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1 Introduction

Ever since the seminal work by Atkinson (1984a,b) economists have paid attention to labor market flexibilization. Originally the focus has been on employers' preferences and advantages, but more recently attention has also been paid to the workers' perspective on flexibilization. One of the basic assumptions nowadays is that flexibilization is beneficial both to employers who need to adapt to changing technologies and turbulent markets, and to employees who want to bring their working career in line with the requirements of their private life. As a direct consequence of this worker flexibility, individuals experience an increasing number of transitions during their working career. According to some economists this feature is even the main characteristic of the modern labor market (Schmid 1998, 2000). Such transitions concern the domain of paid labor itself, e.g. transitions from one job to another, as well as transitions between work and other activities, such as family care, education, unemployment. The implication is that 'life-long tenures' are becoming a characteristic of the past, since today's workers are much more inconstant.

Increasing transitions may comprise a risk for employees however, viz. that interruptions of the working career which are meant to be temporary, unintended turn out to be permanent. This applies in particular to transitions from work to unemployment, prolonged illness and household care. For this reason governments apply policies to stimulate the return to work for those who experience a break in their working career. Pro-active policies, supported by public and private arrangements facilitating labor market transitions, will favor the efficient operation of the labor market as well as diminish the risks of 'exclusionary transitions'.

The Netherlands offers a good example in this respect. There has been the modernization of the Dutch employment service in addition to activating labor market policies. Many policy measures were directed at the placement of long-term unemployed who have a vulnerable labor market position. The Dutch labor market is furthermore characterized by a relatively high degree of part-time work in newly created jobs, and a 'flexicurity'-approach optimizing flexibility as well as work security (Wilthagen 1998). Given the Dutch labor market situation, it is particularly interesting to choose the Netherlands as a case to investigate whether the modern,

more flexible labor market implies new risks of social exclusion.

Increasing risks of social exclusion seem to be a trade-mark of the modern 'risk-society', which means that we can all be the victim of it (Beck 1992). We may nevertheless assume that individuals vary in 'transitional skills' in the same way they differ in e.g. human capital. Not everyone possesses the cognitive and social skills required for a 'reflexively organized life planning' (Giddens 1991). This holds true even when protective institutional arrangements are available, as individuals also vary in 'institutional self-activity' (Dewey 1990) which relates to the use of public utilities.

Distelbrink and Pels (2002) found that immigrants in the Netherlands experience more problems in relation to such self-activity, partly as a consequence of their upbringing which is more directed at compliance and respect than at autonomic thinking and acting, and partly because of their on average lower educational level. We therefore expect immigrants to also have less 'transitional skills' in addition to impediments in their human capital, like on average lower education and limited labor market experience (Veenman 1998). This makes it of interest to compare the transitional risks of immigrants and Dutch natives. If we add that selection processes on the Dutch labor market also negatively affect immigrants' job chances, even when they have identical resources (e.g. Bovenkerk et al. 1995), we believe to have enough arguments to focus on the risks of exclusionary transitions for immigrants in the Netherlands.

We therefore formulate the research question as follows: *Does the contemporary flexible labor market in the Netherlands imply higher risks of 'exclusionary' transitions for immigrants compared to Dutch natives?*

With the exception of the year 1967, the Netherlands is a net-immigration country since the 1960s. From this time up to the 1990s immigration was dominated by four immigrant groups. Still the majority, about 70 percent of the immigrants and their descendants, come from Turkey and Morocco (the Mediterraneans), and from Suriname and the Dutch Antilles (the Caribbeans). We will therefore focus on these four groups, also because they are the best documented immigrant groups in the Netherlands.

Since we try to gain insight into exclusionary transitions we will focus on those who are

unemployed or inactive now, to ascertain their chances of finding a job (again). For this reason we are interested in three transition types, viz. from unemployment to work, from domestic care to work, and from prolonged illness (disability to work, to be more precise) to work.[1] We will systematically compare the transition chances of immigrants and Dutch natives in these areas.

To explain the differences in transition chances we calculate a decomposition of the differences in expected duration for each immigrant group and the native expected duration. This is a non-linear version of the well-known decomposition methodology of Oaxaca (1973) and Blinder (1973). Our methodology is an extension of the approach Fairlie (2006) developed for the decomposition of logit and probit models. This extension is another important contribution of this paper.

Hereafter we will first elaborate on contemporary flexible labor markets (section 2). We will then discuss our method and the data used (section 3). The analyses and their results will be presented in section 4, where each of the three aforementioned transitions will be elaborated on subsequently. Section 5 will contain our conclusions and a short discussion of the main findings.

2 Contemporary flexible labor markets

Work has become more variable and insecure in recent decades. The standard biography (*education-work-inactivity* for males and *education-work-marriage/care-inactivity* for females) increasingly became a feature of the past. Individuals face transitions in their working career more often. Some of these transitions are voluntarily from the point of view of the worker. In this sense the traditional standard biography has been replaced by a biography from choice. Today's citizens have increasing opportunities to arrange their lives according to their own needs and preferences. The situation of individual 'free choice' has a drawback, however. The new biography, which has been described as a 'do-it-yourself biography', can in some instances become a 'breakdown biography' (Beck 1992, Giddens 1991). That is why increasing risks are

[1]The transition from education to work could have been added, but since we lack data on the duration of inactivity of those who left education, we are not able to estimate their hazard rates.

characteristic of today's labor markets.

The number of labor market transitions has grown and their nature has changed because of a combination of economic, technological, cultural, and demographic trends that partly coincide. The most relevant *economic trend* is the growing need for flexibilization of labor relations, which is especially caused by turbulences and insecurity in sales markets and increased international competition (Atkinson 1984a,b, and for the Netherlands Geelhoed 1997). *Technological trends* also affect the flexibilization of labor relations (ibid.), and at the same time have a more direct effect on the increment of labor market transitions. In this connection one should particularly think of fast changes in the ICT-sector (Schmid 2002). The most important *cultural trends* influencing the emergence of more flexible labor markets are the interlinked individualization and women's liberation. Particularly the fast growing female labor market participation requires smooth transitions between paid work and domestic work. *Demographic trends* that add to the coming of the contemporary flexible labor markets are population ageing in combination with declining fertility rates. The consequences in terms of the ratio of economically inactive and active people in society (the so-called i/a-ratio), call for policies such as the prolongation of the working life. To ensure this, extra investments in human capital are needed during the working career to diminish the expected deterioration of this capital. Furthermore one or two rest periods during the working career may be instrumental to motivate workers to bonding to the labor market until an advanced age. From this we can infer the necessity of transitions between paid labor on the one hand and education and sabbaticals on the other.

This short sketch of 'driving forces' behind the emergence of the modern flexible labor market leads us to the transition types we are talking about. Apart from the transition from education to work[2], we may think of the transitions from unemployment to work and from domestic care to work. In this study we will explicitly add the transition from prolonged illness, in this case the disability to work. The latter is of special interest for the Netherlands, where about 960,000 people received an allowance since they were officially registered as disabled to work in 2004 (Statistic Netherlands).[3]

[2]See note 1.

[3]Recently several measures were taken to diminish the number of those who are disable to work. The positive

Many transitions are critical in the sense that they may lead to downward spirals of job careers, ending in recurrent unemployment or ultimately in long-term unemployment and poverty. Opposite to such exclusionary transitions are integrative transitions and maintenance transitions (Schmid 2000). The first refer to transitions of those who were initially outside paid labor and enter a job now, while the second refer to transitions of those who are already in work and have found ways of maintaining employment by moving between different working-time regimes. The latter must be considered as an example, since other transitions can also have a maintenance character, like e.g. the transition from one job to another. Integrative transitions may also refer to the movement of those who are in paid labor and considerably improve their position (e.g. by going from an irregular job to a regular job).

