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The migration of unskilled youth: Is there any wage gain?

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THE MIGRATION OF UNSKILLED YOUTH: Is There Any Wage Gain?

Cécile Détang-Dessendre, Carine Drapier and Hubert Jayet*

1 Introduction

Over the life cycle, entry into labour force is the period where geographic mobility is highest. Moreover, it is mainly driven by employment motives, while elder people often migrate in search of better amenities (Van Ommeren et alii, 1996; Détang-Dessendre et alii, 1999 ; Zax, 1991). Thus, young labour force entrants are an interesting population for the analysis of the links between job markets and migrations. These links can be analysed from several points of view. One may choose to consider employment and migration choices as the outcome of human capital investment decisions (Sjaastad, 1962 ; Greenwood, 1975, 1985). Alternatively, one may be interested in the effects of differences among local labour markets with respect to wages, unemployment, job mobility (Kriaa et Plassard, 1997). We can also examine how firms hiring and labour force management policies induce migrations.

This paper starts from the idea that migration by labour force entrants is the outcome of a search process for jobs. A typical job search process implies a succession of job offers, each offer characterised by a wage drawn from a random distribution (Lippman and McCall, 1976). The searcher's strategy is characterised by a reservation wage, the first offer exceeding it being accepted. The spatial dimension of these search processes is often neglected. A labour force entrant may migrate because, before looking for jobs, he chooses to locate on the labour market wherein returns to search are highest. Alternatively, he may stay at his origin place when searching, looking for jobs on several labour markets. He migrates if the first acceptable offer is not a local one.

Whenever the agent moves before or after searching, spatial search implies differences between jobs accepted by migrants and non migrants. The agent does not face the same wage distribution nor the same search costs when he looks for jobs located outside his local labour market. He changes his reservation wages accordingly. Then, one may expect wages distributions to differ between migrants and non migrants. In section 2, we analyse the main factors that are behind these differences.

* Cécile Détang-Dessendre, INRA, Dijon, **Error! Bookmark not defined.** ; Carine Drapier and Hubert Jayet, MEDEE, Lille University of Science and Technology, **Error! Bookmark not defined.**. We acknowledge an important debt to the CEREQ (Centre for Research on Employment and Skills). They gave us the data used in this

Therefore, an important question is: Are there differences between wages outcomes of migrants and non migrants? If there are, it is possible to explain them on the basis of search processes with a spatial dimension? We deal with this question in section 3, comparing wage equations between migrants and non migrants. However, in econometric analysis, we must recognise that a migrant differs from an immobile entrant not only because he has found better opportunities elsewhere than locally. He can also differ because he does not face the same opportunities, at his origin place and abroad. Therefore, migrants may be self-selected, an issue that can be analysed using the Roy model (Borjas et al, 1991). From an econometric point of view this leads to the two-step Heckman procedure (Heckman, 1979). The results of estimation are presented in section 4. After a brief comment on the decision to migrate, we insist on the impact of migration on wage. We show two complementary selection effects: a positive selection effect on migrants and a negative one on non-migrants.

Section 2. Job search processes in space.

In the typical job search model (Lippman and McCall, 1976), an agent looks for opportunities characterised by the expected value of the wages flow over all future periods, v . At period t , the agent entails a search cost equal to c_t and draws a random offer in the cumulative distribution $F_t(v)$. His optimal strategy is to accept the offer if v exceeds a reservation value V_{t+1} , equal to the value of continuing search at least at period $t + 1$. The series of reservation values is recursively determined using the Bellman equation,

