

# Duration dependence in Flemish unemployment data

July 2010

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HIVA-K.U.Leuven

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Een onderzoek in opdracht van de Vlaamse minister van Financiën, Begroting, Werk, Ruimtelijke Ordening en Sport, in het kader van het VIONA-onderzoeksprogramma

<p>Deze publicatie kwam tot stand met steun van het <b>Europees Sociaal Fonds</b>. Het ESF stelt middelen ter beschikking voor initiatieven die bijdragen tot meer en betere jobs voor meer mensen.</p> <p>Ontdek de werking in Vlaanderen via <a href="http://www.esf-agentschap.be">www.esf-agentschap.be</a>.</p>	<p><b>Kernthema's ESF 2007-2013</b></p> <ul style="list-style-type: none"><li> Talenten activeren</li><li> Arbeidskansen geven</li><li> Ondernemen met mensen</li></ul>
 <p><b>ESF investeert in jouw toekomst.</b></p>	 

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**Table of contents**

July 2010.....	III
Table of contents .....	V
1. Introduction.....	6
2. Literature .....	7
3. Methodology.....	8
3.1 Distribution of the hazard function.....	8
3.2 Distribution of the correction for unobserved heterogeneity .....	8
3.3 Grouped duration data proportional hazards model with gamma correction for unobserved heterogeneity.....	10
4. Institutional features and data description .....	12
4.1 Institutional features .....	12
4.2 The data .....	12
5. Estimation results .....	21
5.1 Duration dependence and unobserved heterogeneity.....	21
5.2 Individual characteristics .....	25
5.3 Business cycle.....	25
6. Policy implications and conclusions .....	26
Appendix I Database description .....	29
Source .....	29
Sample .....	29
Variables .....	29
Appendix II Estimation results.....	31
Bibliography .....	61

## 1. Introduction

The persistence of unemployment has been a point of concern of the European labour market policy for years. Long-term unemployment has a negative impact on the unemployed individual, the group of unemployed and the society as a whole. A great deal of labour market policy measures are therefore designed to prevent people from becoming long-term unemployed. Often it is assumed that such measures would best be undertaken shortly after the individual has become unemployed. This assumption stems from the assessment that the chances of finding a job fall as the unemployment spell lengthens. European guidelines on this matter place a great emphasis on the timely enhancement of the employability of job-seekers. Already in the 1998 European Employment Guideline this is specified as follows:

*“Member States will ensure that:*

- every unemployed young person is offered a new start before reaching six months of unemployment, in the form of training, retraining, work practice, a job or other employability measure;*
- unemployed adults are also offered a fresh start before reaching twelve months of unemployment by one of the aforementioned means or, more generally, by accompanying individual vocational guidance.”*

In the integrated Employment Guidelines for 2008-2010 the term for offering a new start to young people is even reduced to four months. In Flanders these guidelines, which demand a swift intervention, are implemented in the guidance pathways of the Flemish public employment service, Vlaamse Dienst voor Arbeidsbemiddeling (VDAB). The comprehensive approach, which is adopted since the beginning of the 21<sup>st</sup> century, dictates that every single unemployed individual, so not just those who are difficult to place in work, have to be offered a ‘new start’ shortly after becoming unemployed.

However, to evaluate this, or any other active labour market measure, it is important to be able to decompose the unemployment duration into its components. Generally two components or causes for the lower exit rate for long-term unemployed are cited, that is sorting and negative duration dependence. Sorting, also referred to as selection, is of importance when the (initially) most productive unemployed have a higher probability of finding a job. The (initially) least productive thus have a higher probability of becoming long-term unemployed. Conversely in the case of negative duration dependence, the hazard rate is believed to lower precisely because of duration of the unemployment spell. Several grounds for such negative duration dependence can be found. First, long-term unemployed can become discouraged and stop looking intensively for a job. Second, a long period of inactivity can erode skills and attitudes, i.e. productivity could actually lower. Third, employers might view a long unemployment spell as a signal of low productivity and are thus likely to screen the long-term unemployed out. This phenomenon is extensively described in the literature as ‘statistical discrimination’.

The distinction is not only a statistical, but also a policy issue. If true negative duration dependence is the main cause of lowering hazard rates, then it is imperative that all entrants into unemployment quickly get supported in their job search process. However, if sorting is more important, the scarce means are better concentrated on unemployed with unfavourable characteristics. From an identification point of view the intervention in the latter case should not be planned too early in the unemployment spell.

The objective of this paper is to investigate whether the duration dependence in the hazard rate is true or rather a side effect of sorting. Therefore we study Flemish unemployment data from 1995 to 2007.

The outline of this paper is as follows. The next section gives an overview of previous research which tried to disentangle the influence of duration from other influences on the hazard rate. Section three specifies the model we will use in our estimation. The fourth section describes the data. The estimation

results are discussed in the fifth section. The concluding section summarizes the findings and formulates some policy implications.

## 2. Literature

There exists an extensive literature on the issue of duration dependence of unemployment spells and on the difficulty of separating its impact from the effects of unobserved heterogeneity. As a rule researchers find a decrease in the rate at which individuals leave unemployment as the duration of the unemployment spell increases. This decline can reveal a negative duration dependence if all individuals see their chances of exiting unemployment decrease as the duration of their unemployment spell grows. Alternatively, the decline can be the result of a sorting process in which individuals exhibit some heterogeneity in their ability to leave unemployment. Those with a high ability tend to leave unemployment relatively early, hence decreasing the average ability to leave unemployment amongst those remaining unemployed. The identification of such sorting process is hindered by the fact that hardly ever can be accounted for all relevant heterogeneity between individuals. When there exists unobserved heterogeneity negative duration dependence will generally be overstated, while positive duration dependence will be understated.

The microeconomic studies, which address this issue, differ in the specification of the baseline hazard, whether and how the unobserved heterogeneity is treated and which exit states are distinguished.

With respect to baseline hazard, a distinction can be made between a parametric and a nonparametric specification. In the first case, the pattern of duration dependence is restricted to have a particular form. Studies often use a Weibull-distribution; the hazard rate increases or decreases monotonically over time. This method has the advantage that the estimated parameters have a clear, unambiguous interpretation. As an alternative, the pattern of duration dependence can be estimated non-parametrically. The piecewise constant model is commonly used in this respect. This model groups the durations into several intervals. The hazard can vary between the intervals, but is constant within the interval. Here, the idea is that imposing a minimum of restrictions on the functional form results in minimizing the risk of misspecification. However such flexible specification often turns out harder to compute.

Unobserved heterogeneity is taken into account in various ways. Most studies model the unexplained part as an error term. It is often assumed that this term is gamma distributed. A popular non-parametric alternative is the method of mass points.

The outflow state, at last, can be singular: e.g. 'out of unemployment' or 'to work'. Often such unique outflow state is inflicted by data limitations. Several studies however describe multiple outflow states and use a competing risks specification. Such specification can be interesting to model the outflow to work or to inactivity simultaneously.

Empirical evidence on the shape of the hazard function is mixed, both across and within countries. When controlled for unobserved heterogeneity European studies generally find little evidence for genuine negative duration dependence. The U.K. however seems to be an exception to this rule. Reviews of this literature are provided by Devine and Kiefer (1991), Pedersen and Westergård-Nielsen (1993) and Machin and Manning (2000).

There are few empirical studies that look into the duration of unemployment in Belgium or Flanders. Lambrechts et al. (1995) study duration dependence in the Flemish VDAB-data. They find a decrease in the hazard up until the fourth year of unemployment and no duration dependence from then on. They suggest that this result is probably caused by the fact that they did not correct for unobserved heterogeneity. The apparent negative duration dependence the first four years is possibly (partly) due to a selection process. After four years the remaining group is virtually homogeneous, no more sorting is done, so no more spurious negative duration dependence is recorded.

On the basis of aggregate data for the early nineties Cockx and Dejemeppe (2002) analyze the unemployment duration for laid-off male workers in Wallonia. They find that the negative duration dependence is mainly spurious.

Bollens and Heylen (2006) assess the importance of negative duration dependence using VDAB-data on Flemish job-seekers. They find no evidence of such negative duration dependence when correcting for unobserved heterogeneity. This paper is an extension of that research both, in respect to the data as the methodology.

### 3. Methodology

Two issues area of special concern in the application of duration analysis. The first is choice of the distribution of the hazard function, the second the way to control for possible unobserved heterogeneity.

#### 3.1 Distribution of the hazard function

In duration analysis the variable of interest is the duration of the unemployment spell, which is denoted by  $T$ . The cumulative distribution of  $T$  is

The survivor function, which describes the probability that the time of event (e.g. the outflow out of unemployment) is later than some specified time  $t$ , is denoted as

The probability that the unemployment spell will end in the next time interval, given that it has lasted until time  $t$ , is defined as the hazard

In theory  $T$  is often modeled as a continuous variable. However in databases  $T$  is usually recorded as a discrete variable. Prentice and Gloeckler (1978) were pioneers in developing a hazard function with grouped duration data. In this paper we follow their approach and explicitly take into account the grouped nature of the data.

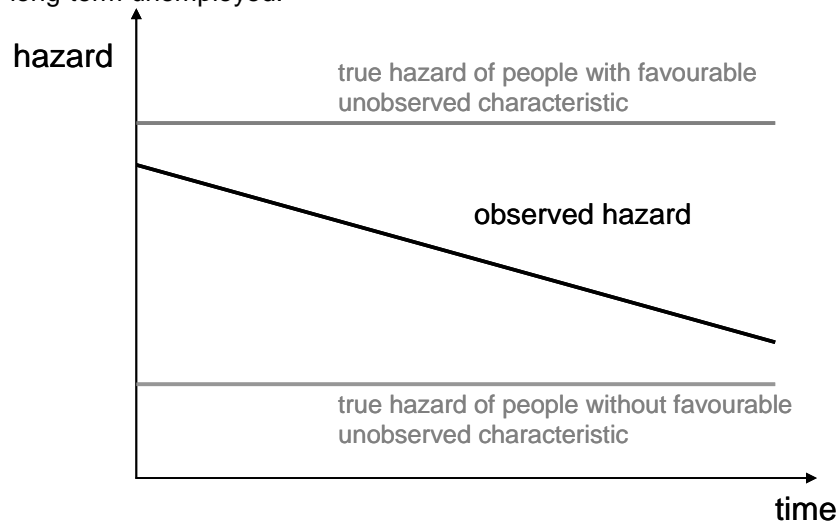
The hazard function can be estimated parametrically, i.e. a certain shape is imposed on the function. Often a Weibull specification, allowing for a monotonic increase or decrease, is chosen (Manning & Machin 2000). Economic theory however is not informative about the shape of the hazard function and thus it is debatable whether any parametric specification would give a satisfactory representation of the unemployment durations. Therefore one can opt for a non-parametric specification of the hazard function. In principle choosing fully flexible forms is the best solution to minimize the potential bias caused by improper distributional assumptions. A drawback of such non-parametric specification is the fact that the estimation can often be rather difficult and time-consuming.

#### 3.2 Distribution of the correction for unobserved heterogeneity

Generally two reasons why unobserved heterogeneity might be important in the analysis are quoted. Firstly, certain relevant variables could be omitted, either because they are not recorded in the database of the public employment service (e.g. looks or linguistic usage) or because they are intrinsically unobservable (e.g. ability). Secondly, a less cited source of unobserved heterogeneity is the fact that the data could contain measurement errors in survival times or regressors (Lancaster 1990).

Neglecting such heterogeneity tends to bias the duration dependence downwards (Lancaster 1990, van den Berg 2001). This bias can be quite severe. A Monte Carlo study by Nicoletti and Rondinelli (2009) finds that ignoring the unobserved heterogeneity causes an overestimation of negative duration dependence and a spurious negative dependence when the true one is positive. This process is intuitively sensible. Consider a random sample of two subgroups of individuals, that can not be distinguished on the basis of observable characteristics. Suppose that the hazard is higher for the members of one sub-

group, caused by a favourable unobserved characteristic. As time elapses, individuals belonging to this group will complete their unemployment spells earlier than the individuals belonging to the other group. Thus, as time passes, the fraction of individuals from the former subgroup remaining in the sample falls. Because individuals from the group without such favourable unobserved characteristics have a lower hazard, the decline in the fraction of individuals with the favourable unobserved characteristic shows up as a decline in the total hazard function over time. This selection process is commonly known as weeding out, selection or sorting effect and is depicted in graph 1. One thus could state that people are long-term unemployed because they have poor job prospects rather than people having poor job prospects because they are long-term unemployed.



Graph 1 Sorting effect: true vs. observed hazard

Furthermore the omission of unobserved heterogeneity not only biases the estimation of the duration coefficients, but may also lead to an underestimation of the coefficients of the other explanatory variables (van den Berg 2001). This bias is again due to the sorting effect. Ridder (1987) suggests that this type of bias can be eliminated by using a non-parametric specification of the hazard function. This suggestion is supported by his Monte Carlo study and by several empirical studies (Dolton and van der Klaauw 1995, Meyer 1990).

There are several ways to account for unobserved heterogeneity. Generally in econometrics, it is assumed that the specification for unobserved heterogeneity enters the equation multiplicatively as a kind of error term (Lancaster 1979). This is called a mixed proportional hazard model. Analogous to the estimation of the hazard function, the correction function can be estimated parametrically or non-parametrically.

Parametric functional form assumptions of the unobserved heterogeneity include among others the gamma (Lancaster 1979, Meyer 1990), normal (Jenkins 1995) and discrete (Nickell 1979) distributions. Since neither in economic theory, nor in the duration data itself a general argument in favour of one choice over the other can be found, researchers often choose a distribution on the basis of computational and expositional reasons. In statistical packages is often opted for the gamma distributed heterogeneity. Abbring and van den Berg (2007) rationalize this popular choice. Moreover Nicoletti and Rondonelli (2009) evaluate the effect on the duration dependence estimation of misspecifying the unobserved heterogeneity and find such incorrect assumption biases neither the estimation of the duration dependence, nor the covariate coefficients.

Alternatively the correction function can be estimated non-parametrically by including mass points in the estimation (Böheim 2006). With the mass point non-parametric approach, unobserved heterogeneity is not assumed to have a particular distribution, but approximated by a number of support points, with cor-



responding probabilities. The idea is that if the number of points of support increases, then any true underlying distribution for the unobserved heterogeneity can be approximated well. Whereas a limited number of mass points does not fully represent the extent of the unobserved heterogeneity. In practice, it is quite difficult to find more than a few mass points. Often, if more than two or three points are requested, the estimates of some of them will coincide (van den Berg 2001). Other drawbacks of this approach are that the distributional properties of the estimators remain unknown and that the estimation is computationally expensive (Carrasco & Garcia Pérez 2008).

### 3.3 Grouped duration data proportional hazards model with gamma correction for unobserved heterogeneity

Several Monte Carlo studies (Baker and Melino 1999, Zhang 2003, Nicoletti and Rondinelli 2006) have been done to analyze the consequences of different duration model specifications. Baker and Melino (1999) find that that a non-parametric specification of either the duration dependence or the unobserved heterogeneity leads to well behaved estimators. Nicoletti and Rondinelli (2006) look at the misspecification of the unobserved heterogeneity distribution in discrete time duration models and conclude that such a misspecification does not seriously affect the estimation results. When an incorrect error distribution is chosen the estimation of the duration dependence is biased, but this bias merely consists in the fact that the estimates are rescaled by a constant factor.

In this paper we opt for a grouped duration data proportional hazards model with gamma correction for unobserved heterogeneity. This means that the hazard function is estimated non-parametrically: the time is divided in different intervals, the hazard within such an interval is kept constant, between the intervals however this hazard  $\varepsilon_i$  can vary without any restrictions. The correction for omitted heterogeneity between individuals is assumed to be a gamma distributed random variable,  $\varepsilon_i$ , with  $E(\varepsilon_i) = 1$  and  $Var(\varepsilon_i) = \sigma^2$ . Jenkins (1997) specified such a procedure in STATA. This procedure estimates two grouped duration data proportional hazard regression models by maximum likelihood. The first model only looks at duration dependence and, if such covariates are included, observed differences between individuals. The second model will, in addition, incorporate a gamma correction distribution to account for the unobserved heterogeneity between individuals.

Technically, the models are formulated as follows. The hazard in a discrete time model is the probability that an event, here the outflow of individual  $i$  out of unemployment, will occur in a certain interval  $j$ , given that it has not occurred until then, i.e.

$$h_{ij} = Pr(T_i = j | T_i \geq j)$$

In the data we observe an individual  $i$ 's unemployment spell from month  $k = 1$  to  $j$  at which point the unemployment spell is either complete ( $c_i = 1$ ) or right censored ( $c_i = 0$ ). The likelihood contributions for the censored and completed spells are given by the following expressions. For censored spells:

$$L = Pr(T_i > j)$$

$$L = S_i(j)$$

$$L = \prod_{k=1}^j (1 - h_{ik})$$

For completed spells:

The likelihood for the whole sample thus becomes

$$L = Pr(T_i = j)$$

$$L = h_{ij} S_i(j - 1)$$

$$L = \frac{h_{ij}}{1 - h_{ij}} \prod_{k=1}^j (1 - h_{ik})$$

Taking logs we can rewrite this expression as

$$\log L = \sum_{i=1}^n c_i \log\left(\frac{h_{ij}}{1 - h_{ij}}\right) + \sum_{i=1}^n \sum_{k=1}^j \log(1 - h_{ik})$$

For simplification we define a new indicator variable  $y_{ik}$ , which equals 1 if individual  $i$  exits unemployment in interval  $k$  and is 0 otherwise. The log-likelihood function can now be rewritten

$$\log L = \sum_{i=1}^n \sum_{k=1}^j y_{ik} \log\left(\frac{h_{ik}}{1 - h_{ik}}\right) + \sum_{i=1}^n \sum_{k=1}^j \log(1 - h_{ik})$$

$$\log L = \sum_{i=1}^n \sum_{k=1}^j (y_{ik} \log(h_{ik}) + (1 - y_{ik}) \log(1 - h_{ik}))$$

This expression has the same form as the standard likelihood function for a binary regression model in which  $y_{ik}$  is the dependent variable and provided the data structure is reorganized from one record per unemployment spell to one record per period that an individual risks to leave the unemployed state. We assumed that the length of the periods is fixed and choose a month as unit length. An important implication is that the number of observations explodes, which will add to the lengthy computational times for this procedure.

In the first model the discrete time hazard of individual  $i$  in the  $k^{\text{th}}$  interval is

$$h_{ik} = 1 - \exp(-\exp(X_{ik}'\beta + \gamma k))$$

where  $X_{ik}$  is a vector of covariates which summarize the observed heterogeneity between individuals in the interval  $k$ . In this way the covariates may vary between the different time intervals, but are assumed to be constant within each interval.  $\beta$  is the vector of parameters associated with the covariates. Finally  $\gamma_k$  is the duration parameter for interval  $k$ . This last parameter can be described by a function, but can also allow us to estimate the hazard function non-parametrically.

The second model includes a Gamma distributed random variable to account for the unobserved heterogeneity between individuals. The hazard function will thus be extended with a variable  $\varepsilon_i$ , with  $E(\varepsilon_i) = 1$  and  $Var(\varepsilon_i) = \sigma^2$ .

$$h_{ik} = 1 - \exp(-\exp(X_{ik}'\beta + \gamma k + \log \varepsilon_i))$$

Meyer (1990) showed that this will alter the log-likelihood function

$$\log L = \sum_{i=1}^n \log((1 - c_i)A_i + c_i B_i)$$

$$A_i = (1 + \sigma^2 \sum_{k=1}^j \exp(X_{ik}'\beta + \gamma k))^{-\sigma^{-2}}$$

$$B_i = (1 + \sigma^2 \sum_{k=1}^{j-1} \exp(X_{ik}'\beta + \gamma k))^{-\sigma^{-2}} - A_i \quad \text{if } j > 1$$

$$B_i = 1 - A_i \quad \text{if } j = 1$$

As the variance of the gamma distributed error term goes to 0, the first models likelihood function will be the limiting case.