Our main interest is in the exclusionary transitions. What are the characteristics of those workers who will be the victims of unintended labor market exclusion which may lead to long-lasting economic inactivity? Before we answer this question we will first present the data and method used.

3 Data and method

Our data are taken from the nationwide survey 'Social Position and Use of Public Utilities by Migrants', more specifically from the survey's editions for the years 1998 and 2002.[4] The survey's main purposes are to gain insight into (the development of) the socio-economic position of the four largest immigrant groups in the Netherlands (Turks, Moroccans, Surinamese and Antilleans), in the variety in socio-economic position among these groups as well as in differences

results show from the decline to about 880,000 people in 2005. To put this number in perspective, we add that the employed labor force then counted about 6,9 million people in the Netherlands.

[4] The 1998-survey was done by the Institute for Sociological and Economic Research (ISEO) from Erasmus University Rotterdam in co-operation with the Social and Cultural Planning Office of the Netherlands (SCP). In 2002 ISEO co-operated with the SCP and, on specific items, with researchers from the Netherlands Organisation for Scientific Research (NWO)-Program Netherlands Kinship Panel Study (NKPS).

in position compared to the native Dutch.[5] Because of the high degree of spatial concentration of immigrants in the larger cities, the survey is based on random sampling within the 13 largest Dutch cities. This procedure results in nationwide representativeness for the four immigrant groups.[6] In each household the head of household was asked to answer general questions on the composition of the household and (if relevant) on its migration history. All members of the household being older than 11 years were asked to answer the other questions.[7] Both the first generation of actual immigrants and the second generation (of descendants) are represented in the survey. Table 1 shows the number of respondents per group.

Table 1: Number of people in SPVA by ethnicity and main activity.

	Turks	Moroccans	Surinamese	Antilleans	Natives	Total
Main activity[*]						
Working	2129	1640	2802	1522	2336	10429
Unemployed searching for job	589	500	364	263	128	1844
Domestic care	1328	1164	439	308	402	3641
Disability benefits	552	440	303	116	165	1576
Student	259	304	296	274	152	1285
Other	189	118	100	79	162	648
Total	5046	4166	4304	2562	3345	19423

[*] Only people 18-65 years. *Source:* SPVA (ISEO/SCP)

[5] To be considered as a member of one of the immigrant groups, the person or at least one of his parents should be coming from the country concerned.

[6] More detailed information on the survey can be found in Groeneveld and Weijers-Martens (2003).

[7] An exception must be made for a series of questions on cultural integration and social contacts, which are not relevant for our purposes. These questions were asked alternately in interviews with the head of household and his/her partner and in interviews with the eldest child present during the interview.

3.1 Duration analysis

The data used contain retrospective information on the length of the elapsed duration in the labor market situation at the interview moment. These data on the duration in a particular state are based on stock sampling, because they are obtained by sampling from the stock in that state using a single interview.[8] Since for some individuals labor market transitions occur at a very low rate, these individuals may stay in their current state till they reach the retirement age of 65. In the Netherlands, as in most European countries, unemployment benefits and disability benefits cease after retirement. In fact, everybody leaves the (potential) labor force when reaching the retirement age. This implies that every state has an upper bound of its duration till retirement. We will account for both the stock-sampling and the possible maximum duration.

In duration analysis the hazard rate or intensity is usually modelled. A common way to accommodate the presence of observed characteristics is to specify a proportional intensity model,

$$\lambda(t|x) = \lambda_0(t;\alpha)e^{\beta' x_i(t)}, \tag{1}$$

where $\lambda_0(t;\alpha)$ represents the baseline hazard, that is, the duration dependence of the intensity common to all individuals. The covariates affect the intensity proportionally and the time-varying variables are external variables that change independent of the employment state, such as the age of a disabled individual that changes independent of the employment state. If the duration of individual i has an upper bound of $\bar{t}_i$, the time till retirement, the hazard of leaving unemployment at $\bar{t}_i$ is ∞. This implies that the probability to reach $\bar{t}_i$ for individual i is $S(\bar{t}_i|x_i) = \exp\big(-\int_0^{\bar{t}_i} \lambda_0(s;\alpha)e^{\beta' x_i(s)}\,ds\big)$.

If we sample from a stock of individuals at time 0 (in calendar time) in a particular state, e.g. from the stock of people on disability benefits, and observe the elapsed time e in that state, then the distribution of the observations e is a conditional distribution, see a.o. Heckman and Singer (1984). The condition is the presence of a particular individual in the stock. Let $r(-e|x_i)$ denote the entry rate, the probability to enter the state during $[e, e+de)$ in the past

[8] In fact some individuals are interviewed twice, both in 1998 and in 2002, in the SPVA. However, only for a very limited number of individuals this occurs. We therefore ignore the panel structure of the data.

given observed characteristics x and assume, as Nickell (1979) does, that the entry of people with characteristics x is a constant fraction of the total entry, $r(-e|x) = r_1(-e)r_2(x)$. Then the density of the elapsed duration for individual i, adapted for the upper bound in the duration, is

$$h(e|\bar{t}_i, x_i) = \frac{r_1(-e)e^{-\Lambda(e|x_i)}}{\int_0^{\bar{t}_i} r_1(-\tau)e^{-\Lambda(\tau|x_i)}\, d\tau} \tag{2}$$

where $\Lambda(e|x_i) = \int_0^e \lambda_0(s;\alpha)\exp\big(\beta' x_i(s)\big)\, ds$, the integrated hazard.

In practice it is hard to find a closed form solution to the integrals in the density. For example, the commonly applied proportional hazard model with Weibull baseline hazard leads to intractable integrals. Although these integrals may be approximated, the Weibull baseline is also very restrictive. A very flexible and tractable assumption is to use a piecewise constant baseline hazard. If the entry rate is also constant on intervals we have a closed form expression for the density of the elapsed duration, from which we can easily derive a maximum likelihood estimator for the parameters of the model.

A well known issue in duration models is that neglecting unobserved heterogeneity in proportional hazards models leads to spurious negative duration dependence. In principle it is possible to allow for possible unobserved heterogeneity in our model through a multiplicative random error term in the hazard, $\lambda(t|x,v) = v\lambda_0(t;\alpha)e^{\beta' x_i(t)}$. Murphy (1996) shows how to include Gamma-distributed unobserved heterogeneity into the stock-sampled proportional hazards model. The adjustment to a possible upper bound on the duration is rather straightforward, as is the use of a discrete unobserved heterogeneity distribution. We attempted to fit models with a gamma or with a discrete unobserved heterogeneity distribution. However, none of these models have led to an indication of unobserved heterogeneity or a change in the parameters and, therefore, we do not present the details of the models with unobserved heterogeneity.

3.2 Decomposition of the difference in expected duration

The standard wage decomposition methodology of Oaxaca (1973) and Blinder (1973) has been widely used to examine discrimination in the labor market. The technique decomposes the average difference in wages between two demographic groups into differences in observable

characteristics (differences that the variables in the regression model can explain, mainly endowments), and differences in coefficient estimates (the structure of the model that cannot be explained).

Suppose we distinguish two groups $g = 1, 2$ and observe for each group $i = 1, \ldots, N_g$ individuals. Consider the following linear regression model, which is estimated separately for each group

$$Y_{ig} = X_{ig}\beta_g + \epsilon_{ig} \tag{3}$$

For such a linear model, the standard Oaxaca-Blinder decomposition of the average value of the dependent variable is

$$\bar{Y}_1 - \bar{Y}_2 = (\bar{X}_1 - \bar{X}_2)\hat{\beta}_1 + \bar{X}_2(\hat{\beta}_1 - \hat{\beta}_2) \tag{4}$$

where $\bar{Y}_g = N_g^{-1} \sum_{i=1}^{N_g} Y_{ig}$ and $\bar{X}_g = N_g^{-1} \sum_{i=1}^{N_g} X_{ig}$. The first term on the right hand side of (4) represents the difference in the outcome variable between the groups due to differences in observable characteristics and the second term represents the differential due to differences in coefficient estimates. The second term also captures the portion of the differential due to group differences in unobserved characteristics.

