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## **Typology of early professional careers and perceived discrimination for young people of foreign origin**

Olivier JOSEPH, Séverine LEMIÈRE,  
Laurence LIZÉ, Patrick ROUSSET

**2011.41**



# Typology of early professional careers and perceived discrimination for young people of foreign origin

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## Résumé

Cette étude porte sur les jeunes qui estiment avoir été victimes de discrimination en raison de leur origine étrangère et/ou de leur couleur de peau. L'enquête Génération 98 du Céreq à 7 ans est mobilisée afin de construire une typologie (méthode de regroupement des cartes d'auto-organisation, algorithme de Kohonen), complétée par une analyse économétrique (modèle probit bivarié) et par une enquête qualitative par entretiens. Nous cherchons à montrer en quoi le fait de se déclarer victime de discrimination a une influence sur la position professionnelle de ces jeunes adultes. Les résultats montrent l'effet complexe de cette déclaration de discrimination sur les trajectoires d'insertion sept ans après la sortie du système éducatif. La segmentation des trajectoires semble exister à deux niveaux : inter-classes et intra-classe.

Mots-clés : discrimination, segmentation, insertion professionnelle des jeunes, France

## Abstract

This research focuses on individuals who consider they have been victims of discrimination. The aim is to look at the feeling of discrimination and to assess its effects on career paths seven years after leaving school. Taking data from the Class of 98 (*Génération 98*) survey by the Céreq, we used the method for grouping self-organising maps (Kohonen's algorithm), supplemented by an econometric analysis to distinguish eight major classes of career paths. In parallel, an interview survey was conducted. The results show a segmentation of career paths at two levels. On the one hand, young people of foreign origin who experienced discrimination are over-represented in certain paths, characterised by unemployment, temping or precarious work (inter-class segmentation). On the other hand, strong inequalities exist within those paths which provide rapid access to stable employment, as persons obtain lower-quality jobs (intra-class segmentation).

Key words: Labor economics, Segmentation, Discrimination, Youth, France

JEL Classification: J71

# Typology of early professional careers and perceived discrimination for young people of foreign origin

## 1. Introduction

The analysis focuses on the feeling of discrimination experienced and modes entering the French job market by young people of foreign origin.<sup>1</sup> The objective is to look at the feeling of discrimination expressed by these young people and try to evaluate its effect on their career paths seven years after leaving the educational system. Our approach allows the differences in career paths to be analysed for three populations: young people of French origin, those of foreign origin and those of foreign origin who declare having experienced discrimination. Based on subjective feeling, this study focuses on individuals who feel they have been discriminated against, i.e. to have suffered unfair treatment, intentionally or not, because of their foreign origin and/or their skin colour. We attempt here to show how the act of declaring having been a victim of discrimination has an impact on the professional position of these young adults.

Our analysis of different forms of discrimination moves away from the neoclassical economic definition whereby people whose real or potential productivity is identical are actually treated differently because of certain individual characteristics, such as gender or ethnicity. Numerous econometric methods taking "all other things as being equal" also consider discrimination as a "residue": in other words, that share of remaining occupational and/or wage inequality which is not explained by the productive characteristics of individuals.<sup>2</sup> In this context, the long-standing theories of discrimination are seeking, first to measure the phenomenon of discrimination, and secondly to understand how situations of wage discrimination in employment may exist and persist, though economically they seem irrational, inefficient in the medium term or related to problems of the quality of information (statistical discrimination), and therefore correctable in the market.

By choosing to work on the sensation of discrimination, we derive any *a priori* association between foreign origin and discrimination, in contrast to common statistical and econometric analysis. Here, any person of foreign origin is not identified automatically with a person discriminated against. The article aims to highlight the effect of declaring oneself as a victim of discrimination (i.e. having experienced discrimination at school, during job search, in employment, or in daily administrative activities, at leisure, or in the street, etc.) on the quality of job-market entry.

Our hypotheses hold that individuals' internalisation and experience of discriminatory practices by employers and/or discrimination experienced in other spheres of life contribute to labour market segmentation. The central aim of segmentation theories is to show how differentiated employment management strategies by companies structure employees' scope for mobility. The seminal works by Doeringer and Piore (1971) and Reich *et al.* (1973) stressed how the choice of certain companies to implement internal labour markets leads them to create entry barriers which exclude employees that companies assume are not fit to enter a stable employment relationship. Discriminatory criteria for getting a job are pinned on individuals: for example, the exclusion of women and immigrants is based on their presumed instability. Selection criteria may also be linked to the nature of employment held by individuals in the past: someone who has held a series of precarious jobs may be considered *a priori* as unstable. Thus, employees from the external labour market or who have individual characteristics associated with instability in a job will have difficulties entering companies with internal markets.

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<sup>1</sup> This research is part of the ANR contract on "Perceived Discriminations and Social Inequalities" (*Discriminations ressenties et inégalités sociales* (DRIS)).

<sup>2</sup> Other methodologies allow the analysis and measurement of discrimination to be taken further (Brown R.S., Moon M. & Zoloth B.S., 1980; Joseph & Lemièrè, 2006).

Fuelling theories of segmentation and in contrast to the proponents of job search, theoretical approaches concerning employer search (Barron *et al.*, 1985) clearly show how companies choose and arbitrate between candidates (data here relates to the Netherlands, the United States, the United Kingdom and France). In fact, job-seekers and employers both contribute to aggravating segmentation. Several types of barriers exist: Holzer (1987, 1988) has shown that job-search choices by young Americans depend on their individual characteristics (skills, qualifications, place of residence, etc.), search costs and the expected chances of success. For example, young Afro-Americans used different channels to young Whites/Caucasians, notably public placement agencies rather than unsolicited applications or personal relations. The effectiveness of a channel thus depends on the profile of the job-seeker, and the use of a channel varies according to origin and colour. In our data, temping work also constitutes a particular path to employment for young people of immigrant origin who do not have family or professional relationship networks.

This segmentation leads to persistent inequalities (Aeberhardt *et al.*, 2010). When persons believe that they will be treated less well on the labour market, then they reduce their human capital investments and endorse beliefs in their lower productivity (Coate & Loury, 1993). This constitutes a kind of vicious circle of statistical discrimination. Extensions of these models in the 1980s have led the expectations of groups suffering discrimination to be taken into account, especially concerning their investments in human capital (Lundberg & Startz, 1983). Young people of immigrant origin are thus assumed to invest less than others in their education, and to limit themselves to lower-paid career paths as they expect difficulties in pursuing a career. Such behaviour in categories experiencing discrimination may contribute to creating observable spaces of regulation for certain types of jobs which are overwhelmingly held by young people of immigrant origin (Hellerstein *et al.*, 2008).

Being excluded from internal markets, disadvantaged groups are forced to focus on the external market. Following Piore, the updating of theory has centred on the transformation of internal markets, the development of precarious work and the issue of dualism in labour markets (Gazier & Petit, 2007; Bruyère & Lizé, 2011). The context of our data includes weakening internal markets which the parents of the young people surveyed may have experienced (some being former workers with large auto makers), while their job-market entry is into external or “non-organised” labour markets. Discrimination is thus embedded in segmentation and may be self-fulfilling by internalised social norms by the actors themselves and/or experience of discrimination in other spheres of life. Furthermore, both internal and external markets renew themselves over time. The dynamics of precariousness settles in labour market segments in which contracts are open-ended, but nevertheless increasingly fragile, holding out poorer career prospects and reduced working time. Such phenomena are observable in our data, though with limits. In our study, individual data describes above all the supply of labour, so that it has not been possible to look at labour demand directly.

Our main question hinges on whether the fact of having experienced discrimination determines the specific job-market entry path taken by young people who are the descendants of immigrants. We take the impact of declaring having experienced discrimination as being twofold: first it affects the access (or not) to certain entry paths, and second, within a given path, it may lead to more or less vulnerable outcomes.

Our paper proceeds as follows. In the following section, we set out the method used, which is both quantitative and qualitative (Section 2). The main results of the research are presented in the section 3. The article concludes with a brief perspective on our results (Section 4).

## **2. Methodology**

### **2.1 The populations studied and the specificities of young people of foreign origin who declare they have suffered from discrimination**

Three types of population are compared: persons of French origin, persons of foreign origin and lastly persons of foreign origin who declare they have suffered from discrimination. Persons of foreign origin are defined as having at least one parent who was born abroad or who holds a foreign nationality. Persons of foreign origin who declare they have suffered from discrimination replied

positively to this question in 2001 and/or 2005, when the *Céreq Génération 98* survey was conducted. The causes for discrimination included here are linked to origin and colour.<sup>3</sup>

Box 1: Sample of persons of foreign origin declaring they have suffered from discrimination

The slight differences in the survey questions (discrimination in access to employment and discrimination in employment, etc.) are not taken into account here, as they are held to be of little significance in understanding and nuance. Moreover, the interviews conducted indicate that discrimination outside working life often adds to the feeling of discrimination (housing, school streaming, overall social situation, discos, police controls, etc.). The experiences of young people of French origin who declare having suffered discrimination (due to their origins or colour) are studied specifically. Indeed, though their number is statistically limited (about 1.5% of young people of French origin, i.e. less than 200 individuals) they may nevertheless have significant structural weight in our analysis. The study of the causes of discrimination shows that only 1/6<sup>th</sup> of French-origin young people suffer discrimination due to (skin) colour. This implies that it is not possible to associate directly and with certainty the declaration of having experienced discrimination by members of this French-origin population with being young and coming from France's Overseas *Départements* and Territories (people from these Overseas *Départements* and Territories are often Black or Afro-French). Young people whose grand-parents were foreign may also belong to this group, as may young people of French-origin who declare having experienced discrimination due to colour. The complexity of this sub-population, and hence important error risks explain why they have been taken out of this analysis.