## 4. Institutional features and data description

### 4.1 Institutional features

In Belgium, the unemployment benefit delivery and labour market mediation are separated: unemployment benefits are administered by the federal level (RVA), while the labour market mediation is managed by the public employment service at the regional level (VDAB, ACTIRIS, FOREM and ADG).

A unique feature of the Belgian unemployment benefit system is the, in principle, unlimited duration of benefit entitlement. While unlimited in time, the benefit entitlement is restricted by a series of conditions such as involuntarily unemployment and availability for work. Until 2004, only household heads were entitled to benefits that are proportional to their previous wage for an unlimited period. Other persons received reduced benefits and lost them altogether after a given period if they could not prove that they were still actively looking for work. In 2004, the unemployment benefit system was reformed. The reform aimed at activating the unemployed as well as preventing long-term unemployment by linking the receipt of unemployment benefit more explicitly to active job-seeking. A new monitoring system is implemented to check labour market availability and job searching behaviour.

The public employment service as the main public agent in the field of active labour market policy, operates under the auspices of the regions. The services provided by this service consist of traditional mediation services (registration, information, etc.) and route services (specialist counseling, vocational training, job clubs, etc.). Until 1999, the public employment service had a monopolistic position in terms of mediation. From then onwards this monopoly position was abolished as private actors were allowed to organize mediation services.

The Flemish public employment service, the VDAB, is charged with the guidance and training of the unemployed residing in Flanders. Their systematic approach to prevent individuals from becoming unemployed is mainly influenced by the European Employment Guidelines. The comprehensive approach suggested by these guidelines, called for offering a new start to young unemployed before reaching 6 months unemployment and to adults before reaching 12 months. Moreover, this preventive approach is flanked by a curative one: every long-term unemployed, who shall be summoned by the RVA, is presented an offer for guidance.

### 4.2 The data

The data were obtained from the Flemish public employment service. The VDAB keeps records on all unemployed and employed job-seekers in Flanders. Firstly, the dataset contains information on the unemployment spell such as its starting and ending dates. This information is indispensable to determine the duration of an unemployment spell, but can also be used to link the hazard rate to the business cycle. Secondly, the dataset specifies some personal characteristics of the unemployed job-seekers such as their age, gender, education, place of residence, etc. which allows us to control for a part of the heterogeneity between the unemployed. The dataset in its current form goes back to August 1995. Our observation window thus runs from August 1995 until December 2007. For our study we confined the sample to unemployed job-seekers older than 18 and younger than 50. We further ignore unemployment spells that were already in progress before August 1995 because using them would force us to make assumptions about the period before the beginning of the observation window. In this way an inflow sample of unemployment spells is obtained. After the moment of inflow we follow the individuals over time until their exit out of unemployment or right-censoring. The latter is the case when the unemployment spell continues at the end of the observation window, i.e. December 2007. With respect to the outflow it should be noted that the data do not allow us to distinguish between unemployment spells ending in employment or in withdrawal from the labour force.

The final sample used in this paper contains information on 1 438 319 individuals who have been unemployed for at least one month during the studied period. Note that by following the individuals over more than a decade, we may observe multiple unemployment spells per individual. In total 2 873 979 spells are recorded, which represent 23 004 673 person-months. An overview of the observations is provided in table 1.

Table 1 Observations

	Men	Women	Total
Unemployed individuals	698 913	739 406	1 438 319
Unemployment spells	1 371 800	1 502 179	2 873 979
Completed	93,9%	94,0%	93,9%
Right censored	6,1%	6,0%	6,1%
Unemployment months	10 290 296	12 714 377	2 3004 673

In the previous section we already briefly touched upon computational issues. In order to limit the computer time the model is preferably estimated on more homogeneous samples. Since labour force behaviour is known to differ substantially by gender and educational level, the population is first stratified by age (18-25, 26-45 and 46-49) and highest educational attainment (no secondary education, secondary education and higher education) at the start of the spell. Next, random subsamples of 15% of the unemployment spells are taken. Table 2 summarizes the different samples.

Table 2 Population and 15%-sample sizes

Unemployment spells	18-25		26-45		46-49	
	Population	Sample	Population	Sample	Population	Sample
Men						
No secondary education	24 817 137	37 376	322 394	48 507	42 861	6 327
Secondary education	299 053	45 013	190 978	28 786	17 552	2 593
Higher education	135 750	20 447	105 296	15 713	9 745	1 443
Women						
No secondary education	165 309	24 877	309 799	46 623	50 231	7 393
Secondary education	302 978	45 587	265 388	39 984	21 260	3 117
Higher education	224 204	33 750	153 617	23 108	9 393	1 397

Table 3 provides summary statistics of the explanatory variables used in our analysis. Here we only show the statistics for the subsamples used in the further estimation.<sup>1</sup>

First, the number of unemployment spells in the sample is provided. Besides this, the percentage of interrupted or right censored durations is shown.

Next, we look into several individual and unemployment spell characteristics. In appendix I a detailed description of these variables is given.

The “limited working ability” dummy contains in part a subjective assessment by the VDAB caseworker. The share of unemployed that are labeled as having a reduced ability to work, increases as the age group rises and the educational level lowers. More than 1 out of 10 unskilled unemployed have a “limited working ability” label.

<sup>1</sup> The appendix contains the same summary statistics for the entire population, which allows the reader to assure him- or herself that the random subsamples are representative for the different populations.

Since mobility can be of great importance when looking for a job, two mobility dummies are included. The first indicating whether one has obtained his driving license, the second whether he owns a car. Young unemployed and women score worse on these mobility variables, although this difference is flattened within the highly educated subsample.

Concerning nationality/ethnicity we distinguish between three categories: Europeans, people of Turkish or Moroccan descent, other non-Europeans. Closely related with this variable is the variable that indicates whether Dutch is the mother tongue of the unemployed job-seeker.

A region dummy indicates in which Flemish province the unemployed has his or her place of residence. A small number of unemployed do have a place of residence in Brussels or Wallonia. These people are grouped in the category 'residency outside Flanders'.

Within the educational categories different sublevels are distinguished. People who did not obtain a degree from secondary education can be divided in the following sublevels: first stage of secondary education or lower, special education (for children with a disability), entrepreneurship training, part-time vocational secondary education, second stage general secondary education, second stage vocational secondary education, second stage technical education and second stage arts education. People whose highest degree is one of secondary education are split up as follows: third stage general secondary education, third stage vocational secondary education, fourth stage vocational secondary education, third stage technical secondary education and third stage arts secondary education. For the highest educated we distinguish between higher (professional) education and academic education.

A set of inflow dummies indicate the month and the year the unemployment spell started. This calendar time variable accounts for changes in legislation, business cycle, etc. The relative inflow into unemployment is highest between 2001 and 2003. This coincides with the downturn in the business cycle at that moment. Most young people flow into unemployment between July and September, most of them are probably leaving school at that moment.

Table 3 Mean of the variables for the unemployed without secondary education (15% sample)

No secondary education	Men			Women		
	18-25	26-45	46-49	18-25	26-45	46-49
N	37 376	48 507	6 327	24 877	46 623	7 393
Age	21.43	35.06	47.92	21.55	35.89	47.95
European decent	0.83	0.81	0.92	0.82	0.86	0.96
Turkish/Moroccan decent	0.13	0.12	0.05	0.14	0.08	0.02
Non European decent	0.04	0.07	0.03	0.04	0.05	0.02
Max. 1st stage of secondary education	0.37	0.51	0.62	0.34	0.53	0.70
Entrepreneurship training	0.11	0.07	0.04	0.10	0.06	0.01
Part time vocational education	0.03	0.01	0.00	0.02	0.00	0.00
General sec. ed. (2nd stage)	0.02	0.01	0.01	0.02	0.01	0.01
Vocational sec. ed. (2nd stage)	0.23	0.20	0.15	0.28	0.26	0.17
Special education	0.10	0.04	0.01	0.11	0.03	0.00
Technical sec. ed. (2nd stage)	0.14	0.15	0.16	0.11	0.10	0.10
Arts sec. ed. (2nd stage)	0.01	0.00	0.00	0.01	0.00	0.00
Weak functional urbanization	0.31	0.30	0.37	0.30	0.36	0.41
Moderate functional urbanization	0.20	0.19	0.20	0.20	0.21	0.22
Strong functional urbanization	0.48	0.50	0.43	0.49	0.43	0.37
Inflow in 1995	0.04	0.04	0.04	0.03	0.03	0.03
Inflow in 1996	0.07	0.08	0.07	0.07	0.08	0.05
Inflow in 1997	0.07	0.08	0.07	0.07	0.08	0.06
Inflow in 1998	0.08	0.07	0.07	0.07	0.08	0.06
Inflow in 1999	0.07	0.08	0.07	0.07	0.08	0.07
Inflow in 2000	0.07	0.08	0.08	0.08	0.08	0.08
Inflow in 2001	0.09	0.09	0.08	0.10	0.10	0.09
Inflow in 2002	0.10	0.09	0.09	0.10	0.09	0.11
Inflow in 2003	0.09	0.08	0.08	0.08	0.08	0.08
Inflow in 2004	0.08	0.08	0.09	0.08	0.09	0.13
Inflow in 2005	0.08	0.08	0.08	0.08	0.07	0.07
Inflow in 2006	0.07	0.07	0.08	0.08	0.07	0.08
Inflow in 2007	0.08	0.08	0.09	0.08	0.07	0.08
Inflow in January	0.08	0.10	0.10	0.09	0.10	0.09
Inflow in February	0.07	0.08	0.08	0.07	0.07	0.07
Inflow in March	0.07	0.08	0.08	0.07	0.08	0.07
Inflow in April	0.06	0.07	0.07	0.07	0.07	0.07
Inflow in May	0.06	0.07	0.07	0.06	0.07	0.07
Inflow in June	0.07	0.07	0.07	0.08	0.07	0.07
Inflow in July	0.14	0.08	0.08	0.14	0.09	0.09
Inflow in August	0.10	0.08	0.07	0.10	0.08	0.07
Inflow in September	0.11	0.09	0.09	0.11	0.10	0.08
Inflow in October	0.09	0.10	0.10	0.09	0.11	0.14
Inflow in November	0.07	0.09	0.09	0.07	0.08	0.09
Inflow in December	0.07	0.09	0.09	0.07	0.08	0.08
Residency outside Flanders	0.01	0.01	0.01	0.01	0.01	0.00
Residency in Antwerpen	0.30	0.31	0.29	0.30	0.28	0.26
Residency in Limburg	0.16	0.15	0.15	0.15	0.17	0.17
Residency in Oost-Vlaanderen	0.23	0.22	0.22	0.24	0.22	0.21
Residency in Vlaams Brabant	0.13	0.12	0.14	0.11	0.12	0.13
Residency in West-Vlaanderen	0.18	0.19	0.20	0.19	0.20	0.22
Limited working ability	0.12	0.10	0.12	0.13	0.10	0.13
Dutch mother tongue	0.84	0.78	0.86	0.81	0.80	0.89
Driving licence	0.39	0.71	0.80	0.25	0.57	0.65
Car	0.29	0.51	0.56	0.18	0.38	0.38

Table 4 Mean of the variables for the unemployed with secondary education (15% sample)

Secondary education	Men			Women		
	18-25	26-45	46-49	18-25	26-45	46-49
N	45 013	28 786	2 593	45 587	39 984	3 117
Age	21.43	33.83	47.91	21.59	33.99	47.90
European decent	0.92	0.81	0.89	0.92	0.92	0.98
Turkish/Moroccan decent	0.06	0.12	0.07	0.07	0.05	0.01
Non European decent	0.02	0.08	0.04	0.01	0.03	0.02
General sec.ed. (3rd stage)	0.16	0.24	0.27	0.16	0.21	0.26
Vocational sec. ed. (3rd stage)	0.43	0.43	0.32	0.47	0.44	0.32
Vocational sec. ed. (4th stage)	0.00	0.00	0.00	0.02	0.03	0.03
Technical sec. ed. (3rd stage)	0.39	0.31	0.40	0.33	0.31	0.37
Arts sec. ed. (3rd stage)	0.02	0.01	0.01	0.02	0.02	0.02
Weak functional urbanization	0.40	0.31	0.37	0.40	0.41	0.42
Moderate functional urbanization	0.21	0.19	0.18	0.22	0.21	0.20
Strong functional urbanization	0.38	0.50	0.46	0.38	0.37	0.38
Inflow in 1995	0.03	0.03	0.03	0.03	0.03	0.01
Inflow in 1996	0.07	0.06	0.05	0.08	0.06	0.04
Inflow in 1997	0.07	0.06	0.05	0.08	0.07	0.04
Inflow in 1998	0.08	0.06	0.06	0.08	0.07	0.05
Inflow in 1999	0.07	0.07	0.07	0.07	0.07	0.06
Inflow in 2000	0.07	0.07	0.07	0.07	0.07	0.07
Inflow in 2001	0.09	0.08	0.08	0.09	0.08	0.08
Inflow in 2002	0.09	0.09	0.09	0.09	0.09	0.11
Inflow in 2003	0.09	0.09	0.11	0.08	0.09	0.10
Inflow in 2004	0.09	0.10	0.09	0.09	0.10	0.13
Inflow in 2005	0.09	0.10	0.11	0.09	0.09	0.12
Inflow in 2006	0.08	0.09	0.09	0.08	0.09	0.10
Inflow in 2007	0.07	0.10	0.11	0.07	0.09	0.11
Inflow in January	0.07	0.10	0.09	0.08	0.10	0.09
Inflow in February	0.05	0.07	0.08	0.06	0.07	0.07
Inflow in March	0.05	0.08	0.07	0.05	0.07	0.08
Inflow in April	0.05	0.08	0.07	0.05	0.07	0.07
Inflow in May	0.05	0.07	0.07	0.05	0.07	0.07
Inflow in June	0.07	0.07	0.07	0.08	0.08	0.07
Inflow in July	0.20	0.08	0.08	0.19	0.09	0.10
Inflow in August	0.15	0.08	0.07	0.13	0.09	0.07
Inflow in September	0.13	0.10	0.10	0.12	0.10	0.09
Inflow in October	0.07	0.10	0.10	0.08	0.10	0.13
Inflow in November	0.05	0.08	0.10	0.06	0.08	0.08
Inflow in December	0.06	0.09	0.09	0.06	0.08	0.08
Residency outside Flanders	0.00	0.01	0.01	0.00	0.01	0.00
Residency in Antwerpen	0.27	0.31	0.30	0.27	0.28	0.30
Residency in Limburg	0.16	0.15	0.12	0.17	0.17	0.13
Residency in Oost-Vlaanderen	0.23	0.21	0.21	0.23	0.20	0.20
Residency in Vlaams Brabant	0.15	0.15	0.18	0.13	0.15	0.19
Residency in West-Vlaanderen	0.18	0.16	0.18	0.19	0.18	0.18
Limited working ability	0.01	0.03	0.04	0.01	0.04	0.07
Dutch mother tongue	0.92	0.76	0.79	0.91	0.87	0.90
Driving licence	0.61	0.81	0.86	0.51	0.78	0.80
Car	0.45	0.61	0.62	0.38	0.57	0.54

Table 5 Summary statistics for the unemployed with higher education (20% sample)

Higher education	Men			Women		
	18-25	26-45	46-49	18-25	26-45	46-49
N	20 447	15 713	1 443	33 750	23 108	1 397
Age	23.39	33.41	47.94	23.10	33.19	47.80
European decent	0.98	0.89	0.92	0.98	0.92	0.94
Turkish/Moroccan decent	0.01	0.04	0.02	0.01	0.02	0.01
Non European decent	0.01	0.07	0.06	0.01	0.06	0.06
Higher (professional) ed. (short)	0.55	0.50	0.52	0.67	0.64	0.74
Higher (professional) ed. (long)	0.19	0.18	0.19	0.10	0.12	0.08
Academic education	0.26	0.32	0.29	0.23	0.25	0.18
Weak functional urbanization	0.43	0.33	0.39	0.43	0.37	0.40
Moderate functional urbanization	0.19	0.15	0.17	0.19	0.17	0.15
Strong functional urbanization	0.38	0.52	0.45	0.37	0.46	0.45
Inflow in 1995	0.04	0.03	0.02	0.03	0.03	0.02
Inflow in 1996	0.08	0.06	0.05	0.08	0.07	0.04
Inflow in 1997	0.07	0.07	0.06	0.08	0.06	0.04
Inflow in 1998	0.06	0.06	0.05	0.07	0.07	0.05
Inflow in 1999	0.06	0.06	0.06	0.06	0.07	0.06
Inflow in 2000	0.06	0.06	0.06	0.06	0.07	0.05
Inflow in 2001	0.09	0.08	0.08	0.08	0.08	0.08
Inflow in 2002	0.09	0.10	0.10	0.09	0.09	0.10
Inflow in 2003	0.09	0.10	0.11	0.09	0.09	0.08
Inflow in 2004	0.10	0.11	0.11	0.09	0.09	0.12
Inflow in 2005	0.09	0.10	0.10	0.09	0.10	0.13
Inflow in 2006	0.08	0.10	0.10	0.09	0.10	0.11
Inflow in 2007	0.07	0.09	0.11	0.08	0.10	0.13
Inflow in January	0.03	0.09	0.09	0.03	0.08	0.08
Inflow in February	0.02	0.06	0.08	0.02	0.06	0.07
Inflow in March	0.02	0.07	0.08	0.02	0.06	0.07
Inflow in April	0.03	0.07	0.08	0.03	0.07	0.07
Inflow in May	0.02	0.07	0.06	0.03	0.06	0.08
Inflow in June	0.06	0.08	0.08	0.09	0.08	0.07
Inflow in July	0.37	0.11	0.09	0.39	0.11	0.11
Inflow in August	0.18	0.09	0.08	0.17	0.09	0.09
Inflow in September	0.16	0.13	0.11	0.12	0.15	0.13
Inflow in October	0.06	0.10	0.09	0.04	0.08	0.09
Inflow in November	0.03	0.07	0.07	0.02	0.07	0.07
Inflow in December	0.03	0.08	0.09	0.03	0.08	0.09
Residency outside Flanders	0.00	0.02	0.02	0.00	0.01	0.01
Residency in Antwerpen	0.25	0.29	0.31	0.25	0.29	0.30
Residency in Limburg	0.14	0.11	0.09	0.15	0.12	0.11
Residency in Oost-Vlaanderen	0.24	0.23	0.22	0.24	0.24	0.20
Residency in Vlaams Brabant	0.19	0.21	0.23	0.18	0.21	0.23
Residency in West-Vlaanderen	0.18	0.13	0.14	0.17	0.13	0.15
Limited working ability	0.00	0.01	0.02	0.00	0.01	0.03
Dutch mother tongue	0.95	0.82	0.83	0.95	0.81	0.80
Driving licence	0.80	0.85	0.90	0.77	0.83	0.83
Car	0.56	0.64	0.71	0.57	0.64	0.64