$$V_t = -c_t + \int_0^{+\infty} \max(v, V_{t+1}) dF_t(v) \quad (1)$$

A particular case of (1) is when the lifetime horizon is infinite and all periods are identical. Then, $c_t = c$, $F_t = F$, and $V_t = V = b^{-1}\bar{w}$, where b is the discount factor and \bar{w} is the reservation wage, *id est* the minimal accepted wage. The distribution of accepted wages is $G(w) = [1 - F(\bar{w})]^{-1}[F(w) - F(\bar{w})]$. All changes implying a higher return from future search, for example lower search costs, also imply a higher reservation wage and a higher mean accepted wage. The model may be easily generalised to a spatial setting, with searchers moving between local labour markets. When migration is speculative, the agent moves before search. Each local labour market, n , is characterised by the local search cost c_t^n and the local distribution of wage offers, $F_t^n(v)$, hence by the local value of search, V_t^n . The agent chooses to locate where the net returns from search, $V_t^n - m_n$ (where m_n is the migration cost to n), is highest. On the contrary, the agent may stay on at his origin place until he has received an acceptable opportunity. The global search cost is the sum of all search costs on each local market, $c_t = \sum_n c_t^n$. The global distribution of wage offers combines all

local distributions, $F_i(v) = 1 - \prod_n (1 - F_i^n(v - m_n))$. There is only one global reservation value, V_t . The agent accepts offer with a value net of migration costs exceeding the global reservation value, $v_n - m_n > V_t^n$. There is contracted migration when the accepted offer is not located at the agent's origin.

Therefore, whether it leads to speculative or contracted migration, at first, spatial search impacts on reservation wages and on accepted distribution of wages offers. What can we tell about this impact? Can we compare migrants and non migrants accepted wages?

Spatial search implies higher reservation wages

At first, when search and migration result from rational decisions, spatial search implies accepted jobs with higher wages. All the arguments leading to this conclusion are variants of the fact that a rational agent would not accept to migrate were he better off staying than moving. When migration is speculative, considering new distant labour markets is valuable because search displays higher returns on these markets. These higher returns may stem from lower local search costs or a better distribution of local wages. The agent migrates because the difference between local values of continuing search is high enough for covering migration costs. But the local value of continuing search equals the local reservation value of accepted jobs. Thus, the reservation wage of a speculative migrant at his destination is higher than at his origin.

When migration is contracted, simultaneous search on more labour markets implies higher search costs, which normally imply a lower value of search and a lower reservation wage. Were the distribution of wage offers unchanged, the agent would search at his origin place only. But, with simultaneous search, the agent receives more wage offers and their distribution shifts toward higher wages. The modified distribution of wage offers has a positive effect on the value of search. Simultaneous search is accepted because this positive effect overrides the negative effect of the higher search costs (Herzog & alii, 1985).

But migrants may have lower wages than stayers

The fact that spatial search implies accepted jobs with higher wages does not imply that migrants have higher wages than stayers. It would be true if all workers were identical, whether they migrate or not. But they are not, Moreover, it is well known that a central assumption of search models, the existence of a non degenerated distribution of wage offers, cannot hold with an homogenous population of searchers. And, as soon as workers are heterogeneous, migrants and non migrants self-select.

The consequences of self selection have been examined by various others using the Roy model, an outstanding contribution being by Borjas and alii (1991). To illustrate keeping things simple, let us

assume that all searchers face the same migrations costs and the same distributions of wage offers both locally and abroad. Only differences in search costs induce differences in reservation and accepted wages. Migrants face a lower search cost abroad than at home, hence a positive difference between values of search abroad and at home, large enough for covering migration costs. The opposite holds true for non migrants.

When search costs at home, c^h , and abroad, c^a , are independently distributed among agents, or negatively correlated, migrants face higher search costs than non migrants at home, and lower search costs than non migrants abroad. Therefore, were they staying at home, migrants would accept lower wages at home than non migrants; and, were they moving, non migrants would accept lower wages at home than migrants. The latter are negatively selected at their origin and positively selected at their destination and, as in the homogenous case, migrants earn higher wages than non migrants.