Table 1: The distribution of the sample for the three populations

Populations	numbers	Weighted numbers
Young people of french origin	13802	620450
Young people of foreign origin who not declare having suffered discrimination	1610	85764
Young people of foreign origin who declare having suffered discrimination	411	22349

Source: « Génération 98 » Survey polling seven years, Céreq, statistics authors

Among the young persons surveyed, 14.8% are of foreign origin, 20.3% of whom declared themselves as having experienced discrimination (the percentages are calculated on weighted numbers). This sentiment varies according to origin: 37.1% for youths of North African origin, compared to 4.5% of young people from Southern Europe. 67% of the victims of discrimination come from North Africa.

Non-graduates (of whatever level of training – pre-high school diploma, France's high school diploma and undergraduate training) are over-represented among young people declaring themselves as having suffered discrimination. There is also a strong link between social origin and foreign origin, a link that is even more pronounced among the self-declared victims of discrimination. While 16% of young persons of French origin have a father with a managerial position, only 7.8% of youths of foreign origin do so, a figure which falls to as little as 1.9% for the victims of discrimination. Among those declaring discrimination, 10% have an unemployed father and 57.7% have mothers who are homemakers (not working outside the home). In contrast, only 2.1% of French-origin young people have an unemployed father and only 9.1% have mothers with no outside work. Young people of foreign origin not experiencing discrimination are in an intermediate position.

Similarly, causes for breaking off education are also strongly linked to declaring discrimination. "Positive" reasons for ceasing education exist less among the victims of discrimination: 27.4% of French-origin youths end their studies to take up employment and 49% because they have obtained the "desired level" of education. The figures are respectively 24.8% and 36.2% among young people of foreign origin, and fall to 20.8% and 22% for persons declaring having suffered discrimination. Also, more victims of discrimination quit their studies as they are refused access to higher classes and for

<sup>3</sup> This motive was requested in 2001.

financial reasons (a factor which holds true *vis-à-vis* foreign students who have not experienced discrimination).

Table 2: Characteristics of the three populations (percent, and numbers in brackets)

	Youth with french origin	Youth with a foreign origin not declaring a discrimination	Youth with a foreign origin declaring a discrimination
<b>Father's occupation in 1998</b>			
Senior executive, engineer, teacher	16% (2007)	7,8% (110)	1,9% (7)
Unemployment	2,1% (263)	5,2% (77)	10% (43)
Housewife (mother's occupation in 1998)	9,1% (1241)	31,1% (757)	57,7% (241)
<b>Reason for dropping out studies</b>			
Reached the desired degree	49%	36,2%	22%
Found a job	27,4%	24,8%	20,8%
Was refused in the following class	9,5%	12,7%	16,1%
Financial reasons	20%	21,8%	29%
<b>Failure diploma :</b>			
Vocational diploma in high school (CAP and BEP)	6,6% (815) 3,7% (454)	11,1% (168) 4,5% (64)	21,5% (77) 5,6% (20)
High school diploma 1 or 2 years in higher education	13% (1609)	13,6% (230)	16,8% (74)

Source: « Génération 98 » Survey polling seven years, Céreq, statistics authors

Note: 16% of french origin youth have a father with a occupation like senior executive, engineer, teacher. It represents 2007 individuals.

## 2.2 Typology the Job-Entry Pathways

Constructing a typology of job-entry pathways for young people is the first step in processing the data statistically.

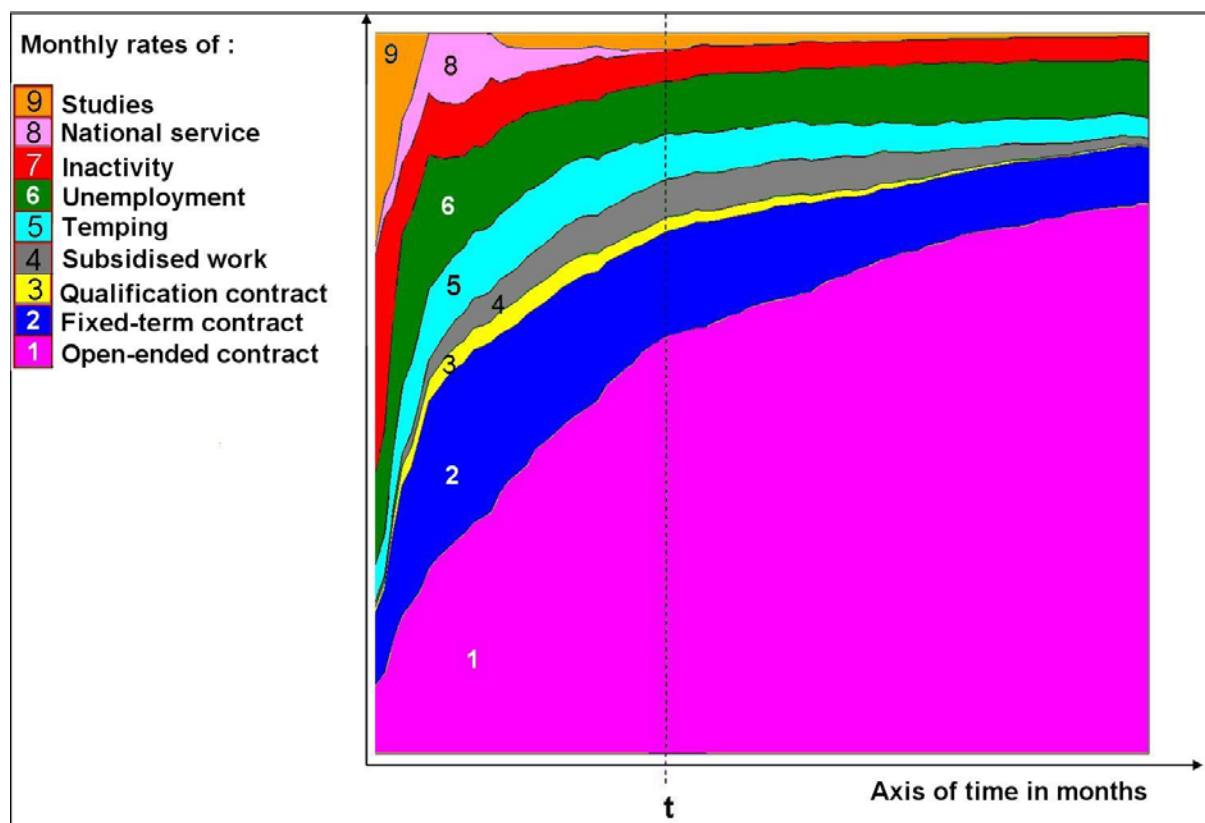
### 2.2.1 The Kohonen Maps method

The typology of pathways used differentiates between paths for two reasons: they must be clearly distinguishable in order to represent a large number of individuals, as well as being sufficiently varied to take into account the diversity of pathways. Employment statuses are used here to discriminate between career paths. Our method consists in drawing out pathway types from the data, which is given monthly over a period of seven years. This calendar structure leads to an extremely detailed presentation of pathways. Each unit of time is dated and the individual's position is identifiable for each state: specifically, among five positions for the labour contract and four for non-employment.

The method also includes a time dimension in the metric between states (Rousset & Giret, 2008). The essential element of this metric is defined as the distance between states indicated by time, which are thus called "situations". Thus, a fixed-term contract (FTC, known in France as a CDD, *contrat à durée déterminé*) is little removed from an open-ended contract (OEC, *contrat à durée indéterminé* in France) in the years following education, but converges on precarious states of employment afterwards. Distance unites situations which provide the same transitions to other future situations by giving more weight to transitions in the short term than in the long term.

As far as the grouping method is concerned, we use self-organising maps (Kohonen, 2001, Villmann *et al.*, 1997), based on Kohonen's algorithm. This representation makes it possible to work on a large number of classes and hence a very detailed description (Cottrell *et al.*, 1998, Oja & Kaski 1998, Massoni *et al.*, 2009). We chose chronograms which indicate the share of each state in the class for data, in order to represent typical paths by class (Graph 1). This representation summarises the variations over time at class level, but generally masks greater variation at the individual level.

