

Andersson, Pernilla; Wadensjö, Eskil

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## Temporary Employment Agencies : A Route for Immigrants to Enter the Labour Market?

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## Temporary Employment Agencies: A Route for Immigrants to Enter the Labour Market?

Pernilla Andersson  
Eskil Wadensjö

March 2004

# Temporary Employment Agencies: A Route for Immigrants to Enter the Labour Market?

**Pernilla Andersson**

*Swedish Institute for Social Research,  
Stockholm University*

**Eskil Wadensjö**

*Swedish Institute for Social Research,  
Stockholm University and IZA Bonn*

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IZA

P.O. Box 7240  
53072 Bonn  
Germany

Phone: +49-228-3894-0  
Fax: +49-228-3894-180  
Email: [iza@iza.org](mailto:iza@iza.org)

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## ABSTRACT

### **Temporary Employment Agencies: A Route for Immigrants to Enter the Labour Market?\***

We study immigrants in temporary employment agencies in Sweden using a unique data set that covers all aged 16-64 who were employed by temporary employment agencies (TEAs) in Sweden in November 1999, with information on their employment status in 1998 and 2000. We find that young people, women, people living in big cities, and immigrants are overrepresented in the TEAs. Grouping immigrants after origin shows that immigrants from Africa, Asia and South America are greatly overrepresented in the sector. Immigrants are on average slightly older than the natives who work in TEAs, they are more often married, and women are less overrepresented among those born outside of Sweden. The immigrants are overrepresented among those with the lowest education and those with higher education. The mobility between employment status (employed in a TEA, other type of employment, unemployed, studying) differs between immigrants and natives in several respects. One result is that immigrants more often leave a TEA for another type of employment, which could be interpreted as employment in a TEA being used as a stepping stone to the labour market.

JEL Classification: J15, J40, J61

Keywords: immigrant workers, temporary agency work, contingent labour, temporary work

Corresponding author:

Eskil Wadensjö  
Swedish Institute for Social Research  
Stockholm University  
10691 Stockholm  
Sweden  
Email: [Eskil.Wadensjo@sofi.su.se](mailto:Eskil.Wadensjo@sofi.su.se)

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*1. Introduction – temporary employment agencies – a dead-end street or a route to the labour market for immigrants?*

Immigrants, especially those from non-European countries, are generally in a precarious situation in the Swedish labour market. Their labour force participation is lower and unemployment higher than for the non-immigrant population. The immigrants who have jobs less often have permanent jobs in the primary labour market. Immigrants are overrepresented among the self-employed and among those who have less stable employment. One form of contingent employment is to take work in temporary employment agencies.

This paper studies immigrants in temporary employment agencies in Sweden. We use a unique data set that covers all aged 16-64 who were employed by temporary employment agencies (TEA) in Sweden in November 1999, with information on their employment status in 1998 and 2000. We have information on their age, gender, marital status, immigrant status, education, region, income etc. The data set also covers information relating to all people aged 16-64 in 1999 irrespective of if they are employed by a temporary employment agency or not with the same type of information. We also have information on all who were employed in 2000 by a TEA which was in business in 1999.

The second section of the paper surveys research on temporary employment agencies. The research is scarce mainly due to lack of databases that cover people employed by employment agencies. In the third section of the paper we present the database that is used for the present study in more detail.

In section 4 we study the factors that influence employment by temporary employment agencies. We find that young people, women, people living in big cities, and immigrants (first generation but also second-generation immigrants) are overrepresented. Grouping immigrants after origin shows that immigrants from Africa, Asia and South America are greatly overrepresented in the sector. However, immigrants from countries that are geographically close to Sweden are not overrepresented in temporary employment agencies compared to people who were born in Sweden.

In section 5 the characteristics of immigrants employed by temporary employment agencies are compared with natives employed in the same sector. Immigrants are on

average slightly older than the natives who work in TEAs, they are more often married, and women are less overrepresented among those born outside of Sweden. The immigrants are overrepresented among those with the lowest education and those with higher education. The immigrants in TEAs more often live in big cities than natives in TEAs. To a large extent the same type of differences are also found when comparing all employed immigrants and natives. A comparison between immigrants who come from different areas shows large differences in characteristics.

In section 6, sector mobility is studied. The mobility between employment status (employed in a TEA, other type of employment, unemployed, studying) in year 1998 and in year 2000 is examined. The pattern differs between immigrants and natives in several respects. With multinomial logit analysis the factors that influence the probability of going from a job in a temporary employment agency (in 1999) to another type of employment (in 2000) are studied. One result is that immigrants more often leave for another type of employment. Other factors such as age, gender, education, and if the person lives in a big city are also of importance.

In section 7 groups with different mobility patterns are compared. One group consists of those employed in a TEA all three years, another of those unemployed in 1998, employed in a TEA in 1999, and with another type of employment in 2000. Immigrants are overrepresented in the second group, which could be characterized as TEA being a stepping stone to the labour market. We also present information on the income development for those with different employment status careers.

In section 8 the main results are summarized and some conclusions are drawn.

## *2. Research on temporary employment agencies*

Temporary employment agencies have a long history. However, up to the 1990s few researchers showed interest in the sector. In Sweden and some other European countries this may be due to that their activities first became legal in that decade. Another factor may be a lack of good statistical information, a problem which still exists. In the last few years the interest in the sector has grown and a number of studies have been published, especially in the United States. Below, a short survey is given of one of the questions dealt with: Why

does a market for temporary employment agencies exist? The answer to this question may contribute to the knowledge of why some groups are overrepresented in the industry.

Why are some people hired from temporary employment agencies instead of being employed directly on a regular basis? The answer to this question has to be found on the demand side, the supply side or a combination of the two sides of the labour market. There are some different answers to this question put forward in the literature in the field.<sup>1</sup>

The first explanation for the phenomenon is that the temporary employment agencies combine many part-time and part-year jobs to full-time and full-year jobs. Employers in many cases only have a demand for people to work with certain tasks for a few hours a day, or full-time for only a few days or weeks. Most people want to work more than that. In principle a person could himself combine a number of part-time or part-year jobs to full-time employment, but it takes time and it could lead to a disadvantage regarding different forms of fringe benefits such as for example insurances which are dependent on a minimum working time with one employer. The temporary employment agency combines several part-time or part-year jobs to full-time jobs (or longer part-time jobs).

A second explanation is based on that it is costly to recruit people. There are costs for advertisements, interviews, training etc. These costs may be of minor importance when the employment is expected to last for a long period, but they could be prohibitive if the expected period is short. And there is a demand for short employment spells, for example to match short-run variations in product demand, at seasonal variations, when regular employees are on sick leave, and for the time when recruitment for a permanent position is carried out. When an employer uses a temporary employment agency that agency covers most of the recruitment costs but the agency can distribute these costs over many hiring companies. Another related advantage for the company hiring workers is that the recruitment often is faster if a temporary employment agency is used instead of alternative methods.

A third explanation is that the temporary employment agencies are better at finding people with the required competence, maybe especially in comparison to small firms. In such cases a job in a temporary employment agency may also serve as a trial employment.

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<sup>1</sup> For an analysis see Houseman (1997).

The second and third explanations build on two types of uncertainty. The second explanation relates to uncertainty regarding the extent and duration of the demand for labour, and the third on uncertainty regarding the quality of the supply of labour.<sup>2</sup>

The fourth explanation builds on that laws and collective agreements make it costly for employers to reduce the workforce or change its composition. It is much easier to change the volume or composition of the personnel hired from a temporary employment agency. If a firm does not want to hire a worker any longer the temporary employment agency may find another firm willing to hire the same worker. Increased employment security according to law or agreement may lead to an increased demand for the services of temporary employment agencies.<sup>3</sup>

In the United States a fifth explanation has also been an important part of the debate and the research on the temporary employment agencies. That is that by hiring a temp instead of employing the worker himself an employer is able to reduce the wage costs due to that the wages and especially the insurance costs (e.g. for health insurance) are lower for those hired from a temporary employment agency than for those hired directly by the employer.<sup>4</sup> Sweden has a different industrial relation system with collective agreements covering most of the labour market including those working in temporary employment agencies. This means that the lower wage cost explanation is probably of less relevance regarding the Swedish labour market.

There is a discussion on how the different explanatory factors could be used to explain the expansion in the temporary employment industry. This is especially so for the legal framework. In the United States, employment protection has gradually been enhanced mainly by decisions taken in the courts on the state level. These changes have taken place at different times in different states which facilitate studies of the effects of the changes. The studies show that the changes have the expected effects – an increase in the demand for the services of the temporary employment agencies. Another result is that a high union density means a higher market share for the temporary employment agencies. This fact,

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<sup>2</sup> See Milner and Pinker (2000) for a theoretical analysis of the two models of explanation.