This is no longer true with search costs at home and abroad positively correlated. Higher search costs at home do imply higher search costs abroad. When the higher the search cost at home, c^h , the higher the difference between search costs, $c^h - c^a$, migrants have high search costs both at home and abroad. Therefore, they are negatively selected and accept lower wages than non migrants, both at home and abroad. Conversely, when the higher the search cost at home, c^h , the lower the difference between search costs, $c^h - c^a$, migrants have low search costs both at home and abroad. They are positively selected and accept higher wages than non migrants, both at home and abroad.

Besides intrinsic differences among individual, the search process itself may be a major source of heterogeneity and then of self-selection. As search is going on, agents revise their expectations and the costs they face evolve. After a long duration of unsuccessful search at home, a searcher expects the distribution of local job offers to worsen. Moreover, financial constraints may tighten, implying higher search costs. The value of continuing search at home and the reservation wage move downward. If the searcher was not considering search abroad before, he will accept it in the future. In this context, long search duration imply negative self selection of migrants.

Therefore, the links between migrants and non migrants wages of previous searchers cannot be analysed without controlling self selection effects.

Section 3. Measuring the impact of migration on wage

An empirical framework for measuring these effects thus begins with the specification of the wage equation. In addition to the classical determinants likely to influence wage such as gender, marital status, educational level and job characteristics, we introduce the notion of migration:

$$W = X\mathbf{b} + \mathbf{a}\mathbf{M} + u \quad (1)$$

where W is the log-wage, X the set of explanatory variables and M a dummy variable indicating whether or not the individual migrated after leaving school; u is the stochastic error term, assumed to be normally distributed with zero mean and variance $M^* = Y\mathbf{g} + e$.

Treatment of the selection bias.

The question is: does \mathbf{a} measure the impact of migration? If the decision to migrate and the level of wage are correlated, the least square estimates of \mathbf{a} will overestimate the migration effect (Greene, 1993). We therefore model migration decision as:

$$\begin{cases} M = 1 \text{ if } M^* = Y\mathbf{g} + e > 0 \\ M = 0 \text{ if } M^* = Y\mathbf{g} + e \leq 0 \end{cases} \quad (2)$$

$$\text{and } M^* = Y\mathbf{g} + e \quad (3)$$

where M is equal to 1 if the individual migrates and 0 otherwise and Y is a set of explanatory variables for the migration benefit M^* , which is latent.

Assuming that u and e are bivariate normally distributed with r the correlation,

$$\begin{aligned} E(W/M=1) &= X\mathbf{b} + \mathbf{a} + E(u/M=1) \\ E(W/M=1) &= X\mathbf{b} + \mathbf{a} + E(u/e > -Y\mathbf{g}) = X\mathbf{b} + \mathbf{a} + \mathbf{r}\mathbf{s}_u \frac{\mathbf{f}(Y\mathbf{g})}{\Phi(Y\mathbf{g})} \\ E(W/M=0) &= X\mathbf{b} - \mathbf{r}\mathbf{s}_u \frac{\mathbf{f}(Y\mathbf{g})}{1 - (\Phi(Y\mathbf{g}))} \end{aligned}$$

where \mathbf{f} and Φ are, respectively, the density and the distribution function.

We use the Heckman two-step estimation procedure (Heckman, 1979) which is as follows:

- the probit estimation of (3) provides estimations for \mathbf{g} and $\mathbf{f}(Y\hat{\mathbf{g}})$ and $\Phi(Y\hat{\mathbf{g}})$ can therefore be computed.
- the OLS estimation of $W = X\mathbf{b} + \mathbf{a}M + \mathbf{r}\mathbf{s}_u \mathbf{l}(Y\hat{\mathbf{g}}) + \mathbf{e}$ with \mathbf{l} the inverse of Mill's ratio, provides consistent estimators for \mathbf{b} and $\mathbf{r}\mathbf{s}_u$.

As the estimated standard errors for the coefficients are not consistent estimates, we compute heteroscedastic consistent standard errors using the formulas suggested by White (1980).

By estimating a common wage equation, we implicitly constrain the coefficients to be equal for migrants and non-migrants alike. We have therefore estimated two wage equations, taking into account the selection bias: one for migrants and one for non-migrants.