Graph 1: Chronogram of the Cohort of School Leavers in 1998



Source: Céreq, *Génération 98* Survey, of the complete cohort

Explanation: The chronogram provides the share of different employment statuses or of non-employment for all data (y-axis). This representation has the advantage of showing the evolution over time of the relative importance of different statuses. The figure shows the rise in FTCs, a fall followed by a stabilisation of temporary work and unemployment statuses. This representation also smoothes out information hiding the greater variation of paths at the individual level. It has the advantage of showing that transitions between states exist, as well as overall impact on the cohort, but without identifying them completely (some may be very rare or very common, oneway or twoway, such as FTCs leading to OECs, or OECs leading to FTCs).

### 2.2.2 Grouping into eight macro-classes

The proximity of classes in the map is shown by a similarity of chronograms, thanks to the conservation characteristic of the typology of self-organised maps (two individuals of neighbouring classes are close together within the data space). This makes it possible to process simultaneously proximities between states (FTC and temping, inactivity and unemployment) and over time (“access to a OEC via a 1-year FTC” and “access to a OEC via an 18-month FTC). Thus, the characteristics of classes may be generalised for their home region, as a variation or an evolution to the same event. The map provides a level of grouping for 100 classes and hence makes it possible to interpret results by region.

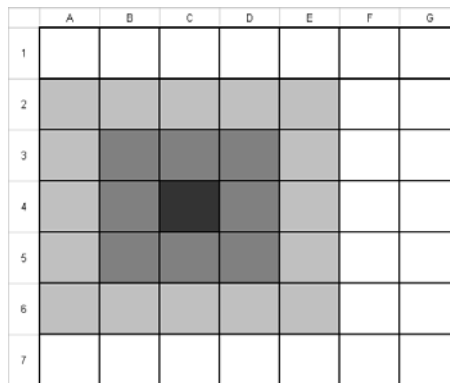
#### Box 2: The Self-Organisation Map and the Reading of a Two-Dimensional Grid

The regrouping method by self-organisation maps generalises k-means by integrating the neighbouring structure between classes. This structure is given by a network structure called a map, which is generally a two-dimensional grid. Its main characteristic, called the preservation of the topology, is that two individuals associated with neighbouring classes on the map are close together within the data space. In the Figure below, units neighbouring the number C4, in a “radius” of 2, 1 and 0, are respectively shaded (the A2-E6 rectangle), the darkly shaded (the B3-D5 rectangle) and the unit itself. This characteristic makes it possible for the map to be a system for representing the intrinsic structure of the data and of classes at the same time. The map thus becomes a tool for varied



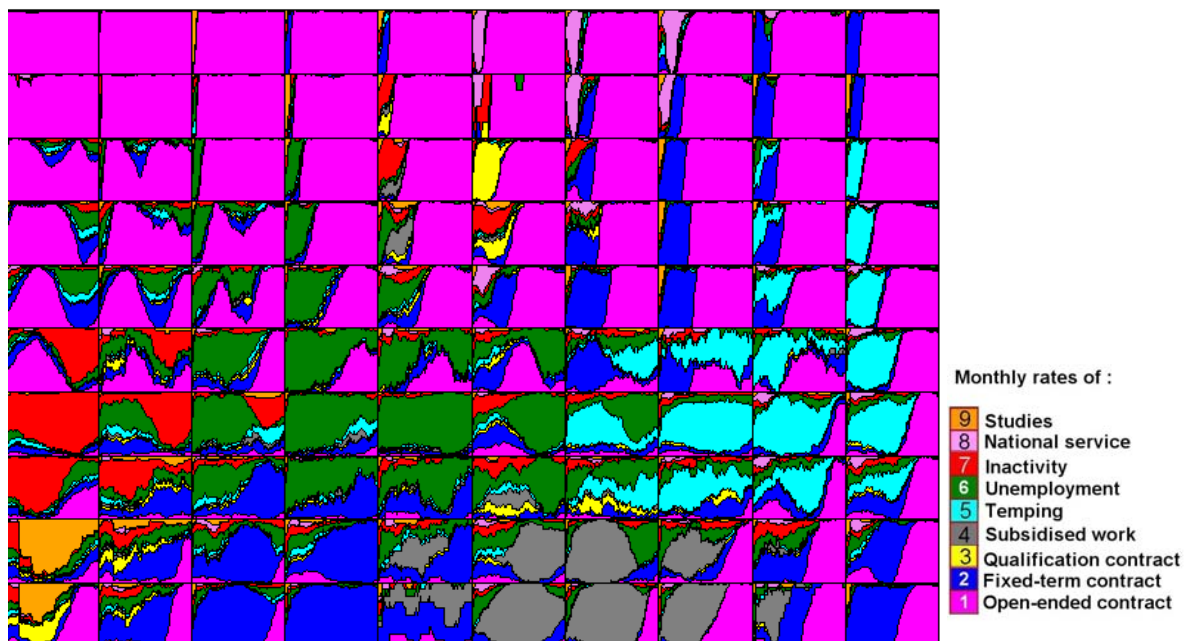
representation based on the same principle: the units of the map are symbolised by boxes which are used as a graphic window to represent the characteristics of the associated classes. It is generally expected that the internal structure of the classes confirms the neighbouring structure found in the map. Redundancy is generated by to the fact that neighbouring classes for endogenous data are often close to each other in terms of exogenous data. It is dealt with by the neighbourhood structure of the map. This representation allows a large number of classes to be treated and hence a very detailed level of description.

Self-organisation map: the example of two-dimensional grid



Reading: the self-organizing map (two-dimensional grid): shaded cells are adjacent to cell C4, with a “radius” of 0, 1 and 2 respectively for the intensity of grey.

Graph 2: Typology of 100 classes of career paths based on self-organisation map



Source: Céreq, *Génération 98* Survey, for the complete cohort (7 years).

Note: Reading: in the presentation here, direct access to an open-ended contract (OEC) is located in the North-Western part of the map; access to an OEC via temporary work is in the North-East, a zone of non-employment and zones of precarious work are found in the South.

The map shows up various zones. The centre relates to non-employment paths. The paths which may be assimilated to different forms of instability are found in the first radius around the centre. Paths maintaining precarious employment (temporary and subsidized jobs) are in the South. Paths following from the loss of an open-ended contract (OEC) are North West of the centre of the map, with the

remainder of the belt being made up of late access to an OEC via temporary jobs (fixed-term contract or temping). The last part of the map concerns the North, and the West, which are immediate access paths to an OEC. Rapid access to an OEC is also shown in the East, via military service, training/qualification contracts and temporary employment. We decided to group together 100 classes into 8 macro-classes, including 7 major classes and one very marginal one (class 8), as shown in the map (see Graph 3).

Graph 3: The distribution of the 8 macro-classes on the map

	A	B	C	D	E	F	G	H	I	J
1	1	1	1	1	1	1	1	1	2	2
2	1	1	1	1	1	1	2	2	2	2
3	1	1	1	1	1	1	2	2	2	3
4	4	4	4	2	2	2	2	2	2	3
5	4	4	4	2	2	2	2	2	3	3
6	4	4	7	7	5	5	5	5	5	3
7	7	7	7	7	7	7	5	5	3	3
8	7	5	5	5	5	5	5	5	3	3
9	8	5	5	5	5	6	6	6	2	2
10	8	5	5	5	5	6	6	6	6	2

Source: Céreq, *Génération 98* Survey, for the complete cohort.

Note: this map is constructed with reference to Graph 2 and indicates the grouping of 100 classes of the map, into 8 regions. The 100 classes are grouped into 8 macro-classes which are identified by a shade of grey and their number. Class 1 (North-West), rapid access to an OEC. Class 2 (North-East), an OEC via a long term FTC. Class 3 (East), OEC via a long period of temping. Class 4 (West), loss of OEC. Class 5 (South), precarious work. Class 6 (South East), time spent in subsidised work. Class 7 (centre), a situation of non-employment. Class 8 (South-West), return to training/study.

### 2.2.3 The specificities of the eight classes

Job-market entry by young people from the generation which left the school system in 1998 is analysed after a period of seven years. This interval makes it possible to differentiate the paths between foreign-origin persons declaring they have suffered discrimination and the two other populations, in particular in terms of the lesser access to stable employment and higher levels of precarious work (Table 3).

Table 3: Distribution of the three populations in 8 macro-classes (percent, numbers in brackets)

	1 Rapid access to a OEC	2 A OEC via a long term FTC	3 A OEC via a long period of temping	4 Loss of OEC	5 Precarious work	6 Time spent in subsidised work	7 A situation of non- employment	8 Return to training/study	Total % (N)
Youth with a french origin	35,9 (5066)	23,3 (3607)	7,5 (996)	5,3 (703)	12,5 (1628)	5,3 (709)	7,8 (834)	2,4 (259)	100 (13802)
Youth with a foreign origin	25,7 (527)	17,1 (379)	9,4 (201)	6,3 (127)	15,4 (309)	5,5 (123)	17,1 (301)	3,7 (54)	100 (2021)
Youth with a french origin declaring a discrimination	17,9 (72)	13,2 (56)	10 (42)	6,7 (25)	20,9 (92)	5,9 (29)	21 (82)	4,4 (13)	100 (411)
Population size	5593	3986	1197	830	1937	832	1135	313	15823

Source: « Génération 98 » Survey polling seven years, Céreq, statistics authors

Note: 35,9 % of young people of french origin have acceded rapidly to a OEC (an open-ended contract), it represents 5066 individuals.