<sup>3</sup> See Autor (2000) and Miles (2000) for studies of the importance of the stricter rules for employment protection on the development of temporary employment agencies in the United States.

<sup>4</sup> See Golden (1996) for a study which gives some support to this hypothesis.



however, cannot contribute to explain the development over time since union density has declined during the last decades in the United States.

The first of the five explanations presented above is that the matching in the labour market is facilitated by the temporary employment agencies (a combined demand and supply side explanation). The other four explanations are different forms of demand side explanations – the employers get lower costs by utilizing temporary employment agencies. There may also be supply side factors. Some people may prefer a job in a temporary employment agency compared to an ordinary job due to that it is more flexible as regards the number of working hours and also due to that it makes it easier to switch between different places of work. For other individuals an employment in a TEA can be a way of finding a regular employment. Those who are hired out to firms have a possibility to show their skills and ability. This should be compared to a situation where unemployed are looking for regular jobs by sending applications and going to interviews. In this situation they have to make an impression on the employer during a short period of time and for some groups on the labour market such as young people and immigrants, in general those without experience on this particular labour market, it can be difficult to convince the employer to hire him or her. For these groups, a period of employment in a TEA can be a way of getting to know the labour market and make contacts with different firms and employers. To look for a job in this way can in some cases be more efficient than to search for a job in a more traditional way.

As was mentioned in the introduction, the purpose of this study is to describe the groups who work in this particular industry. We also analyse the flows to and from the TEI. The focus of this paper is on differences between natives and immigrants concerning their relative representation in the industry and concerning their respective flow patterns. Our main hypotheses are that immigrants are overrepresented in the TEI and if they do work in this industry, they are more likely to enter it from unemployment and leave the industry for an employment in another industry. It is our belief that in particular immigrants are those who use an employment in a TEA as a way of finding a regular employment.

### *3. Data*

The purpose of this study is, by using a unique dataset, to study the people employed in the Temporary Employment Industry (TEI) and the flows to and from that industry. By doing so we are able to describe differences and similarities between natives and immigrants and between different groups of immigrants. By combining the employment status in 1998 and 2000 we can distinguish between different patterns.

Our main population consists of all individuals between 16 and 64 years of age who lived in Sweden in November 1999. Information on these individuals is gathered from Statistics Sweden's register based labour market statistics (RAMS). Using this data we have information on age, gender, marital status, place of birth, parents' birth country, education, place of residence, employment status and annual income for about 5 million individuals. In the main population we identify, by using the same definitions as Statistics Sweden, the groups who were employed and unemployed in November 1999.

To identify the population we are primarily concerned with, all who in November 1999 were employed were matched with firms classified as TEAs<sup>5</sup> to find all individuals employed in a TEA in November 1999. This population consists of 18 296 individuals. Of these, 15 847 individuals were born in Sweden and 2 449 individuals were born in another country. To be able to study the flows to and from the TEI, we use also information for 1998 and 2000.

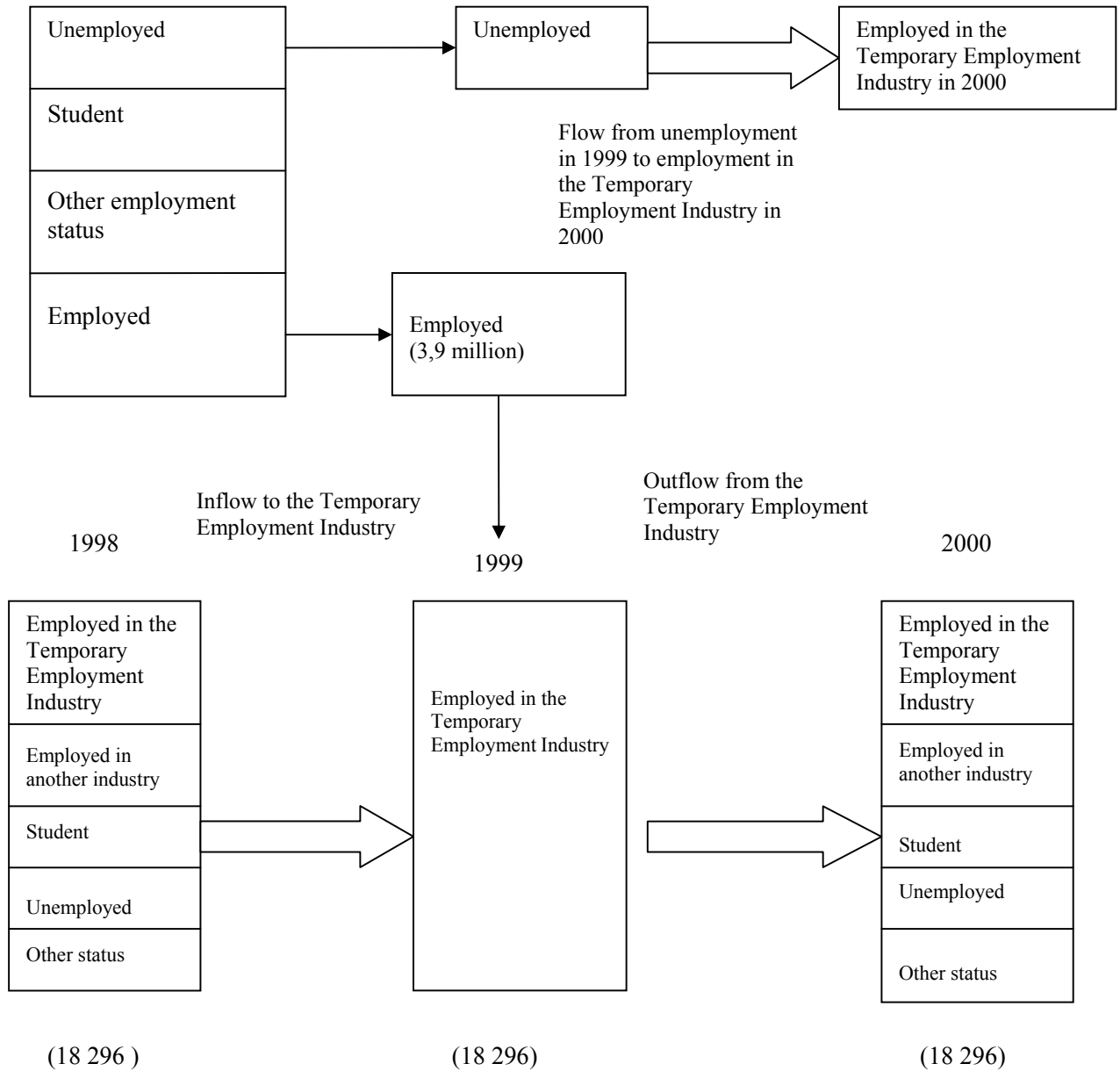
As earlier mentioned, we are also interested in looking at the flows from unemployment to the TEI. To be able to do this, we have studied the individuals who were unemployed in 1999 and those who were employed in a TEA in 2000. *Figure 1* shows our populations and the flows we are interested in.

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<sup>5</sup> The classification of firms as TEA started with a register from Statistics Sweden with names and addresses to firms in an industry where one typically can find these kinds of firms. Additional TEAs were found on the Internet, on the Yellow Pages and in a register over firms who are members of SPUR (the employer organization in the TEI). During the spring 2000 the firms were contacted to judge which of them that were running its business in 1999.

Figure 1

All individuals between 16 and 64 years of age living in Sweden December, 31 1999



In the data we cannot distinguish between people with different work tasks within the TEI. This means that we cannot determine who are employed to be hired out to other employers and who have administrative work tasks in a TEA. However, the second category of employees is only a minor part of all employed in the TEI.

As was mentioned earlier we use annual data from administrative registers. An advantage is that we have reliable information for each individual, but there is a problem associated with using annual data when defining employment status. We only have information on whether an individual has been employed or not, and in which industry he or she was employed in for one month during the year (November). We also know if an individual has been registered as a student during the fall semester for each year and if he/she has received unemployment insurance benefits during the year. The problem is that an individual can have done several things during one year; for example both been a student and been unemployed. To deal with this problem we have used the available information to construct groups that are mutually exclusive. A detailed description is given in the Appendix to this paper.