The data and estimated models

Our data is derived from a 1994 survey of young French persons in employment who had left school 4 years previously with a low level of educational level¹. Information was collected via an interview questionnaire. In addition to socio-economic information (parents' occupation, marital status, number of children, etc.), the survey covers education and gives details of the previous occupation (wage, type of contract, sector, function in the company, etc.). It also includes recall questions covering these 4 years and allowing us to build up some historical variables on employment status (experience, etc.). Our sample consists of 7188 individuals.

We consider as migrant an individual declaring that he or she had moved from one French *département*² to another at least once during the previous 4 years. It is reasonable to suppose that these migrants will have changed their local labour market, although "border" effects will of course exist in certain instances.

Wage determinants may be divided into four categories: personal characteristics such as sex and age; "human capital", i.e. migration, educational level and professional experience; job characteristics, i.e. skill level, function, work contract and weekly work time; company characteristics, i.e. sector, size and location. The decision to migrate is essentially governed by human capital (educational level and driving licence) and personal characteristics (sex, marital status, parents' job situation). We also introduce variables to take into account wishes concerning job (wish to change job, job search).

Section 4: Empirical results: Wage determinants

In our sample, 43% of those interviewed changed residence but less than half (19% of the total sample) migrated over a long distance. Our sample covers a generally low educational level but a distinction may be drawn between two principal categories: persons possessing a professional qualification, i.e. vocational training certificate (CAP), technical education certificate (BEP), and those without professional qualifications. The former category accounts for 75% of the sample. In view of the fact that women tend to be "better educated" than men in France, men are over-represented in the sample (69% of the total sample). In 1994, 57% of the interviewees were single. With regard to the parents of these young persons: 68% have fathers in employment, 51% have mothers in employment; less than 5% have unemployed fathers or mothers; fathers are retired in 16% of cases, mothers inactive in 37% of cases. For the sample as a whole, the average wage is 5938 FF. The difference between migrant and non-migrant wage is very small and is not significant: migrants earn on average 1.7% more than non-migrants³.

Comments on the decision to migrate

¹. Individuals dropping out during the final year of a short vocational cycle, or in the 6th form (or earlier) of a secondary school

² A *département* is an administrative geographic subdivision, roughly equivalent to the British *county*. In France, there are about 100 *départements*

³ Complementary descriptive statistics on explanatory variables in the Appendix.

In this sample of persons with low educational level, the difference between those with and those without professional certificates remains unclear and even not in the usual way. There is, however, a weak effect suggesting that those with certificates are less likely to migrate than others. We may hypothesise that, while all seek jobs in the same type of labour market, it is easier for the former to find employment.

Marital status does not have a significant effect. The population is certainly too young for the emergence of such a phenomenon. On the other hand, the parents' job situation seems to have a great impact on the decision to migrate, particularly with respect to two situations concerning the father. An individual whose father is unemployed is more likely to migrate (reference: father employed) while an individual whose father is retired is more likely to be immobile. Income may provide an explanation for this phenomenon. When the father is unemployed, the son/daughter will logically wish to find a job and leave the family as soon as possible. On the other hand, retired persons in France enjoy a fixed income and are in a position to support their children.

Wage equation: general comments

The comparison of the factors influencing the wage of migrants and non-migrants reveals many similarities but also some interesting differences. Globally, there is no major opposite effect, but it seems that the wage of non-migrants is sensitive to more variables than that of migrants. As usual, men earn more than women irrespective of whether they migrate or not; the oldest non-migrants earn more than the youngest but the average is not at the same age: for the migrants, it is the oldest that are distinguishable with higher wage while for the non-migrants, it is the youngest that are with lower wage.