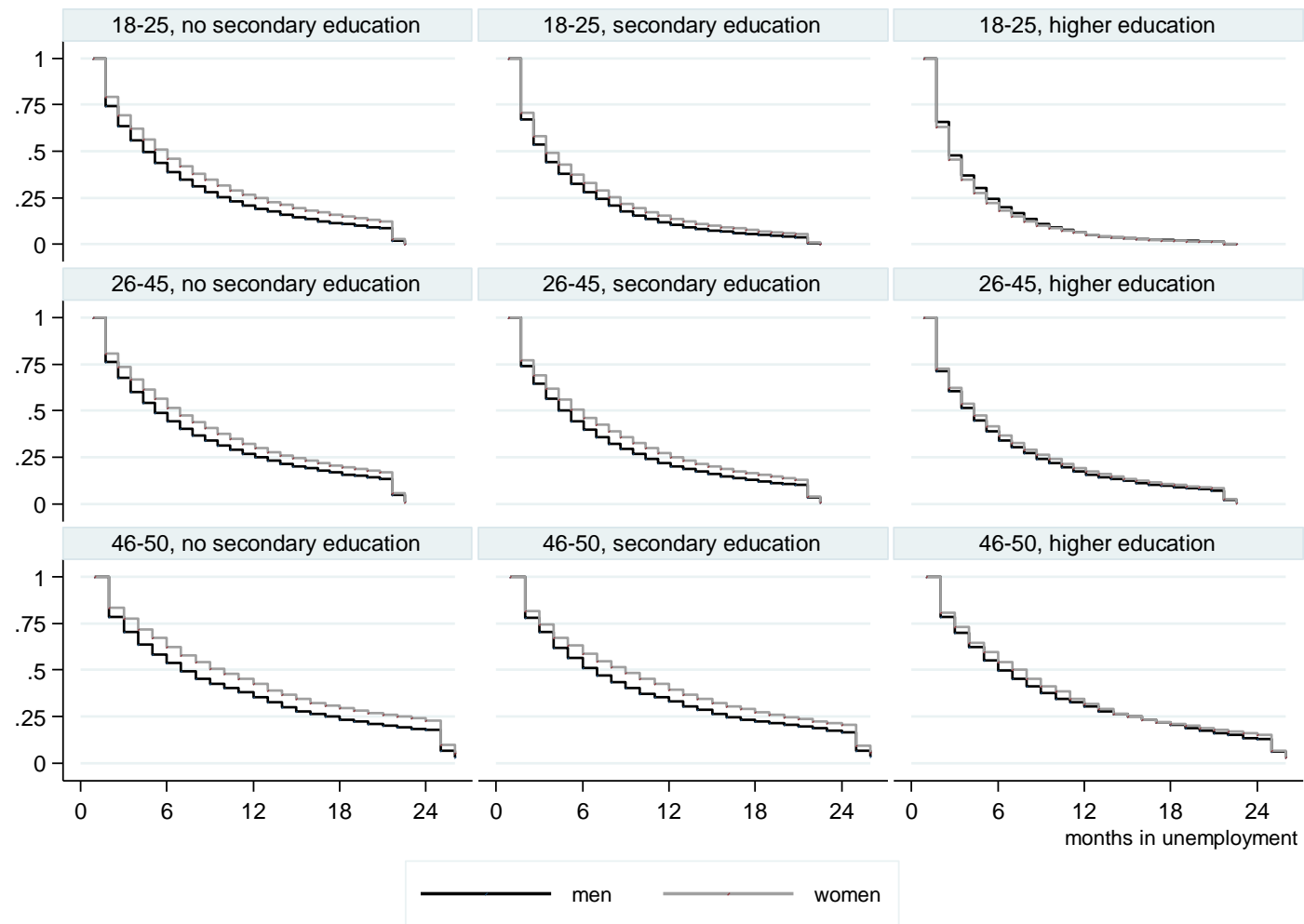
Finally, the duration of the unemployment spells is not taken up in the summary statistics tables but visualized graphically. Graph 2 depicts the empirical survivor functions for the different subpopulations. The survival rate in month  $t$  can be interpreted as the proportion of a group of people who are still unemployed  $t$  months after they became unemployed. The horizontal axis indicates time (in months) while



the vertical axis displays the percentage of individuals surviving in unemployment at that time. The graph thus starts at 100% and monotonically decreases to (almost) 0% and can be interpreted as follows: 75% of the unemployment spells of prime aged men with a secondary education lasts at least 2 months, 50% at least 5 months and 25% at least 13 months.

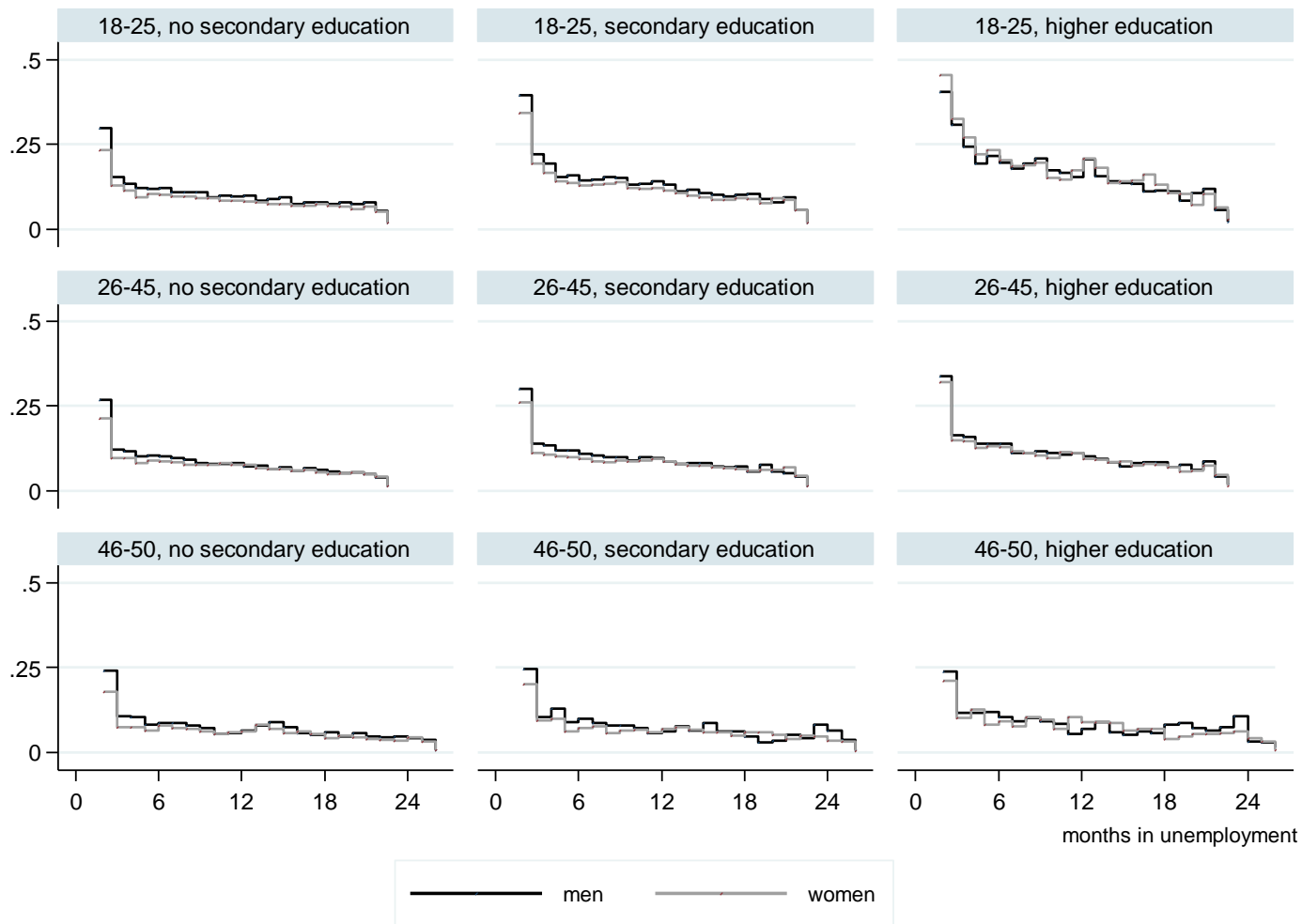
A simple comparison of the survivor functions already yields some useful insights. First, women generally survive longer in unemployment than men with the same educational and age level. For the higher educated this disparity seems to disappear. Second, the graphs shift outwards as the age class increases and/or the educational level lowers, i.e. as the profile gets less favourable. After 6 months only 25% of the young and highly educated remain unemployed, while this is the case for more than half of the old and unskilled unemployed.

Also the hazard rate can directly be deduced from the data. Graph 3 shows the empirical hazard function for the different subsamples. First of all this graph confirms the conclusions inferred from graph 2: women generally have slightly lower hazards and the hazard worsens when the profile is less favourable. Moreover this graph indicates that while there is a general trend of lowering hazards, this is certainly not a monotonous trend. This supports our choice for a non-parametric and flexible baseline.



Graph 2

Empirical survivor functions for the different subsamples



Graph 3 Empirical hazard functions for the different subsamples

## 5. Estimation results

We estimated the effect of the duration of the unemployment spell on the exit probability out of unemployment, while controlling for individual characteristics and business cycle effects. We start by discussing the duration dependence, hereby pointing out the importance of allowing for unobserved heterogeneity. We then follow with a discussion of the individual and business cycle characteristics. Since the purpose of the present study is to test for negative duration dependence in the unemployment process, we will focus on the results for the baseline hazard function and the heterogeneity components and will only briefly discuss the most important results with respect to the other explanatory variables in the model.

The estimation results are summarized in tables 6 to 23 of appendix II. These tables present results in the form of coefficients and significance levels. A negative coefficient indicates that a variable is negatively related to the exit probability. A positive coefficient conversely mark a positive relationship between variable and hazard. The adjacent stars allow us to draw inferences on the statistical significance of this relation: one star indicates that there is only a 10% chance of a false relation, two and three stars respectively indicate a 5% and 1% chance.

### 5.1 Duration dependence and unobserved heterogeneity

As described in the methodological paragraph we do not impose a certain functional form on the duration dependence, but capture it in a flexible way by introducing dummy variables for the duration intervals. For the first two years monthly dummies are included. Durations of more than two years are aggregated in larger intervals, '25-48 months' and '49 or more months'. This aggregation is deemed useful from two perspectives. First, for the estimation to be correct it is imperative that at least one unemployment spell ends during each interval. For the very lengthy unemployment spells monthly intervals might thus cause a problem. Second, such aggregation limits the number of parameters to be estimated, which renders the model easier to calculate.

Duration dependence is reflected in the slope of the hazard function with downward sloping hazard functions corresponding to negative duration dependence and upward sloping functions to positive duration dependence. To assess the impact of heterogeneity on duration dependence the hazard is estimated three times: first without any individual covariates, second with the observed individual covariates discussed in the previous paragraph and finally with a correction for the unobserved differences<sup>2</sup>. Graph 4 and 5 plot the different estimated hazard rates at the mean of the covariates. The gap between the lines gives some indication of the bias caused by neglected heterogeneity.

The black lines in graph 4 and 5 plot the relative changes in the hazard, not taking into account the observed or unobserved heterogeneity between individuals and spells. These curves drop sharply as expected. After two years the exit probability of most subsamples has been more than halved. For the older unemployed and the highly educated this drop is quite erratic.

The grey lines indicate the relative changes in the hazard, only taking into account observed differences in the characteristics. All curves still drop but shift upwards. This means that the negative

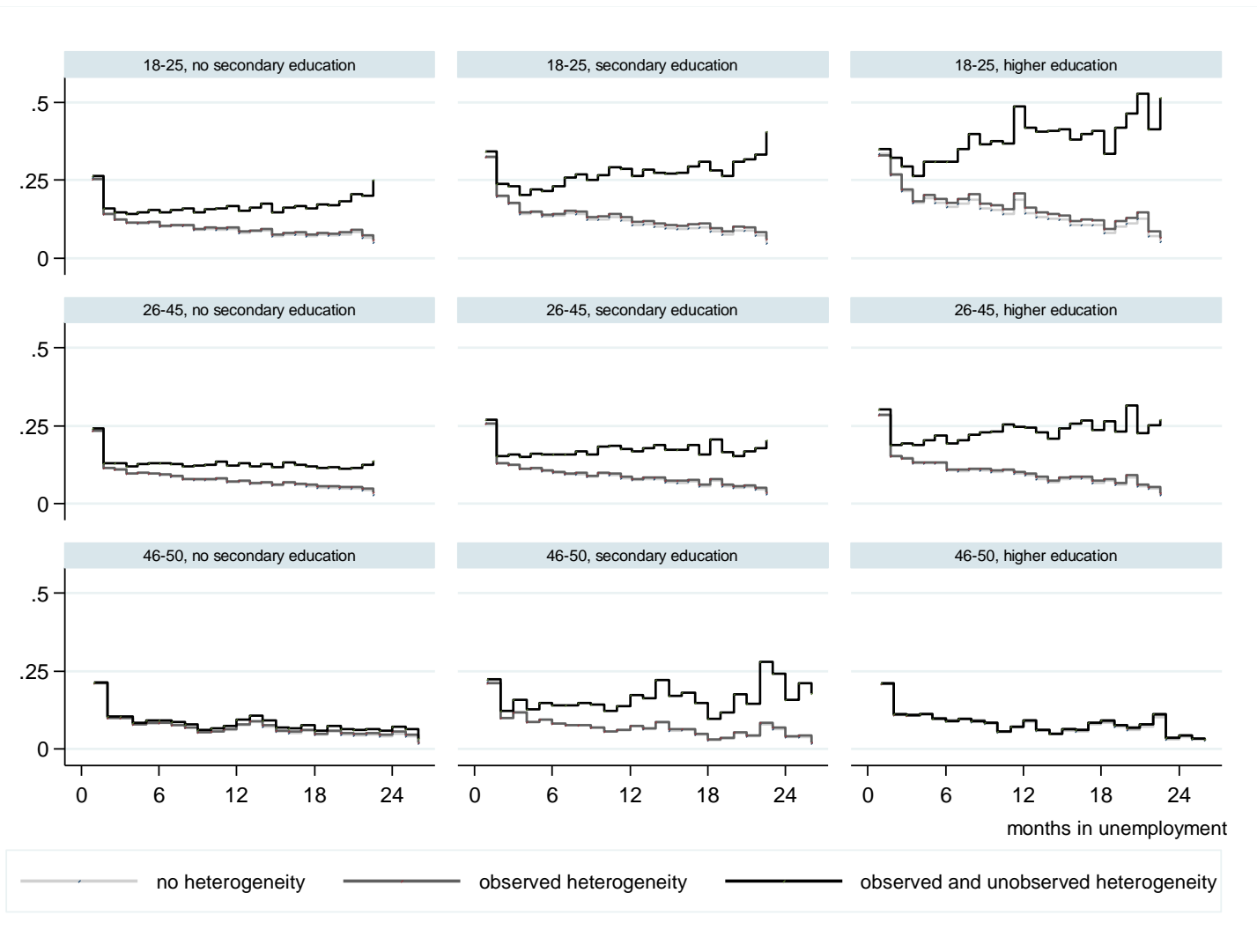
<sup>2</sup> As appendix II shows we have modeled the unobserved heterogeneity both by including a gamma distributed error term as a normal distributed error term. The gamma term is more flexible, but the convergence of these models are often quite strenuous and occasionally impossible. In the graphs we used the estimates of the gamma corrected model where possible.

duration dependence is less serious than implied by the black curves. We should note however that this upward shift is quite marginal. This continued drop might mean that either there is negative duration dependence, or the sorting process is done on the basis of unobserved differences.

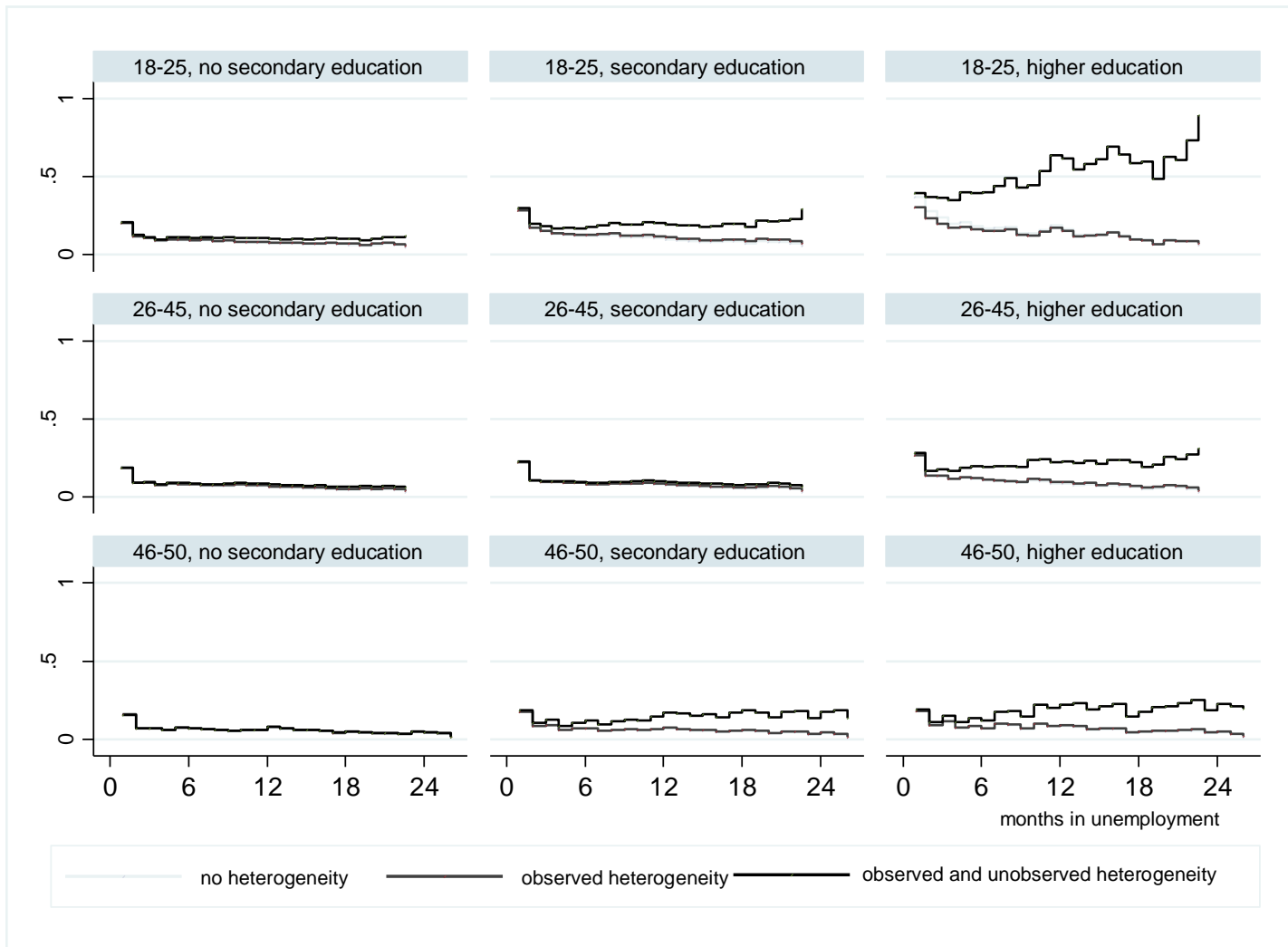
The silver lines therefore indicate the relative changes in the hazard, taking into account both observed and unobserved differences. This unobserved heterogeneity is modeled as a gamma distributed error term. When gamma heterogeneity is allowed, generally the shape of the baseline hazard changes notably. Mostly the negative duration dependence disappears almost completely. Only prime aged women whose highest level of education is secondary education, exhibit a persistent but slightly negative duration dependence.

Here the error terms of the hazard rates are assumed to follow a gamma distribution. The estimated parameters, describing the dispersion of this distribution indicate that the unobservable differences are of importance. Only for the oldest age class, that is 46-49, the correction for unobserved heterogeneity was deemed not to be statistically significant. To test the robustness of these results the error term was also assumed to be normally distributed. Similar results were found and reported in appendix II.