### Box 3: A short description of the 8 classes

Class 1: access to an open-ended contract (OEC) in less than a year, over-representation of men and graduates, strong inequalities among young persons who declare discrimination and others in terms of subjective loss of social position, lesser access to managerial jobs and more part-time employment.

Class 2: access to an OEC after a fairly long term FTC (fixed-term contract), over-representation of women and persons with 2 years higher education. Young persons declaring discrimination also declare suffering loss of social position in terms of wages, use of skills and access to managerial jobs.

Class 3: access to an OEC after a fairly long period of temping, under-representation of women and over-representation of workers. Young persons of foreign origin feeling discrimination do not associate their situation with a loss in social position.

Class 4: job-market entry characterised by one or two terminations of an OEC during the seven years following the completion of study. The situation of young people of foreign origin declaring discrimination is less favourable. For some, the termination of an OEC may be part of a career strategy.

Class 5: working life characterised by precariousness of employment status (FTC or temping), a slight over-representation of women and vocational qualifications usually taken before the end of high school (BEP-CAP certificates), along with a high level of unemployment. The type of precariousness varies according to declared discrimination: young people not declaring discrimination are more affected by FTCs and those of foreign origin declaring discrimination by temping.

Class 6: pathway involves subsidised employment (though not sandwich training), over-representation of women, over-representation of failure by qualified employees, strong heterogeneity among young people of foreign origin declaring themselves as victims of discrimination.

Class 7: path characterised by long periods of unemployment and inactivity, over-representation of young people of foreign origin, with an important correlation with father's socio-professional category, but refusal of victimisation in their discourse.

Class 8: job-market entry marked by a return to education: specifically young people of foreign origin declaring discrimination break off higher education without obtaining a diploma (or degree) or having fallen behind in their studies. A return to education is a way of catching up (with job satisfaction, the wish of having a career, etc.).

Based on these 8 classes, our analysis centres on three major forms of job-market entry pathways. First, a path that gives direct access to a stable job with an open-ended contract (Classes 1, 2, and 3). Second, a path characterised by job-market entry only via precarious contracts, FTCs or temping (Class 5). Lastly, a pathway not leading to job-market entry, i.e. strongly characterised by unemployment and inactivity (Class 7).

### 2.3 An econometric analysis

This is the second stage of our quantitative work. Various econometric analyses have been conducted using the macro-classes. The aim is to identify better the impact of the feeling of discrimination on job-market entry which has been shown up (see annex I, Tables A, B, and C).

To understand the impact on a career path when someone declares having been discriminated against due to origin or colour,<sup>4</sup> we developed three econometric models to estimate probabilities.<sup>5</sup> Three interesting variables are explained by individual characteristics: the probability of following a pathway to obtaining an open-ended contract (OEC – see macro-classes 1, 2, and 3); the probability of taking the pathway to precarious employment (see macro-class 5) and the probability of being on a pathway to no employment (see macro-class 7). The explanatory variables used provide information about individual's schooling (type of diploma/degree, training specialty, reason for stopping to study) on his/her geographic location at the end of their education and on their social origin, via the socio-professional position of the father.

A main explanatory variable is “to have declared discrimination”. This variable may mask an endogenous variable in explaining the variable which interests us here. Indeed, we should consider that individuals having given such information are susceptible to having unobserved individual characteristics that affect both variables together. It is not unreasonable to think that such individual characteristics may affect persons' sensitivity to possible discrimination (and to reporting it). At the same time, they may affect persons' behaviour in the labour market, as well as their career paths. We model both variables simultaneously using a recursive bivariate probit model. To capture the endogeneity of “to having declared discrimination”, we draw on the individual's place of residence at the end of schooling, i.e. whether they live in a “sensitive urban zone” (*zone urbaine sensible* or ZUS) or not<sup>6</sup>.

#### Box 4: The econometric model

The econometric model estimated for each variable of interest is therefore a qualitative, dependent variable with two equations. The error terms of both equations are assumed to follow a bivariate normal distribution (bivariate probit model). The first equation explains the probability of reporting a feeling of discrimination during the person's career and the second estimated the probability of having experienced a particular type of career, for example an employment path which is essentially

<sup>4</sup> The econometric models only concern the population of young people of immigrant origin, as we assume that young people of French origin cannot experience discrimination due to their ethnic origins, their colour, or their race. Interpreting the occurrence of such phenomena for these persons is delicate. In contrast, the question may be raised for young people originating from France's overseas *départements* and territories, though it is meaningless, as it is impossible to identify the colour of these individuals in the data used.

<sup>5</sup> Dichotomy models are used rather than polytomous logit models, as we cannot explicitly assert that individuals see themselves as facing choices of paths clearly defined *a priori* at the beginning of their working lives. Furthermore, we do not have information about the characteristics of possible choices (about diverse paths) to use a conditional logit model. For a presentation of this method see Afsa (2003).

<sup>6</sup> This information plays an instrument role which is meant to be linked to the feeling of discrimination, but *a priori* has no link with a particular pathway. In other research, the authors used the density of persons of foreign origin within the geographical area of the individual (Fougère, Safi, 2008).

characterised by open-ended employment contracts (OECs). The particularity of the model is to include the dependent variable of the first equation in the second equation, making this a recursive model. Let  $Y$  be the variable representing membership of the stated path, with a value of 1 if the young person experiences it, and 0 otherwise. In this model, membership of a path depends on the exogenous characteristics of  $X$  (diploma, speciality, educational experience, social capital, etc.) and a potentially endogenous variable  $T$ , namely the feeling of discrimination which takes a value of 1 if the young person has felt discrimination. The declaration of a feeling of discrimination depends itself on the exogenous characteristics  $Z$  (level of education, social origin, ethnic origin, characteristics of the local environment, etc.).

The model may be written as:

$$\left\{ \begin{array}{l} Y_1^* = X_1\beta_1 + \varepsilon_1 \\ Y_2^* = X_2\beta_2 + \alpha Y_1 + \varepsilon_2 \end{array} \right. \text{with}$$

$$\left( \begin{array}{c} \varepsilon_1 \\ \varepsilon_2 \end{array} \right) \rightarrow N \left[ \left( \begin{array}{c} 0 \\ 0 \end{array} \right), \left( \begin{array}{cc} \sigma_1^2 & \rho\sigma_1\sigma_2 \\ \rho\sigma_1\sigma_2 & \sigma_2^2 \end{array} \right) \right]$$

$Y_1^*$  et  $Y_2^*$  are two latent variables for which there  $Y_1 = I(Y_1^* > 0)$  and  $Y_2 = I(Y_2^* > 0)$  .  
Both equations of the model are estimated simultaneously by maximum likelihood.

#### 2.4 The qualitative approach using an interview survey

Using a sample drawn from the *Génération 98* Survey, semi-structured interviews were conducted with 65 young people of North African origin, in order to collect qualitative data about their educational experience, career guidance, job-market entry, family context, etc. To be sure, these interviews also ask about the “feeling of having been discriminated against”: On what occasions did it occur? How did the individual react? The persons were interviewed face-to-face in 2008, i.e. ten years after having left the educational system.

Overall, these people say that they have been discriminated against in employment or in access to employment. Nevertheless, many biases exist in this declaration: in terms of the difference between employment and access to employment; or persons who have not themselves experienced discrimination but who speak out for their relatives or who reiterate the general discourse surrounding them; in terms of persons who suffered discrimination in the educational system or in their school streaming, etc. Another strong limit of the survey is that young people failing the most in the labour market are under-represented among interviewees.

Individuals declaring themselves to be “victims of discrimination” feel a state of racial inequality, which may indeed be clearly discriminatory though not systematic, as racism is not always accompanied by discrimination. When asked about it, they often want to report this injustice.

Box 5: Levels of diploma in France

- No qualification
- Vocational diploma in high school: “CAP and BEP”
- High school diploma: “Baccalauréat”
- Undergraduate vocational diploma (2 years in higher education): “BTS”
- 2 years in higher education and more: University degree

### 3 Young People of Foreign Origin Facing Discrimination: a Complex Segmentation of Job-Entry Pathways

#### 3.1 Job-entry pathways leading to stable employment

Individuals acceding to stable employment (with open-ended contracts) are grouped together here. They either rapidly accede to such jobs, i.e. in less than a year (53.2% of all cases) or possibly after a long pathway (up to 6 years), including a succession of temporary contracts. French origin and foreign origin young people not declaring discrimination face a median time span of 21 months to obtain an OEC, which rises to 25 months for young people of foreign origin declaring discrimination. Despite this heterogeneity in paths, all converge on a stabilised employment situation after seven years.

In this job-entry pathway, 12% of individuals were of foreign origin. They are therefore less represented in the whole sample (14.8%). Among young people from immigrant families, 16.3% declared having suffered discrimination, which is less than in the overall sample (20.3%). This job-entry pathway has a higher share of men (56.1%) and includes a number of persons with 2-year undergraduate degrees or 5-year graduate qualifications.