However, in most models for duration outcomes the expectation is a non-linear function of the coefficients β and ancillary parameters α reflecting the shape of the baseline hazard. Additionally, duration data are usually censored and OLS estimation leads to biased estimation of the parameter vector and hence to misleading results of the decomposition. We follow Fairlie (2006) for the decomposition of the non-linear difference in expected duration. The first term in brackets on the right hand side reflects the contribution of the observed characteristics, the second term in brackets reflects the contribution of the baseline hazard and the last term in brackets reflects the contribution of the coefficients to the difference in expected duration. Note that the decomposition also depends on the shape parameter(s), α. Consequently, there are three other equivalent possible decompositions of the difference in expected duration between the two groups on which α_g is used in the counterfactual parts of the decomposition equation (see Appendix A).

The alternative methods of calculating the decomposition provide different estimates, which is the familiar index problem with the Oaxaca-Blinder decomposition. Ham et al. (1998) suggest to average over the alternative decompositions to estimate the contribution of the coefficient estimates and of the coefficients. They did not consider the difference in the baseline hazard. Thus including the ancillary parameters, we propose to measure the contribution of the differences in the duration between the groups due to differences in observable characteristics in a similar way (see Appendix A).

Note that the three components add to the difference in mean. However, this holds only for uncensored data. For censored data (and also for stock sampled data) the average observed duration is not equal to the true underlying expected duration. Therefore, we decompose the expected durations implied by the proportional hazards model in section 3.1, instead of the observed mean durations. By doing this, we are able to find out which factors affect the immigrants' position on the contemporary flexible labor market.

In many articles only the size of each of the components of the difference in the mean between the two groups are reported. Without knowing the significance of these components this is of little value. However, for our nonlinear decomposition method (and because it is an average of four alternative decompositions) it is very hard to calculate the exact variance. We therefore rely on a bootstrap method to calculate the approximate variances of each of the components.

4 Differential transitional risks

In this section we attempt to answer the research question whether the contemporary flexible labor market in the Netherlands implies higher risks of 'exclusionary' transitions for immigrants than for Dutch natives. As stated before we will subsequently focus on three transition types: from unemployment, domestic care and prolonged illness (disability to work) to paid work.

4.1 From unemployment to work

The unemployment among immigrant groups as 'officially' registered by the Employment Office is four till five times as high as among Dutch natives, with the most disadvantageous figures for the Mediterraneans.[9] These differences in employment rate are reflected in data on the unemployment duration. Looking at the 'registered' unemployment again, we find that the Turks have, on average, the longest duration, followed by (in this order) Antilleans, Moroccans and Surinamese.[10] The relatively favorable position of Moroccans is caused by the labor market withdrawal of women in case their unemployment lasts more than a few months. Focusing on males only, we find that Moroccans have on average the longest unemployment duration after the Turks.

The described data on the unemployment duration are based on stock sampling which leads to a distortion as a consequence of 'length biased sampling'. In section 3.1 a correction for this distortion is discussed. We also account for the possibility that some individuals stay unemployed till they reach retirement. With stock sampled data, unemployed from a period with high unemployment are overrepresented in the data. We adjust for such overrepresentation by assuming that the national inflow in the unemployment in the past is proportional to the observed characteristics of the unemployed.[11] These inflow figures give the weights $r_1(-e)$ in equation (2). The inclusion of two time-varying covariates, age and presence of young children, deserve additional explanation. The age of the unemployed at the moment of the interview is calculated back to the age at the moment their unemployment spell begun. The presence of young children (under twelve) in the household is also calculated back through the information on the age of all the children now present in the household.

For this stock based sample of unemployment durations (in months) we apply a proportional hazards model with a piecewise constant baseline hazard on six intervals: 0 till 2 months; 2

[9]The 'registered' unemployment figures are: Dutch natives 2%, Surinamese: 7%, Antilleans 8%, Moroccans 9% and Turks 10%. (source: SPVA-2002 and survey Labour Force 2002)

[10]To illustrate this: among unemployed Turks almost 40% is jobless for at least two years. For Moroccans the same figure is 30%, among Antilleans 28% and among Surinamese 20%.

[11] See UWV, `http://www.uwv.nl/overuwv/kennis-publicaties/index.aspx` (only in Dutch)

till 6 months; 6 months till 1 year; 1 till 2 years; 2 till 5 years and 5 years and beyond.[12] The estimation results are given in Table 6 in Appendix B. Large differences are visible among the ethnic groups. From the parameters of the piecewise constant baseline hazard we can estimate the implied baseline survival functions for each ethnic group. The baseline survival function is the survival function for the reference individual, an individual with all covariates at zero, that is a single male with basic or no education, good health, less than 75% labour market experience, no kids under 12 years of age at home and aged 35. This baseline survival function (taking the changing age into account) is depicted for each ethnic group in Figure 1. We see that a native reference individual leaves unemployment the fastest and a Turkish reference individual the slowest.

[Place Figure 1 here]

The impact of observed characteristics on the outflow into employment differs substantially among the ethnic groups. We see from Table 6 (in Appendix B) that the relative labor market experience, that is the percentage of time spent working since graduating, is the most important variable. The more labor market experience the faster the unemployed return to work. This effect is the highest for Antilleans. Gender plays a role for the Antilleans and natives, education is important for the Turks, Moroccans and natives, and health is important for Turks. The presence of young children reduces the re-employment rate (only significant for Turks, Moroccans and Surinamese).

To find out to what extent the model's determinants affect the expected unemployment duration, we applied the decomposition method explained in section 3.2. For each immigrant group we calculate the expected unemployment duration implied by parameter estimates and compare this expected duration with the expected duration of Dutch natives. The decomposition allows us to calculate the portion of the difference that arises from differences in coefficients, the portion of the difference that arises from differences in the baseline hazard (different survival rates for the reference individual) and the portion of the difference that arises from differences

[12]Due to limited observations in particular in duration intervals for some ethnic groups we had to combine the baseline intervals for those groups.

in explanatory variables.

Table 2: Decomposition of differences in expected UNEMPLOYMENT duration (in months)

	Turks	Moroccans	Surinamese	Antilleans
Expected duration immigrant group	38.3	35.4	19.9	17.5
Expected duration natives	4.9	4.9	4.9	4.9
immigrant group - natives	33.4**	30.5**	15.0**	12.6*
	(6.7)	(8.0)	(5.5)	(6.0)
Difference due to:				
Explanatory variables	10.2**	11.0**	3.0	3.1
	(3.4)	(3.3)	(2.1)	(2.9)
Coefficients	9.4	13.3	3.3	4.5
	(8.1)	(9.1)	(6.5)	(8.8)
Baseline hazard	13.7	6.2	8.7	4.9
	(12.4)	(12.5)	(10.8)	(12.6)

Notes: Standard errors are shown in parentheses. $^{*}p < 0.05;^{**}p < 0.01$. *Source:* SPVA (ISEO/SCP)

The results in Table 2 show that Turks and Moroccans have far the longest expected unemployment duration (around three years) and natives far the shortest (about 5 months). The difference in the expected unemployment duration is mainly attributable to the fact that the variables in our model turn out to be unfavorable for the job chances of Turks and Moroccans. The difference in coefficients do not lead to a significant difference in the expected unemployment duration, neither does the difference in the baseline duration dependence. Although for Turks and Moroccans the reference unemployed individual (a single male with basic or no education, good health, less than 75% labor market experience, no kids and aged 35) has a higher expected unemployment duration than the native reference individual, this difference is not significant.