In summary, not accounting for unobserved population heterogeneity, one would accept the hypothesis of negative duration dependence in the unemployment process. However, the declining hazard rate obviously results from the sorting effect. Hence, the conclusion that the unemployment process is characterized by negative duration dependence would be unwarranted.



Graph 4 Estimation results men: hazard at the mean of the covariates



Graph 5 Estimation results women: hazard at the mean of the covariates

## 5.2 Individual characteristics

Since labour force behaviour is known to differ substantially by gender and educational level, the population is first stratified by age and highest educational attainment at the start of the spell. Within the different models we account for age and different disciplines (general, technical, vocational, etcetera).

Age generally has a negative effect on the hazard, except for older men and women, who do not see their exiting probabilities affected by their age.

Overall we find that people tend to have a higher exit probability as their educational level is higher. Furthermore there are some differences between the different disciplines. People with a technical or vocational degree exit unemployment faster than people whose highest degree is a general one. People with a degree in arts generally do worse. For the highly educated there seems to be no significant differences between those with an academic degree and those who attended higher professional education.

Other observable characteristics controlled for in the estimation include dummy variables for inability to work, social assistance, mobility, foreign nationality or ethnicity and education. The estimated effects of the individual characteristics are quite intuitive.

Starting with two characteristics which might be considered as indications of individuals with a large distance to the labour market, i.e. unemployed labeled unable to work or social assistance beneficiaries, we find indeed that these people have a lower probability of exiting unemployment. The results are similar across the different subgroups. As to the mobility variables, both having a driving license and owning a car generally increase the chances of leaving unemployment. Yet, the positive influence of having a driving license decreases as age increases. For prime aged women the positive impact is not even statistically significant.

Next, we tried to capture the possible influences of ethnicity. Therefore we had to our disposal the nationality and mother tongue of the unemployed and an indicator that stated whether the individual was of Turkish or Moroccan descent. First, it is clear in all analysis that, regardless of nationality, people whose mother tongue is Dutch have a higher probability of leaving unemployment sooner. As for nationality, hardly any significant differences between Belgians and other European citizens are found. An exception to this finding is the higher educated women with a European nationality, that are outperformed by their Belgian counterparts. For Belgians and non-Belgians of Turkish or Moroccan descent, or people from outside the European Union, we continually record negative and significant coefficients. This means that these characteristics lower their exiting probability.

Lastly the influence of the place of residence is assessed. The five Flemish provinces and the category 'residency outside Flanders' are distinguished. 'Antwerpen' is taken as the reference category. People who have their place of residence in Vlaams Brabant or West-Vlaanderen have a higher probability to exit the unemployment register. For the other categories we hardly find any differences to the reference category, 'Antwerpen'.

## 5.3 Business cycle

The probability of finding a job also depends on the state of the business cycle. Search theory however does not provide an unambiguous prediction on the sign of the relationship between the business cycle and unemployment duration. On the one hand economic growth increases the probability of receiving a job offer. On the other hand it also tends to increase the reservation wage of the job-seekers. Empirical work has not resolved the issue either (Bover et al. 2002). Business



cycle effects on individual unemployment duration are typically captured in empirical work by GDP growth or unemployment rate.

In this paper however we use the year of inflow in unemployment as a proxy for both the business cycle and changes in legislation or in the labour market policy. For most subsamples the yearly dummies are significantly different from the reference category 'inflow in 1995' and 'inflow in 1996'. In expansion years, 1999-2001 and 2006-2007, the hazards are relatively higher. Conversely the hazard of prime aged, higher educated men does not seem to be influenced by the year of inflow in unemployment.

## 6. Policy implications and conclusions

A basic principle of the Flemish labour market policy is to prevent entrants to unemployment becoming long-term unemployed. This in itself is a legitimate aim. However the implementation calls for some critical comments. The key questions with regard to such implementation often revolve around when and for whom best to intervene with an activation supply. This requires a profound knowledge of the processes that influence unemployment and its dynamics.

In this paper we have looked at a common finding in descriptive analyses of unemployment spells namely negative duration dependence or the decreasing escape rate as the unemployment spell lengthens. Our main concern was to assess whether this represents genuine negative duration dependence or whether it simply results from heterogeneity or sorting. In the former case the exit probability is depressed by the duration itself. Otherwise stated people have low job prospects because they are long-term unemployed. This implies that an effective policy to reduce long-term unemployment should be aimed at all entrants to unemployment as soon they become unemployed. In the latter case the exit probabilities are not influenced by the duration of the spell, but as time goes by the people remaining unemployed will exactly be the ones with the lowest exit probabilities. In other words people become long-term unemployed because they had poor job prospects from the beginning. An efficient policy thus would be to target the individuals with the lowest exit probabilities. An additional problem here is the a priori identification of such poor job prospect, as unobserved characteristics of the unemployed are expected to be of influence. This unobserved heterogeneity will also bias the estimated duration dependence downwards. It follows that both positive and constant duration dependence at the individual level could turn up as negative duration dependence in estimations without measures to correct for unobserved heterogeneity.

We have thus estimated several duration models using 1995-2007 job-seekers data from the Flemish public employment service, VDAB. In particular we tried to estimate the hazard rate non-parametrically, while accounting for unobserved heterogeneity by inserting a gamma function in the equation. Our main empirical results can be summarized as follows. First, it is clear that unobserved heterogeneity plays an important role in the prediction of the hazard. When possible, the corrected models all indicate that the applied gamma correction is significant. In the corrected models there is hardly any negative duration dependence left. The negative duration dependence observed in the raw data and, to a lesser degree, in the model that incorporated observed differences can be considered as largely spurious. Second, the estimated effects of the other observed characteristics controlled for in the estimation are quite intuitive. The exit probability is lower for the older and the less educated subsamples. The hazard also drops when certain weaknesses in the employability are revealed (disability, mobility problems, ...). With regard to the ethnicity worse job prospects are noted for individuals of Turkish or Moroccan decent. Third, it is clear that entrants in expansion years tend to leave unemployment earlier.

Only empirical analyses using panel data and correcting for unobserved heterogeneity can be considered reliable guides for policy. If true negative duration dependence is a pervasive phenomenon at the individual level, policy measures should concentrate on ending the unemployment spell in an early stage. However, if the variation of exit rates over time is only due to heterogeneity between individuals, as it seems to be the case, policy measures should concentrate on individuals with a low, duration independent, exit rate. For the moment we have to conclude that long-term unemployment does not seem to result from a deterioration of human capital or stigmatization, but is rather related to the low employment probabilities of a minority of all unemployed people right from the beginning of their unemployment spell due to some unobserved time-invariant characteristics. Since, by definition, we do not know what exactly these characteristics are, there is unfortunately no operational way to target active labour market programmes on people with such characteristics. Given this lack of information, targeting training, public employment or wage subsidy programmes on people with observable characteristics associated with long-term unemployment such as old age, Turkish or Moroccan ethnicity and a low educational level seems to be the only feasible option for active labour market policy.



## Appendix I Database description

### Source

For our estimations we use the administrative data from the Flemish public employment service, VDAB (Vlaamse Dienst voor Arbeidsbemiddeling), from August 1995 to December 2007.

### Sample

From the population of job-seekers registered with the VDAB we exclude those

- that are employed;
- that only have a passive record;
- that are over 50 years old at the time of becoming unemployed;
- whose unemployment spell started before August 1995.

2 873 979 unemployment spells satisfy these restrictions. Since one person can account for several unemployment spells during the observation window we find only 1 438 319 unique individuals in our database. To simplify computations we divide the total sample in 18 different subsamples, stratifying by gender, age and educational level. Further we take a 15% random sample of each of these subsamples.

### Variables

The explanatory variables used in the analysis are defined as follows:

- Age. Different models are estimated for three age groups: younger than 26, 26 to 45, and 46 to 50. Within each model age is included as a continuous and time varying variable.
- Education. The highest degree which was earned at the time the unemployment spell starts. Different models are estimated for three educational levels: no secondary education, secondary education, higher education. Within the models an even more refined classification is used. People who did not obtain a degree from secondary education can be divided in the following sublevels: first stage of secondary education or lower, special education (for children with a disability), entrepreneurship training, part-time vocational secondary education, second stage general secondary education, second stage vocational secondary education, second stage technical education and second stage arts education. People whose highest degree is one of secondary education are split up as follows: third stage general secondary education, third stage vocational secondary education, fourth stage vocational secondary education, third stage technical secondary education and third stage arts secondary education. For the highest educated we distinguish between higher (professional) education and academic education.
- Gender. Male, Female.

- Duration of the unemployment spell. For the first two years monthly dummies are included. Durations of more than two years are aggregated in larger intervals, '25-48 months' and '48+ months'.
- Limited working ability. Indicator whether an unemployed individual is considered mentally or physically unable to work. Next to people who attended special education and people who are labeled disabled by a doctor, this indicator also entails a subjective assessment by the VDAB case worker.
- Driving license. Dummy variable that checks whether the unemployed has at least a class B driving license.
- Car. Dummy variable that indicates whether someone has a car at his/her disposal to go to work.
- Nationality / ethnicity. Three categories are distinguished: Europeans, people of Turkish or Moroccan descent, other non-Europeans.
- Dutch mother tongue. Dummy variable that indicates whether Dutch is listed as the mother tongue of the unemployed.
- Place of residence. The place of residence is grouped into province dummies: Antwerpen, Limburg, Vlaams Brabant, Oost-Vlaanderen en West-Vlaanderen. Besides these five Flemish regions, a small minority of the unemployed list another Belgian province. These observations are grouped into the category "outside Flanders".
- Month and year of inflow. This variable records the year the unemployment spell started.

## **APPENDIX II ESTIMATION RESULTS**

Table 6 Estimation results: men, 18-25, no secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.21 ***	-0.87 ***	-1.08 ***	-0.84 ***
2 months	-1.88 ***	-1.52 ***	-1.57 ***	-1.41 ***
3 months	-2.03 ***	-1.67 ***	-1.63 ***	-1.50 ***
4 months	-2.12 ***	-1.75 ***	-1.64 ***	-1.53 ***
5 months	-2.13 ***	-1.76 ***	-1.58 ***	-1.50 ***
6 months	-2.12 ***	-1.74 ***	-1.51 ***	-1.43 ***
7 months	-2.23 ***	-1.84 ***	-1.56 ***	-1.50 ***
8 months	-2.21 ***	-1.82 ***	-1.49 ***	-1.44 ***
9 months	-2.22 ***	-1.83 ***	-1.44 ***	-1.40 ***
10 months	-2.36 ***	-1.96 ***	-1.53 ***	-1.50 ***
11 months	-2.32 ***	-1.91 ***	-1.44 ***	-1.42 ***
12 months	-2.35 ***	-1.94 ***	-1.43 ***	-1.41 ***
13 months	-2.33 ***	-1.92 ***	-1.37 ***	-1.35 ***
14 months	-2.47 ***	-2.06 ***	-1.47 ***	-1.46 ***
15 months	-2.43 ***	-2.01 ***	-1.40 ***	-1.38 ***
16 months	-2.38 ***	-1.95 ***	-1.31 ***	-1.30 ***
17 months	-2.60 ***	-2.18 ***	-1.50 ***	-1.49 ***
18 months	-2.54 ***	-2.10 ***	-1.40 ***	-1.39 ***
19 months	-2.53 ***	-2.10 ***	-1.37 ***	-1.36 ***
20 months	-2.61 ***	-2.17 ***	-1.41 ***	-1.41 ***
21 months	-2.55 ***	-2.11 ***	-1.32 ***	-1.31 ***
22 months	-2.59 ***	-2.15 ***	-1.34 ***	-1.33 ***
23 months	-2.54 ***	-2.10 ***	-1.26 ***	-1.25 ***
24 months	-2.45 ***	-2.01 ***	-1.14 ***	-1.13 ***
25-48 months	-2.69 ***	-2.23 ***	-1.18 ***	-1.15 ***
49+ months	-2.98 ***	-2.48 ***	-1.02 ***	-0.90 ***
Age		-0.01 ***	-0.01 ***	-0.01 ***
Turkish/Moroccan decent		-0.24 ***	-0.34 ***	-0.33 ***
Non European decent		-0.19 ***	-0.29 ***	-0.27 ***
Entrepreneurship training		0.20 ***	0.27 ***	0.25 ***
Part time vocational education		-0.05 ***	-0.05 ***	-0.04 ***
General sec. ed. (2nd stage)		0.13 ***	0.15 ***	0.14 ***
Vocational sec. ed. (2nd stage)		0.05 ***	0.07 ***	0.07 ***
Special education		0.33 ***	0.47 ***	0.46 ***
Technical sec. ed. (2nd stage)		0.11 ***	0.15 ***	0.14 ***
Arts sec. ed. (2nd stage)		-0.16 **	-0.24 ***	-0.23 ***
Strong functional urbanization		-0.12 ***	-0.16 ***	-0.15 ***
Weak functional urbanization		0.01	0.01	0.01
Inflow in 1995		-0.34 ***	-0.48 ***	-0.45 ***
Inflow in 1996		-0.28 ***	-0.40 ***	-0.38 ***
Inflow in 1997		-0.18 ***	-0.25 ***	-0.23 ***
Inflow in 1998		-0.07 **	-0.11 ***	-0.11 ***
Inflow in 1999		0.10 ***	0.13 ***	0.12 ***
Inflow in 2000		0.20 ***	0.31 ***	0.30 ***
Inflow in 2001		0.01	0.04	0.04
Inflow in 2002		-0.09 ***	-0.09 **	-0.08 **
Inflow in 2003		-0.07 **	-0.08 *	-0.07 *
Inflow in 2004		-0.04	-0.04	-0.04
Inflow in 2005		-0.02	-0.04	-0.04
Inflow in 2006		0.05	0.04	0.04
Inflow in January		-0.10 ***	-0.12 ***	-0.12 ***
Inflow in February		-0.07 **	-0.08 **	-0.08 **
Inflow in March		-0.09 ***	-0.12 ***	-0.12 ***
Inflow in April		-0.14 ***	-0.19 ***	-0.18 ***
Inflow in May		-0.09 ***	-0.14 ***	-0.13 ***
Inflow in June		-0.04	-0.04	-0.04
Inflow in July		0.06 **	0.11 ***	0.10 ***
Inflow in August		-0.02	-0.01	0.00
Inflow in September		-0.11 ***	-0.15 ***	-0.15 ***
Inflow in October		-0.10 ***	-0.15 ***	-0.14 ***
Inflow in November		-0.10 ***	-0.15 ***	-0.14 ***
Residence outside Flanders		0.19 ***	0.24 **	0.23 **
Residence in Antwerpen		-0.05 ***	-0.07 ***	-0.06 ***
Residence in Limburg		-0.05 ***	-0.07 ***	-0.06 ***
Residence in Oost-Vlaanderen		-0.10 ***	-0.14 ***	-0.13 ***
Residence in Vlaams Brabant		-0.01	-0.02	-0.02
Limited working ability		-0.39 ***	-0.53 ***	-0.52 ***
Dutch mother tongue		0.05 ***	0.09 ***	0.08 ***
Driving licence		0.08 ***	0.11 ***	0.10 ***
Car		0.11 ***	0.14 ***	0.13 ***
Unobserved heterogeneity			normal ***	gamma ***

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)



Table 7 Estimation results: men, 26-45, no secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.31	***	-0.65	***	-0.77	***	-0.51	***
2 months	-2.11	***	-1.44	***	-1.31	***	-1.21	***
3 months	-2.15	***	-1.48	***	-1.23	***	-1.19	***
4 months	-2.29	***	-1.62	***	-1.27	***	-1.29	***
5 months	-2.27	***	-1.59	***	-1.16	***	-1.22	***
6 months	-2.30	***	-1.61	***	-1.10	***	-1.19	***
7 months	-2.34	***	-1.65	***	-1.06	***	-1.19	***
8 months	-2.40	***	-1.71	***	-1.05	***	-1.21	***
9 months	-2.52	***	-1.81	***	-1.10	***	-1.29	***
10 months	-2.54	***	-1.83	***	-1.07	***	-1.27	***
11 months	-2.54	***	-1.83	***	-1.01	***	-1.23	***
12 months	-2.50	***	-1.79	***	-0.92	***	-1.16	***
13 months	-2.64	***	-1.92	***	-1.02	***	-1.27	***
14 months	-2.61	***	-1.89	***	-0.94	***	-1.21	***
15 months	-2.73	***	-2.01	***	-1.02	***	-1.30	***
16 months	-2.69	***	-1.96	***	-0.93	***	-1.22	***
17 months	-2.82	***	-2.08	***	-1.02	***	-1.32	***
18 months	-2.69	***	-1.96	***	-0.86	***	-1.17	***
19 months	-2.79	***	-2.05	***	-0.91	***	-1.24	***
20 months	-2.86	***	-2.11	***	-0.95	***	-1.28	***
21 months	-2.95	***	-2.20	***	-1.00	***	-1.34	***
22 months	-2.94	***	-2.18	***	-0.96	***	-1.30	***
23 months	-3.02	***	-2.26	***	-1.01	***	-1.36	***
24 months	-3.01	***	-2.25	***	-0.98	***	-1.33	***
25-48 months	-3.12	***	-2.33	***	-0.85	***	-1.24	***
49+ months	-3.55	***	-2.68	***	-0.71	***	-1.14	***
Age			-0.02	***	-0.02	***	-0.02	***
Turkish/Moroccan decent			-0.23	***	-0.38	***	-0.32	***
Non European decent			-0.07	***	-0.17	***	-0.14	***
Entrepreneurship training			0.11	***	0.18	***	0.15	***
Part time vocational education			0.10		0.11		0.10	
General sec. ed. (2nd stage)			0.00		0.01		0.01	
Vocational sec. ed. (2nd stage)			0.05	***	0.08	***	0.07	***
Special education			0.26	***	0.37	***	0.34	***
Technical sec. ed. (2nd stage)			0.12	***	0.19	***	0.16	***
Arts sec. ed. (2nd stage)			-0.29	***	-0.52	***	-0.44	***
Strong functional urbanization			-0.10	***	-0.15	***	-0.13	***
Weak functional urbanization			0.02		0.04	*	0.03	*
Inflow in 1995			-0.13	***	-0.24	***	-0.20	***
Inflow in 1996			-0.09	***	-0.15	***	-0.14	***
Inflow in 1997			-0.01		-0.01		-0.01	
Inflow in 1998			0.08	**	0.12	***	0.10	***
Inflow in 1999			0.12	***	0.20	***	0.17	***
Inflow in 2000			0.13	***	0.25	***	0.22	***
Inflow in 2001			0.03		0.03		0.03	
Inflow in 2002			0.00		0.02		0.00	
Inflow in 2003			0.03		0.04		0.02	
Inflow in 2004			0.09	***	0.14	***	0.11	***
Inflow in 2005			0.12	***	0.15	***	0.12	***
Inflow in 2006			0.15	***	0.17	***	0.15	***
Inflow in January			-0.06	***	-0.09	***	-0.08	***
Inflow in February			-0.09	***	-0.14	***	-0.13	***
Inflow in March			-0.13	***	-0.21	***	-0.19	***
Inflow in April			-0.16	***	-0.25	***	-0.22	***
Inflow in May			-0.17	***	-0.30	***	-0.25	***
Inflow in June			-0.18	***	-0.33	***	-0.27	***
Inflow in July			-0.10	***	-0.14	***	-0.13	***
Inflow in August			-0.11	***	-0.16	***	-0.14	***
Inflow in September			-0.12	***	-0.21	***	-0.18	***
Inflow in October			-0.14	***	-0.23	***	-0.19	***
Inflow in November			-0.08	***	-0.15	***	-0.12	***
Residence outside Flanders			0.25	***	0.34	***	0.31	***
Residence in Antwerpen			-0.10	***	-0.16	***	-0.13	***
Residence in Limburg			-0.07	***	-0.09	***	-0.08	***
Residence in Oost-Vlaanderen			-0.13	***	-0.19	***	-0.16	***
Residence in Vlaams Brabant			-0.03	*	-0.05	*	-0.05	**
Limited working ability			-0.45	***	-0.63	***	-0.56	***
Dutch mother tongue			0.07	***	0.13	***	0.11	***
Driving licence			0.07	***	0.10	***	0.08	***
Car			0.13	***	0.19	***	0.16	***
Unobserved heterogeneity					normal	***	gamma	***