The block arrows in *figure 1* indicate which flows we are interested in and have estimated regressions for the probability to follow. By using the panel we look at the probability of having a certain employment status in 1998 and in 2000 given that the individual was employed in a TEA in 1999. We have defined five different employment statuses for each year and estimate the probabilities by using multinomial logit regressions. This method makes it possible to compare the probability of having been unemployed in 1998 with for example the probability of having been employed in another industry than the TEI. With the same estimation method we have looked at the probability of having a certain mobility pattern compared to other patterns. Two patterns are of special interest. The first consists of being unemployed in 1998 and employed in another industry in 2000. In this group we probably find those who use employment in a TEA as a way to enter the regular labour market. The second pattern of interest is to have been employed in the TEI in all three years. In this group we probably find those who have chosen this employment form as a long term alternative to regular employment, but also those that are “stuck” in this industry and cannot find any better alternative. We assume that it is positive to follow the path from unemployment in 1998 to employment in another industry in 2000, but to investigate this

further we look at the income development over the three years included in the study. This is done both for annual labour income and for annual income including employment-related transfer payments. A problem is that the annual income for an individual employed in a TEA in November may partly come from other industries than the TEI. If he/she were employed in another industry at the beginning of the year, for example, the income from that employment is also included in the annual income.<sup>6</sup>

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<sup>6</sup> The transfers added to the annual income to get annual gross income are unemployment insurance benefits and social security transfers as sickness benefits and parental leave benefits.

#### *4. Immigrant representation among those employed in the temporary employment agencies*

In this section we study the factors that influence that an individual is employed by a temporary employment agency. We will do so firstly by descriptive statistics comparing those employed in the TEI with all employed. See Table 1.

From the table we find that some groups are overrepresented. Women are overrepresented in the TEI, and those employed in that industry are on average younger than all the employed. The average age is 34.8 years compared to 41.1 years. Those working in the TEI are also more often unmarried than all employed, which is probably mainly related to the difference in age. The industry is also strongly overrepresented in the big cities, especially Stockholm. And, which is of special interest for this study, immigrants are overrepresented in the TEI. Among those employed in the TEI 13.4 per cent were born outside of Sweden compared to 9.7 per cent among all employed. Even those who were born in Sweden but whose parents are immigrants are overrepresented. Grouping immigrants after origin shows that immigrants who come from countries that are geographically close to Sweden are not overrepresented in temporary employment agencies in comparison to people who were born in Sweden. Immigrants from Africa, South America and Asia are overrepresented while immigrants from the Nordic countries are underrepresented.

As immigrants are overrepresented in big cities and younger than natives on average, the overrepresentation of immigrants could possibly be explained by these differences. We will therefore use probit analysis in the next step. See Table 2 which shows estimations of three different models. To deal with the heterogeneity within the group of immigrants, variables representing different groups of immigrants are introduced in Model 2 and Model 3.

Model 1 shows that immigrants are overrepresented in the TEI. This is case for both first and second generation immigrants. The effect is larger for the first generation immigrants. The results for the other variables that are included – age, gender, education, region, marital status – go in the same direction as in the descriptive statistics shown in Table 1.

In Model 2 separate variables are introduced that represent various regions of origin. It shows that those who come from the Nordic countries, other EU countries and Oceania are not overrepresented in the TEI compared to those who were born in Sweden. Those who come from Africa, North and South America and especially those from Asia are however overrepresented. In Model 3 separate variables are introduced that represent immigrants who arrived in different periods. Immigrants who arrived to Sweden in 1966 or later are overrepresented. The overrepresentation is largest for those who arrived in the period from 1986 to 1993.

So far we could only conclude that among all employed in 1999 an immigrant is more likely to be employed in the business in focus than natives. The first part of the hypothesis is then supported.

##### *5. What characterizes immigrants employed by the temporary employment agencies?*

In the preceding section we found that immigrants were overrepresented in the TEI. In this section we will study the characteristics of immigrants who are employed by temporary employment agencies. As a start we will compare this group with natives employed in the same sector. See Table 3. We will also compare immigrants in the TEI with all employed immigrants. See Table 4. We will also compare different immigrant groups. We divide immigrants into four different groups. The first consists of individuals who were born in one of the Nordic countries, the second are individuals who were born within the European Union, North America and Oceania, and the third are individuals who were born in a European country which is not a member of the European Union and Soviet Union. The last group consists of those who were born in Africa, Asia or South America. We call them “North”, “West”, “East” and “South”. See Table 5.

The share of women employed in the TEI is larger among natives (61.1 per cent) than among immigrants (53.5), but women are in the majority in the TEI even among immigrants. Women are overrepresented in the TEI also in comparison with all employed immigrants. Of all immigrants employed in November 1999, 48.6 per cent were women. The female share differs considerably between immigrants from different regions. Among

those born in the Nordic countries almost 73 per cent are women compared to only 42 per cent of those born in Africa, Asia or South America.

Immigrants in the TEI are slightly older on average than natives in the same industry. There are fewer immigrants in the two youngest cohorts. Immigrants in the TEI are younger, however, than all employed immigrants, but the difference is smaller than the corresponding difference for the total population. The immigrants from the North are the oldest (42.8 years) and immigrants from the South the youngest (32.8 years) on average. The differences in marital status are quite noticeable. In general, immigrants in the TEI are less often unmarried than natives in the same industry. Only a part of this may be explained by that the immigrants are slightly older, but the differences are large between the immigrant groups and not related to the average age of the group.

There are no major differences in education level between natives and immigrants in the TEI. The immigrants are slightly overrepresented among those with the shortest education. A comparison of the different immigrant groups shows that this overrepresentation is mainly to be found among those from the North and the South.

The immigrants in the TEI are overrepresented in the three big cities (Stockholm, Gothenburg and Malmö) both compared to natives in the TEI, and compared to all employed immigrants.

Individuals born in Asia are the largest group of immigrants in the TEI. Almost one third of the immigrants belong to this group. They are also overrepresented compared to their share of all employed immigrants. Those who were born in the Nordic countries on the other hand are underrepresented in the TEI compared to their share of all employed immigrants.

#### *6. Labour market mobility for those employed by the temporary employment agencies*

One issue in the debate regarding the temporary employment agencies is whether they function as a route to the ordinary labour market. Relating this issue to differences between immigrants and natives, as is the purpose of the study, the question is; why expect that immigrants are more likely to use an employment in a TEA as a route to the ordinary labour market? Certain groups of immigrants are more likely to have experienced discrimination



of some form than natives are. The employers may when hiring have larger difficulties to evaluate the capacity of immigrant workers than native workers, which may lead to statistical discrimination. If on the other hand the worker is hired through a temporary employment agency that company makes the evaluation and takes the risk. And temporary employment agencies may have a comparative advantage in the evaluation of workers. The immigrant worker may in this way be able to show his capacity and in some cases get an ordinary job in the company which have hired him. Assuming immigrants from these groups are aware of this, it is reasonable for them to view an employment in a TEA as a route to regular employment.

In this section we first present flow matrices between 1998 and 2000 to illustrate how different groups move between employment statuses. The second step is to estimate a probit regression to study the factors that influence the propensity to leave unemployment in 1999 to work in a TEA in 2000. We then continue with multinomial logit regressions where probabilities for having different statuses are estimated. This is done both for 1998 and 2000. We especially focus on country of origin while controlling for age, gender, marital status, education and region.

To start with, we look at the flows to and from the TEI for the whole group of immigrants compared to natives. See Table 6. The patterns for the two groups are similar, while the levels differ. As was mentioned before, the transition paths we are most interested in are for those who were employed in a TEA in 1998 and 2000, and those who were unemployed in 1998 and employed in another industry in 2000. For natives, these groups consist of 22.3 per cent and 2.8 per cent. For immigrants, the percentage shares are 18.5 and 4.8 respectively. It is more common for immigrants to follow the path from unemployment to employment in another industry.

We will now compare the four groups of immigrants (see Table 7). In some cases there are larger differences between different groups of immigrants than between natives and immigrants. Immigrants from the “East” and the “South” show the same kind of pattern, while immigrants from the “North” and the “West” have a pattern similar to that of the natives. As we have shown earlier, immigrants from the first two groups are overrepresented in the TEI, compared to the entire group of employed people. The share

employed in a TEA in 1998 is lower for those who come from the “East” and the “South” than for those who come from the “North” and the “West”. This is also the case in year 2000. It is much more common that immigrants from the “East” and the “South” enter the TEI as students. In 1998 we also have a large group of immigrants from the “South” that had another occupational status in 1998, i.e. it is more common that they were out of the labour force. These differences are not surprising. Immigrants from the “South” and the “East” are more likely to be refugees who have not been in Sweden for very long.

Unemployed people who enter the TEA are a group of particular interest. The idea is that immigrants who are unemployed are more likely to take an employment in a TEA than unemployed natives. However, the results presented in table 8 are not consistent with this idea. To further investigate this matter we use the population of all individuals who were unemployed in 1999 and estimate the probabilities for those individuals to work in a TEA in 2000. We find that unemployed immigrants are not significantly more often than natives going to a TEA, taken into account differences in age, gender, etc.