Wage and human capital: the specific effect of migration

According to the hypothesis of the independence of migration and wage, migration has no significant effect on wage. The estimation of the wage equation on the entire sample, introducing migration and λ (to measure the endogenous selection) shows that the situation is more complex. The direct impact of migration is significantly negative while the endogenous selection effect is positive. It seems that, at least at the outset, migration is not a profitable investment. Nevertheless, it should be remembered that these persons migrated at the most 4 years ago, and it is therefore impossible, on the strength of these results, to draw conclusions as to the migration effect over time. This effect is compensated by an endogenous selection between migrants and non-migrants.

Table 1: equation wage for migrants, non-migrants and for the sample as a whole.

Estimated	Migrants		Non-migrants		Total sample		
	Variable	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
C		3.69	104.29	3.78	387.01	3.78	451.10
MIGL2						-0.12	-5.55
SEX		0.04	4.93	0.04	10.71	0.04	11.71
MARIT		0.01	0.98	0.02	6.45	0.02	6.25
AGEB1		0.00	0.12	0.01	3.49	0.01	3.23
AGEB2		0.00	-0.75	0.00	1.64	0.00	1.00
AGEB4		-0.02	-2.12	0.00	-0.23	0.00	-1.15
HDIP1		-0.02	-1.52	-0.02	-4.17	-0.02	-4.39
HDIP2		0.00	0.21	-0.02	-2.38	-0.01	-2.08
HDIP3		0.00	0.10	-0.01	-1.60	0.00	-1.40
HDIP4		0.01	1.66	-0.01	-2.92	-0.01	-1.98
HDIP6		-0.01	-0.99	-0.01	-2.82	-0.01	-2.87
NAPB1		0.01	0.21	-0.01	-0.65	-0.01	-0.59
NAPB2		0.00	-0.41	-0.02	-2.71	-0.01	-2.66
NAPB4		0.00	-0.05	-0.01	-3.56	-0.01	-3.27
NAPB5		-0.03	-2.90	-0.03	-6.29	-0.03	-7.05
NAPB6		-0.04	-3.13	-0.04	-6.24	-0.04	-7.09
NAPB7		-0.03	-2.01	-0.03	-3.89	-0.03	-4.63
NAPB8		-0.01	-0.71	0.00	0.25	0.00	-0.37
STAT		-0.02	-1.30	-0.02	-3.35	-0.02	-3.75
CATTR2		0.00	-0.57	0.00	-0.68	0.00	-0.75
CATTR3		-0.02	-1.31	-0.01	-2.92	-0.01	-3.24
CATTR4		-0.01	-1.41	-0.02	-4.42	-0.02	-4.65
CATTR5		-0.02	-1.90	-0.03	-6.53	-0.03	-6.77
CATTR6		0.04	3.50	0.04	6.67	0.04	7.74
TAIL2		0.03	4.83	0.02	5.47	0.02	6.93
TAIL3		0.05	6.78	0.04	10.46	0.04	12.39
TAIL4		0.08	6.86	0.07	13.48	0.07	15.15
TAIL5		0.04	2.78	0.03	4.82	0.03	5.63
CONT2		-0.03	-3.11	-0.03	-6.65	-0.03	-7.40
CONT3		-0.05	-3.71	-0.01	-2.05	-0.02	-3.30
CONT4		-0.13	-8.99	-0.10	-13.93	-0.10	-16.46
CONT5		-0.03	-1.62	-0.01	-1.40	-0.01	-1.87
POSB1		-0.05	-4.78	-0.04	-7.78	-0.04	-9.26
POSB2		-0.03	-3.71	-0.02	-6.76	-0.02	-7.97
POSB4		0.00	0.34	-0.02	-3.21	-0.01	-2.95
POSB5		0.05	3.62	0.02	2.34	0.03	3.68
POSB6		-0.01	-1.12	0.00	-0.72	-0.01	-1.17
NBHB1		0.05	3.14	0.04	5.10	0.04	5.93
NBHB2		0.01	1.24	0.01	1.27	0.01	1.63
NBHB4		0.00	0.29	0.00	-0.22	0.00	-0.16
NBHB5		-0.07	-6.52	-0.05	-6.24	-0.05	-8.23
NBHB6		-0.10	-3.00	-0.08	-4.38	-0.08	-5.19
NBHB7		-0.16	-6.24	-0.11	-9.56	-0.12	-11.37
FONCB2		-0.01	-0.87	0.00	1.05	0.00	0.82
FONCB3		-0.07	-4.07	-0.03	-4.75	-0.03	-5.89
FONCB4		0.00	-0.21	0.01	1.22	0.01	1.15
FONCB5		-0.01	-0.79	0.02	1.97	0.01	1.70
FONCB6		-0.01	-0.79	0.02	2.87	0.01	2.45
FONCB7		0.00	0.20	0.02	3.22	0.02	3.14
FONCB8		0.01	0.98	0.01	1.84	0.01	2.16
ANC		0.0002	1.07	0.0004	3.82	0.0003	3.97