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

Table 8 Estimation results: men, 46-50, no secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.42	***	-1.27	**	-1.19	*	-1.11	*
2 months	-2.24	***	-2.07	***	-1.97	***	-1.89	***
3 months	-2.27	***	-2.10	***	-1.98	***	-1.89	***
4 months	-2.50	***	-2.32	***	-2.19	***	-2.10	***
5 months	-2.45	***	-2.27	***	-2.13	***	-2.04	***
6 months	-2.44	***	-2.26	***	-2.11	***	-2.01	***
7 months	-2.54	***	-2.35	***	-2.19	***	-2.09	***
8 months	-2.65	***	-2.45	***	-2.28	***	-2.18	***
9 months	-2.91	***	-2.72	***	-2.54	***	-2.44	***
10 months	-2.87	***	-2.67	***	-2.48	***	-2.38	***
11 months	-2.75	***	-2.54	***	-2.34	***	-2.24	***
12 months	-2.52	***	-2.32	***	-2.12	***	-2.01	***
13 months	-2.41	***	-2.19	***	-1.98	***	-1.87	***
14 months	-2.59	***	-2.37	***	-2.15	***	-2.04	***
15 months	-2.87	***	-2.65	***	-2.42	***	-2.31	***
16 months	-2.93	***	-2.70	***	-2.47	***	-2.35	***
17 months	-2.81	***	-2.57	***	-2.33	***	-2.22	***
18 months	-3.08	***	-2.84	***	-2.59	***	-2.48	***
19 months	-2.87	***	-2.62	***	-2.37	***	-2.25	***
20 months	-3.05	***	-2.80	***	-2.54	***	-2.42	***
21 months	-3.10	***	-2.84	***	-2.58	***	-2.45	***
22 months	-3.07	***	-2.80	***	-2.54	***	-2.41	***
23 months	-3.17	***	-2.90	***	-2.63	***	-2.51	***
24 months	-2.98	***	-2.71	***	-2.43	***	-2.30	***
25-48 months	-3.19	***	-2.88	***	-2.57	***	-2.42	***
49+ months	-3.99	***	-3.70	***	-3.29	***	-3.10	***
Age			0.00		0.00		0.00	
Turkish/Moroccan decent			-0.18	**	-0.21	**	-0.21	**
Non European decent			-0.01		-0.03		-0.04	
Entrepreneurship training			0.10		0.11		0.11	
Part time vocational education			0.70	***	0.82	***	0.87	***
General sec. ed. (2nd stage)			0.39	***	0.39	***	0.39	***
Vocational sec. ed. (2nd stage)			0.05		0.05		0.05	
Special education			0.25		0.28		0.29	
Technical sec. ed. (2nd stage)			0.06		0.06		0.07	
Arts sec. ed. (2nd stage)			0.28		0.25		0.24	
Strong functional urbanization			-0.03		-0.04		-0.05	
Weak functional urbanization			0.03		0.02		0.02	
Inflow in 1995			-0.19	**	-0.23	*	-0.25	**
Inflow in 1996			-0.14	*	-0.17	*	-0.18	*
Inflow in 1997			-0.06		-0.07		-0.08	
Inflow in 1998			0.04		0.04		0.03	
Inflow in 1999			0.11		0.12		0.12	
Inflow in 2000			0.14	*	0.16	*	0.17	*
Inflow in 2001			-0.09		-0.09		-0.09	
Inflow in 2002			-0.24	***	-0.23	***	-0.23	***
Inflow in 2003			-0.19	**	-0.18	**	-0.18	**
Inflow in 2004			-0.25	***	-0.25	***	-0.25	***
Inflow in 2005			0.05		0.05		0.06	
Inflow in 2006			0.12		0.12		0.13	
Inflow in January			-0.10	*	-0.12	*	-0.12	*
Inflow in February			-0.16	**	-0.17	**	-0.17	**
Inflow in March			-0.17	***	-0.19	**	-0.20	**
Inflow in April			-0.10		-0.11		-0.12	
Inflow in May			-0.23	***	-0.26	***	-0.27	***
Inflow in June			-0.15	**	-0.17	**	-0.17	**
Inflow in July			-0.03		-0.03		-0.03	
Inflow in August			-0.10		-0.10		-0.09	
Inflow in September			-0.15	**	-0.17	**	-0.17	**
Inflow in October			-0.16	***	-0.18	**	-0.19	**
Inflow in November			-0.03		-0.04		-0.04	
Residency outside Flanders			0.03		0.05		0.06	
Residency in Antwerpen			-0.06		-0.05		-0.05	
Residency in Limburg			-0.07		-0.07		-0.07	
Residency in Oost-Vlaanderen			-0.14	***	-0.15	***	-0.15	***
Residency in Vlaams Brabant			-0.06		-0.07		-0.07	
Limited working ability			-0.39	***	-0.43	***	-0.44	***
Dutch mother tongue			0.08		0.09		0.09	
Driving licence			0.04		0.03		0.03	
Car			0.14	***	0.15	***	0.15	***
<b>Unobserved heterogeneity</b>					<b>normal</b>		<b>gamma</b>	

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

Table 9 Estimation results: women, 18-25, no secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.45 ***	-0.83 ***	-0.86 ***	-0.75 ***
2 months	-2.06 ***	-1.41 ***	-1.39 ***	-1.29 ***
3 months	-2.18 ***	-1.53 ***	-1.47 ***	-1.39 ***
4 months	-2.36 ***	-1.70 ***	-1.61 ***	-1.54 ***
5 months	-2.27 ***	-1.61 ***	-1.48 ***	-1.42 ***
6 months	-2.31 ***	-1.63 ***	-1.48 ***	-1.43 ***
7 months	-2.35 ***	-1.68 ***	-1.50 ***	-1.45 ***
8 months	-2.33 ***	-1.65 ***	-1.45 ***	-1.41 ***
9 months	-2.41 ***	-1.72 ***	-1.50 ***	-1.46 ***
10 months	-2.40 ***	-1.71 ***	-1.46 ***	-1.43 ***
11 months	-2.47 ***	-1.77 ***	-1.50 ***	-1.48 ***
12 months	-2.49 ***	-1.79 ***	-1.50 ***	-1.48 ***
13 months	-2.50 ***	-1.79 ***	-1.48 ***	-1.46 ***
14 months	-2.56 ***	-1.84 ***	-1.52 ***	-1.50 ***
15 months	-2.61 ***	-1.89 ***	-1.55 ***	-1.54 ***
16 months	-2.60 ***	-1.88 ***	-1.52 ***	-1.50 ***
17 months	-2.68 ***	-1.95 ***	-1.58 ***	-1.57 ***
18 months	-2.66 ***	-1.93 ***	-1.54 ***	-1.53 ***
19 months	-2.61 ***	-1.87 ***	-1.46 ***	-1.46 ***
20 months	-2.69 ***	-1.94 ***	-1.52 ***	-1.52 ***
21 months	-2.72 ***	-1.97 ***	-1.53 ***	-1.53 ***
22 months	-2.84 ***	-2.09 ***	-1.64 ***	-1.64 ***
23 months	-2.71 ***	-1.95 ***	-1.49 ***	-1.49 ***
24 months	-2.62 ***	-1.86 ***	-1.39 ***	-1.39 ***
25-48 months	-2.78 ***	-2.00 ***	-1.42 ***	-1.43 ***
49+ months	-3.04 ***	-2.19 ***	-1.34 ***	-1.33 ***
Age		-0.02 ***	-0.02 ***	-0.02 ***
Turkish/Moroccan decent		-0.21 ***	-0.26 ***	-0.26 ***
Non European decent		-0.12 ***	-0.16 ***	-0.16 ***
Entrepreneurship training		0.10 ***	0.12 ***	0.12 ***
Part time vocational education		-0.13 ***	-0.15 ***	-0.15 ***
General sec. ed. (2nd stage)		0.18 ***	0.20 ***	0.20 ***
Vocational sec. ed. (2nd stage)		-0.09 ***	-0.11 ***	-0.11 ***
Special education		0.24 ***	0.26 ***	0.25 ***
Technical sec. ed. (2nd stage)		0.05 **	0.06 **	0.05 **
Arts sec. ed. (2nd stage)		0.09 ***	0.13 ***	0.13 ***
Strong functional urbanization		-0.09 ***	-0.11 ***	-0.11 ***
Weak functional urbanization		0.03 ***	0.02 ***	0.02 ***
Inflow in 1995		-0.53 ***	-0.62 ***	-0.60 ***
Inflow in 1996		-0.52 ***	-0.61 ***	-0.59 ***
Inflow in 1997		-0.40 ***	-0.46 ***	-0.45 ***
Inflow in 1998		-0.26 ***	-0.29 ***	-0.28 ***
Inflow in 1999		-0.21 ***	-0.22 ***	-0.21 ***
Inflow in 2000		-0.02 ***	0.03 ***	0.03 ***
Inflow in 2001		-0.12 ***	-0.11 **	-0.10 **
Inflow in 2002		-0.24 ***	-0.25 ***	-0.25 ***
Inflow in 2003		-0.24 ***	-0.27 ***	-0.26 ***
Inflow in 2004		-0.17 ***	-0.18 ***	-0.18 ***
Inflow in 2005		-0.09 **	-0.10 **	-0.10 **
Inflow in 2006		0.05 ***	0.06 ***	0.05 ***
Inflow in January		-0.08 **	-0.10 **	-0.10 **
Inflow in February		-0.11 ***	-0.13 ***	-0.13 ***
Inflow in March		-0.12 ***	-0.15 ***	-0.15 ***
Inflow in April		-0.11 ***	-0.14 ***	-0.13 ***
Inflow in May		-0.10 ***	-0.15 ***	-0.14 ***
Inflow in June		0.01 ***	0.01 ***	0.01 ***
Inflow in July		0.09 ***	0.12 ***	0.12 ***
Inflow in August		0.00 ***	0.01 ***	0.01 ***
Inflow in September		-0.05 ***	-0.07 *	-0.07 *
Inflow in October		-0.07 **	-0.10 **	-0.10 **
Inflow in November		-0.03 ***	-0.06 ***	-0.06 ***
Residence outside Flanders		0.22 ***	0.27 ***	0.27 ***
Residence in Antwerpen		-0.11 ***	-0.13 ***	-0.12 ***
Residence in Limburg		-0.11 ***	-0.13 ***	-0.12 ***
Residence in Oost-Vlaanderen		-0.11 ***	-0.12 ***	-0.12 ***
Residence in Vlaams Brabant		0.02 ***	0.03 ***	0.03 ***
Limited working ability		-0.34 ***	-0.38 ***	-0.37 ***
Dutch mother tongue		0.10 ***	0.13 ***	0.12 ***
Driving licence		0.14 ***	0.16 ***	0.15 ***
Car		0.06 **	0.07 **	0.07 **
Unobserved heterogeneity			normal ***	gamma ***

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

Table 10 Estimation results: women, 26-45, no secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.55	***	-0.90	***	-0.95	***	-0.87	***
2 months	-2.35	***	-1.69	***	-1.70	***	-1.64	***
3 months	-2.34	***	-1.68	***	-1.67	***	-1.62	***
4 months	-2.52	***	-1.85	***	-1.83	***	-1.78	***
5 months	-2.43	***	-1.75	***	-1.71	***	-1.67	***
6 months	-2.44	***	-1.77	***	-1.71	***	-1.67	***
7 months	-2.48	***	-1.79	***	-1.72	***	-1.68	***
8 months	-2.56	***	-1.87	***	-1.78	***	-1.75	***
9 months	-2.57	***	-1.88	***	-1.77	***	-1.74	***
10 months	-2.56	***	-1.87	***	-1.75	***	-1.72	***
11 months	-2.51	***	-1.80	***	-1.67	***	-1.65	***
12 months	-2.57	***	-1.86	***	-1.72	***	-1.70	***
13 months	-2.58	***	-1.86	***	-1.70	***	-1.69	***
14 months	-2.70	***	-1.98	***	-1.81	***	-1.80	***
15 months	-2.74	***	-2.02	***	-1.84	***	-1.83	***
16 months	-2.77	***	-2.03	***	-1.84	***	-1.84	***
17 months	-2.85	***	-2.11	***	-1.91	***	-1.91	***
18 months	-2.80	***	-2.06	***	-1.85	***	-1.84	***
19 months	-2.92	***	-2.17	***	-1.95	***	-1.95	***
20 months	-2.99	***	-2.24	***	-2.02	***	-2.02	***
21 months	-2.98	***	-2.23	***	-2.00	***	-2.00	***
22 months	-2.92	***	-2.17	***	-1.92	***	-1.93	***
23 months	-3.03	***	-2.27	***	-2.02	***	-2.02	***
24 months	-2.95	***	-2.18	***	-1.92	***	-1.92	***
25-48 months	-3.06	***	-2.26	***	-1.93	***	-1.95	***
49+ months	-3.43	***	-2.52	***	-2.02	***	-2.05	***
Age			-0.01	***	-0.01	***	-0.01	***
Turkish/Moroccan decent			-0.17	***	-0.25	***	-0.23	***
Non European decent			-0.18	***	-0.20	***	-0.20	***
Entrepreneurship training			0.07	***	0.09	***	0.08	***
Part time vocational education			0.01		0.00		0.00	
General sec. ed. (2nd stage)			-0.11	**	-0.12	**	-0.11	**
Vocational sec. ed. (2nd stage)			0.02		0.02		0.02	
Special education			0.27	***	0.30	***	0.30	***
Technical sec. ed. (2nd stage)			0.04	**	0.05	**	0.04	**
Arts sec. ed. (2nd stage)			-0.18	**	-0.20	**	-0.19	**
Strong functional urbanization			-0.04	***	-0.05	***	-0.05	***
Weak functional urbanization			0.01		0.01		0.01	
Inflow in 1995			-0.49	***	-0.54	***	-0.53	***
Inflow in 1996			-0.48	***	-0.53	***	-0.52	***
Inflow in 1997			-0.39	***	-0.42	***	-0.42	***
Inflow in 1998			-0.25	***	-0.27	***	-0.27	***
Inflow in 1999			-0.17	***	-0.17	***	-0.17	***
Inflow in 2000			-0.18	***	-0.17	***	-0.17	***
Inflow in 2001			-0.18	***	-0.18	***	-0.18	***
Inflow in 2002			-0.23	***	-0.24	***	-0.24	***
Inflow in 2003			-0.21	***	-0.22	***	-0.22	***
Inflow in 2004			-0.16	***	-0.17	***	-0.17	***
Inflow in 2005			-0.02		-0.02		-0.02	
Inflow in 2006			0.06	**	0.07	**	0.07	**
Inflow in January			-0.04	*	-0.05	**	-0.05	**
Inflow in February			-0.14	***	-0.17	***	-0.16	***
Inflow in March			-0.11	***	-0.13	***	-0.13	***
Inflow in April			-0.11	***	-0.13	***	-0.13	***
Inflow in May			-0.14	***	-0.17	***	-0.16	***
Inflow in June			-0.12	***	-0.15	***	-0.14	***
Inflow in July			0.01		0.02		0.02	
Inflow in August			-0.03		-0.04		-0.04	
Inflow in September			-0.09	***	-0.11	***	-0.10	***
Inflow in October			-0.11	***	-0.14	***	-0.13	***
Inflow in November			-0.12	***	-0.15	***	-0.14	***
Residency outside Flanders			0.18	***	0.20	***	0.20	***
Residency in Antwerpen			-0.11	***	-0.13	***	-0.12	***
Residency in Limburg			-0.09	***	-0.10	***	-0.10	***
Residency in Oost-Vlaanderen			-0.10	***	-0.11	***	-0.11	***
Residency in Vlaams Brabant			0.00		0.00		0.00	
Limited working ability			-0.45	***	-0.50	***	-0.49	***
Dutch mother tongue			0.09	***	0.11	***	0.11	***
Driving licence			0.03	**	0.03	**	0.03	**
Car			0.12	***	0.13	***	0.13	***
Unobserved heterogeneity					normal	***	gamma	***

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)



Table 11 Estimation results: women, 46-50, no secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.72 ***	-1.72 ***	-1.71 ***	No convergence
2 months	-2.60 ***	-2.58 ***	-2.57 ***	
3 months	-2.60 ***	-2.58 ***	-2.56 ***	
4 months	-2.73 ***	-2.70 ***	-2.69 ***	
5 months	-2.54 ***	-2.51 ***	-2.49 ***	
6 months	-2.63 ***	-2.59 ***	-2.58 ***	
7 months	-2.68 ***	-2.63 ***	-2.62 ***	
8 months	-2.79 ***	-2.73 ***	-2.72 ***	
9 months	-2.91 ***	-2.85 ***	-2.83 ***	
10 months	-2.81 ***	-2.74 ***	-2.72 ***	
11 months	-2.77 ***	-2.69 ***	-2.68 ***	
12 months	-2.50 ***	-2.42 ***	-2.41 ***	
13 months	-2.68 ***	-2.59 ***	-2.57 ***	
14 months	-2.85 ***	-2.75 ***	-2.74 ***	
15 months	-2.79 ***	-2.70 ***	-2.68 ***	
16 months	-2.89 ***	-2.79 ***	-2.77 ***	
17 months	-3.19 ***	-3.07 ***	-3.05 ***	
18 months	-3.01 ***	-2.89 ***	-2.87 ***	
19 months	-3.12 ***	-3.02 ***	-3.00 ***	
20 months	-3.22 ***	-3.09 ***	-3.07 ***	
21 months	-3.32 ***	-3.19 ***	-3.17 ***	
22 months	-3.35 ***	-3.21 ***	-3.19 ***	
23 months	-3.10 ***	-2.95 ***	-2.93 ***	
24 months	-3.16 ***	-3.01 ***	-2.99 ***	
25-48 months	-3.36 ***	-3.18 ***	-3.16 ***	
49+ months	-4.05 ***	-3.96 ***	-3.92 ***	
Age		0.01	0.01	
Turkish/Moroccan decent		-0.22 **	-0.22 **	
Non European decent		-0.02	-0.02	
Entrepreneurship training		-0.09	-0.09	
Part time vocational education		-0.02	-0.02	
General sec. ed. (2nd stage)		-0.03	-0.03	
Vocational sec. ed. (2nd stage)		-0.04	-0.04	
Special education		-0.02	-0.02	
Technical sec. ed. (2nd stage)		-0.03	-0.03	
Arts sec. ed. (2nd stage)		0.61	0.62	
Strong functional urbanization		-0.07 **	-0.08 **	
Weak functional urbanization		-0.04	-0.04	
Inflow in 1995		-0.28 ***	-0.28 ***	
Inflow in 1996		-0.31 ***	-0.31 ***	
Inflow in 1997		-0.24 ***	-0.24 ***	
Inflow in 1998		-0.08	-0.08	
Inflow in 1999		-0.06	-0.06	
Inflow in 2000		0.00	0.00	
Inflow in 2001		-0.03	-0.03	
Inflow in 2002		-0.33 ***	-0.33 ***	
Inflow in 2003		-0.43 ***	-0.43 ***	
Inflow in 2004		-0.46 ***	-0.46 ***	
Inflow in 2005		0.03	0.03	
Inflow in 2006		0.04	0.04	
Inflow in January		-0.07	-0.07	
Inflow in February		-0.09	-0.09	
Inflow in March		-0.18 ***	-0.18 ***	
Inflow in April		-0.19 ***	-0.19 ***	
Inflow in May		-0.12 *	-0.12 *	
Inflow in June		-0.13 **	-0.13 **	
Inflow in Julv		0.05	0.05	
Inflow in August		-0.04	-0.04	
Inflow in September		-0.11 *	-0.12 *	
Inflow in October		-0.20 ***	-0.20 ***	
Inflow in November		-0.14 **	-0.14 **	
Residency outside Flanders		0.32	0.32	
Residency in Antwerpen		-0.07 *	-0.07 *	
Residency in Limburg		-0.08 *	-0.08 *	
Residency in Oost-Vlaanderen		-0.16 ***	-0.16 ***	
Residency in Vlaams Brabant		-0.03	-0.03	
Limited working ability		-0.39 ***	-0.40 ***	
Dutch mother tongue		0.06	0.06	
Driving licence		-0.05	-0.05	
Car		0.10 ***	0.10 ***	
<b>Unobserved heterogeneity</b>			<b>normal</b>	<b>gamma</b>