A bit surprising is the result that unemployed second generation immigrants significantly more often than natives become employed by a TEA. Another result is that unemployed women less often than unemployed men get employment in a TEA. Younger unemployed people are more often employed by TEAs than older unemployed people, and unemployed people living in Stockholm and Gothenburg are more often becoming employed by a TEA.

As a third step we estimate a multinomial logit for the probability of having different employment statuses in 1998. See Table 9. As a comparison group in the multinomial logit regression, we use employment in a TEA. The results are consistent with our earlier discussion. Immigrants from the “South” and the “East” employed in the TEI significantly more often have been students, unemployed or of having another occupational status than natives. Generally, individuals having these statuses are those who may be entering the Swedish labour market for the first time, or re-entering if they have been unemployed. We find almost the same result concerning the youngest cohorts. One conclusion is that it seems to be quite a few immigrants who use employment in a TEA as a way into the labour market. We do not at all find this pattern for natives, which would suggest that there could

be a difference between immigrants and natives concerning the reasons for why they choose to enter the TEI.

This result together with the results presented in table 8 give us an important insight. Given that an individual was unemployed in 1999, there is no difference in the probability of entering the TEI in 2000. Given that an individual did enter the TEI in 1999 immigrants are more likely to have been unemployed in 1998 compared to natives.

Studying the outflow from the TEI in 2000 we use employment in another sector as the comparison group as this is the largest group (see Table 10). The result of this regression is not as striking as for the occupational status in 1998. One result is that immigrants from the “East” and the “South” are less likely to be employed in a TEA in 2000, compared to natives, than to be employed in another industry. In other words, they are more likely to leave the TEI. This gives some support to the hypothesis that immigrants, at least from some areas, use employment in a TEA as a way into regular employment. However, we also find that immigrants from the “South” are more likely, compared to natives, to be unemployed in year 2000 than of working in a TEA.

#### *7. Differences between groups with different mobility patterns.*

In this section we explicitly look at the characteristics of individuals who work in the TEI in all three years and of individuals who were unemployed in 1998 and employed in another industry in 2000. We also estimate the probabilities of belonging to a group that follows one of these paths. Finally, we study the income development for the different groups.

The paths we analyse in this paper are chosen so as to represent different reasons why one decides to work in a TEA (see Table 11). The group of individuals who are employed in a TEA during all three years can be seen as representing those who have a job in a TEA on a more permanent basis. This could be due to that they prefer this type of employment but also be a result of lack of alternative opportunities. The other group consisting of individuals who were unemployed in 1998 and employed in another industry in 2000, represents a group of individuals that can be assumed to use employment in the TEI as a route to the regular labour market (see Table 12).

When comparing natives and immigrants who worked in a TEA during all three years, the most visible result is that there are no great differences. On average, they are about the same age, the share of women is almost the same and the educational level appears to be the same. However, it is important to note that almost 40 per cent of the immigrants were born in the Nordic countries and we know that this group is quite similar to natives in the labour market. Most immigrants from the Nordic countries came to Sweden between 1973 and 1985, and only 4.6 per cent during the second half of the 1990s.

Among those who were unemployed in 1998 and employed in another industry in 2000, the share of women is 50 percent among natives and only 38 per cent among immigrants (see Table 12). The natives are slightly younger than the immigrants on average. The share of individuals over 45 years is greater among immigrants than among natives. More than half of the immigrants having this mobility pattern were born in countries belonging to the group “South”. 65.3 per cent of the immigrants in this group came to Sweden after 1986, compared to 34.3 percent in the stable group.

A conclusion from this analysis is that immigrants from the “South” more often belong to the volatile group than the stable group. This implies that they use this employment form to a larger extent as a way out of unemployment to employment in another industry. Immigrants from the “South” are also overrepresented in the TEI compared to all employed.

The probabilities of following the two paths of interest are compared to all the other paths with multinomial regression (see Table 13). The result is consistent with our earlier conclusions. Immigrants born in the “South” (Africa, Asia, and South America) are more likely than natives to follow the path from unemployment to employment in another industry, compared to all other possible paths. On the other hand they are underrepresented among the stable group. We also find that immigrants who were born in the “West” (EU 12, North America, and Oceania) are more likely to follow this path.

We see from the regressions that women have a significantly lower probability of taking the path from unemployment to employment in another industry than men do. However, they do not have a higher probability than men of belonging to the stable group either, which is kind of remarkable. Women are more likely than men to belong to one of the other

14 paths. Immigrants belonging to the overrepresented groups have a higher probability of belonging to the volatile group compared to natives.

We have implicitly assumed that going from unemployment to employment in another industry via a TEA is a good thing. To study if this is the case we have studied the income development over the three years. See Table 14 and 15. Earnings increase from 1998 to 2000. The increase from 1999 to 2000 is larger for the group of individuals that went from employment in a TEA to employment in another industry than for those who stayed in the TEI. This is the case for both natives and immigrants. Immigrants who follow the path from unemployment in 1998 to employment in 2000 have a higher increase in annual earnings between 1999 and 2000 than natives who follow the same path. Immigrants in this group have higher earnings in 1999 and 2000 than natives. The same pattern is found if the gross labour incomes are studied. Concerning the stable group (TEA in all three years) the increase between 1999 and 2000 is about the same for the two groups, but in this case natives have higher incomes.

#### *8. Conclusions/Discussion*

Those who are new on the Swedish labour market are more likely to work in the TEI in the first place and they are more likely to use this kind of employment as passage from different occupational statuses in general, and as a way from unemployment to employment in another industry, in particular. Individuals can be considered both as new in terms of age and in terms of the number of years that they have lived in Sweden. By this reasoning we can explain both why immigrants from the southern countries are more likely to work in the TEI, and the large share of young people. These groups are also the ones who are most likely to leave this industry for employment in another industry. An answer to the question about whether this form of occupation can work as a route to regular employment for groups that are generally in a precarious situation in the Swedish labour market is both yes and no. If unemployed immigrants enter the TEI, they seem to have a good chance of leaving it for employment in another industry. Unemployed immigrants, however, do not enter the TEI to a higher extent than what unemployed natives do.

In section two we presented some explanations for why some people are overrepresented in the TEI. The explanations are both based on that some groups prefer a job in the TEI and that some groups have few alternatives and that they select a job in TEA lacking better alternatives. This study gives mainly support to the second story. The groups overrepresented in the TEI are mainly those who do not have a very strong position in the labour market.

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## Appendix

### Definition of employment status

An individual is defined as employed in the TEI in 1998 and/or 2000 if he/she

- was registered as employed in a TEA in November of the year in question.

An individual is defined as employed in another industry in 1998 and/or in 2000 if he/she

- was registered as employed in November of the respective year, and
- has not been coded as employed in a TEA during the respective year.

An individual is defined as a student in 1998 and/or in 2000 if he/she

- was registered as a student during the fall semester of the respective year,
- has not been coded as employed in the TEI during the respective year, and
- has not been coded as employed in another industry during the respective year.

An individual is defined as unemployed in 1998 and/or 2000 if he/she

- has not been coded as employed in a TEA, employed in another industry or as a student during the respective year, and
- has received unemployment insurance benefits during the year.

An individual is defined as having another employment status in 1998 and/or 2000 if

he/she

- has not been coded as employed in a TEA, employed in another industry, a student or unemployed during the respective year.



Table 1. People employed in the temporary employment industry and all employed in Sweden in November 1999; aged 16 to 64 (percent).