4.2 From domestic care to work

Since domestic care is still predominantly a female activity, even in 'modern' Western societies (Hofmeister et al. 2003), we will focus on women in this section. Looking at the labor market participation in 2002, we find the highest rates among Surinamese females (64%), followed by Antillean and native Dutch females (59%). A large gap exists with Mediterranean females: 32% labor market participation among Turkish women and 30% among Moroccan women. Age differentiation reveals participation rates during the life cycle, see Figure 2. For native Dutch women we find a kind of inverse U-curve for the participation rate that is known for men, however with a decline after the age of 30. This is the age at which native Dutch women on average give birth to their first child. Since a slight increase in participation exists after the age of 42 we may speak of a 'child dip' in the participation curve, although without a return to the original high level. The labor market participation among native Dutch females drops back strongly after the age of 48, partly because of a cohort effect as women above 60 mostly did not participate at all.

[Place Figure 2 here]

Surinamese women show a clearer inverse U-curve, although with a difficult to explain decline in the age category 45 till 48. The labor market participation definitely diminishes after the age of 51. Antillean women show a kind of inverse U-curve. A 'child dip' in the curve exists between the ages of 27 and 39. As among Surinamese women the participation rate clearly diminishes after the age of 51. While Surinamese women and to a lesser degree Antillean women are able to combine domestic care and work, we find quite different results for Mediterranean women. They have a relatively low marriage age, have children on a relatively early age, and show a strong decline in labor market participation after marrying and giving birth to a child. Among Moroccan females the labor market participation remains low during their life cycle while Turkish women show a slight increase after the first decline, followed by a second decline. It therefore comes as no surprise that the life cycle participation rate among Mediterranean women is much lower than among Caribbean and native Dutch women. The lower labor market participation can be explained from more traditional gender roles. Mediterranean women are

expected to take care of the family and not (or to a lesser degree) to participate on the labor market (Distelbrink and Pels 2002).

When estimating the hazard rates for the time spent in domestic care (in years), we again use the model with maximum duration for stock-sampled data that accounts for varying entry (see Section 3.1). Very often women stay at home for a long period. Thus the domestic care duration can easily be 20 years. This implies that many women do not participate on the labor market till their retirement age. The upper bound on the duration therefore has an important impact on the estimation results. Only recently the participation rate of women in the Netherlands increased. In the late 70s less than 20% of the women were participating on the labor market. This implies an overrepresentation of the women who begun their domestic care in the 70s or earlier. We adjust for this overrepresentation by assuming that the national inflow in domestic care in the past is proportional to the number of non-participating women 20 years of age.[13] We also assume that this inflow is proportional to the observed characteristics of the women.

We estimate a proportional hazards model with a piecewise constant baseline hazard on four intervals: 0 till 10 years; 10 till 15 years; 15 till 20 years and 20 years and beyond.[14] The estimation results are given in Table 7 in Appendix B. Again the parameters estimates differ among the ethnic groups. We estimate the implied survival rate for the reference female, that is a single female with basic or no education, less than 75% labour market experience, no kids under 12 years of age at home and aged 40. This baseline survival function (taking the changing age into account) is depicted for each ethnic group in Figure 3. A Dutch native (reference) female in domestic care has the slowest outflow and an Antillean female the fastest outflow into employment.

[Place Figure 3 here]

The impact of observed characteristics on the re-employment rate out of domestic care differs substantially among the ethnic groups. We see from Table 7 that the relative labor market experience is again the most important variable. If a woman worked more than 75% of

[13] See the public statistics site of Statistics Netherlands, `http://statline.cbs.nl/` for the numbers.

[14] See note 12.

her potential productive years (labor market experience > 75%), she then leaves domestic care and starts working again much faster. This effect is the highest for native women. Education is also an important factor in explaining whether the women will go working again. Marital status is important for Turkish, Moroccan and Surinames women. The presence of young children reduces the rate to leave domestic care, especially for native and Moroccan women. To find out to what extent the model's determinants affect the expected duration of domestic care, we applied the decomposition method explained in section 3.2.

Table 3: Decomposition of differences in expected HOUSEHOLD CARE duration (in years)

	Turks	Moroccans	Surinamese	Antilleans
Expected duration immigrant group	27.0	34.6	22.8	21.9
Expected duration natives	18.9	18.9	18.9	18.9
immigrant group - natives	8.1**	15.7**	3.9	3.0
	(2.9)	(4.8)	(3.7)	(4.1)
Difference due to:				
Explanatory variables	13.7**	17.8**	8.8**	9.0**
	(2.0)	(4.3)	(1.7)	(2.5)
Coefficients	13.8**	7.1	11.8**	14.0**
	(3.7)	(6.9)	(4.6)	(3.1)
Baseline hazard	−19.5**	−9.3	−16.6**	−20.0**
	(4.9)	(8.2)	(6.5)	(4.7)

Notes: Standard errors are shown in parentheses. $^{*}p < 0.05$;$^{**}p < 0.01$. *Source:* SPVA (ISEO/SCP)

The results in Table 3 show that Moroccan women have the longest expected domestic care duration (35 years) and native women the shortest (19 years). The difference in the expected domestic care duration is mainly attributable to the fact that the variables in our model are unfavorable for the job chances of Moroccan women and Turkish women, and to a lesser extent of

Surinamese and Antillean women. The coefficients have a significant impact on the difference in domestic care duration, except for female Moroccans. This may be due to unobserved variables, such as cultural aspects, social networks, or labor market discrimination. Other reasons for this are that the observed characteristics have different effects on the transition probability for these women or that these women have a different labor market position. Our data are not decisive in this respect. The baseline hazard for women from all four immigrant groups is above the baseline hazard for native women, which is probably due to the fact that native lower-educated Dutch women, who completely stop working after giving birth to a child, are a very specific category with rather traditional norms in relation to gender roles.

4.3 From prolonged illness to work

The last transition type to be discussed here is between prolonged illness and paid work. As stated in Section 2, disability to work is a clear social and economic problem in the Netherlands. That is why we focus on this form of prolonged illness. The SPVA-2002 contains data on self-reported disability to work and on receiving a disability allowance. Combining these two variables, we find highly varying proportions of disabled persons per ethnic group, as shown in Table 4.

Table 4: Percentage disabled persons in the total population (15-65 years) and in the labor force by ethnic group

	Turks		Moroccans		Surinamese		Antilleans		Dutch	
	M	F	M	F	M	F	M	F	M	F
Total Population	11	8	11	4	5	7	4	4	9	8
Labour force	17	25	17	12	7	11	5	6	12	14

Source: SPVA (ISEO/SCP)

When looking at the total population (15-65 years of age), we find the proportion of disabled persons to be the highest among Mediterranean males, followed by native Dutch males. The proportion of disabled persons among Caribbean males is much lower. Among females, the

Turks and the Dutch natives show the highest proportion of disabled persons, followed by the Surinamese. The proportion is low among Moroccan and Antillean women. The proportion of disabled persons in the labor force (those working for at least 12 hours per week or actively looking for work for at least 12 hours per week) is the highest among Turkish females (25%). This is the result of a combination of relatively many disabled persons and a relatively small labor force. Mediterranean males too show a high proportion of disabled persons in the labor force (17%), followed at some distance by the native Dutch males (12%). A much lower proportion is found among the Antilleans, males and females alike.

Again we estimate the hazard rate for the transition from disability to work (in years). To this end, we apply the model described in section 3.1. Since the duration on disability benefits can exceed 20 years, the maximum duration implied by the retirement age also plays an important role in the analysis of the return to work from disability. As the inflow into disability has changed over time, we use the national inflow figures to adjust for the changing inflow in the past.[15] We assume a piecewise constant baseline hazard on five intervals: 0 till 10 years; 10 till 20 years and 20 years and beyond.[16] The estimated survival functions for the reference individual, a single male with no or basic education, less than 75% labour market experience aged 48, are depicted in Figure 4. Note the drop to zero in the baseline survival functions after 17 years in disability, when the retirement age of 65 is reached. An Antillean (reference) individual in disability has the fastest outflow into employment. Natives, Turks, Moroccans and Surinamese have the first 10 years of disability a very low rate of leaving disability.