Reference category: European decent, max. 1st stage of secondary education, moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

Table 12 Estimation results: men, 18-25, secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-0.92	***	0.11		0.23	**	0.39	***
2 months	-1.51	***	-0.46	***	-0.09		-0.05	
3 months	-1.65	***	-0.59	***	-0.08		-0.09	
4 months	-1.88	***	-0.81	***	-0.19		-0.23	**
5 months	-1.85	***	-0.77	***	-0.07		-0.14	
6 months	-1.94	***	-0.85	***	-0.07		-0.16	
7 months	-1.92	***	-0.83	***	0.03		-0.07	
8 months	-1.87	***	-0.77	***	0.16		0.05	
9 months	-1.89	***	-0.78	***	0.22		0.09	
10 months	-2.03	***	-0.91	***	0.15		0.01	
11 months	-2.01	***	-0.90	***	0.22		0.08	
12 months	-1.96	***	-0.84	***	0.33	*	0.19	
13 months	-2.04	***	-0.91	***	0.32	*	0.18	
14 months	-2.19	***	-1.06	***	0.22		0.07	
15 months	-2.15	***	-1.02	***	0.30		0.16	
16 months	-2.24	***	-1.10	***	0.26		0.12	
17 months	-2.30	***	-1.15	***	0.25		0.10	
18 months	-2.33	***	-1.18	***	0.26		0.12	
19 months	-2.28	***	-1.13	***	0.34	*	0.20	
20 months	-2.27	***	-1.10	***	0.40	*	0.27	*
21 months	-2.43	***	-1.26	***	0.28		0.15	
22 months	-2.53	***	-1.36	***	0.20		0.07	
23 months	-2.37	***	-1.20	***	0.40	*	0.27	
24 months	-2.39	***	-1.21	***	0.42	*	0.29	
25-48 months	-2.60	***	-1.39	***	0.44	*	0.35	**
49+ months	-3.01	***	-1.75	***	0.56	**	0.61	***
Age			-0.05	***	-0.06	***	-0.06	***
Turkish/Moroccan decent			-0.28	***	-0.43	***	-0.39	***
Non European decent			-0.32	***	-0.49	***	-0.46	***
Vocational sec.ed. (3rd stage)			0.10	***	0.18	***	0.17	***
Vocational sec.ed. (4th stage)			0.45	***	0.75	***	0.70	***
Technical sec.ed. (3rd stage)			0.14	***	0.23	***	0.21	***
Art sec.ed. (3rd stage)			-0.16	***	-0.26	***	-0.24	***
Strong functional urbanization			-0.07	***	-0.11	***	-0.10	***
Weak functional urbanization			0.02		0.03		0.02	
Inflow in 1995			-0.39	***	-0.59	***	-0.53	***
Inflow in 1996			-0.28	***	-0.41	***	-0.37	***
Inflow in 1997			-0.21	***	-0.32	***	-0.30	***
Inflow in 1998			-0.14	***	-0.19	***	-0.17	***
Inflow in 1999			-0.04		-0.03		-0.02	
Inflow in 2000			0.04		0.08	*	0.07	**
Inflow in 2001			-0.03		-0.05		-0.03	
Inflow in 2002			-0.12	***	-0.13	***	-0.12	***
Inflow in 2003			-0.10	***	-0.12	***	-0.11	***
Inflow in 2004			-0.08	***	-0.09	**	-0.08	**
Inflow in 2005			-0.09	***	-0.15	***	-0.14	***
Inflow in 2006			-0.01		-0.03		-0.03	
Inflow in Januarv			-0.19	***	-0.27	***	-0.25	***
Inflow in Februarv			-0.13	***	-0.17	***	-0.16	***
Inflow in March			-0.22	***	-0.33	***	-0.30	***
Inflow in April			-0.19	***	-0.28	***	-0.26	***
Inflow in May			-0.26	***	-0.43	***	-0.39	***
Inflow in June			-0.03		-0.05		-0.04	
Inflow in Julv			-0.04	*	-0.07	**	-0.06	*
Inflow in August			-0.11	***	-0.16	***	-0.15	***
Inflow in September			-0.23	***	-0.34	***	-0.31	***
Inflow in October			-0.24	***	-0.38	***	-0.35	***
Inflow in November			-0.19	***	-0.30	***	-0.27	***
Residence outside Flanders			0.04		0.04		0.06	
Residence in Antwerpen			-0.08	***	-0.14	***	-0.13	***
Residence in Limburg			-0.08	***	-0.12	***	-0.11	***
Residence in Oost-Vlaanderen			-0.12	***	-0.19	***	-0.18	***
Residence in Vlaams Brabant			-0.05	***	-0.10	***	-0.09	***
Limited working ability			-0.49	***	-0.67	***	-0.64	***
Dutch mother tongue			0.13	***	0.21	***	0.20	***
Driving licence			0.09	***	0.12	***	0.11	***
Car			0.10	***	0.13	***	0.12	***
Unobserved heterogeneity					normal	***	gamma	***

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*), and 1% (\*\*\*).

Table 13 Estimation results: men, 26-45, secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.20 ***	-0.71 ***	-0.90 ***	-0.60 ***
2 months	-1.99 ***	-1.47 ***	-1.38 ***	-1.24 ***
3 months	-2.01 ***	-1.50 ***	-1.27 ***	-1.20 ***
4 months	-2.14 ***	-1.62 ***	-1.27 ***	-1.26 ***
5 months	-2.13 ***	-1.60 ***	-1.15 ***	-1.18 ***
6 months	-2.21 ***	-1.68 ***	-1.13 ***	-1.20 ***
7 months	-2.26 ***	-1.73 ***	-1.09 ***	-1.19 ***
8 months	-2.32 ***	-1.78 ***	-1.08 ***	-1.21 ***
9 months	-2.31 ***	-1.76 ***	-0.99 ***	-1.14 ***
10 months	-2.42 ***	-1.87 ***	-1.04 ***	-1.20 ***
11 months	-2.30 ***	-1.75 ***	-0.86 ***	-1.04 ***
12 months	-2.35 ***	-1.79 ***	-0.83 ***	-1.03 ***
13 months	-2.46 ***	-1.89 ***	-0.88 ***	-1.09 ***
14 months	-2.55 ***	-1.98 ***	-0.92 ***	-1.14 ***
15 months	-2.52 ***	-1.94 ***	-0.83 ***	-1.06 ***
16 months	-2.49 ***	-1.91 ***	-0.76 ***	-1.00 ***
17 months	-2.65 ***	-2.05 ***	-0.86 ***	-1.10 ***
18 months	-2.67 ***	-2.08 ***	-0.85 ***	-1.10 ***
19 months	-2.63 ***	-2.03 ***	-0.76 ***	-1.01 ***
20 months	-2.85 ***	-2.25 ***	-0.95 ***	-1.20 ***
21 months	-2.59 ***	-1.98 ***	-0.64 ***	-0.91 ***
22 months	-2.86 ***	-2.25 ***	-0.88 ***	-1.15 ***
23 months	-2.97 ***	-2.36 ***	-0.96 ***	-1.23 ***
24 months	-2.91 ***	-2.29 ***	-0.87 ***	-1.14 ***
25-48 months	-3.07 ***	-2.43 ***	-0.79 ***	-1.07 ***
49+ months	-3.49 ***	-2.80 ***	-0.68 ***	-0.92 ***
Age		-0.02 ***	-0.03 ***	-0.02 ***
Turkish/Moroccan decent		-0.26 ***	-0.43 ***	-0.37 ***
Non European decent		-0.18 ***	-0.33 ***	-0.28 ***
Vocational sec.ed. (3rd stage)		0.08 ***	0.13 ***	0.11 ***
Vocational sec.ed. (4th stage)		0.00	-0.01	0.00
Technical sec.ed. (3rd stage)		0.12 ***	0.19 ***	0.16 ***
Art sec.ed. (3rd stage)		-0.29 ***	-0.47 ***	-0.42 ***
Strong functional urbanization		-0.11 ***	-0.17 ***	-0.15 ***
Weak functional urbanization		0.05 **	0.07 **	0.06 **
Inflow in 1995		-0.07	-0.15 **	-0.13 **
Inflow in 1996		-0.06	-0.10 *	-0.09 **
Inflow in 1997		0.04	0.07	0.06
Inflow in 1998		0.08 **	0.13 **	0.11 **
Inflow in 1999		0.15 ***	0.27 ***	0.24 ***
Inflow in 2000		0.15 ***	0.29 ***	0.27 ***
Inflow in 2001		0.08 **	0.11 **	0.10 **
Inflow in 2002		0.04	0.08	0.06
Inflow in 2003		0.07 **	0.11 **	0.08 **
Inflow in 2004		0.13 ***	0.18 ***	0.15 ***
Inflow in 2005		0.17 ***	0.23 ***	0.19 ***
Inflow in 2006		0.15 ***	0.16 ***	0.13 ***
Inflow in Januarv		0.00	0.00	0.00
Inflow in Februarv		-0.01	-0.03	-0.03
Inflow in March		-0.08 ***	-0.12 **	-0.10 **
Inflow in April		-0.09 ***	-0.17 ***	-0.15 ***
Inflow in May		-0.10 ***	-0.22 ***	-0.19 ***
Inflow in June		-0.08 **	-0.21 ***	-0.17 ***
Inflow in Julv		0.00	0.01	0.00
Inflow in August		-0.01	-0.01	-0.02
Inflow in September		-0.02	-0.05	-0.05
Inflow in October		-0.07 **	-0.16 ***	-0.15 ***
Inflow in November		-0.05 *	-0.12 **	-0.10 **
Residence outside Flanders		0.21 ***	0.31 ***	0.30 ***
Residence in Antwerpen		-0.13 ***	-0.19 ***	-0.16 ***
Residence in Limburg		-0.07 ***	-0.10 ***	-0.08 ***
Residence in Oost-Vlaanderen		-0.13 ***	-0.19 ***	-0.17 ***
Residence in Vlaams Brabant		-0.05 **	-0.07 *	-0.06 **
Limited working ability		-0.48 ***	-0.69 ***	-0.62 ***
Dutch mother tongue		0.14 ***	0.27 ***	0.23 ***
Driving licence		0.02	0.03	0.02
Car		0.13 ***	0.20 ***	0.17 ***
<b>Unobserved heterogeneity</b>			<b>normal</b> ***	<b>gamma</b> ***

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*), and 1% (\*\*\*).

Table 14 Estimation results: men, 46-50, secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3	Model 4		
1 month	-1.41	***	-1.97	**	-1.52	-0.55		
2 months	-2.26	***	-2.80	***	-2.06	-1.23		
3 months	-2.06	***	-2.61	***	-1.72	-0.94		
4 months	-2.41	***	-2.94	***	-1.92	-1.18		
5 months	-2.33	***	-2.85	***	-1.74	-1.02		
6 months	-2.46	***	-2.98	***	-1.78	-1.08		
7 months	-2.53	***	-3.05	***	-1.76	-1.08		
8 months	-2.53	***	-3.05	***	-1.69	-1.02		
9 months	-2.65	***	-3.16	***	-1.73	-1.06		
10 months	-2.86	***	-3.37	***	-1.89	-1.22		
11 months	-2.78	***	-3.29	***	-1.76	-1.09		
12 months	-2.57	***	-3.09	***	-1.50	-0.83		
13 months	-2.73	***	-3.22	***	-1.58	-0.92		
14 months	-2.44	***	-2.92	***	-1.23	-0.56		
15 months	-2.79	***	-3.27	***	-1.53	-0.86		
16 months	-2.78	***	-3.25	***	-1.46	-0.79		
17 months	-3.04	***	-3.51	***	-1.69	-1.01		
18 months	-3.54	***	-4.00	***	-2.15	-1.48		
19 months	-3.36	***	-3.82	***	-1.95	-1.27		
20 months	-2.95	***	-3.41	***	-1.51	-0.83		
21 months	-3.19	***	-3.66	***	-1.72	-1.04		
22 months	-2.49	***	-2.95	***	-0.98	-0.29		
23 months	-2.73	***	-3.18	***	-1.17	-0.47		
24 months	-3.24	***	-3.68	***	-1.64	-0.94		
25-48 months	-3.23	***	-3.63	***	-1.37	-0.62		
49+ months	-4.03	***	-4.43	***	-1.73	-0.81		
Age			0.01		-0.02	-0.03		
Turkish/Moroccan decent			-0.36	***	-0.60	***	-0.55	***
Non European decent			-0.01		-0.13		-0.17	
Vocational sec.ed. (3rd stage)			0.12	**	0.21	**	0.20	**
Vocational sec.ed. (4th stage)			0.51		0.77		0.68	
Technical sec.ed. (3rd stage)			0.16	***	0.31	***	0.30	***
Art sec.ed. (3rd stage)			-0.30		-0.53		-0.51	*
Strong functional urbanization			-0.02		-0.05		-0.07	
Weak functional urbanization			0.04		0.05		0.04	
Inflow in 1995			0.07		0.05		0.01	
Inflow in 1996			-0.07		-0.30		-0.36	*
Inflow in 1997			0.24	*	0.30		0.20	
Inflow in 1998			0.24	*	0.29		0.20	
Inflow in 1999			0.44	***	0.60	***	0.47	***
Inflow in 2000			0.31	**	0.52	**	0.47	***
Inflow in 2001			0.19		0.31	*	0.32	*
Inflow in 2002			0.09		0.20		0.22	
Inflow in 2003			0.05		0.11		0.10	
Inflow in 2004			0.05		0.10		0.11	
Inflow in 2005			0.23	**	0.35	*	0.29	*
Inflow in 2006			0.30	**	0.46	**	0.41	***
Inflow in Januarv			0.07		0.23		0.24	
Inflow in Februarv			-0.03		0.07		0.10	
Inflow in March			-0.06		-0.05		-0.03	
Inflow in April			-0.12		-0.12		-0.11	
Inflow in May			-0.14		-0.19		-0.16	
Inflow in June			-0.06		-0.07		-0.04	
Inflow in Julv			-0.01		0.14		0.17	
Inflow in August			0.06		0.17		0.16	
Inflow in September			0.08		0.22		0.22	
Inflow in October			-0.07		-0.06		-0.03	
Inflow in November			-0.03		-0.01		0.00	
Residence outside Flanders			0.21		0.24		0.27	
Residence in Antwerpen			-0.16	**	-0.26	**	-0.22	**
Residence in Limburg			-0.04		-0.03		-0.02	
Residence in Oost-Vlaanderen			-0.17	**	-0.27	**	-0.25	**
Residence in Vlaams Brabant			0.05		0.05		0.04	
Limited working ability			-0.48	***	-0.75	***	-0.74	***
Dutch mother tongue			0.13	**	0.21	*	0.19	**
Driving licence			-0.02		-0.02		-0.02	
Car			0.08	*	0.13		0.13	*
<b>Unobserved heterogeneity</b>					<b>normal</b>	<b>***</b>	<b>gamma</b>	<b>***</b>

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*).

Table 15 Estimation results: women, 18-25, secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.07 ***	-0.19 ***	-0.17 **	-0.02
2 months	-1.65 ***	-0.75 ***	-0.59 ***	-0.49 ***
3 months	-1.79 ***	-0.89 ***	-0.64 ***	-0.57 ***
4 months	-1.95 ***	-1.03 ***	-0.72 ***	-0.66 ***
5 months	-1.99 ***	-1.06 ***	-0.70 ***	-0.65 ***
6 months	-2.05 ***	-1.11 ***	-0.70 ***	-0.66 ***
7 months	-2.03 ***	-1.08 ***	-0.62 ***	-0.59 ***
8 months	-2.02 ***	-1.06 ***	-0.56 ***	-0.54 ***
9 months	-1.98 ***	-1.01 ***	-0.46 ***	-0.45 ***
10 months	-2.11 ***	-1.13 ***	-0.54 ***	-0.52 ***
11 months	-2.14 ***	-1.15 ***	-0.52 ***	-0.51 ***
12 months	-2.10 ***	-1.11 ***	-0.44 ***	-0.44 ***
13 months	-2.17 ***	-1.17 ***	-0.47 ***	-0.46 ***
14 months	-2.26 ***	-1.24 ***	-0.51 ***	-0.51 ***
15 months	-2.31 ***	-1.30 ***	-0.54 ***	-0.53 ***
16 months	-2.37 ***	-1.35 ***	-0.56 ***	-0.56 ***
17 months	-2.46 ***	-1.43 ***	-0.62 ***	-0.61 ***
18 months	-2.46 ***	-1.43 ***	-0.59 ***	-0.58 ***
19 months	-2.41 ***	-1.37 ***	-0.51 ***	-0.50 ***
20 months	-2.42 ***	-1.38 ***	-0.49 ***	-0.48 ***
21 months	-2.57 ***	-1.52 ***	-0.62 ***	-0.60 ***
22 months	-2.38 ***	-1.33 ***	-0.40 ***	-0.39 ***
23 months	-2.44 ***	-1.38 ***	-0.43 ***	-0.41 ***
24 months	-2.44 ***	-1.38 ***	-0.41 ***	-0.39 ***
25-48 months	-2.60 ***	-1.50 ***	-0.37 **	-0.33 **
49+ months	-2.87 ***	-1.67 ***	-0.17	-0.04
Age		-0.04 ***	-0.04 ***	-0.04 ***
Turkish/Moroccan decent		-0.36 ***	-0.48 ***	-0.47 ***
Non European decent		-0.30 ***	-0.40 ***	-0.39 ***
Vocational sec.ed. (3rd stage)		-0.06 ***	-0.06 ***	-0.06 ***
Vocational sec.ed. (4th stage)		0.37 ***	0.55 ***	0.54 ***
Technical sec.ed. (3rd stage)		0.04 **	0.05 ***	0.05 ***
Art sec.ed. (3rd stage)		-0.20 ***	-0.27 ***	-0.26 ***
Strong functional urbanization		-0.08 ***	-0.09 ***	-0.09 ***
Weak functional urbanization		-0.01	-0.01	-0.01
Inflow in 1995		-0.57 ***	-0.77 ***	-0.73 ***
Inflow in 1996		-0.51 ***	-0.67 ***	-0.65 ***
Inflow in 1997		-0.42 ***	-0.54 ***	-0.52 ***
Inflow in 1998		-0.24 ***	-0.29 ***	-0.28 ***
Inflow in 1999		-0.15 ***	-0.17 ***	-0.17 ***
Inflow in 2000		-0.05 *	-0.04	-0.03
Inflow in 2001		-0.10 ***	-0.11 ***	-0.10 ***
Inflow in 2002		-0.20 ***	-0.23 ***	-0.22 ***
Inflow in 2003		-0.17 ***	-0.20 ***	-0.19 ***
Inflow in 2004		-0.10 ***	-0.11 ***	-0.10 ***
Inflow in 2005		-0.16 ***	-0.20 ***	-0.19 ***
Inflow in 2006		-0.04	-0.04	-0.04
Inflow in Januarv		-0.07 **	-0.10 ***	-0.10 ***
Inflow in February		-0.03	-0.03	-0.03
Inflow in March		-0.09 ***	-0.13 ***	-0.13 ***
Inflow in April		-0.08 ***	-0.13 ***	-0.12 ***
Inflow in May		-0.15 ***	-0.24 ***	-0.23 ***
Inflow in June		0.06 **	0.08 **	0.08 **
Inflow in Julv		0.06 ***	0.08 **	0.07 **
Inflow in August		0.01	0.00	0.00
Inflow in September		-0.06 **	-0.08 ***	-0.09 ***
Inflow in October		-0.05 **	-0.09 ***	-0.09 ***
Inflow in November		-0.10 ***	-0.16 ***	-0.16 ***
Residence outside Flanders		-0.02	-0.06	-0.06
Residence in Antwerpen		-0.08 ***	-0.10 ***	-0.09 ***
Residence in Limburg		-0.18 ***	-0.23 ***	-0.22 ***
Residence in Oost-Vlaanderen		-0.08 ***	-0.11 ***	-0.10 ***
Residence in Vlaams Brabant		0.06 ***	0.08 ***	0.07 ***
Limited working ability		-0.55 ***	-0.68 ***	-0.66 ***
Dutch mother tongue		0.21 ***	0.28 ***	0.26 ***
Driving licence		0.11 ***	0.13 ***	0.12 ***
Car		0.07 ***	0.09 ***	0.09 ***
<b>Unobserved heterogeneity</b>			<b>normal</b> ***	<b>gamma</b> ***

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*).

