the population enrolled in these higher schools is generally from upper backgrounds, with professional/manager parents and social networks. Holders of a vocational Bachelor diploma did not get an upward mobility, compare with general Bachelor graduates. Ethnic origin plays also a role: the likelihood of obtaining an upward social mobility is higher among young people from parents born abroad. Overall, graduates in industrial fields seemed to be in better position in the labour market than other graduates.

Table 6. To the Upward Mobility (ordered probit)

	Mobility
Man (ref. woman)	-0.0181 (-0.87)
Diploma (ref. General Bachelor)	
Vocational Bachelor	0.0633 (1.28)
Other vocational diploma (Isced 5b)	0.125*** (3.94)
<i>Maitrise</i> /Master1	0.0555 (1.06)
Vocational Master2 + <i>DESS</i>	0.1000*** (2.61)
Research Master2 + <i>DEA</i>	0.00198 (0.03)
<i>Grandes Écoles</i>	0.0915* (2.10)
Phd	0.0782 (1.79)
Parents born abroad	0.298*** (8.01)
Field of study: industrial	0.0716*** (3.40)
cut 1	-0.972*** (-30.52)
cut2	0.724*** (23.08)
N	12923

(Source: Céreq's Generation 2007' survey)

* p<0.05, **p<0.01, *** p<0.001

Reading note: All things being equal, a vocational Master or *DESS* graduate has a higher probability of having an upward mobility compared with a general Bachelor graduate.

Elements of conclusion

In terms of the value of vocational diplomas and of their returns on the French labour market, this study highlights a persistent hierarchy of qualification levels affecting the access to employment. The highest qualifications in vocational education have the highest levels of employability with better work conditions. In a context of significant educational and economic change, the general hierarchy of diplomas has remained largely unchallenged by employers. Higher education graduates also tend to be less exposed to the effects of changing economic circumstances, despite continuing disparities between *Grandes Écoles* graduates and university graduates. These observations highlight the continuing influence of forms of higher education inherited from the past (Brennan, Tang, 2008). The diploma continues to play a central and hierarchized role in France because of their double value within the education system – i.e. as a means of accessing both higher education and the labour market, as a signal.

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