[Place Figure 4 here]

The estimation results in Table 8 (in Appendix B) indicate that the impact of observed characteristics on the re-employment rate differ substantially among the ethnic groups. Again the relative labor market experience is the most important variable, especially for Turks and Moroccans. The education level does not play an important role in explaining departure from disability. For natives the age of the disabled individual is very important. Gender is important

[15] See note 11

[16] See note 12.

for Turks and Moroccans and marital status for Turks and Surinamese. We applied the decomposition method again to disentangle the effect of the model's determinants on the expected disability duration.

Table 5: Decomposition of differences in expected DISABILITY duration (in years)

	Turks	Moroccans	Surinamese	Antilleans
Expected duration immigrant group	14.5	16.7	14.1	8.7
Expected duration natives	16.0	16.0	16.0	16.0
immigrant group - natives	-1.5	0.7	-1.9	-7.4
	(3.7)	(3.7)	(3.8)	(4.2)
Difference due to:				
Explanatory variables	3.5**	3.5**	2.2*	1.1
	(1.1)	(1.6)	(0.9)	(0.8)
Coefficients	2.9	4.4	3.8	4.6
	(3.8)	(4.1)	(3.2)	(3.1)
Baseline hazard	-7.9	-7.2	-7.8	−13.0*
	(6.0)	(5.9)	(5.5)	(5.7)

Notes: Standard errors are shown in parentheses. $^{*}p < 0.05;^{**}p < 0.01$. *Source:* SPVA (ISEO/SCP)

The results in Table 5 show that Moroccans have the longest expected disability duration (17 years) and Antilleans the shortest (9 years). This is a surprisingly short period when compared to the expected disability duration of Dutch natives (16 years). For Turks, Moroccans and Surinamese the high expected disability durations are attributable to the fact that the variables in the model turn out to be unfavorable for the groups concerned. Just as for the duration in domestic care of women, the baseline hazard for immigrants is above the baseline hazard for Dutch natives. This difference is, however, only significant for Antilleans who show a very favorable baseline hazard.

5 Summary and conclusions

Contemporary labor markets are characterized by such a high degree of flexibility that a new type of labor market is emergent. This market features an increasing number of transitions during the working career. The so-called transitional labor market offers both employers and employees new chances, but at the same time increases the risk of long-term exclusion of workers. The Netherlands offers a good example of a labor market with institutional arrangements to mitigate the new risks.

We investigated whether the contemporary flexible labor market in the Netherlands implies higher risks of 'exclusionary' transitions for groups which, for human capital reasons, are already vulnerable on the labor market. We thus compared immigrants to Dutch natives, and subsequently elaborated on the transitions from (a) unemployment, (b) domestic care, and (c) prolonged illness to work. We used duration analysis to estimate different groups' chances to make a transition from inactivity to work.

We used proportional hazards models with maximum duration for stock-sampled data that account for varying entry, and piecewise constant baseline hazards on different intervals (calculated in months for unemployment and in years for both domestic care and prolonged illness). Looking at the baseline survival function, we find that in the case of unemployment the native Dutch reference individual leaves unemployment the fastest, while Turks leave unemployment the slowest. The analysis of the transition from domestic care to work, which is restricted to women, establishes that among the reference women Antilleans clearly have the fastest outflow, while the Dutch natives have the slowest outflow. We explained this somewhat remarkable outcome from the traditional attitude among the specific category of lower-educated native women who completely stop working after giving birth to a child. In the case of disability to work, the transition to the labor market is the fastest for the Antillean reference individual. More generally, Antilleans diverge remarkably from all other groups that show very low outflows, especially in the first ten years of disability.

Our analyses thus show that unequal chances exist, but to a different degree for the various groups and with variations per transition type. To try and explain the differences found, we

used decomposition analyses on the expected durations estimated by the proportional hazards model. In the case of unemployment, we first established that the impact of the observed characteristics on the outflow differs among the various groups. We then showed that the higher transitional risks for the Turks and Moroccans are mainly attributable to the fact that the observed characteristics turn out to be unfavorable for them. These characteristics concern both endowments and demographic features, such as marital status, gender and age. In particular for the Turks the baseline duration dependence is also much worse, which might indicate that discrimination plays a role alongside other unobserved factors such as language proficiency, social networks and cultural aspects (e.g. work attitude, search behavior). But the differences in baseline hazards are not significant in the unemployment analysis.

In the case of domestic care, we again found fairly large differences in the impact of the observed characteristics on the transitional risks of the immigrant groups. The decomposition of the expected home care durations shows that the observed characteristics are particularly unfavorable for Moroccan and Turkish women. The coefficients have no significant meaning for female Moroccans, but do have such meaning for women from the other immigrant groups. This may mean several things: that the observed characteristics have different effects for these women, that these women have a rather distinct labor market position, or that (other) unobserved factors play a role in the explanation of their outflow chances. Here we may think of quite different variables like cultural aspects, social networks, or labor market discrimination. Our data are not conclusive in this respect. For the explanation of the disadvantageous baseline hazard of native Dutch women who completely stopped working after giving birth to a child, we refer to what we just wrote about the traditional norms of this specific category.

Some care should be taken in interpreting differences in the baseline hazard and/or differences in the coefficients. A different baseline hazard can arise for two reasons. First, the baseline hazard is truly different and/or, secondly, important factors that explain the duration are neglected in the model. Although we could not identify unobserved heterogeneity, it may still be present (see Bijwaard and Ridder 2005). If the baseline hazard is truly lower for ethnic groups this may indicate discrimination of these groups on the labor market. The same holds

for the difference in coefficients. However, we cannot rule out that important unobserved factors like Dutch language proficiency, social aspects and cultural networks explain the differences (cf. Veenman 1998).

In the case of disability too, the impact of the observed characteristics differs among the various groups. While the Antilleans, characterized by a fast outflow, show an advantageous baseline hazard, the low outflow of Turks, Moroccans and Surinamese seems to be primarily related to the observed characteristics. The coefficients do not add significantly to the explanation, although recent research shows that miscommunication between immigrant clients on the one hand and civil servants from the agency responsible for the disability benefits on the other hand, helps to explain the disadvantaged outflow chances of the first (Veenman 2006).

The short discussion of the results from the decomposition analyses confirms that it is not easy to formulate general findings. The only factor with significant meaning in every analysis is the relative labor market experience, i.e. the percentage of time spent working since leaving education. The longer the period of labor market participation, the faster the expected return to work for those who at the moment are unemployed, take care of children or are disabled. If the duration of labor market experience is of such importance, it means that rapid transitions back-to-work are a strong remedy against 'exclusionary' transitions. This somewhat circular reasoning underlines the importance of institutional arrangements such as activating labor market policies. Without such arrangements the modern flexible labor market might be very risky for groups that are already vulnerable for human capital reasons.

Generally speaking, our analyses show that duration analyses combined with decomposition analyses reveal a lot about transitional risks. They are however not conclusive with respect to the explanatory variables. That is why we plead for more panel research on the labor market. This method probably turns out to be superior if one wants to achieve a real comprehension of exclusionary labor market processes.