If the variables of sex, diploma and social origin obviously have an effect on the probability of following a job-entry pathway leading to stable employment, the fact of declaring having suffered discrimination is significant “other things being equal”. Indeed, young people of foreign origin who have experienced discrimination have a lower probability of acceding to this type of job-entry. This econometric result is corrected for other influential variables such as living in a sensitive urban zone, or being behind in their schooling. A negative effect thus clearly exists, with young people of foreign origin who succeed in obtaining “good” pathways declaring less frequently that they are victims of discrimination (see annex I, table A).

Overall, job-entry pathways in this case may often be considered as being of good quality. Nevertheless, strong inequalities do manifest themselves between young people facing discrimination and others: a subjective decline in socio-professional status, less possibilities of acceding to managerial positions and more part-time work. These situations appear to be particularly unequal. Indeed, there are far fewer higher education graduates among young people of foreign origin declaring discrimination than within the whole population. For the discriminated, expectations relating to the returns on degrees and their ability to ensure a good social position are certainly very high. Yet, it is likely that a share of graduates experiencing discrimination may have open-ended contracts, though these are weakened due to poor quality or low wages. In fact, young people suffering discrimination are more likely than others to declare that their priorities lie “outside work”, thus reflecting perhaps employment situations with no prospects of mobility or making a career.

For 12% of young people on a job-entry pathway, temping seems to provide access to an open-ended contract, bypassing the classical methods of selection. This raises the possibility of pursuing a different type of career, via the acquisition of experience, which also leads to a higher salary. In this class, a bypassing strategy via temping may be crossed with a wage strategy: young people declaring discrimination have a higher median salary than others. The different modes for accessing stable employment do not operate on the same labour market segments and do not concern the same profiles. Certain temping jobs or certain subsidised jobs can act as a springboard to an OEC, for young people of foreign origin (see Graph 2).

The Case of N: rapid entry into an open-ended contract but strong career inequalities

A little more than a year after qualifying with an undergraduate vocational diploma (BTS) as a management assistant, and after difficult job search, N was recruited as a secretary in the company she presently works for. Today, she is responsible for organising IT training and development, on top of her secretarial activities. Her functions have much evolved, but her job status is unchanged, so that her status and salary relating to her new functions are undervalued.

Moreover, her sense of inequality goes back to school. She had to struggle to re-sit a year and hence continue to complete her high school diploma, rather than being streamed towards vocational training (BEP). Getting into a undergraduate vocational diploma programme indicates she made the right decision, which was helped by strong investment by her parents in her studies, despite the financial difficulties and the obligation to pursue her studies locally, etc. She is very interested in further training, has had a skills assessment, but is held back internally within her company.

N's situation combines discrimination in the undervaluation of work done by women with discrimination due to her origins. In fact, she mainly points out the problem of gender discrimination. But she also voices, if understating it somewhat, a feeling of discrimination due to her origins, though regarding racial discrimination. She states, "No... No, I don't think so. At least not in my work, not because I'm called N, even though I know that my first boss was slightly racist and used to proclaim, 'well, we do have an N working for us...'.<sup>7</sup>" She minimises discrimination, though she also faces it in access to housing.

The issue here is thus not access to a job, but the quality of an open-ended contract in terms of career development, correct pay, access to promotion and training, etc.

#### The Case of K: delayed access to an open-ended contract with very tough working conditions

K is of Algerian origin had holds a graduate degree in Spanish. She began working in a subsidised employment "young person's job" (*emploi jeune*) in France's national education system, as a teaching assistant (a job she rather describes as a fixed-term contract). Then she taught in difficult conditions, with a precarious job status. She was subsequently unemployed for two years, during which she clearly felt being discriminated against due to her North African origins, and especially her name. She opted for a genuine career reorientation, and has since progressed in her company, in which she has now held an open-ended contract for three years. Today she manages a business centre. Initially she was subjected to remarks about her hair braids, and she considers she suffered from real harassment (criticism, pressure, etc.). She reported a difficult working environment, with much turnover, tight supervision and "policing". She felt she was badly paid and had no access to training. Her words indicate discrimination: "It's immediately obvious, when you see a newcomer arrive, get responsibilities and be trained directly. It's three years that I've hardly had any training, having to learn everything by myself or simply trying to glean information here and there. It's really not very fair, having to wait three years..."

K's situation appears to bear out real difficulties in getting stable employment, despite her high level of qualification. And access to an OEC comes with a very low quality job. She has reached the conclusion that it is always necessary to struggle!

#### The Case of A: resorting to a strategy of professional mobility to deal with perceived discrimination

A is of North African origin, and has held OEC jobs in the construction industry since obtaining his undergraduate vocational diploma in 1998. The impact of the discrimination he has felt has acted in the long term. He thus explains the problems he had at school and the way he was forced into taking a vocational qualification (BEP) taken at about 15 years old. He managed however to enter a technology high school diploma programme, but still holds the feeling that his strong potential in maths was wasted and that his ambitions were thwarted by the system. He wanted to be an engineer, yet only became a technician.

He felt discrimination directly in his previous employment: he did get the job he had been promised and he was a victim of unequal pay compared to colleagues holding the same job with the same qualifications but who are of French origin. As in his previous job, A is still waiting to be promoted to a managerial position. Faced with such discrimination, A has resigned and rebounded. He lives his North African origin as a handicap that has to be compensated for by being beyond reproach: he says

<sup>7</sup> First name and family name of North African connotation.

it means “turning a fault into a quality”, an expression which actually bears witness to a long process of making discrimination endogenous.

A’s job mobility could, *a priori*, fit in with the logics of a professional market: he has a recognised qualification and transferable skills. If he resigns, it is to find a better job in the same sector. However, the discrimination he has experienced blurs this interpretation, as his resignations have been “driven by company hierarchies” and his job mobility has not given him access to a better status as a manager. His mobility has been imposed on him as much as he has chosen it.

### 3.2. Job-entry paths characterised by precarious work

This group includes persons whose job-entry paths have been much marked by precarious work: repeated fixed-term contracts (FTCs), temping and unemployment that have not led to an open-ended contract seven years after the end of education. 12.5% of French-origin young people are in this situation, as are 15.4% of foreign-origin youths. Among the latter, 28.1% declare having experienced discrimination, which is a far higher rate than 20.7% for the whole of the population. Furthermore, 20.9% of the victims of discrimination are in this situation, compared to only 12.6% for persons not experiencing discrimination.

This group is slightly more feminised than the average, and vocational qualifications usually taken before the end of high school (CAP-BEP) are more strongly represented. The status of their first job held is very different, depending on the declaration of discrimination: temping work concerns 50.8% of the young persons declaring discrimination, as opposed to only 26.3% of those not declaring discrimination, while 53.3% are employed with an FTC, compared to 19.9% of young persons declaring discrimination. In 2005, the rate of unemployment among young people of foreign origin experiencing discrimination was especially high in this group (46.4% as opposed to 28.2% for young people of foreign origin and 20.2% of persons of French origin).

When young people in this class were in employment in 2005, their median wage was generally lower than those of other classes. “Workers” are the most frequently represented socio-professional category here, especially among victims of discrimination (66% as opposed to 36.9% in the overall sample, 32.2% of French-origin youths, compared to 23.4% overall). Non-marketable services are more marked by this type of precarious work than other sectors. Furthermore, young people of foreign origin declaring discrimination find themselves more in this job-entry pathway than do others in industry, the auto sector or construction.

“Other things being equal”, for young people of foreign origin experiencing discrimination raises the probability of finding themselves on a path characterised by precarious work (see annex I, table B). To be sure, the explanatory variables that are commonly used such as holding a diploma, training speciality or living in metropolitan Paris affect this type of job-entry pathway, though without withdrawing the specific effect of victims declaring discrimination.

All individuals in this group state that they are holding a poor job and are looking for something else. Nevertheless, victims of discrimination often feel less that they hold jobs inferior to their skills levels. The search for stability is a priority for these persons, especially for the victims of discrimination. The latter are less satisfied with their situation than the sample as a whole and more worried about their professional outlook. In contrast to temporary work that leads to an open-ended contract, this type of precariousness is imposed, and generates strong dissatisfaction and the search for stability.

The case of C: in the face of discrimination, holding down a job with an unstable status and avoiding confrontation

At the time of the survey, C had finished his contract with the army (an 8-year FTC) and was preparing to change careers, with a project for creating a business as a manager of a mobile telephone company in a difficult Parisian suburb. In the army he had not been assigned work in his specialty in supplies but worked instead in computing. He was nevertheless obliged to pass exams in supplies and



failed. He would like to have stayed in the army, and so his career switch to being self-employed was forced on him.

His professional life manifests both the difficulties faced by young people of working class and North African origin. The son of a construction worker, his schooling was streamed towards technical training at the age of 12: he took a “pre-apprenticeship” and then an apprentice qualification in mechanics. He does not declare himself as coming from a “difficult neighbourhood”, as his family had moved from social housing into a residential area, as home-owners.