Table 16 Estimation results: women, 26-45, secondary education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.35	***	-0.62	***	-0.62	***	-0.55	***
2 months	-2.19	***	-1.45	***	-1.41	***	-1.35	***
3 months	-2.25	***	-1.51	***	-1.45	***	-1.40	***
4 months	-2.28	***	-1.53	***	-1.46	***	-1.41	***
5 months	-2.33	***	-1.57	***	-1.48	***	-1.43	***
6 months	-2.37	***	-1.60	***	-1.49	***	-1.45	***
7 months	-2.44	***	-1.68	***	-1.56	***	-1.52	***
8 months	-2.48	***	-1.71	***	-1.57	***	-1.54	***
9 months	-2.42	***	-1.64	***	-1.49	***	-1.46	***
10 months	-2.46	***	-1.67	***	-1.51	***	-1.48	***
11 months	-2.42	***	-1.62	***	-1.45	***	-1.42	***
12 months	-2.37	***	-1.57	***	-1.39	***	-1.36	***
13 months	-2.44	***	-1.63	***	-1.43	***	-1.41	***
14 months	-2.54	***	-1.73	***	-1.52	***	-1.49	***
15 months	-2.62	***	-1.80	***	-1.57	***	-1.55	***
16 months	-2.62	***	-1.79	***	-1.56	***	-1.54	***
17 months	-2.66	***	-1.83	***	-1.58	***	-1.56	***
18 months	-2.71	***	-1.88	***	-1.62	***	-1.60	***
19 months	-2.75	***	-1.91	***	-1.65	***	-1.63	***
20 months	-2.83	***	-1.98	***	-1.71	***	-1.69	***
21 months	-2.81	***	-1.96	***	-1.68	***	-1.66	***
22 months	-2.79	***	-1.94	***	-1.65	***	-1.63	***
23 months	-2.68	***	-1.82	***	-1.53	***	-1.51	***
24 months	-2.79	***	-1.92	***	-1.62	***	-1.60	***
25-48 months	-2.97	***	-2.08	***	-1.71	***	-1.69	***
49+ months	-3.39	***	-2.39	***	-1.86	***	-1.84	***
Age			-0.02	***	-0.02	***	-0.02	***
Turkish/Moroccan decent			-0.20	***	-0.23	***	-0.23	***
Non European decent			-0.05		-0.08	*	-0.08	*
Vocational sec.ed. (3rd stage)			0.00		0.00		0.00	
Vocational sec.ed. (4th stage)			0.25	***	0.28	***	0.28	***
Technical sec.ed. (3rd stage)			0.00		-0.01		-0.01	
Art sec.ed. (3rd stage)			-0.09	**	-0.10	**	-0.10	**
Strong functional urbanization			-0.03	**	-0.04	**	-0.04	**
Weak functional urbanization			0.01		0.02		0.02	
Inflow in 1995			-0.45	***	-0.51	***	-0.51	***
Inflow in 1996			-0.42	***	-0.47	***	-0.46	***
Inflow in 1997			-0.35	***	-0.39	***	-0.38	***
Inflow in 1998			-0.19	***	-0.20	***	-0.20	***
Inflow in 1999			-0.10	***	-0.09	***	-0.09	***
Inflow in 2000			0.01		0.04		0.04	
Inflow in 2001			-0.07	**	-0.07	**	-0.07	**
Inflow in 2002			-0.14	***	-0.15	***	-0.15	***
Inflow in 2003			-0.09	***	-0.10	***	-0.10	***
Inflow in 2004			-0.11	***	-0.12	***	-0.12	***
Inflow in 2005			0.00		-0.01		-0.01	
Inflow in 2006			0.05	*	0.05		0.05	
Inflow in Januarv			-0.06	***	-0.07	**	-0.07	**
Inflow in Februarv			-0.09	***	-0.10	***	-0.10	***
Inflow in March			-0.07	***	-0.08	***	-0.08	***
Inflow in April			-0.10	***	-0.12	***	-0.12	***
Inflow in May			-0.15	***	-0.18	***	-0.18	***
Inflow in June			-0.08	***	-0.10	***	-0.10	***
Inflow in Julv			0.04		0.05	*	0.05	*
Inflow in August			-0.06	**	-0.07	**	-0.07	**
Inflow in September			-0.08	***	-0.10	***	-0.10	***
Inflow in October			-0.11	***	-0.13	***	-0.13	***
Inflow in November			-0.09	***	-0.10	***	-0.10	***
Residence outside Flanders			0.34	***	0.37	***	0.36	***
Residence in Antwerpen			-0.15	***	-0.16	***	-0.16	***
Residence in Limburg			-0.15	***	-0.17	***	-0.17	***
Residence in Oost-Vlaanderen			-0.10	***	-0.12	***	-0.11	***
Residence in Vlaams Brabant			0.01		0.01		0.01	
Limited working ability			-0.52	***	-0.57	***	-0.57	***
Dutch mother tongue			0.17	***	0.19	***	0.19	***
Driving licence			0.02		0.02		0.02	
Car			0.11	***	0.13	***	0.12	***
<b>Unobserved heterogeneity</b>					<b>normal</b>	***	<b>gamma</b>	***

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*).

Table 17 Estimation results: women, 46-50, secondary education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.60 ***	-1.28	-0.98	-0.39
2 months	-2.38 ***	-2.05 **	-1.57	-1.01
3 months	-2.30 ***	-1.97 **	-1.40	-0.85
4 months	-2.79 ***	-2.44 ***	-1.79	-1.24
5 months	-2.63 ***	-2.28 ***	-1.57	-1.02
6 months	-2.58 ***	-2.22 ***	-1.45	-0.89
7 months	-2.85 ***	-2.50 ***	-1.67	-1.10
8 months	-2.75 ***	-2.39 ***	-1.51	-0.93
9 months	-2.70 ***	-2.32 ***	-1.40	-0.81
10 months	-2.82 ***	-2.44 ***	-1.47	-0.87
11 months	-2.69 ***	-2.30 ***	-1.29	-0.67
12 months	-2.59 ***	-2.20 ***	-1.14	-0.51
13 months	-2.70 ***	-2.30 ***	-1.19	-0.55
14 months	-2.85 ***	-2.45 ***	-1.30	-0.64
15 months	-2.83 ***	-2.43 ***	-1.25	-0.57
16 months	-3.01 ***	-2.61 ***	-1.39	-0.70
17 months	-2.84 ***	-2.45 ***	-1.21	-0.51
18 months	-2.82 ***	-2.41 ***	-1.13	-0.41
19 months	-2.97 ***	-2.54 ***	-1.24	-0.50
20 months	-3.21 ***	-2.78 ***	-1.45	-0.70
21 months	-3.02 ***	-2.58 ***	-1.23	-0.46
22 months	-3.04 ***	-2.60 ***	-1.22	-0.44
23 months	-3.37 ***	-2.92 ***	-1.53	-0.74
24 months	-3.13 ***	-2.68 ***	-1.26	-0.46
25-48 months	-3.39 ***	-2.90 ***	-1.32	-0.40
49+ months	-4.32 ***	-3.87 ***	-1.96	-0.76
Age		-0.01	-0.03	-0.03
Turkish/Moroccan decent		-0.23	-0.39	-0.40
Non European decent		0.14	0.10	0.05
Vocational sec.ed. (3rd stage)		-0.04	-0.06	-0.06
Vocational sec.ed. (4th stage)		0.01	0.01	0.02
Technical sec.ed. (3rd stage)		-0.08 *	-0.12	-0.13
Art sec.ed. (3rd stage)		-0.04	-0.16	-0.26
Strong functional urbanization		0.06	0.08	0.07
Weak functional urbanization		0.14 **	0.17 **	0.14 *
Inflow in 1995		-0.11	-0.24	-0.36
Inflow in 1996		-0.22 *	-0.46 *	-0.63 ***
Inflow in 1997		-0.04	-0.12	-0.21
Inflow in 1998		0.09	0.07	0.00
Inflow in 1999		0.20 *	0.26	0.20
Inflow in 2000		0.19 *	0.37 *	0.44 **
Inflow in 2001		0.09	0.19	0.23
Inflow in 2002		-0.10	-0.05	0.04
Inflow in 2003		-0.15	-0.10	0.00
Inflow in 2004		-0.20 *	-0.29 *	-0.31 **
Inflow in 2005		0.14	0.20	0.18
Inflow in 2006		0.24 **	0.30 **	0.27 *
Inflow in Januarv		0.04	0.04	0.01
Inflow in February		0.04	0.02	-0.04
Inflow in March		0.11	0.13	0.11
Inflow in April		0.08	0.04	-0.05
Inflow in May		0.09	0.08	0.03
Inflow in June		0.07	0.01	-0.07
Inflow in Julv		0.25 ***	0.35 **	0.34 **
Inflow in August		0.06	-0.02	-0.12
Inflow in September		0.21 **	0.23	0.16
Inflow in October		-0.04	-0.13	-0.21
Inflow in November		0.03	-0.02	-0.09
Residence outside Flanders		0.39	0.44	0.40
Residence in Antwerpen		-0.14 **	-0.18 **	-0.15 *
Residence in Limburg		-0.11	-0.15	-0.15
Residence in Oost-Vlaanderen		-0.05	-0.06	-0.06
Residence in Vlaams Brabant		0.02	0.06	0.07
Limited working ability		-0.49 ***	-0.63 ***	-0.63 ***
Dutch mother tongue		0.17 **	0.27 **	0.30 **
Driving licence		-0.11 *	-0.14	-0.13
Car		0.18 ***	0.23 ***	0.22 ***
<b>Unobserved heterogeneity</b>			<b>normal</b>	<b>gamma</b> **

Reference category: European decent, general secondary education (3<sup>rd</sup> stage), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*).



Table 18 Estimation results:men,18-25, higher education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-0.90	***	0.38	**	0.59	***	0.72	***
2 months	-1.18	***	0.12		0.57	**	0.62	***
3 months	-1.41	***	-0.09		0.50	**	0.51	**
4 months	-1.64	***	-0.31	**	0.39		0.38	*
5 months	-1.54	***	-0.20		0.59	**	0.57	**
6 months	-1.63	***	-0.27	*	0.60	**	0.57	**
7 months	-1.72	***	-0.35	**	0.60	**	0.57	**
8 months	-1.65	***	-0.27	*	0.75	**	0.72	***
9 months	-1.57	***	-0.18		0.91	***	0.88	***
10 months	-1.75	***	-0.36	**	0.80	**	0.78	***
11 months	-1.79	***	-0.39	**	0.83	**	0.81	***
12 months	-1.87	***	-0.48	***	0.80	**	0.79	***
13 months	-1.58	***	-0.17		1.16	***	1.16	***
14 months	-1.86	***	-0.45	***	0.94	***	0.95	***
15 months	-1.96	***	-0.55	***	0.89	**	0.91	***
16 months	-2.00	***	-0.59	***	0.89	**	0.92	***
17 months	-2.03	***	-0.62	***	0.89	**	0.94	***
18 months	-2.20	***	-0.77	***	0.77	**	0.82	***
19 months	-2.18	***	-0.74	***	0.83	**	0.89	***
20 months	-2.19	***	-0.75	***	0.85	**	0.92	***
21 months	-2.49	***	-1.04	***	0.59		0.66	*
22 months	-2.23	***	-0.79	***	0.87	**	0.95	***
23 months	-2.14	***	-0.69	***	0.99	**	1.09	***
24 months	-2.01	***	-0.55	**	1.17	***	1.28	***
25-48 months	-2.63	***	-1.12	***	0.76	*	0.93	***
49+ months	-2.94	***	-1.41	***	0.87	*	1.24	***
Age			-0.04	***	-0.05	***	-0.05	***
Turkish/Moroccan decent			-0.26	***	-0.43	***	-0.42	***
Non European decent			-0.39	***	-0.60	***	-0.59	***
Higher (professional) education (long)			-0.02		-0.04		-0.04	
Academic education			-0.06	***	-0.11	***	-0.11	***
Strong functional urbanization			-0.07	***	-0.10	***	-0.10	***
Weak functional urbanization			0.00		-0.01		-0.01	
Inflow in 1995			-0.64	***	-0.93	***	-0.89	***
Inflow in 1996			-0.59	***	-0.84	***	-0.81	***
Inflow in 1997			-0.50	***	-0.71	***	-0.68	***
Inflow in 1998			-0.41	***	-0.56	***	-0.53	***
Inflow in 1999			-0.36	***	-0.49	***	-0.47	***
Inflow in 2000			-0.30	***	-0.42	***	-0.41	***
Inflow in 2001			-0.22	***	-0.34	***	-0.31	***
Inflow in 2002			-0.45	***	-0.63	***	-0.59	***
Inflow in 2003			-0.51	***	-0.71	***	-0.67	***
Inflow in 2004			-0.40	***	-0.56	***	-0.53	***
Inflow in 2005			-0.29	***	-0.40	***	-0.39	***
Inflow in 2006			-0.11	***	-0.14	***	-0.13	***
Inflow in January			-0.08		-0.13		-0.13	
Inflow in February			-0.03		-0.03		-0.02	
Inflow in March			-0.18	***	-0.29	***	-0.29	***
Inflow in April			-0.17	***	-0.29	***	-0.29	***
Inflow in Mav			-0.23	***	-0.42	***	-0.41	***
Inflow in June			0.19	***	0.25	***	0.24	***
Inflow in July			0.02		-0.03		-0.03	
Inflow in August			-0.04		-0.11		-0.11	*
Inflow in September			-0.16	***	-0.29	***	-0.28	***
Inflow in October			-0.25	***	-0.40	***	-0.40	***
Inflow in November			-0.17	***	-0.25	***	-0.24	***
Residence outside Flanders			0.05		-0.03		-0.03	
Residence in Antwerpen			-0.11	***	-0.15	***	-0.15	***
Residence in Limburg			-0.07	***	-0.11	***	-0.11	***
Residence in Oost-Vlaanderen			-0.13	***	-0.20	***	-0.19	***
Residence in Vlaams Brabant			-0.03		-0.06	*	-0.06	*
Limited working ability			-0.34	*	-0.54	**	-0.52	**
Dutch mother tongue			0.15	***	0.22	***	0.21	***
Driving licence			0.13	***	0.16	***	0.16	***
Car			0.12	***	0.15	***	0.14	***
<b>Unobserved heterogeneity</b>					<b>normal</b>	<b>***</b>	<b>gamma</b>	<b>***</b>

Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.

Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*).

Table 19 Estimation results: men, 26-45, higher education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.08	***	-0.44	***	-0.44	***	-0.18	
2 months	-1.81	***	-1.15	***	-0.72	***	-0.73	***
3 months	-1.85	***	-1.20	***	-0.57	***	-0.69	***
4 months	-1.97	***	-1.31	***	-0.52	***	-0.72	***
5 months	-1.98	***	-1.31	***	-0.37	*	-0.64	***
6 months	-1.98	***	-1.31	***	-0.24		-0.56	***
7 months	-2.20	***	-1.51	***	-0.34		-0.70	***
8 months	-2.20	***	-1.52	***	-0.25		-0.65	***
9 months	-2.16	***	-1.47	***	-0.12		-0.54	***
10 months	-2.19	***	-1.49	***	-0.05		-0.50	***
11 months	-2.24	***	-1.54	***	-0.02		-0.49	***
12 months	-2.20	***	-1.50	***	0.11		-0.39	**
13 months	-2.28	***	-1.59	***	0.09		-0.42	**
14 months	-2.36	***	-1.64	***	0.10		-0.43	**
15 months	-2.49	***	-1.77	***	0.03		-0.51	**
16 months	-2.64	***	-1.91	***	-0.06		-0.61	***
17 months	-2.51	***	-1.78	***	0.12		-0.44	*
18 months	-2.48	***	-1.75	***	0.20		-0.37	
19 months	-2.49	***	-1.75	***	0.26		-0.32	
20 months	-2.68	***	-1.93	***	0.12		-0.47	*
21 months	-2.59	***	-1.84	***	0.26		-0.34	
22 months	-2.79	***	-2.04	***	0.10		-0.50	*
23 months	-2.45	***	-1.71	***	0.47		-0.13	
24 months	-2.87	***	-2.13	***	0.08		-0.52	*
25-48 months	-3.00	***	-2.24	***	0.23		-0.39	
49+ months	-3.55	***	-2.78	***	0.26		-0.32	
Age			-0.02	***	-0.04	***	-0.03	***
Turkish/Moroccan decent			-0.23	***	-0.42	***	-0.35	***
Non European decent			-0.21	***	-0.47	***	-0.37	***
Higher (professional) education (long)			-0.08	***	-0.12	***	-0.09	***
Academic education			-0.04	**	-0.10	***	-0.08	***
Strong functional urbanization			-0.11	***	-0.20	***	-0.17	***
Weak functional urbanization			0.04		0.06		0.05	
Inflow in 1995			-0.12	**	-0.24	**	-0.19	**
Inflow in 1996			-0.04		-0.07		-0.07	
Inflow in 1997			0.02		0.04		0.03	
Inflow in 1998			0.07		0.11		0.09	
Inflow in 1999			0.11	**	0.20	**	0.16	**
Inflow in 2000			0.11	**	0.18	**	0.16	**
Inflow in 2001			0.06		0.04		0.04	
Inflow in 2002			0.02		0.02		0.01	
Inflow in 2003			0.02		0.02		0.00	
Inflow in 2004			0.02		-0.01		-0.02	
Inflow in 2005			0.09	*	0.10		0.08	
Inflow in 2006			0.12	**	0.14	**	0.12	**
Inflow in January			-0.04		-0.08		-0.07	
Inflow in February			-0.06		-0.12		-0.11	*
Inflow in March			-0.09	**	-0.14	*	-0.12	*
Inflow in April			-0.11	***	-0.23	***	-0.20	***
Inflow in May			-0.18	***	-0.39	***	-0.31	***
Inflow in June			-0.08	*	-0.25	***	-0.18	***
Inflow in July			-0.02		-0.01		-0.01	
Inflow in August			-0.02		0.01		0.00	
Inflow in September			-0.06		-0.11		-0.09	*
Inflow in October			-0.02		-0.08		-0.07	
Inflow in November			-0.06		-0.14	*	-0.11	*
Residence outside Flanders			0.24	***	0.31	***	0.26	***
Residence in Antwerpen			-0.10	***	-0.17	***	-0.15	***
Residence in Limburg			-0.07	*	-0.10	*	-0.09	*
Residence in Oost-Vlaanderen			-0.16	***	-0.28	***	-0.23	***
Residence in Vlaams Brabant			-0.06	*	-0.11	**	-0.09	**
Limited working ability			-0.38	***	-0.62	***	-0.51	***
Dutch mother tongue			0.18	***	0.36	***	0.29	***
Driving licence			0.08	***	0.11	**	0.09	**
Car			0.12	***	0.20	***	0.16	***
<b>Unobserved heterogeneity</b>					<b>normal</b>	<b>***</b>	<b>gamma</b>	<b>***</b>

Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*) , 5% (\*\*) and 1% (\*\*\*)

Table 20 Estimation results: men, 46-50, higher education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.43 ***	0.57	0.57	No convergence
2 months	-2.15 ***	-0.13	-0.13	
3 months	-2.16 ***	-0.15	-0.16	
4 months	-2.13 ***	-0.10	-0.11	
5 months	-2.26 ***	-0.25	-0.27	
6 months	-2.39 ***	-0.33	-0.36	
7 months	-2.28 ***	-0.25	-0.28	
8 months	-2.40 ***	-0.33	-0.36	
9 months	-2.48 ***	-0.41	-0.44	
10 months	-2.92 ***	-0.85	-0.87	
11 months	-2.66 ***	-0.58	-0.60	
12 months	-2.42 ***	-0.33	-0.34	
13 months	-2.82 ***	-0.73	-0.74	
14 months	-2.98 ***	-1.01	-1.02	
15 months	-2.80 ***	-0.70	-0.71	
16 months	-2.84 ***	-0.75	-0.75	
17 months	-2.51 ***	-0.42	-0.42	
18 months	-2.44 ***	-0.34	-0.34	
19 months	-2.62 ***	-0.51	-0.51	
20 months	-2.76 ***	-0.65	-0.65	
21 months	-2.60 ***	-0.49	-0.49	
22 months	-2.24 ***	-0.14	-0.13	
23 months	-3.45 ***	-1.34	-1.33	
24 months	-3.23 ***	-1.11	-1.11	
25-48 months	-3.50 ***	-1.38	-1.38	
49+ months	-3.55 ***	-1.46	-1.44	
Age		-0.04	-0.04	
Turkish/Moroccan decent		-0.13	-0.14	
Non European decent		-0.12	-0.13	
Higher (professional) education (long)		0.05	0.05	
Academic education		0.06	0.06	
Strong functional urbanization		0.00	0.00	
Weak functional urbanization		0.20 **	0.20 **	
Inflow in 1995		-0.37	-0.38	
Inflow in 1996		-0.32 *	-0.32 *	
Inflow in 1997		-0.42 ***	-0.42 ***	
Inflow in 1998		-0.18	-0.17	
Inflow in 1999		-0.07	-0.08	
Inflow in 2000		-0.14	-0.14	
Inflow in 2001		-0.25 *	-0.25 *	
Inflow in 2002		-0.39 ***	-0.38 ***	
Inflow in 2003		-0.33 **	-0.33 **	
Inflow in 2004		-0.45 ***	-0.46 ***	
Inflow in 2005		-0.27 *	-0.27 *	
Inflow in 2006		-0.24 *	-0.23	
Inflow in January		0.04	0.04	
Inflow in February		-0.08	-0.07	
Inflow in March		-0.23	-0.23	
Inflow in April		-0.24 *	-0.24 *	
Inflow in May		-0.27 *	-0.25	
Inflow in June		-0.09	-0.08	
Inflow in July		-0.13	-0.14	
Inflow in August		-0.03	-0.03	
Inflow in September		0.03	0.04	
Inflow in October		-0.10	-0.11	
Inflow in November		-0.01	-0.01	
Residence outside Flanders		0.47 **	0.45 *	
Residence in Antwerpen		-0.11	-0.11	
Residence in Limburg		-0.16	-0.17	
Residence in Oost-Vlaanderen		-0.04	-0.03	
Residence in Vlaams Brabant		-0.18 *	-0.19 *	
Limited working ability		-0.26	-0.26	
Dutch mother tongue		0.04	0.02	
Driving licence		0.20 *	0.20 *	
Car		-0.05	-0.03	
<b>Unobserved heterogeneity</b>			<b>normal</b>	<b>*** gamma</b>

Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*) , 5% (\*\*) and 1% (\*\*\*)

Table 21 Estimation results: women, 18-25, higher education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-0.77 ***	-0.07	-0.06	0.15
2 months	-1.12 ***	-0.38 ***	0.00	0.06
3 months	-1.31 ***	-0.55 ***	0.04	0.05
4 months	-1.51 ***	-0.73 ***	0.02	-0.01
5 months	-1.46 ***	-0.68 ***	0.20	0.16
6 months	-1.59 ***	-0.78 ***	0.21	0.16
7 months	-1.68 ***	-0.86 ***	0.23	0.17
8 months	-1.67 ***	-0.83 ***	0.35	0.30
9 months	-1.62 ***	-0.78 ***	0.49 *	0.44 **
10 months	-1.89 ***	-1.04 ***	0.31	0.27
11 months	-1.92 ***	-1.07 ***	0.35	0.31
12 months	-1.74 ***	-0.89 ***	0.59 **	0.57 ***
13 months	-1.56 ***	-0.70 ***	0.86 ***	0.85 ***
14 months	-1.72 ***	-0.84 ***	0.80 ***	0.80 ***
15 months	-1.99 ***	-1.11 ***	0.59 **	0.61 ***
16 months	-1.97 ***	-1.09 ***	0.66 **	0.70 ***
17 months	-1.95 ***	-1.06 ***	0.74 **	0.79 ***
18 months	-1.83 ***	-0.92 ***	0.93 ***	1.00 ***
19 months	-2.04 ***	-1.12 ***	0.78 **	0.86 ***
20 months	-2.23 ***	-1.33 ***	0.61 *	0.71 ***
21 months	-2.28 ***	-1.36 ***	0.63 *	0.74 ***
22 months	-2.63 ***	-1.71 ***	0.30	0.43
23 months	-2.27 ***	-1.36 ***	0.69 *	0.83 ***
24 months	-2.39 ***	-1.47 ***	0.61 *	0.76 **
25-48 months	-2.37 ***	-1.42 ***	0.88 **	1.11 ***
49+ months	-2.77 ***	-1.67 ***	1.15 ***	1.65 ***
Age		-0.03 ***	-0.03 ***	-0.03 ***
Turkish/Moroccan decent		-0.23 ***	-0.40 ***	-0.38 ***
Non European decent		-0.50 ***	-0.85 ***	-0.81 ***
Higher (professional) education (long)		-0.16 ***	-0.26 ***	-0.24 ***
Academic education		-0.14 ***	-0.27 ***	-0.25 ***
Strong functional urbanization		-0.07 ***	-0.11 ***	-0.10 ***
Weak functional urbanization		-0.01	-0.03	-0.03
Inflow in 1995		-0.65 ***	-1.09 ***	-1.02 ***
Inflow in 1996		-0.63 ***	-1.01 ***	-0.94 ***
Inflow in 1997		-0.54 ***	-0.88 ***	-0.83 ***
Inflow in 1998		-0.44 ***	-0.69 ***	-0.64 ***
Inflow in 1999		-0.30 ***	-0.46 ***	-0.42 ***
Inflow in 2000		-0.22 ***	-0.36 ***	-0.34 ***
Inflow in 2001		-0.15 ***	-0.31 ***	-0.29 ***
Inflow in 2002		-0.21 ***	-0.35 ***	-0.33 ***
Inflow in 2003		-0.28 ***	-0.42 ***	-0.39 ***
Inflow in 2004		-0.24 ***	-0.39 ***	-0.36 ***
Inflow in 2005		-0.23 ***	-0.37 ***	-0.34 ***
Inflow in 2006		-0.11 ***	-0.19 ***	-0.18 ***
Inflow in January		-0.14 ***	-0.23 ***	-0.21 ***
Inflow in February		-0.14 ***	-0.23 ***	-0.22 ***
Inflow in March		-0.22 ***	-0.39 ***	-0.39 ***
Inflow in April		-0.31 ***	-0.56 ***	-0.54 ***
Inflow in May		-0.33 ***	-0.63 ***	-0.60 ***
Inflow in June		0.10 ***	0.08	0.06
Inflow in July		-0.04	-0.15 ***	-0.16 ***
Inflow in August		-0.07 **	-0.16 ***	-0.16 ***
Inflow in September		-0.18 ***	-0.35 ***	-0.34 ***
Inflow in October		-0.18 ***	-0.33 ***	-0.32 ***
Inflow in November		-0.19 ***	-0.35 ***	-0.33 ***
Residence outside Flanders		-0.02	-0.12	-0.12
Residence in Antwerpen		-0.02	-0.06 **	-0.06 **
Residence in Limburg		-0.14 ***	-0.23 ***	-0.21 ***
Residence in Oost-Vlaanderen		-0.07 ***	-0.13 ***	-0.13 ***
Residence in Vlaams Brabant		0.09 ***	0.12 ***	0.10 ***
Limited working ability		-0.75 ***	-1.08 ***	-1.04 ***
Dutch mother tongue		0.32 ***	0.53 ***	0.50 ***
Driving licence		0.08 ***	0.10 ***	0.09 ***
Car		0.08 ***	0.13 ***	0.12 ***
Unobserved heterogeneity			normal ***	gamma ***

Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*) , 5% (\*\*) and 1% (\*\*\*)

Table 22 Estimation results: women, 26-45, higher education

Hazard (out of unemployment)	Model 1	Model 2	Model 3	Model 4
1 month	-1.14 ***	-0.19 ***	-0.11	0.08
2 months	-1.90 ***	-0.94 ***	-0.46 ***	-0.52 ***
3 months	-1.93 ***	-0.96 ***	-0.29 **	-0.45 ***
4 months	-2.08 ***	-1.09 ***	-0.28 *	-0.51 ***
5 months	-2.03 ***	-1.04 ***	-0.09	-0.39 ***
6 months	-2.06 ***	-1.06 ***	0.02	-0.34 ***
7 months	-2.16 ***	-1.15 ***	0.03	-0.37 ***
8 months	-2.21 ***	-1.19 ***	0.09	-0.34 ***
9 months	-2.26 ***	-1.24 ***	0.13	-0.34 **
10 months	-2.33 ***	-1.31 ***	0.14	-0.36 ***
11 months	-2.17 ***	-1.14 ***	0.39 *	-0.13
12 months	-2.21 ***	-1.17 ***	0.44 *	-0.10
13 months	-2.37 ***	-1.33 ***	0.35	-0.21
14 months	-2.40 ***	-1.34 ***	0.40	-0.17
15 months	-2.49 ***	-1.43 ***	0.37	-0.22
16 months	-2.46 ***	-1.39 ***	0.46 *	-0.14
17 months	-2.62 ***	-1.55 ***	0.36	-0.26
18 months	-2.54 ***	-1.46 ***	0.49 *	-0.13
19 months	-2.58 ***	-1.49 ***	0.51 *	-0.13
20 months	-2.69 ***	-1.61 ***	0.44	-0.20
21 months	-2.90 ***	-1.81 ***	0.28	-0.37 *
22 months	-2.82 ***	-1.73 ***	0.38	-0.27
23 months	-2.62 ***	-1.53 ***	0.62 **	-0.04
24 months	-2.72 ***	-1.62 ***	0.57 *	-0.09
25-48 months	-2.88 ***	-1.77 ***	0.71 **	0.03
49+ months	-3.39 ***	-2.21 ***	0.87 **	0.20
Age		-0.03 ***	-0.05 ***	-0.04 ***
Turkish/Moroccan decent		-0.27 ***	-0.48 ***	-0.40 ***
Non European decent		-0.17 ***	-0.35 ***	-0.29 ***
Higher (professional) education (long)		-0.09 ***	-0.15 ***	-0.13 ***
Academic education		0.01	0.02	0.02
Strong functional urbanization		-0.02	-0.04	-0.03
Weak functional urbanization		-0.01	-0.01	-0.01
Inflow in 1995		-0.34 ***	-0.57 ***	-0.46 ***
Inflow in 1996		-0.26 ***	-0.42 ***	-0.34 ***
Inflow in 1997		-0.20 ***	-0.31 ***	-0.25 ***
Inflow in 1998		-0.11 ***	-0.15 **	-0.12 **
Inflow in 1999		-0.09 **	-0.08	-0.05
Inflow in 2000		-0.01	0.04	0.05
Inflow in 2001		-0.03	-0.02	-0.01
Inflow in 2002		-0.16 ***	-0.26 ***	-0.21 ***
Inflow in 2003		-0.09 **	-0.13 **	-0.11 **
Inflow in 2004		-0.07 *	-0.09	-0.08 *
Inflow in 2005		0.00	-0.01	-0.02
Inflow in 2006		0.02	0.00	-0.01
Inflow in January		-0.07 **	-0.12 *	-0.10 **
Inflow in February		-0.14 ***	-0.25 ***	-0.21 ***
Inflow in March		-0.10 ***	-0.17 ***	-0.14 ***
Inflow in April		-0.13 ***	-0.27 ***	-0.23 ***
Inflow in May		-0.11 ***	-0.28 ***	-0.22 ***
Inflow in June		-0.09 ***	-0.25 ***	-0.17 ***
Inflow in July		0.12 ***	0.26 ***	0.22 ***
Inflow in August		0.03	0.08	0.06
Inflow in September		0.00	0.00	-0.01
Inflow in October		-0.11 ***	-0.21 ***	-0.17 ***
Inflow in November		-0.06 *	-0.15 **	-0.12 **
Residence outside Flanders		0.14 **	0.22 **	0.21 **
Residence in Antwerpen		-0.13 ***	-0.19 ***	-0.15 ***
Residence in Limburg		-0.10 ***	-0.12 ***	-0.10 ***
Residence in Oost-Vlaanderen		-0.09 ***	-0.14 ***	-0.11 ***
Residence in Vlaams Brabant		0.03	0.08 *	0.07 **
Limited working ability		-0.37 ***	-0.58 ***	-0.51 ***
Dutch mother tongue		0.27 ***	0.53 ***	0.42 ***
Driving licence		0.03	0.06	0.05 *
Car		0.10 ***	0.17 ***	0.14 ***
Unobserved heterogeneity			normal ***	gamma ***



Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

Table 23 Estimation results: women, 46-50, higher education

Hazard (out of unemployment)	Model 1		Model 2		Model 3		Model 4	
1 month	-1.56	***	-2.93	**	-2.98		-2.23	
2 months	-2.30	***	-3.65	***	-3.49	*	-2.80	
3 months	-2.08	***	-3.43	***	-3.15		-2.49	
4 months	-2.52	***	-3.85	***	-3.46	*	-2.81	
5 months	-2.41	***	-3.72	***	-3.26	*	-2.61	
6 months	-2.58	***	-3.90	***	-3.37	*	-2.73	
7 months	-2.27	***	-3.59	***	-2.98		-2.34	
8 months	-2.34	***	-3.63	***	-2.95		-2.30	
9 months	-2.67	***	-3.95	***	-3.20		-2.55	
10 months	-2.27	***	-3.55	***	-2.74		-2.07	
11 months	-2.43	***	-3.73	***	-2.85		-2.17	
12 months	-2.42	***	-3.69	***	-2.75		-2.06	
13 months	-2.45	***	-3.71	***	-2.72		-2.02	
14 months	-2.75	***	-4.00	***	-2.96		-2.24	
15 months	-2.68	***	-3.92	***	-2.85		-2.12	
16 months	-2.68	***	-3.91	***	-2.80		-2.05	
17 months	-3.20	***	-4.43	***	-3.29		-2.53	
18 months	-3.06	***	-4.28	***	-3.11		-2.34	
19 months	-2.91	***	-4.14	***	-2.93		-2.15	
20 months	-2.93	***	-4.15	***	-2.91		-2.12	
21 months	-2.87	***	-4.10	***	-2.84		-2.03	
22 months	-2.81	***	-4.04	***	-2.75		-1.93	
23 months	-3.18	***	-4.42	***	-3.10		-2.26	
24 months	-3.00	***	-4.23	***	-2.89		-2.04	
25-48 months	-3.36	***	-4.56	***	-3.06		-2.12	
49+ months	-4.03	***	-5.25	***	-3.40		-2.20	
Age			0.02		0.01		0.00	
Turkish/Moroccan decent			0.14		0.23		0.30	
Non European decent			0.15		0.22		0.22	
Higher (professional) education (long)			-0.18		-0.24		-0.22	
Academic education			-0.08		-0.12		-0.13	
Strong functional urbanization			0.07		0.11		0.11	
Weak functional urbanization			0.01		0.07		0.09	
Inflow in 1995			-0.11		-0.27		-0.33	
Inflow in 1996			-0.18		-0.39		-0.47	*
Inflow in 1997			-0.04		-0.14		-0.21	
Inflow in 1998			-0.08		-0.19		-0.26	
Inflow in 1999			0.00		-0.03		-0.04	
Inflow in 2000			0.17		0.30		0.33	
Inflow in 2001			0.12		0.10		0.05	
Inflow in 2002			-0.14		-0.09		-0.02	
Inflow in 2003			0.20		0.26		0.25	
Inflow in 2004			0.02		0.01		0.00	
Inflow in 2005			0.19		0.30		0.32	
Inflow in 2006			0.15		0.16		0.14	
Inflow in January			0.02		0.01		0.00	
Inflow in February			0.07		0.10		0.11	
Inflow in March			-0.04		-0.08		-0.09	
Inflow in April			-0.02		0.01		0.00	
Inflow in May			-0.09		-0.12		-0.10	
Inflow in June			0.09		0.18		0.21	
Inflow in July			0.12		0.30		0.36	
Inflow in August			0.14		0.27		0.30	
Inflow in September			0.00		0.03		0.04	
Inflow in October			-0.10		-0.14		-0.12	
Inflow in November			-0.08		-0.07		-0.02	
Residence outside Flanders			0.80	***	1.04	**	0.96	**
Residence in Antwerpen			-0.26	***	-0.34	**	-0.29	**
Residence in Limburg			-0.10		-0.13		-0.12	
Residence in Oost-Vlaanderen			-0.18	*	-0.27		-0.26	*
Residence in Vlaams Brabant			0.12		0.25		0.31	*
Limited working ability			-0.54	***	-0.72	**	-0.70	**
Dutch mother tongue			0.48	***	0.75	***	0.78	***
Driving licence			-0.14		-0.19		-0.17	
Car			0.12		0.16		0.15	
<b>Unobserved heterogeneity</b>					<b>normal</b>	<b>***</b>	<b>gamma</b>	<b>***</b>

Reference category: European decent, higher (professional) education (short), moderate functional urbanization, inflow in 2007, inflow in december, residence in West-Vlaanderen.  
Significance level: 10% (\*), 5% (\*\*) and 1% (\*\*\*)

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