@MILLS	0.05	2.31	-0.08	-4.63	0.07	5.73
N	1337		5851		7188	

Description of the variables in Appendix

The estimation of two wage equations helps to explain the phenomenon. First, the wage difference between migrants and non-migrants can be observed through the constant term. All other variables being equal to zero, the predicted wage for a migrant is 4897 FF as against 6025 FF for a non-migrant. Second, It seems that we have two complementary effects. A positive selection effect appears on potential migrants, their characteristics predisposing them to obtain a higher wage. At the same time, a negative selection effect emerges on non-migrants. People who refuse as a matter of course to migrate receive a lower wage than other.

The other dimension of human capital introduced in the model concerns knowledge acquired from education and from employment. The higher the educational level the more the non-migrant earns. In contrast, the impact of educational level is not significant for migrants. This is a somewhat surprising finding in the light of classical results. An explanation could be the narrow educational level spread in our sample. Once again, on-the-job experience (time spent in the present job) increases the non-migrant wage (but not the migrant wage) significantly.

The hypothesis to the effect that an individual needs time to capitalise on human capital would repay further exploration and testing.

Wage and job characteristics

The type of work contract binding employer and employee has a classically significant and important impact on wage irrespective of whether or not migration takes place⁴. People in permanent employment enjoy a higher wage than all other categories. In temporary employment, the lowest wage is to be found in so-called “assisted” jobs, i.e. benefiting from public assistance or funds. For migrants and non-migrants alike, wage levels reflect job qualifications in accordance with a well-established gradient: unskilled workers/skilled workers/intermediate categories.

The number of hours worked by week varies from one person to another and the wage estimation used by us corresponds to the equivalent full-time work (39-hour week). We have taken as our basis the hours of work actually declared by the individual and not the time mentioned on the pay slip. If overtime, i.e. hours worked in excess of 39 hours a week, were really paid at a higher rate (as it should be according to the law) we would expect to see longer working hours reflected in a higher full-time wage. But this is not the case. After 46 hours per week (more than 9 hours per day for a 5-day week), wage levels significantly decrease. This phenomenon seems to be particularly pronounced in the case of migrants.

Wage and firm characteristics

⁴ Seasonal workers are the only exception to the rule. We hypothesise that in migrants, jobs connected with the tourist industry are over-represented and these jobs are known to be very poorly paid.

Wage levels are higher in industry than in all other sectors, especially the service sector, for migrants and for non-migrants. The size effect is fairly pronounced in all cases: the larger the company the higher the wage.

We distinguish work areas on an urban-periurban-rural gradient. It is known that wages are lower in rural than in urban areas. The estimation brings out an interesting point: wage differences between different areas are higher for non-migrants than for migrants. For the former, those who work in urban and periurban areas are the best paid. The further their place of work from urban areas, the less they are paid. For the latter, the only significant fact is the lower wage obtained when people work in a “remote” rural area. It seems that when people migrate to work in a rural area, they obtain better wages than “native” workers⁵. We hypothesise that, in such cases, companies pay to attract workers to those areas.