	Employed in the TEI in November 1999	All employed in Sweden in November 1999
Women	60.0	47.8
Average age	34.8	41.1
<i>Age groups</i>		
16-20	7.4	3.1
21-25	20.3	8.0
26-30	16.6	11.4
31-35	14.6	13.3
36-40	10.5	12.2
41-45	8.7	12.4
46-50	8.4	12.8
51-55	7.9	13.8
56-60	4.5	9.4
61-65	1.2	3.6
Born in Sweden	86.7	90.5
<i>Born in another country</i>		
The Nordic countries	3.0	3.4
EU12*	1.0	1.0
Other countries in Europe	2.6	2.0
Africa	0.9	0.4
North America	0.3	0.2
South America	1.2	0.5
Asia	4.0	1.9
Oceania	0.0	0.0
Soviet Union	0.2	0.1
Total	13.4	9.7
Born in Sweden with both parents born in another country	4.5	3.0
Born in Sweden with one parent born in Sweden and the other born in another country	11.2	10.1
<i>Year of arrival (percent of immigrants)</i>		
1945-1965	6.7	14.2
1966-1972	12.8	17.1
1973-1985	31.2	28.6
1986-1993	35.3	25.3
1994-1999	14.0	14.8

Table 1 continued

<i>Highest educational level</i>		
Primary school less than 9 years	4.1	7.5
Primary school 9 (10) years	14.3	12.4
Upper secondary 2 years or less	25.4	31.9
Upper secondary 2 years or more	29.8	18.0
Higher education less than 3 years	16.2	15.5
Higher education 3 years or more	9.9	13.6
Post-graduate education	0.1	0.9
<i>Resides in a large city in 1999</i>		
Stockholm	43.0	20.2
Gothenburg	11.6	8.6
Malmoe	4.1	5.5
<i>Marital status</i>		
Married	27.3	47.8
Unmarried	60.9	40.4
Divorced	11.2	10.6
Share in TEI in 1999		0.5
Share in manufacturing in 1999		18.7
Share in other industries in 1999		80.8
Number of observations	18 296	3 906 861

\* EU12 are the fifteen EU countries with the exception of Sweden, Denmark and Finland (the two latter are included in the group Nordic Countries).

Table 2. Marginal effects for the probability of working in a temporary employment agency in 1999. Probit models

Variables	Model 1	Model 2	Model 3
Woman	0.0015 (0,00007)**	0.0015 (0,00007)**	0.0015 (0,00007)**
<i>Country of origin</i>			
Sweden and both parents born in Sweden	reference	reference	reference
Born in another country than Sweden	0.0011 (0,00010)**	-	-
The Nordic countries	-	- 0.0001 (0,00015)	-
EU	-	0.0005 (0,00030)	-
Other countries in Europe	-	0.0016 (0,00024)**	-
Africa	-	0.0016 (0,00043)**	-
North America	-	0.0019 (0,00070)**	-
South America	-	0.0017 (0,00039)**	-
Asia	-	0.0027 (0,00025)**	-
Oceania	-	-0.0025 (0,00069)	-
Soviet Union	-	0.0054 (0,0018)**	-
Born in Sweden and both parents born in another country	0.0008 (0,00016)**	0.0008 (0,00016)**	0.0008 (0,00016)**
Born in Sweden and one of the parents born in another country	0.0006 (0,00010)**	0.0006 (0,00010)**	0.0006 (0,00010)**
<i>Year of arrival</i>			
1936-1965	-	-	-0.0000 (0,00028)
1966-1972	-	-	0.0008 (0,00025)**
1973-1985	-	-	0.0009 (0,00017)**
1986-1993	-	-	0.0025 (0,00022)**
1994-1999	-	-	0.0008 (0,00025)**
<i>Highest educational level</i>			
Primary school less than 9 years	-0.0002 (0,00014)	-0.0002 (0,00014)	-0.0002 (0,00014)
Primary school 9 (10) years	-0.0003 (0,00008)**	-0.0003 (0,00008)**	-0.0003 (0,00008)**
Upper secondary 2 years or less	-0.0009 (0,00007)**	-0.0009 (0,00007)**	-0.0009 (0,00007)**
Upper secondary 2 years or more	reference	reference	reference
Higher education less than 3 years	-0.0007 (0,00008)**	-0.0007 (0,00008)**	-0.0007 (0,00008)**
Higher education 3 years or more	-0.0015 (0,00007)**	-0.0015 (0,00007)**	-0.0015 (0,00007)**
Post-graduate education	-0.0031 (0,00009)**	-0.0031 (0,00009)**	-0.0032 (0,00009)**
<i>Region</i>			
Stockholm	0.0054 (0,00011)**	0.0054 (0,00011)**	0.0054 (0,00011)**
Gothenburg	0.0027 (0,00015)**	0.0027 (0,00015)**	0.0027 (0,00015)**
Malmoe	0.0003 (0,00013)*	0.0003 (0,00013)*	0.0003 (0,00013)*
<i>Age groups</i>			
16-20 years	0.0047 (0,00032)**	0.0045 (0,00032)**	0.0046 (0,00032)**
21-25 years	0.0053 (0,00026)**	0.0051 (0,00026)**	0.0052 (0,00026)**
26-30 years	0.0023 (0,00017)**	0.0022 (0,00017)**	0.0022 (0,00017)**
31-35 years	0.0013 (0,00014)**	0.0013 (0,00014)**	0.0013 (0,00014)**
36-40 years	0.0005 (0,00013)**	0.0005 (0,00013)**	0.0005 (3.99)**
41-45 years	reference	reference	reference
46-50 years	-0.0001 (0,00012)	-0.0001 (0,00012)	-0.0001 (0,00013)
51-55 years	-0.0006 (0,00011)**	-0.0005 (0,00011)**	-0.0005 (0,00011)**
56-60 years	-0.0010 (0,00011)**	-0.0010 (0,00011)**	-0.0010 (0,00012)**
61-65 years	-0.0018 (0,00013)**	-0.0017 (0,00013)**	-0.0017 (0,00014)**
<i>Marital status</i>			
Married	-0.0018 (0,00010)**	-0.0020 (0,00010)**	-0.0019 (0,00010)**
Married woman	0.0008 (0,00013)**	0.0008 (0,00013)**	0.0008 (0,00013)**
Divorced	-0.0001 (0,00015)	-0.0001 (0,00015)	-0.0001 (0,00015)
Divorced woman	0.0009 (0,00022)**	0.0009 (0,00022)**	0.0009 (0,00022)**
Log likelihood	-109 005,29	-108 935,99	-108 799,25
Number of observations	3 862 798	3 862 798	3 854 343

\* = significant on the 5% level, \*\* = significant on the 1% level

Table 3. Employed in the Temporary Employment Industry in 1999 and all employed immigrants.

	Natives	Immigrants	All immigrants employed in 1999
Women	61.1	53.5	48.6
Average age (years)	34.5	36.4	41.8
<i>Age groups</i>			
16-20	7.9	4.4	1.8
21-25	20.9	16.2	5.9
26-30	16.8	14.9	9.8
31-35	14.4	15.9	13.7
36-40	10.1	12.7	14.9
41-45	8.3	11.5	14.8
46-50	8.0	10.8	14.0
51-55	7.9	7.8	12.7
56-60	4.6	4.3	8.7
61-65	1.1	1.5	3.6
<i>Highest educational level</i>			
Primary school less than 9 years	3.3	6.5	11.0
Primary school 9 (10) years	11.0	10.2	13.4
Upper secondary 2 years or less	26.5	24.6	25.8
Upper secondary 2 years or more	31.7	28.4	18.2
Higher education less than 3 years	13.5	14.7	13.2
Higher education 3 years or more	13.7	14.5	14.2
Post-graduate education	0.0	0.3	1.6
<i>Resides in a large city in 1999</i>			
Stockholm	42.2	48.1	36.3
Gothenburg	11.4	12.6	10.3
Malmoe	4.2	3.2	8.3
<i>Marital status</i>			
Married	25.3	41.0	55.2
Unmarried	63.7	42.3	27.1
Divorced	10.5	15.7	
<i>Employment status in November 1998</i>			
Temporary Employment Agency	39.7	34.3	
Employed in another industry	36.7	30.0	
Student	11.4	15.9	
Unemployed	5.6	8.9	
Other status	6.5	10.8	
<i>Employment status in November 2000</i>			
Temporary Employment Agency	42.6	38.1	
Employed in another industry	48.7	52.4	
Student	5.6	2.7	
Unemployed	1.7	2.6	
Other status	3.7	4.1	

Born in Sweden with parents born in another country	5.2		
Born in Sweden with one parent born in another country	7.8		
<i>Born in another country</i>			
The Nordic countries		23.0	35.7
EU12		7.7	10.6
Other countries in Europe		20.0	21.1
Africa		6.7	4.6
North America		2.6	2.3
South America		8.8	5.5
Asia		29.9	19.3
Oceania		0.1	0.3
Soviet Union		1.2	0.6
<i>Year of arrival</i>			
1945-1965	6.6		14.6
1966-1972	12.6		17.5
1973-1985	30.9		29.3
1986-1993	34.9		25.8
1994-1999	13.8		12.7
Number of observations	15 847	2 449	379 631