C’s experience illuminates the process of endogenisation of discrimination, knowing that he had been particularly affected by acts of racism and discrimination. He remembers precisely the most striking experience he had when he was training as a car mechanic: “at the age of 19, I resigned from the company because of racism. I was always sweeping up the shop after three years, clearing up the rubbish, and I had to find parts lost in waste skips. Above all, in fact, they didn’t even use my name. They called me “Mouloud”, even though it is actually “C”. It wasn’t really that serious, I guess. But the day we received our overalls, mine was marked by “Mouloud”, and on my locker too I had that name. It didn’t bother me that much, I was getting paid at the end of every month, so... But it got worse... and I finally preferred to resign...”

His work experience was clearly characterised by racism which was humiliating. Subsequently in the army, he had the feeling of wasting his time, and did not acquire pension rights (he describes the army as a “monstrous scam”). His feeling of have been employed at below his level of skills is clearly separated from discrimination he encountered. He refused to join the gendarmerie (a police force in France managed by the army) because he “is Arab” and feared having possible problems in his private life, even though he considers the “gendarmes to be very good military personnel”. He has also been frequently subject to discrimination in his daily life (with the police using the familiar “tu” and not the formal “vous” in talking to him, and having his ID checked all the time, etc.).

His attitude is one of resignation, leading him to accept the racist discourse and the arbitrary abuse of authority by the police: “you’ve just got to accept it”, “I’ve never, never, never reacted to those things. People tell me ‘it’s not good’, and I say ‘Yes, it’s not good’. But that’s it. My father taught me to be like that.”

At the same time, C rejects the victimisation which sees discrimination as an alibi for Arab-French and Afro-French who do not get hired, “especially for young people in poor housing estates who do nothing, who don’t integrate and don’t leave their neighbourhoods”. His overall work experience seems to be dominated by a feeling of impotence in the face of discrimination.

### **3.3 Non-integration pathways: long term situations dominated by unemployment and inactivity**

This class draws together job-entry pathways which are strongly marked by non-employment, i.e. unemployment or inactivity. It is the 7<sup>th</sup> class in the typology. After seven years, young people in this group may be in employment, but the median time spent accessing an open-ended contract is very long. Not surprisingly, the rate of unemployment of young people of foreign origin declaring discrimination stood at 66.2% in 2005, compared to 51.7% of young people of foreign origin and 42.3% of those of French origin. Overall, 17.1% of youths of foreign origin were not able to enter employment, and hence find themselves in this class, as compared to 7.8% of youths of French origin.

The feeling of discrimination is strongest in this class, being declared by 25.4% of persons. More than a quarter (27.6%) of young people in this situation of non-employment are of foreign origin. Furthermore, 21% of all persons declaring discrimination are in this class, as opposed to the 8.8% of non-victims of discrimination. Individuals with few skills and women are over-represented in this class, which is made up to 65.4% of women.

Declaring “having experienced discrimination due to origin” did not have a specific impact on the probability of following this path, characterised by unemployment and inactivity. The bi-probit model used shows control variables such as living in metropolitan Paris, living in a sensitive urban zone or being behind at school cover all information and render the specific declaration of discrimination non-

significant (see annex I, table C). These social characteristics (area of residence and schooling) are enough to explain the presence of young persons of foreign origin declaring discrimination in this type of job-entry path.

When in work (in 2005), individuals in this class often hold part-time positions. These jobs belong more to classes of workers or employees. The industries or sectors involved have no specific impact. Individuals in this class, whatever their origin and feeling of discrimination, declare being undervalued in terms of skills levels and poor employment. They are indeed often looking for other work. Logically, they are deeply dissatisfied and worried about their professional futures.

This situation is often highlighted in order to present the difficulties which young persons of foreign origin face in terms of discrimination (low skills levels, repeated or long-term unemployment, inactivity, etc.). This accumulation of difficulties, however, is not the situation of the majority, as 83% of persons of foreign origin are not in this class (even though they are over-represented in it). Also, though the declaration of discrimination is certainly greater than the average (25.4%), it remains low, given that these persons suffer very high levels of unemployment. These statistical data suggest that young people may be adopting a strategy of “refusing victimisation”: discrimination is not mentioned as an explanation of their poor situation in the labour market. The interviews suggest that the link between these persons’ social position and the socio-professional category of their father and mother is more determinant.

The case of S: an accumulation of difficulties and a refusal of victimisation

S is a young woman of North African origin. She has low skills (a BEP as a secretary) and was unemployed at the time of the survey. Job-entry problems led her to being out of work: her first job as a cashier was followed by a succession of precarious jobs, then by a position as an administrative employee in transport, with an OEC. But she lost her job because of illness. When her unemployment benefit ran out, she went on to social assistance. She suffers all the problems preventing job-entry: she is recognised as a “disabled employee” due to her health problems, but does not inform employers of this. She cannot find training suited to her and has no family nor social networks. She feels that “at 32, I have never had a steady job, despite myself... I’m a bit dependent on my parents, who provide me with food and housing...”

She has felt two types of discrimination, concerning her illness, which she prefers to hide, and concerning her North African origin. She recalls an interview with an employee from the public employment agency (ANPE in France): “When I asked [the ANPE employee] for more detailed information, I was asked whether I understood French... For a fraction of a second I asked myself, ‘What do I do? Shall I assault him?’ Finally I took a deep breath and told him I had been to school and spoke French very well... it was infuriating.” These words clearly put S off from accepting other offers of training. She rejects all victimisation due to her origins: “I don’t hide behind racial discrimination”, yet she strongly feels injustice. Faced with the problems of finding a job, her attitude oscillates between passivity, withdrawal and job search.

The case of P: a qualified woman who has withdrawn from the labour market

P is a young woman of North African origin. She has an undergraduate vocational diploma and a third year higher education qualification in “sales”, but has had problems entering the labour market. She is married with three children and fell into inactivity after maternity leave. Her career path has been chaotic: after a period of apprenticeship in the insurance industry, she was unemployed, and then held a subsidised young-person’s job (*emploi jeune*) for four years. She was not able to find an OEC, so she became self-employed. She declares that she took the initiative of breaking off her career, and no longer wants to hold a salaried job.

She did experience discrimination in her very modest family background and in her children’s school. She felt “ethnic discrimination” especially strongly in her job in insurance, because of the “North African connotation of her name”: this sector is not ready to accept “child of immigrant origin”. As a result, she did not re-apply for work in insurance, and so she switched sectors and professions before

stopping to work. P. has a diploma which, in principle, is well recognised on the job market, and she is involved in non-profit activities in her neighbourhood. However, her career path is very clearly weakened by her withdrawal from the labour market, which was encouraged by maternity leave. The discrimination she has experienced has likely affected her path and accentuated her withdrawal into non-employment activities.

## 4. Conclusion

The quantitative and qualitative methods have provided complementary information about how feelings of discrimination affect pathways in the labour market. The typology, the econometric estimates and the interview survey demonstrate the complex effect of declaring having experienced discrimination on job-entry pathways, seven years after leaving the education system. Pathways appear to be segmented at two levels: inter-class and intra-class.

On the one hand, at the inter-class level, the most successful job-entry pathways benefit young persons having experienced discrimination proportionately less. Other things being equal, the feeling of being discriminated against reduces the probability of following these pathways. At the other extreme, these young people are over-represented in pathways most characterised by unemployment, temping and precarious work. Young people of foreign origin facing precarious work or non-employment declare discrimination more frequently. Nevertheless, this level of discrimination is much less pronounced than could have been expected. Given particularly harsh conditions in the labour market, we have been surprised by this result, as we were expecting the descriptive statistics to reveal a very strong declaration of discrimination, or at least far stronger than those found for “good” job-entry pathways, which is not the case. The econometric analyses confirm this surprise: “declaring having been a victim of discrimination” is not significant in entering a pathway characterised by unemployment and inactivity. The econometric results of the bi-probit model thus indicate that control variables such as residence in metropolitan Paris, living in a sensitive urban zone or being behind in schooling cover all information and make the specific declaration of discrimination non-significant. This signifies that there is no direct association between job-entry and the fact of being discriminated against: there is no “automatic declaration of discrimination” by young who are disadvantaged in the labour market. The interviews reinforce and refine this result, by stressing the interviewees’ refusal to support a discourse of discrimination victimisation.

On the other hand, this segmentation of job-entry pathways is finer than is usually presented. Strong inequalities exist at the intra-class level, especially among persons who have succeeded in obtaining stable employment. Within the same classes which provide the best access to a stable job, persons declaring discrimination often hold part time positions and access jobs as managers less frequently. The interviews reveal the complexity of forms of discrimination within pathways: accessing jobs which are indeed with open-ended contracts are of poorer quality in terms of wages and working time, or hold out less possibilities for career and salary advancement within companies. Access to internal or professional labour markets is thus particularly limited for young people of foreign origin having experienced discrimination. It is possible to identify “resistance” strategies based on returning to studies or temping work within persons’ autobiographical accounts.