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A Decomposition

Let $E(X_i, \beta, \alpha)$ denote the expected duration for the individual with characteristics X_i given the coefficient vector β and the baseline hazard parameter vector α. Then, following Fairlie (2006), the decomposition of the non-linear difference in expected duration $\bar{Y}_1 - \bar{Y}_2$ can be

written as

$$\begin{aligned} D^1 &= \left[\sum_{i=1}^{N_1}\frac{E(X_{i1},\hat{\beta}_1,\hat{\alpha}_1)}{N_1}-\sum_{i=1}^{N_2}\frac{E(X_{i2},\hat{\beta}_1,\hat{\alpha}_1)}{N_2}\right] \\ &+\left[\sum_{i=1}^{N_2}\frac{E(X_{i2},\hat{\beta}_1,\hat{\alpha}_1)}{N_2}-\sum_{i=1}^{N_2}\frac{E(X_{i2},\hat{\beta}_1,\hat{\alpha}_2)}{N_2}\right] \\ &+\left[\sum_{i=1}^{N_2}\frac{E(X_{i2},\hat{\beta}_1,\hat{\alpha}_2)}{N_2}-\sum_{i=1}^{N_2}\frac{E(X_{i2},\hat{\beta}_2,\hat{\alpha}_2)}{N_2}\right] \end{aligned} \tag{5}$$

The first term in brackets on the right hand side reflects the contribution of the characteristics, the second term in brackets reflects the contribution of the baseline hazard and the last term in brackets reflects the contribution of the coefficients to the difference in expected duration. Note that the decomposition also depends on the shape parameter(s), α. Consequently, there are three other equivalent possible decompositions of the difference in expected duration between the two groups on which α_g is used in the counterfactual parts of the decomposition equation

$$\begin{aligned} D^2 &= D\big(X_1,1,1,X_2,1,1\big)+D\big(X_2,2,1,X_2,2,2\big)+D\big(X_2,1,1,X_2,2,1\big) \\ D^3 &= D\big(X_1,2,2,X_2,2,2\big)+D\big(X_1,1,1,X_1,1,2\big)+D\big(X_1,1,2,X_1,2,2\big) \\ D^4 &= D\big(X_1,2,2,X_2,2,2\big)+D\big(X_1,2,1,X_1,2,2\big)+D\big(X_1,1,1,X_1,2,1\big) \end{aligned}$$

where

$$D\big(X_m,b^1,a^1,X_n,b^2,a^2\big)=\sum_{i=1}^{N_m}\frac{E(X_{im},\hat{\beta}_{b^1},\hat{\alpha}_{a^1})}{N_m}-\sum_{i=1}^{N_n}\frac{E(X_{in},\hat{\beta}_{b^2},\hat{\alpha}_{a^2})}{N_n}$$

The alternative methods of calculating the decomposition provide different estimates, which is the familiar index problem with the Oaxaca-Blinder decomposition. Ham et al. (1998) suggest to average over the alternative decompositions to estimate the contribution of the coefficient estimates and of the coefficients. They did not consider the difference in the baseline hazard. Thus including the ancillary parameters, we propose to measure the contribution of the difference in the duration between the groups due to differences in observable characteristics by

$$D(X)=\frac{1}{2}\sum_{k=1}^{2}D\big(X_1,k,k,X_2,k,k\big) \tag{6}$$

The contribution of the coefficient estimates to the differential is measured by

$$D(\beta)=\frac{1}{4}\sum_{g=1}^{2}\Big[D\big(X_g,1,2,X_g,2,2\big)+D\big(X_g,1,1,X_g,2,1\big)\Big] \tag{7}$$

The contribution of the baseline hazard to the differential is measured by

$$D(\alpha)=\frac{1}{4}\sum_{g=1}^{2}\Big[D\big(X_g,2,1,X_g,2,2\big)+D\big(X_g,1,1,X_g,1,2\big)\Big] \tag{8}$$

Note that $D(X)+D(\beta)+D(\alpha)=D\big(X_1,1,1,X_2,2,2\big)=\bar{Y}_1-\bar{Y}_2$, as should be.

B Estimation results

Table 6: Parameter estimates of hazard model with maximum duration for time in UNEMPLOYMENT (in months)

	Turks	Moroccans	Surinamese	Antilleans	Natives
Regression coefficients					
Female	0.019	0.178	−0.046	−0.305*	−0.082
	(0.089)	(0.112)	(0.081)	(0.122)	(0.114)
Married/Cohabiting	0.075	−0.098	0.189	0.017	0.015
	(0.089)	(0.098)	(0.105)	(0.173)	(0.115)
Low Secondary educ.	0.254	0.376*	0.207	0.051	0.065
	(0.134)	(0.177)	(0.109)	(0.165)	(0.189)
High Secondary educ.	0.458**	0.377*	0.068	−0.107	0.272
	(0.159)	(0.184)	(0.108)	(0.163)	(0.168)
High education	0.458**	0.377*	0.068	−0.107	0.551**
	(0.159)	(0.184)	(0.108)	(0.163)	(0.191)
bad health	−0.387**	−0.319*	−0.211	−0.077	0.133
	(0.121)	(0.125)	(0.143)	(0.195)	(0.139)
Relative labor market experience (> 75%)	0.593**	0.580**	0.404**	0.961**	0.158
	(0.135)	(0.158)	(0.118)	(0.209)	(0.116)
age[a]	−0.097	−0.015	−0.032	0.029	−0.041
	(0.061)	(0.076)	(0.048)	(0.069)	(0.076)
age-squared	−0.115*	−0.220**	−0.005	−0.001	0.017
	(0.051)	(0.061)	(0.041)	(0.053)	(0.057)
Children (< 12)	−0.527**	−0.470**	−0.419**	0.022	−0.024
	(0.125)	(0.123)	(0.127)	(0.152)	(0.146)
duration dependence[b]					
α_1 (0 to 2 months)	−2.881	−2.186	−2.940	−2.181	−0.417
	(0.680)	(0.490)	(0.733)	(0.395)	(0.339)
α_2 (2 to 6 months)	−2.881	−2.186	−2.940	−2.181	−1.826
	(0.680)	(0.490)	(0.733)	(0.395)	(0.558)
α_3 (6 month to 1 year)	−3.041	−2.321	−2.429	−2.642	−3.838
	(0.266)	(0.432)	(0.172)	(0.266)	(0.848)
α_4 (1 to 2 years)	−3.041	−3.490	−2.429	−2.642	−3.838
	(0.266)	(0.172)	(0.172)	(0.266)	(0.848)
α_5 (2 to 5 years)	−3.412	−3.490	−3.696	−3.686	−3.502
	(0.187)	(0.172)	(0.281)	(0.382)	(0.306)
α_6 (> 5 years)	-3.784	-3.649	-3.976	-3.631	-4.647
	(0.119)	(0.125)	0.142)	(0.173)	(0.232)
Log-likelihood	-2736.0	-2297.4	-1557.6	-963.2	-602.4
N	516	432	316	200	126

[a] Age is the (time-varying) age at each year of unemployment, starting from the year the individual entered unemployment, centered at the mean age of 35 years.