Table 4. Descriptive statistics for immigrants from different regions

	NORTH	WEST	EAST	SOUTH
Women	72.6	54.7	56.2	42.2
Average age (years)	42.8	37.9	36.6	32.8
<i>Age groups</i>				
16-20	0.4	0.8	5.0	7.1
21-25	5.5	13.4	14.5	23.1
26-30	7.5	15.7	15.1	18.5
31-35	15.3	20.9	13.5	16.1
36-40	12.2	13.0	15.3	11.7
41-45	13.3	8.3	13.9	10.1
46-50	19.9	9.0	11.4	6.3
51-55	16.3	9.0	5.8	4.1
56-60	6.9	8.3	4.4	2.0
61-65	2.7	1.6	1.1	1.0
<i>Highest educational level</i>				
Primary school less than 9 years	9.4	4.3	4.6	8.5
Primary school 9 (10) years	13.8	13.0	8.3	16.6
Upper secondary 2 years or less	33.4	20.1	19.1	17.8
Upper secondary 2 years or more	16.9	25.2	32.4	31.1
Higher education less than 3 years	14.9	18.5	16.8	15.5
Higher education 3 years or more	11.0	15.8	17.8	9.0
Post-graduate education	0.0	1.2	0.4	0.3
<i>Resides in a large city in 1999</i>				
Stockholm	50.1	45.3	44.6	49.5
Gothenburg	8.5	14.2	12.4	14.3
Malmoe	3.6	5.9	5.4	1.3
<i>Marital status</i>				
Married	37.3	42.9	49.6	38.2
Unmarried	41.7	43.3	33.0	49.6
Divorced	18.7	13.0	17.2	11.9
<i>Employment status in November 1998</i>				
Temporary Employment Agency	47.4	37.0	29.8	28.1
Employed in another industry	28.8	31.5	27.0	29.5
Student	12.3	9.8	7.4	20
Unemployed	11.5	12.2	20.8	10.6
Other status	5.7	9.5	15.0	11.8
<i>Employment status in November 2000</i>				
Temporary Employment Agency	47.6	44.0	34.0	33.9
Employed in another industry	45.5	47.6	57.1	54.9
Student	0.7	2.4	2.2	3.6
Unemployed	2.1	2.8	2.9	3.1
Other status	4.1	3.2	3.8	4.5
<i>Born in another country</i>				
Nordic countries	100.0	*	*	*
EU12	*	74.0	*	*

Other countries in Europe	*	*	94.4	*
Africa	*	*	*	14.8
North America	*	25.2	*	*
South America	*	*	*	19.4
Asia	*	*	*	65.8
Oceania	*	0.8	*	*
Soviet Union	*	*	5.6	*
<i>Year of arrival</i>				
1945-1965	21.6	11.6	2.3	0.2
1966-1972	30.0	13.8	9.8	5.0
1973-1985	25.8	33.1	20.3	37.9
1986-1993	11.5	20.9	38.6	48.1
1994-1999	9.2	19.7	27.4	8.5
Sum	98.1	99.1	98.4	99.7
Number of observations	563	254	518	1 113

Table 5. Flows between different states

<b>ALL</b>	2000					
	TEA	Employed in another industry	Unemployed	Student	Other status	Sum
1998						
TEA	21.8%	14.7%	0.3%	0.7%	1.5%	39.0%
Employed in another industry	12.6%	20.6%	0.7%	1.0%	0.9%	35.8%
Unemployed	2.2%	3.1%	0.4%	0.1%	0.2%	6.0%
Student	3.2%	7.1%	0.2%	1.0%	0.6%	12.1%
Other status	2.3%	3.8%	0.2%	0.3%	0.5%	7.1%
Sum	42.1%	49.3%	1.8%	3.1%	3.7%	100.0%
N: 18 296						
<b>NATIVES</b>	2000					
	TEA	Employed in another industry	Unemployed	Student	Other status	Sum
1998						
TEA	22.3%	14.9%	0.3%	0.8%	1.4%	39.7%
Employed in another industry	13.1%	20.8%	0.7%	1.1%	1.0%	36.7%
Unemployed	2.1%	2.8%	0.4%	0.1%	0.2%	5.6%
Student	3.0%	6.8%	0.2%	0.9%	0.6%	11.5%
Other Status	2.2%	3.4%	0.1%	0.3%	0.5%	6.5%
Sum	42.7%	48.7%	1.7%	3.2%	3.7%	100.0%
N: 15 847						
<b>IMMIGRANTS</b>	2000					
	TEA	Employed in another industry	Unemployed	Student	Other status	Sum
1998						
TEA	18.5%	13.3%	0.4%	0.5%	1.7%	34.4%
Employed in another industry	9.1%	19.1%	0.8%	0.3%	0.7%	30.0%
Unemployed	3.2%	4.8%	0.6%	0.1%	0.2%	8.9%
Student	4.3%	9.1%	0.2%	1.6%	0.7%	15.9%
Other Status	3.1%	6.1%	0.6%	0.2%	0.8%	10.8%
Sum	38.2%	52.4%	2.6%	2.7%	4.1%	100.0%
N: 2 449						



Table 6. Flows between different states for different groups of immigrants

<b>NORTH</b>		2000					
1998	TEA	Employed in another industry	Unemployed	Student	Other status	Sum	
TEA	29.7%	16.9%	0.3%	0.3%	2.3%	49.5%	
Employed in another Industry	12.6%	18.1%	1.2%	0.4%	0.9%	33.2%	
Unemployed	2.5%	3.6%	0.3%	0.0%	0.2%	6.6%	
Student	1.2%	3.4%	0.0%	0.0%	0.4%	5.0%	
Other Status	1.6%	3.6%	0.2%	0.0%	0.3%	5.7%	
Sum	47.6%	45.6%	2.0%	0.7%	4.1%	100.0%	

N: 563

<b>WEST</b>		2000					
1998	TEA	Employed in another industry	Unemployed	Student	Other status	Sum	
TEA	23.6%	11.0%	0.0%	0.4%	2.0%	37.0%	
Employed in another Industry	10.6%	18.9%	1.2%	0.4%	0.4%	31.5%	
Unemployed	2.7%	5.9%	0.8%	0.0%	0.4%	9.8%	
Student	4.3%	6.7%	0.0%	1.2%	0.0%	12.2%	
Other Status	2.8%	5.1%	0.4%	0.8%	0.4%	9.5%	
Sum	44.0%	47.6%	2.4%	2.8%	3.2%	100.0%	

N: 254

<b>EAST</b>		2000					
1998	TEA	Employed in another industry	Unemployed	Student	Other status	Sum	
TEA	11.8%	14.5%	0.4%	0.6%	2.5%	29.8%	
Employed in another Industry	8.3%	17.9%	0.2%	0.2%	0.4%	27.0%	
Unemployed	3.1%	3.9%	0.4%	0.0%	0.0%	7.4%	
Student	6.0%	12.3%	0.6%	1.9%	0.0%	20.8%	
Other Status	4.8%	8.5%	0.6%	0.2%	0.9%	15.0%	
Sum	34.0%	57.1%	2.2%	2.9%	3.8%	100.0%	

N: 518

<b>SOUTH</b>		2000					
1998	TEA	Employed in another industry	Unemployed	Student	Other status	Sum	
TEA	14.7%	11.6%	0.4%	0.4%	0.9%	28.0%	
Employed in another Industry	7.3%	20.1%	0.8%	0.4%	0.9%	29.5%	
Unemployed	3.7%	5.7%	0.8%	0.2%	0.3%	10.7%	
Student	5.1%	11.1%	0.2%	2.3%	1.3%	20.0%	
Other Status	3.0%	6.5%	0.9%	0.3%	1.1%	11.8%	
Sum	33.8%	55.0%	3.1%	3.6%	4.5%	100.0%	

N: 1 113

Table 7. Marginal effects for the probability of individuals who were unemployed in 1999 to work in a TEA in 2000. Standard errors in parentheses

<u>Variables</u>	
Female	-0.0007 (0.0002)***
<i>Place of birth</i>	
Sweden	reference
North	-0.0007 (0.0005)
West	0.0014 (0.0010)
East	-0.0005 (0.0005)
South	-0.0002 (0.0003)
Second generation immigrant	0.0020 (0.0007)***
<i>Age groups</i>	
16-20	0.0057 (0.0020)***
21-25	0.0026 (0.0007)***
26-30	0.0009 (0.0005)*
31-35	0.0007 (0.0005)
36-40	-0.0002 (0.0004)
41-45	reference
46-50	-0.0001 (0.0005)
51-55	-0.0008 (0.0004)*
56-60	-0.0026 (0.0003)***
61-65	-0.0045 (0.0002)***
<i>Highest Educational Level</i>	
Primary school less than 9 years	-0.0022 (0.00047)***
Primary school 9 (10) years	-0.0010 (0.0003)***
Upper secondary 2 years or less	-0.0070 (0.0003)**
Upper secondary 2 years or more	0.0005 (0.0004)
Higher education less than 3 years	reference
Higher education 3 years or more	-0.0005 (0.0005)
Post-graduate education	-0.0002 (0.0019)
<i>Marital status</i>	
Unmarried	reference
Married	-0.0003 (0.0003)
Divorced	-0.0002 (0.0003)
Stockholm	0.0052 (0.0006)***
Gothenburg	0.0024 (0.0005)***
Malmoe	0.0001 (0.0005)
Number of observations	251 752

Table 8. Multinomial logit. Probability for having a certain employment status in 1998 for individuals who were employed in the TEI in 1999. Standard errors in parentheses.