## References

- Aeberhardt R., Fougère D., Pouget J. and Rathelot R. (2010), “Wages and Employment of French Workers with African Origin”, *Journal of Population Economics*, 23, 881-905.
- Afsa E. C. (2003), « Les modèles logit polytomiques non ordonnés : théorie et applications », Série des documents de travail, méthodologie statistique, n° 0301, INSEE.
- Arrow K.J. (1973), “The theory of discrimination” in O. Ashenfelter & A. Rees (1973), *Discrimination in labor markets*, Princeton University Press, Princeton, New Jersey, pp. 3-33.
- Barron J., Bishop J., 1985, “Extensive Search, Intensive Search and Hiring Costs : New Evidence on Employer Hiring Activity”, *Economic Inquiry*, 23, 363-382.
- Becker G. (1957), *The economics of discrimination*, The University of Chicago Press, First Edition.
- Brown R.S., Moon M. and Zoloth B.S. (1980), "Incorporating Occupational Attainment in Studies of Male/Female Earnings Differentials", *The Journal of Human Resources*, vol.15, 1, 3-28.
- Bruyère M., Lizé L. (2011), “Employment and Career Path Security: What Are the Link?”, *Net.doc*, n°81, Cereq, 22 p.
- Cameron Colin A., Trivedi Pravin K. (2005), “Microeconometrics: Methods and Applications”, Cambridge University Press, New York.
- Coate S., Loury G.C. (1993), “Will affirmative-action policies eliminate negative stereotypes?”, *The American Economic Review*, 83(5), 1220-1240.
- Cottrell, M., Girard B. and Rousset P. (1998), “Forecasting of Curves using a Kohonen classification”, *Journal of Forecasting*, 17, 429-439.
- Doeringer P. B., Piore M. (1971), *Internal Labor Markets and Manpower Analysis*, Heath Lexington Books, 2° ed augmentée, 1985, New York, Armonk Sharpe.
- Fougère D., Safi M. (2008), « The effect of naturalization on immigrant’ employment probability (France, 1968-1999)”, IZA, Discussion paper series, n°3372, February.
- Gazier B., Petit H. (2007), “French labour market segmentation and French labour market policies since the seventies : connecting changes”, *Economies et Sociétés, Série Socio-Economie du travail*, 28, 1027-1056.
- Hellerstein J.K., McInerney M. and Neumark D. (2008), “Spatial Mismatch or Racial Mismatch?”, *Journal of Urban Economics*, 64 (2), 464-479.
- Holzer H. (1987), “Informal job search and black youth unemployment”, *The American Economic Review*, 77 (3), 446-452.
- Holzer H. (1988), « Search method use by unemployment youth », *Journal of Labor Economics*, 6 (1), 1-20.
- Joseph O., Lemièrre S. (2006), “Assessing gender discrimination amongst young people on their arrival into the labour market : analysis of young populations of French and foreign origins” in *Gender Pay Differentials – cross national evidence from micro-data*, edited by B. Mahy, R. Plasman and F. Rycx, Palgrave Macmillan.
- Kohonen T. (2001), “Self-organizing Maps”, 3.ed, *Springer series in information sciences*, 30, Springer verlag, Berlin.
- Lundberg S., Startz R. (1983), “Private Discrimination and Social Intervention in a Competitive Labor Market”, *American Economic Review*, 73(3), 340-347.
- Massoni S., Olteanu M., Rousset P. (2009), “Career-path analysis using optimal matching and self-organizing maps”, *Advances in self-organizing maps*, José C. Principe, Risto Miikkulainen (ed.), 162 p.
- Oja E., Kaski S. (1999), *Kohonen Maps*, Elsevier.

Phelps E. S. (1972), “The statistical Theory of racism and sexism”, *The American Economic review*, LXII, September, 659-61.

Rousset P., Giret J.-F. (2008), “A longitudinal Analysis of Labour Market Data with SOM”, *Encyclopedia of Artificial Intelligence*, Edition Information Science Reference

Villmann T., Herrmann M. and Martinetz T.M. (1997), “Topology preservation in self-organizing feature maps: exact definition and measurement”, *IEEE Transactions on Neural Networks*, 8:2, March, p. 256-266.

## Annex I

Table A: probability of belonging to employment classes characterised by open-ended contracts (classes 1, 2 and 3)

Variables	Parameter	P >  z
<b>Probability of following a pathway to obtaining an open-ended contract</b>		
Men	<b>.4876711</b>	<b>0.001</b>
	<i>Women</i>	<i>réf.</i>
No qualification	<b>.3749229</b>	<b>0.000</b>
No graduated	<b>-.4774042</b>	<b>0.001</b>
Cap – Bep (Vocational high school degree)	<b>-.251111</b>	<b>0.048</b>
	<i>High school diploma (A-level)</i>	<i>réf.</i>
One year higher education	-.0812551	0.519
Two years higher education	.1928801	0.149
Four years higher education	.293565	0.083
Five years higher education	<b>1.267663</b>	<b>0.000</b>
Tertiary field	-.081708	0.350
General field	<b>-.2909446</b>	<b>0.008</b>
	<i>Industrial field</i>	<i>réf.</i>
Studied in an urban area	-.0392908	0.702
Studied in Ile-de-France region	<b>.277271</b>	<b>0.001</b>
Delay during primary school	.0489644	0.507
Stop studies for financial reasons	.0343101	0.742
Stop studies for no accessing to the following class	-.0692326	0.373
Stop studies for achieving the desired level of education	.1111888	0.161
Stop studies for finding a employment	<b>.5190905</b>	<b>0.000</b>
Father's occupation : senior executive, engineer, teacher	-.0682364	0.713
Father's occupation : Technician, middle manager, intermediate	.060077	0.726
Father's occupation : blue collar, worker	.1282929	0.170
Father's occupation : white collar	.112158	0.332
Father's occupation : missing	-.0932306	0.556
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	.2671227	0.071
Housewife who have never worked	-.0042198	0.957
Father work in the public sector	-.0279767	0.800
<b>Felt discriminated</b>	<b>-.7226108</b>	<b>0.001</b>
Integer	-.1917764	0.266
<b>Probability to be felt discriminated</b>		
Men	<b>.3797498</b>	<b>0.000</b>
	<i>Women</i>	<i>réf.</i>
School leaver from higher education	.0347768	0.698
	<i>School leaver from high school</i>	<i>réf.</i>
Graduated at the end of studies	<b>-.2275712</b>	<b>0.043</b>
Delay during primary school	.1555911	0.059
Stop studies for no accessing to the following class	.1732209	0.150
Studied in an urban area	-.075985	0.546
Studied in Ile-de-France region	.1580822	0.103
Youth with a foreign origin (Maghreb)	<b>.9866653</b>	<b>0.000</b>
Lived in a « sensitive urban area »	<b>.3014358</b>	<b>0.002</b>
Father's occupation : senior executive, engineer, teacher	-.346904	0.125
Father's occupation : Technician, middle manager, intermediate	-.3748312	0.115
Father's occupation : blue collar, worker	.0674701	0.524
Father's occupation : white collar	.1941674	0.135
Father's occupation : missing	.2620787	0.111
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	-.0206039	0.903
Housewife who have never worked	.1235392	0.180
Father work in the public sector	-.05394	0.664
Integer	-1.619961	0.000
Athrho	.2714155	0.055
Likelihood value (Log L)	-2391.2908	

Note: bivariate Probit models are used. The reference modality is recorded on the right in italics. The values are for the estimation coefficients of Probit models. Being a man has a positive impact on the probability of belonging to employment classes leading to a OEC, relative to women. Variable coefficients in bold have a significance threshold of less than or equal to 5%. Field: individuals of immigrant origin; or 2001 persons.

Source: « Génération 98 » Survey polling seven years, Céreq, statistics authors

Table B: probability of taking the pathway to precarious employment (class 5).