5 Conclusion

The main purpose of this paper is to analyse the impact of migration on wage for French unskilled youth. The issue is considered from a search-theoretic perspective and we take into account the possibility of self-selection. The first results we present show a negative direct impact of migration on wage and positive auto-selection effect on migration. In fact, there are two complementary effects: a positive selection effect in earnings of migrants and a negative selection effect in earning of non-migrants.

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⁵ This term is not to be taken in a literal sense.

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Wage equation: list of explanatory variables

C	Constant	TAIL3	50–499 employees
MIG	Migrated	TAIL4	500 employees and more
SEX	Male	CONT1 (REF)	Permanent contract (include civil servants)
MARIT	Living maritally – yes	CONT2	Fixed-term contract
AGEB1	Year of birth: 1969 or before	CONT3	Seasonal worker, temporary worker
AGEB2	Year of birth 1970	CONT4	Special professional “integration” contracts
AGEb3 (REF)	Year of birth 1971	CONT5	Without contract
AGEB4	Year of birth 1972 and after	POSB1 (REF)	Unskilled worker
HDIP1 (REF)	Without diploma	POSB2	Semi-skilled worker
HDIP2	CEP-BEPC (basic school leaving qual.)	POSB3	Skilled worker
HDIP3	CAP-BEP (apprenticeship)	POSB4	Employee
HDIP4	CAP (vocational training qual.)	POSB5	Supervisor, middle management
HDIP5	BEP (certificate of techn. education	POSB6	Other
HDIP6	Diploma unknown	NBHB1 (REF)	Working week: 20 hours
NAPB1	Agriculture	NBHB2	21-38 hours
NAPB2	Agrifood industry	NBHB3	39 hours
NAPB3 (REF)	Industry	NBHB4	40-45 hours
NAPB4	Building, civil engineering	NBHB5	46-50 hours
NAPB5	Commerce	NBHB6	51-55 hours
NAPB6	Service for private individuals	NBHB7	56-60 hours
NAPB7	Administration, education, health	FONCB1(REF)	Production
NAPB8	Service to companies	FONCB2	Maintenance
STAT	Employee in private sector=1 (if not=0)	FONCB3	Upkeep
CATTR1 (REF)	Place of work: Urban pole	FONCB4	Transport, warehousing
CATTR2	Periurban	FONCB5	Secretariat
CATTR3	Rural – slight urban influence	FONCB6	Commerce
CATTR4	Rural pole and periphery	FONCB7	Management
CATTR5	Remote rural area	FONCB8	Other

CATTR6	Place of work unknown		Time spent in previous employment (months)
TAIL1 (REF)	Size of company: 1-9 employees	ANC @MILLS	Inverse of Mills ratio
TAIL2	10-49 employees		

Migration equation: list of explanatory variables

C	Constant
SEX	Male
MARIT	Living maritally – yes
AGEB1	Year of birth: 1969 or before
AGEB2	Year of birth 1970
AGEB3	Year of birth 1971
AGEB4	Year of birth 1972 and after
HDIP1	Without diploma
HDIP2	CEP-BEPC (basic school leaving qual.)
HDIP3	CAP-BEP (apprenticeship)
HDIP4	CAP (vocational training qual.)
HDIP5	BEP (certificate of techn. education)
HDIP6	Diploma unknown
NENF	Children yes
REMP	Declaration: seeking job
JMET	Declaration: wish to change company and/or job
SPERB1(REF)	Father employed
SPERB2	Father unemployed
SPERB3	Father inactive
SPERB4	Father retired
SPERB5	Unknown or inapplicable (deceased)
SMERB1 (REF)	Mother employed
SMERB2	Mother unemployed
SMERB3	Mother inactive
SMERB4	Mother retired
SMERB5	Unknown or inapplicable (deceased)
SMAR1 (REF)	Without spouse
SMAR2	Spouse employed
SMAR3	Spouse unemployed
SMAR4	Spouse retired
SMAR5	Spouse's situation unknown
PERM	Driving licence