Variables	TEA (comparison group)	Employed in another industry	Student	Unemployed	Other status
Female		0.0593 (0.375)	-0.1128 (0.0568)**	-0.4931 (0.0681)***	-0.4618 (0.0652)***
<i>Place of birth</i>					
Sweden		reference	reference	reference	reference
North		-0.0810 (0.0981)	0.0054 (0.2125)	0.1520 (0.1819)	0.3881 (0.1954)**
West		0.0568 (0.1555)	0.7220 (0.2275)***	0.7171 (0.2326)***	0.8102 (0.2393)***
East		0.0935 (0.1203)	1.5217 (0.1455)***	0.6833 (0.1894)***	1.4680 (0.1523)***
South		0.1384 (0.0837)*	1.0804 (0.1042)***	0.9472 (0.1195)***	0.8968 (0.1168)***
Second generation immigrant		0.0804 (0.0866)	0.0079 (0.1312)	0.1323 (0.1655)	0.4201 (0.1334)***
<i>Age groups</i>					
16-20		1.5379 (0.1228)***	4.4043 (0.1734)***	-41.6738 (2.59e+08)	2.9552 (0.1857)***
21-25		0.7039 (0.0776)***	2.1471 (0.1447)***	0.2702 (0.1470)*	1.6963 (0.1533)***
26-30		0.4045 (0.0763)***	1.3959 (0.1414)***	0.5628 (0.1337)***	0.8743 (0.1540)***
31-35		0.0857 (0.0716)	0.5638 (0.1461)***	0.2458 (0.1320)*	0.3340 (0.1563)**
36-40		0.0349 (0.0763)	0.3865 (0.1566)**	0.4209 (0.1349)***	0.2639 (0.1657)
41-45		reference	reference	reference	reference
46-50		-0.1398* (0.0796)	-0.6754 (0.2035)***	-0.0237 (0.1493)	-0.0487 (0.1791)
51-55		-0.0847 (0.0811)	-1.2308 (0.2652)***	0.0415 (0.1531)	-0.4812 (0.2093)**
56-60		-0.3789 (0.0975)***	-3.7874 (1.0103)***	-0.7174 (0.2182)***	-0.6743 (0.2572)***
61-65		-0.5016 (0.1624)***	-41.4089 (2.77e+08)	-2.9738 (1.0110)***	-1.2113 (0.5291)**
<i>Highest educational level</i>					
Primary school less than 9 years		-0.1159 (0.0974)	0.0841 (0.2895)	-0.3988 (0.1955)*	-0.2957 (0.2322)
Primary school 9 (10) years		-0.2709 (0.0604)***	0.2366 (0.0894)***	0.0871 (0.1060)	0.1800 (0.0921)*
Upper secondary 2 years or less		-0.0564 (0.0516)	0.3106 (0.0924)***	0.1136 (0.0932)	-0.1636 (0.0976)*
Upper secondary 2 years or more		reference	reference	reference	reference
Higher education less than 3 years		0.1793 (0.0581)***	1.5410 (0.0821)***	-0.2247 (0.1199)*	-0.0027 (0.1074)
Higher education 3 years or more		-0.0523 (0.0659)	0.54431 (0.1160)***	-0.5032 (0.1398)***	-0.3275 (0.1384)**
Post-graduate education		-0.7040 (0.8222)	1.2736 (1.1221)	0.6794 (0.8627)	1.3334 (0.7494)*
<i>Marital status</i>					
Unmarried		reference	reference	reference	reference
Married		0.0088 (0.0461)	-0.2170 (0.0869)**	-0.1034 (0.0848)	0.1418 (0.0939)

Divorced	0.1459 (0.0613)**	0.0674 (0.1293)	-0.0043 (0.1141)	0.1563 (0.1345)
Stockholm	-0.0209 (0.0396)	-0.1193 (0.0612)*	-0.4001 (0.7049)***	0.0397 (0.0708)
Gothenburg	0.3573 (0.0591)***	0.2363 (0.0901)***	-0.0860 (0.1127)	0.3279 (0.1031)***
Malmoe	0.0355 (0.0931)	0.1793 (0.1333)	0.0742 (0.1666)	0.2033 (0.1624)
Constant	-0.3628 (0.0783)***	-2.9200 (0.1531)***	-1.6365 (0.1428)***	-2.4430 (0.1594)***
N	18 296			

\*\*\* significant on the 1% level, \*\* significant on the 5% level, \* significant on the 10% level

North: The Nordic countries  
Soviet Union

East: Europe (except EU and the Nordic countries) and

West: European Union, North America and Oceania

South: Africa, Asia and South America

Table 9. Multinomial logit. Probabilities of having a certain employment status in 2000 for individuals who were employed in the TEI in 1999. Standard errors in parentheses

Variables	TEA	Another industry (comparison group)	Student	Unemployed	Other status
Woman	0.0222 (0.0348)		0.0945 (0.0917)	-0.3868 (0.1178)***	-0.0736 (0.0843)
<i>Place of birth</i>					
Sweden	reference		reference	reference	reference
North	-0.0651 (0.0934)		-0.6331 (0.5119)	0.2558 (0.3105)	0.1155 (0.2274)
West	-0.0047 (0.1384)		0.2248 (0.400)	0.2699 (0.4336)	-0.0916 (0.3722)
East	-0.3915 (0.1019)***		-0.0355 (0.2769)	0.0879 (0.3227)	-0.1012 (0.2409)
South	-0.2194 (0.0724)***		0.0108 (0.1755)	0.4226 (0.1968)**	0.0683 (0.1600)
Second generation immigrant	-0.0635 (0.0807)		0.0741 (0.1874)	-0.1775 (0.2927)	0.3215 (0.1665)*
<i>Age groups</i>					
16-20	-0.7051 (0.0966)***		1.6655 (0.3001)***	-0.5807 (0.3583)	0.7146 (0.2178)***
21-25	-0.6818 (0.0736)***		1.3925 (0.2785)***	-0.2800 (0.2671)	-0.0267 (0.1979)
26-30	-0.4327 (0.0700)***		0.8012 (0.2787)***	0.3812 (0.2425)	-0.1020 (0.1973)
31-35	-0.1914 (0.0683)***		0.1478 (0.2990)	-0.1108 (0.2602)	0.0646 (0.1926)
36-40	-0.0610 (0.0725)		0.1505 (0.3196)	0.0861 (0.2678)	0.2222 (0.1996)
41-45	reference		reference	reference	reference
46-50	0.1564 (0.0766)**		-1.324 (0.5593)**	-0.0819 (0.3064)	0.0212 (0.2222)
51-55	0.2127 (0.0793)***		-0.5720 (0.4560)	0.3013 (0.2930)	0.2454 (0.2190)
56-60	0.2914 (0.0976)***		-29.6377 (1102491)	1.2989 (0.2946)***	1.0725 (0.2194)***
61-65	0.4532 (0.1715)***		-29.5172 (2235510)	1.7204 (0.4288)***	1.4427 (0.3075)***
<i>Highest educational level</i>					
Primary school less than 9 years	0.1022 (0.0974)		-1.3378 (1.0182)	0.0921 (0.3054)	0.6409 (0.2009)***
Primary school 9 (10) years	0.0617 (0.0550)		-0.2917 (0.1462)**	0.6960 (0.1737)***	0.6142 (0.1159)***
Upper secondary 2 years or less	-0.0816 (0.0488)*		-0.0866 (0.1459)	0.4763 (0.1648)***	0.1191 (0.1260)
Upper secondary 2 years or more	reference		reference	reference	reference
Higher education less than 3 years	-0.05717 (0.0535)		0.2025 (0.1267)	-0.2512 (0.2191)	-0.2590 (0.1530)*
Higher education 3 years or more	-0.0025 (0.0626)		-0.9815 (0.2876)***	-0.6245 (0.3133)**	-0.2302 (0.1879)
Post-graduate education	-0.4111 (0.5608)		-29.7304 (7785723)	-30.7243 (6691697)	-31.2355 (7162836)
<i>Marital status</i>					
Unmarried	reference		reference	reference	reference
Married	-0.0165 (0.0439)		-0.1470 (0.1682)	-0.0159 (0.1530)	-0.0380 (0.1166)
Divorced	-0.1670 (0.0595)***		0.2780 (0.2314)	-0.0924 (0.2021)	0.1816 (0.1415)
Stockholm	-0.5584 (0.0369)***		-0.1813 (0.0987)*	-0.9920 (0.1361)***	-0.3133 (0.0904)***
Gothenburg	0.0667 (0.0540)		0.1926 (0.1388)	-0.5223 (0.1995)***	0.0164 (0.1345)
Malmoe	0.0704 (0.0843)		-0.0239 (0.2314)	0.1534 (0.2587)	0.0342 (0.2162)
<i>Employment status in 1998</i>					