Variables	Paramètre	P >  z
<b>Probability of taking the pathway to precarious employment</b>		
Men	-.0440769	0.654
	<i>réf.</i>	<i>réf.</i>
	<i>Women</i>	
No qualification	.288456	0.090
No graduated	<b>.3107315</b>	<b>0.045</b>
Cap – Bep (Vocational high school degree)	.2502864	0.107
	<i>High school diploma (A-level)</i>	<i>réf.</i>
One year higher education	.0972437	0.576
Two years higher education	-.3723435	0.060
Four years higher education	.0144519	0.951
Five years higher education	-.3966107	0.159
Tertiary field	.1022185	0.314
General field	.0930811	0.468
	<i>Industrial field</i>	<i>réf.</i>
Studied in an urban area	.0290585	0.822
Studied in Ile-de-France region	<b>-.2928539</b>	<b>0.004</b>
Delay during primary school	.0097076	0.907
Stop studies for financial reasons	-.0895126	0.459
Stop studies for no accessing to the following class	.083097	0.387
Stop studies for achieving the desired level of education	-.0493509	0.593
Stop studies for finding a employment	<b>-.3884801</b>	<b>0.000</b>
Father's occupation : senior executive, engineer, teacher	-.0983211	0.656
Father's occupation : Technician, middle manager, intermediate	.0416371	0.859
Father's occupation : blue collar, worker	-.0160145	0.878
Father's occupation : white collar	-.0338003	0.791
Père profession non déclarée	-.2799948	0.186
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	-.0595485	0.712
Housewife who have never worked	-.0493944	0.594
Father work in the public sector	.1385142	0.228
<b>Felt discriminated</b>	<b>.5851157</b>	<b>0.042</b>
Integer	-1.148966	0.000
<b>Probability to be felt discriminated</b>		
Men	<b>.3808057</b>	<b>0.000</b>
	<i>réf.</i>	<i>réf.</i>
	<i>Women</i>	
School leaver from higher education	.0381378	0.672
	<i>School leaver from high school</i>	<i>réf.</i>
Graduated at the end of studies	<b>-.2311557</b>	<b>0.041</b>
Delay during primary school	<b>.1622114</b>	<b>0.049</b>
Stop studies for no accessing to the following class	.1766876	0.141
Studied in an urban area	-.0604218	0.631
Studied in Ile-de-France region	.1642544	0.087
Youth with a foreign origin (Maghreb)	<b>.9933146</b>	<b>0.000</b>
Lived in a « sensitive urban area »	<b>.2648435</b>	<b>0.005</b>
Father's occupation : senior executive, engineer, teacher	-.3506477	0.116
Father's occupation : Technician, middle manager, intermediate	-.3638172	0.121
Father's occupation : blue collar, worker	.0743448	0.485
Father's occupation : white collar	.1949423	0.134
Father's occupation : missing	.2705634	0.097
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	-.0181912	0.914
Housewife who have never worked	.131446	0.153
Father work in the public sector	-.0502152	0.686
Integer	-1.641292	0.000
Athrho	-.2536952	0.161
Likelihood value (Log L)	-1923.1853	

Note: bivariate Probit models are used. The reference modality is recorded on the right in italics. The values are for the estimation coefficients of Probit models. Being « no graduated » has a positive impact on the probability of belonging to precarious employment classes, with respect to individuals who have completed their studies with High school diploma. Variable coefficients in bold have a significance threshold of less than or equal to 5%. Field: individuals of immigrant origin; or 2001 persons.

Source : « Génération 98 » Survey polling seven years, Céreq, statistics authors

Table C: probability of being on a pathway to no employment (class 7).

Variables	Paramètre	P >  z
<b>Probability of being on a pathway to no employment</b>		
Men	<b>-.4078474</b>	<b>0.000</b>
	<i>Women</i>	<i>réf.</i>
No qualification	<b>1.069315</b>	<b>0.000</b>
No graduated	<b>.672243</b>	<b>0.000</b>
Cap – Bep (Vocational high school degree)	<b>.3855457</b>	<b>0.020</b>
	<i>High school diploma (A-level)</i>	<i>réf.</i>
One year higher education	-.1866746	0.310
Two years higher education	-.1298043	0.538
Four years higher education	-.1270226	0.588
Five years higher education	<b>-.8918934</b>	<b>0.002</b>
Tertiary field	.0294572	0.791
General field	.1853269	0.170
	<i>Industrial field</i>	<i>réf.</i>
Studied in an urban area	.2565777	0.083
Studied in Ile-de-France region	<b>-.2287511</b>	<b>0.030</b>
Delay during primary school	-.1084173	0.246
Stop studies for financial reasons	.0568257	0.642
Stop studies for no accessing to the following class	-.116356	0.260
Stop studies for achieving the desired level of education	.1387949	0.177
Stop studies for finding a employment	<b>-.6645102</b>	<b>0.000</b>
Father's occupation : senior executive, engineer, teacher	<b>.5530979</b>	<b>0.019</b>
Father's occupation : Technician, middle manager, intermediate	-.0430704	0.835
Father's occupation : blue collar, worker	-.0074115	0.945
Father's occupation : white collar	-.0888842	0.534
Père profession non déclarée	<b>.4311422</b>	<b>0.016</b>
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	-.0330367	0.863
Housewife who have never worked	.1416291	0.165
Father work in the public sector	.0577217	0.635
<b>Felt discriminated</b>	<b>.2824787</b>	<b>0.348</b>
Integer	<b>-1.364078</b>	<b>0.000</b>
<b>Probability to be felt discriminated</b>		
Men	<b>.3771189</b>	<b>0.000</b>
	<i>Women</i>	<i>réf.</i>
School leaver from higher education	.0378291	0.677
	<i>School leaver from high school</i>	<i>réf.</i>
Graduated at the end of studies	<b>-.235623</b>	<b>0.037</b>
Delay during primary school	.1570281	0.057
Stop studies for no accessing to the following class	.1726163	0.153
Studied in an urban area	-.0621583	0.625
Studied in Ile-de-France region	.170046	0.076
Youth with a foreign origin (Maghreb)	<b>.9904857</b>	<b>0.000</b>
Lived in a « sensitive urban area »	<b>.2812617</b>	<b>0.010</b>
Father's occupation : senior executive, engineer, teacher	-.3527816	0.116
Father's occupation : Technician, middle manager, intermediate	-.3855501	0.108
Father's occupation : blue collar, worker	.0665504	0.532
Father's occupation : white collar	.1938711	0.139
Father's occupation : missing	.2641232	0.106
	<i>Father's occupation : others categories</i>	<i>réf.</i>
Father was unemployed at the end of the studies	-.0231375	0.891
Housewife who have never worked	.1245259	0.179
Father work in the public sector	-.0542614	0.667
Integer	-1.630918	0.000
Athrho	-.0620118	0.725
Likelihood value (Log L)	-1883.881	

Note: bivariate Probit models are used. The reference modality is recorded on the right in italics. The values are for the estimation coefficients of Probit models. Completing education in Ile-de-France/metropolitan Paris has a negative impact on belonging to classes characterised by a situation of non-employment (unemployment of inactivity) with respect to individuals who have completed their studies in another region. The coefficients in bold have significance thresholds of less than or equal to 5%. Field: individuals of immigrant origin; or 2001 persons.

Source: « Génération 98 » Survey polling seven years, Céreq, statistics authors.



Table D : Features of the three populations

	Youth with french origin	Youth with a foreign origin		Total
		Maghreb	Total	
Share of women	49,3	49,7	46,8	49
Education level				
<i>Share of youth from high school</i>	60,1	83,6	76,6	62,5
<i>Share of youth from higher education</i>	39,9	16,4	23,4	37,5
<i>Share of youth with no qualification</i>	6,5	17,5	15,8	7,8
Reason for stopping studies				
<i>Refused in the following class</i>	9,5	13,6	13,4	10,1
<i>Financial reasons</i>	20	27,3	23,3	20,5
<i>Achieved the desired level of education</i>	49	25,5	33,2	46,7
<i>Found a job</i>	27,4	20,4	24	26,9
Social origin (in 1998) :				
<i>Share father's occupation : senior executive</i>	16	3,9	6,6	14,6
<i>Share father's occupation : Technician, middle manager, intermediate</i>	8,6	2,7	4,4	8
<i>Share father's occupation : blue collar, worker</i>	23,9	30,4	30,3	19,5
<i>Share father's occupation : white collar</i>	17,6	14	17,4	22,9
<i>Share housewife who have never worked</i>	9,1	57,4	36,6	13,2
Share of youth living in a « sensitive urban area » in 1998	3,7	30,6	20,8	6.2
Share of youth declaring a discrimination	-	37	20,7	-
Employment rate				
<i>in 2001</i>	90,5	78,6	82,9	89,4
<i>in 2003</i>	91,5	75	81,5	90
<i>in 2005</i>	91,8	73,3	80,8	90.2
Unemployment rate				
<i>in 2001</i>	9,5	21,4	17,1	10,6
<i>in 2003</i>	8,5	25	18,5	10
<i>in 2005</i>	8,2	26,7	19,2	9.8
Time for accessing to OEC ( median in month)	28	46	45	29
Share of individuals in the sample	85,2	5,5 (37,3)	14,8	-
Has known a pathway characterized by				
<i>An Open ended contract</i>	66,7	43,5	52,2	64,6
<i>A Precarious work</i>	12,5	18,8	15,4	12,9
<i>Unemployment / Out of the labour force</i>	7,8	21,6	17,1	9.2

Has known a discrimination and a pathway characterized by				
<i>An Open ended contract</i>	-	31,5	16,3	
<i>A Precarious work</i>	-	47,1	28,1	
<i>Unemployment / Out of the labour force</i>	-	38,7	25,4	

*Note:* Young people with foreign origin are 15%. Three region are identified : Souht of Europe (Italy, Spain, Portugal), North Africa called Maghreb (Tunisia, Algeria, Morocco) and a whole group of other countries. The first group represents 33% of youth, the second one has a contribution of 37% and the last one 29%.

Among youth who reported discrimination, the youth with a north african origin represent 67% of the population "discriminated". The young people from southern Europe are that 4.5% to refer to discrimination, when young people from North Africa are at 37%.

Reading: women account for 49.3% of young persons of French origin.

*Source:* « Génération 98 » Survey polling seven years, Céreq, statistics authors