[b] The duration dependence is piecewise constant with parameter e^{α_i}, for $i = 1, \ldots 6$. Some intervals are combined. Turks: 1 and 2, 3 and 4; Moroccans: 1 and 2, 4 and 5; Surinamese: 1, 2 and 3; Antilleans: 1 and 2, 3 and 4; Natives: 3, 4 and 5. *Notes:* Standard errors are shown in parentheses. $^{*}p < 0.05$; $^{**}p < 0.01$ (only for regression coefficients). *Source:* SPVA (ISEO/SCP)

Table 7: Parameter estimates of hazard model with maximum duration for time in DOMESTIC CARE (in years) for women

	Turks	Moroccans	Surinamese	Antilleans	Natives
Regression coefficients					
Married/Cohabiting	0.821^{**}	1.265^{**}	0.629^{*}	-0.174	-0.151
	(0.162)	(0.251)	(0.279)	(0.313)	(0.811)
Low Secondary educ.	1.386^{**}	2.713^{**}	0.835^{**}	0.480	1.654^{*}
	(0.208)	(0.527)	(0.291)	(0.267)	(0.828)
High Secondary educ.	0.974^{**}	3.113^{**}	0.288	-0.073	2.199^{*}
	(0.257)	(0.499)	(0.337)	(0.412)	(1.006)
High education	0.974^{**}	3.113^{**}	0.288	-0.073	2.929^{*}
	(0.257)	(0.499)	(0.337)	(0.412)	(1.226)
Relative labor market experience ($> 75\%$)	0.613^{*}	2.128^{**}	2.163^{**}	0.851^{*}	4.242^{**}
	(0.289)	(0.447)	(0.306)	(0.386)	(1.574)
age[a]	-1.104^{*}	1.896^{**}	0.191	0.109	2.917^{**}
	(0.498)	(0.197)	(0.266)	(0.260)	(0.833)
age-squared	-2.544^{**}	0.059	-0.585^{*}	-0.780^{**}	1.827^{**}
	(0.546)	(0.218)	(0.261)	(0.218)	(0.639)
Children (< 12)	-0.608^{**}	-1.918^{*}	0.109	0.191	-4.262^{*}
	(0.213)	(0.775)	(0.364)	(0.321)	(2.134)
duration dependence[b]					
α_1 (0 to 10 years)	-1.809	-4.020	-2.547	-1.022	-7.036
	(0.147)	(0.483)	(0.337)	(0.245)	(1.956)
α_2 (10 to 15 years)	-1.809	-4.020	-2.547	-4.003	-7.036
	(0.147)	(0.483)	(0.337)	(0.589)	(1.956)
α_3 (15 to 20 years)	-3.651	-4.020	-5.162	-4.003	-7.036
	(0.259)	(0.483)	(1.375)	(0.589)	(1.956)
α_4 (> 20 years)	-3.651	-5.844	-5.162	-4.003	-6.411
	(0.259)	(0.619)	(1.375)	(0.589)	(1.496)
Log-likelihood	-4683.2	-4027.6	-1382.1	-945.9	-672.1
N	1277	1065	390	266	209

[a] Age is the (time-varying) age at each year of unemployment, starting from the year the individual entered unemployment, centered at the mean age of 40 years.
[b] The duration dependence is piecewise constant with parameter e^{α_i}, for $i = 1, \ldots 4$. Some intervals are combined. Turks: 1 and 2, 3 and 4; Moroccans: 1, 2 and 3; Surinamese: 1 and 2, 3 and 4; Antilleans: 2, 3 and 4; Natives: 1 and 2, 3 and 4. *Notes:* Standard errors are shown in parentheses. $^{*}p < 0.05$;$^{**}p < 0.01$ (only for regression coefficients). *Source:* SPVA (ISEO/SCP)

Table 8: Parameter estimates of hazard model with maximum duration for time in DISABILITY (in years)

	Turks	Moroccans	Surinamese	Antilleans	Natives
Regression coefficients					
female	.695**	1.068*	0.290	0.508	0.780
	(0.229)	(0.456)	(0.284)	(0.372)	(0.656)
Married/Cohabiting	0.496*	−0.551	0.591*	−	0.837
	(0.220)	(0.349)	(0.278)		(0.569)
Low Secondary educ.	0.464	−0.562	0.583	−0.353	0.646
	(0.369)	(0.722)	(0.356)	(0.461)	(0.658)
High Secondary educ.	0.476	1.580	0.515	0.135	0.715
	(0.452)	(0.993)	(0.374)	(0.337)	(0.668)
High education	0.476	1.580	0.515	0.135	1.181
	(0.452)	(0.993)	(0.374)	(0.337)	(0.858)
Relative labor market experience (> 75%)	2.760**	2.674**	1.982**	0.684	0.939*
	(0.685)	(0.626)	(0.631)	(0.450)	(0.467)
age[a]	0.315	0.697	0.717**	0.069	1.413**
	(0.190)	(0.430)	(0.204)	(0.261)	(0.495)
age-squared	−0.022	−0.574	0.162	0.232	0.761**
	(0.113)	(0.321)	(0.177)	(0.162)	(0.282)
duration dependence[b]					
α_1 (0 to 10 years)	-4.370	-4.136	−4.087	-2.905	−5.663
	(0.715)	(0.681)	(0.799)	(0.631)	(1.123)
α_2 (10 to 20 years)	-3.155	-3.584	−3.287	-3.229	−5.663
	(0.314)	(0.615)	(0.351)	(0.745)	(1.123)
α_3 (> 20 years)	-1.914	-1.005	-2.945	-2.715	-4.493
	(0.283)	(0.436)	(0.435)	(0.622)	(0.849)
Log-likelihood	-1668.373	-1327.203	-937.710	-358.883	-449.240
N	550	436	309	122	145

[a] Age is the (time-varying) age at each year of disability, starting from the year the individual entered disability, centered at the mean age of 48 years.
[b] The duration dependence is piecewise constant with parameter e^{α_i}, for $i = 1, \ldots 3$. Some intervals are combined. Natives: 1 and 2. *Notes:* Standard errors are shown in parentheses. $^{*}p < 0.05$; $^{**}p < 0.01$ (only for regression coefficients). *Source:* SPVA (ISEO/SCP)

C Figures

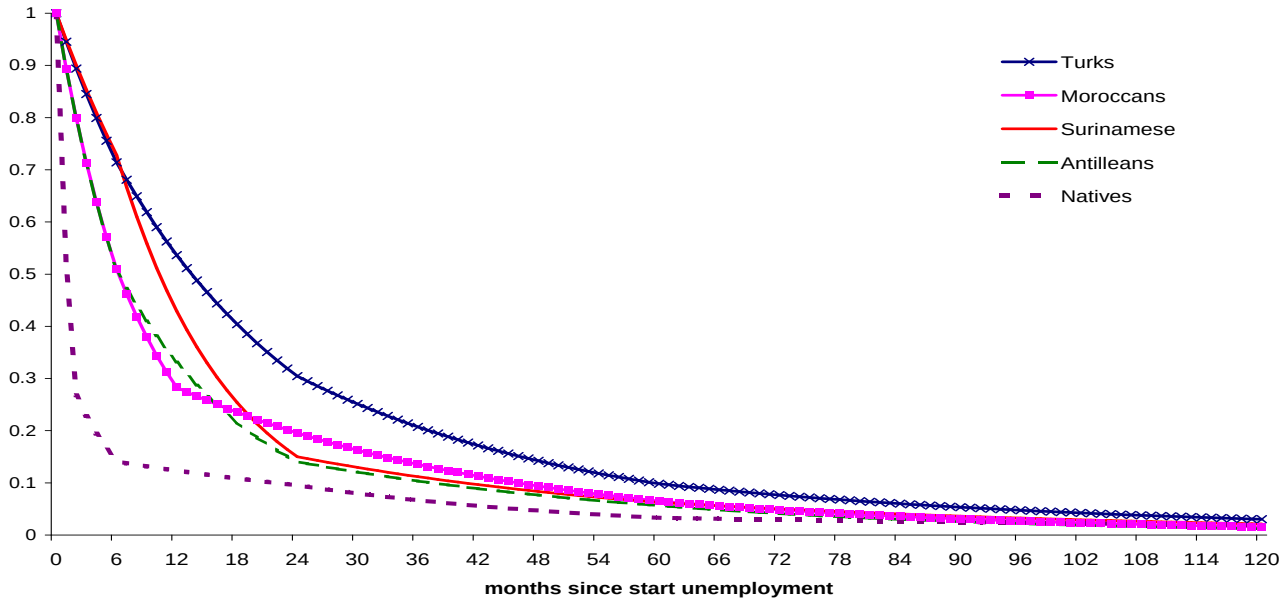

Figure 1: Estimated survival rate in UNEMPLOYMENT for a reference individual.
A reference individual is a single male with basic or no education, good health, no labour market experience, no kids and aged 35.

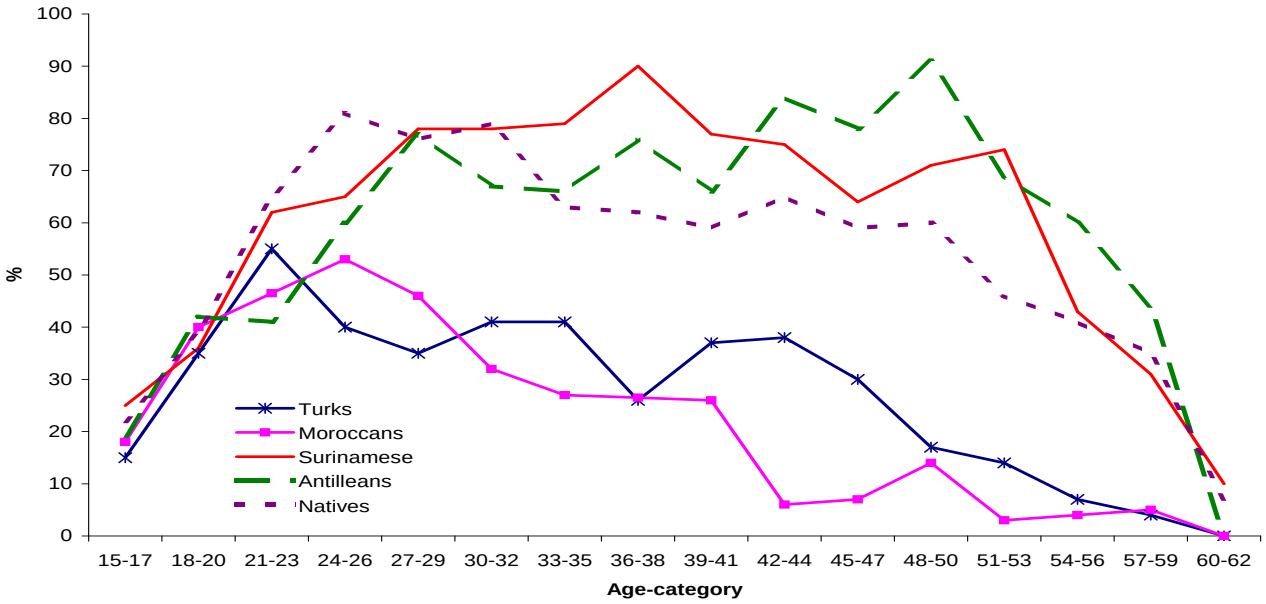

Figure 2: labour participation of women by ethnic group and age, 2002.
Source: SPVA (ISEO/SCP)

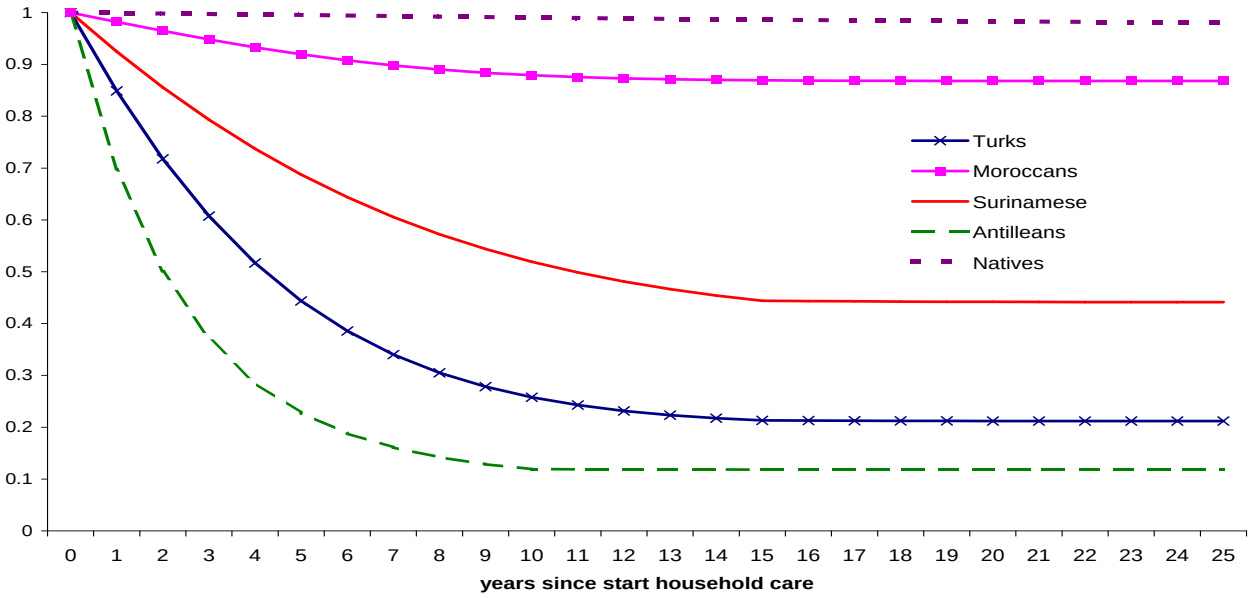

Figure 3: Estimated survival rate in DOMESTIC CARE for a reference female.
A reference female is a single female with basic or no education, no labour market experience, no kids and aged 40.

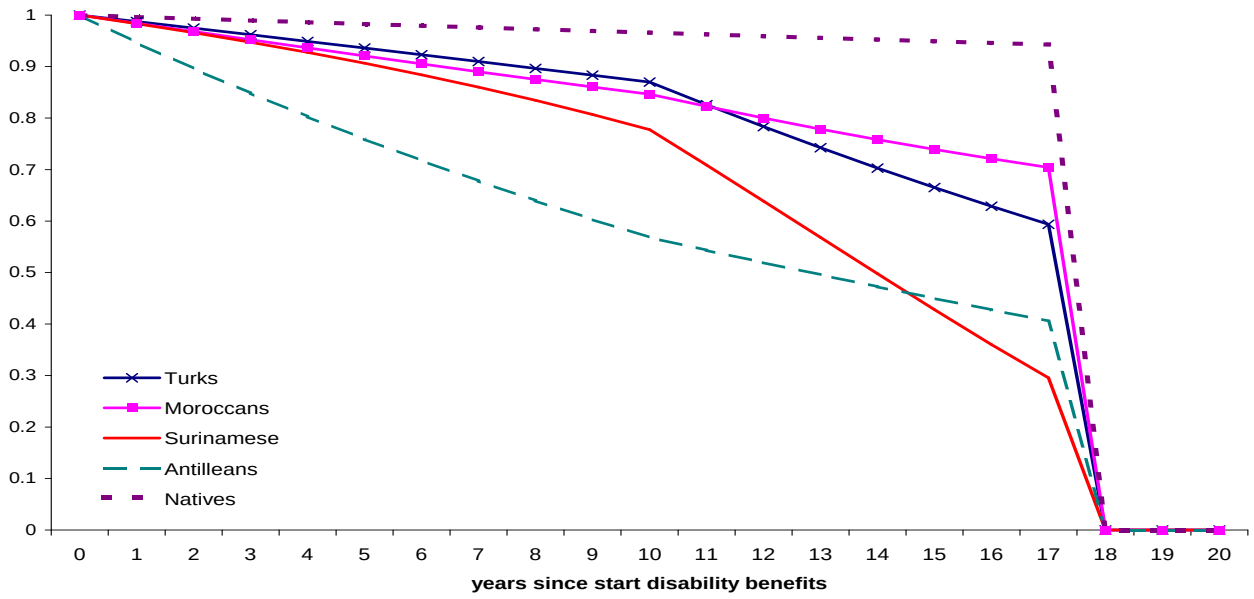

Figure 4: Estimated survival rate in DISABILITY for a reference individual.
A reference individual is a single male with no high education, no labour market experience, no kids and aged 48.