TEA	reference	reference	reference	reference
Employed in another Industry	-0.8081 (0.0377)***	-0.3633 (0.1179)	0.7687 (0.1664)***	-0.7565 (0.1033)***
Unemployed	-0.7068 (0.0715)***	-0.6532 (0.2710)**	1.1811 (0.1905)***	-0.3301 (0.1080)*
Student	-0.8701 (0.0614)***	0.2331 (0.1302)*	0.6238 (0.2435)***	-0.2026 (0.1377)
Other status	-0.6394 (0.0701)***	-0.1998 (0.1730)	1.2684 (0.2255)***	0.3482 (0.1345)***
Constant	0.8319 (0.0764)***	-3.3704 (0.2947)***	-3.7431 (0.2920)***	-2.4712 (0.2036)***
Number of observations		18 296		

Table 10. Descriptive statistics for those who worked in the TEI in all three years

	All	Born in Sweden	Born outside of Sweden
Women	60.6	60.7	59.2
Average age (years)	40.7	40.5	42.3
<u>Age groups</u>			
16-20	1.0	1.1	0.4
21-25	8.9	9.3	6.0
26-30	12.0	12.1	10.8
31-35	15.6	16.1	11.2
36-40	12.6	12.3	14.6
41-45	12.0	11.4	16.3
46-50	13.6	13.5	14.6
51-55	12.9	12.9	12.8
56-60	8.8	8.5	10.4
61-65	2.6	2.5	2.9
<u>Highest educational level</u>			
Primary school less than 9 years	8.2	7.7	11.9
Primary school 9 (10) years	15.6	15.8	13.9
Upper secondary 2 years or less	31.0	31.7	24.9
Upper secondary 2 years or more	20.3	19.8	23.6
Higher education less than 3 years	12.9	13.1	11.5
Higher education 3 years or more	11.6	11.5	13.0
Post-graduate education	0.1	0.1	0.2
<u>Resides in a large city in 1999</u>			
Stockholm	33.7	33.7	33.7
Gothenburg	10.9	10.5	15.2
Malmoe	4.4	4.5	4.1
<u>Marital status</u>			
Married	35.5	33.7	49.9
Unmarried	49.4	52.0	28.7
Divorced	13.8	13.1	20.0
<u>Country of origin</u>			
Born in Sweden with both parents born in another country	3.4	3.8	
Born in Sweden with one	12.1	13.6	

parent born in another country			
<i>Born in another country</i>			
The Nordic countries	4.2		36.9
EU12	1.2		10.6
Other countries in Europe	1.5		12.8
Africa	0.3		2.6
North America	0.8		6.8
South America	0.6		4.8
Asia	2.7		23.8
Oceania	0.0		0.0
Soviet Union	0.0		0.7
<i>Year of arrival</i>			
1945-1965			10.8
1966-1972			19.9
1973-1985			33.6
1986-1993			29.8
1994-1999			4.6
Number of observations	3 984	3 531	453



Table 11. Descriptive statistics for those who were unemployed in 1998, worked in a TEA in 1999 and were employed in another industry in 2000

	All	Born in Sweden	Born in another country
Women	47.2	49.7	38.1
Average age (years)	35.1	34.4	37.5
<i>Age groups</i>			
16-20	0.0	0.0	0.0
21-25	16.9	18.9	9.3
26-30	22.0	23.8	15.2
31-35	20.2	20.0	21.2
36-40	14.2	12.4	21.2
41-45	8.9	8.8	9.3
46-50	7.6	6.7	11.0
51-55	7.3	6.3	11.0
56-60	2.7	2.9	1.7
61-65	0.2	0.2	0.0
<i>Highest educational level</i>			
Primary school less than 9 years	2.3	1.3	5.9
Primary school 9 (10) years	13.1	13.9	10.2
Upper secondary 2 years or less	34.3	35.7	28.8
Upper secondary 2 years or more	27.8	29.0	22.9
Higher education less than 3 years	13.8	12.8	17.8
Higher education 3 years or more	8.3	7.2	12.7
Post-graduate education	0.3	0.0	1.7
<i>Resides in a large city in 1999</i>			
Stockholm	37.6	39.5	48.3
Gothenburg	9.1	11.6	5.1
Malmö	3.9	4.2	4.2
<i>Marital status</i>			
Married	28.2	22.9	48.3
Unmarried	59.7	66.5	33.9
Divorced	11.5	9.9	17.8
<i>Country of origin</i>			
Born in Sweden with both parents born in another country	4.8	6.1	

Born in Sweden with one parent born in another country	9.8	12.4	
<i>Born in another country</i>			
The Nordic countries	3.5		16.9
EU 12	1.9		9.3
Other countries in Europe	3.2		15.2
Africa	0.7		3.4
North America	1.8		8.5
South America	2.3		11.0
Asia	7.1		33.9
Oceania	0.0		0.0
Soviet Union	0.4		1.7
<i>Year of arrival*</i>			
1945-65			5.1
1966-1972			6.8
1973-1985			22.0
1986-1993			53.4
1994-1999			11.9
<hr/>			
Number of observations	563	445	118
<hr/>			

Table 12. Multinomial logit for the probability of following different paths for individuals who were employed in the TEI in 1999. Standard errors in parentheses

Variables	Employed in a TEA in 1998 and 2000	Unemployed in 1998 and employed in another industry in 2000	All other paths (comparison group)
Woman	-0.0385 (0.0403)	-0.5594 (0.0902)***	
<i>Place of birth</i>			
Sweden	reference	reference	
North	-0.0006 (0.0986)	0.2925 (0.2380)	
West	-0.0873 (0.1566)	0.6546 (0.2783)**	
East	-0.9151 (0.1420)***	0.1069 (0.2390)	
South	-0.4250 (0.0923)***	0.5807 (0.1464)***	
Second generation immigrant	-0.1818 (0.1014)*	0.1694 (0.2051)	
<i>Age group</i>			
16-20	-2.7572 (0.1719)***	-29.5892 (313177.8)	
21-25	-1.4281 (0.0869)***	-0.5274 (0.1979)***	
26-30	-0.8019 (0.0784)***	0.1638 (0.1804)	
31-35	-0.3290 (0.0735)***	0.2787 (0.1769)	
36-40	-0.1540 (0.0770)*	0.2840 (0.1863)	
41-45	reference	reference	
46-50	0.2428 (0.0783)***	0.0061 (0.2143)	
51-55	0.2084 (0.0807)**	0.0564 (0.2195)	
56-60	0.4505 (0.0944)***	-0.2929 (0.3060)	
61-65	0.6252 (0.1525)***	-1.6542 (1.0186)	
<i>Highest educational level</i>			
Primary school less than 9 years	0.2580 (0.0953)***	-0.6541 (0.3095)**	
Primary school 9 (10) years	0.1111 (0.0652)*	-0.2400 (0.1496)	
Upper secondary 2 years or less	0.0133 (0.5660)	0.0332 (0.1200)	
Upper secondary 2 years or more	reference	reference	
Higher education less than 3 years	-0.2696 (0.0657)**	-0.4070 (0.1454)***	
Higher education 3 years or more	0.0851 (0.0715)	-0.3989 (0.1771)**	
Post-graduate education	0.5526 (0.5975)	1.3994 (0.8319)*	
<i>Marital status</i>			
Unmarried	reference	reference	
Married	-0.0435 (0.4788)	-0.0112 (0.1131)	
Divorced	-0.2393 (0.0636)***	0.0208 (0.1541)	
Stockholm	-0.4537 (0.0434)***	-0.3938 (0.0972)***	
Gothenburg	-0.2301 (0.0631)***	-0.4769 (0.1569)***	
Malmoe	-0.0179 (0.0958)	-0.1488 (0.2297)	
Constant	-0.4660 (0.0815)***	-2.5031 (0.1934)***	
	Number of observations	18 296	

Table 13. Annual earnings for those working in a TEA in 1999 with different mobility pattern; all, natives, immigrants.

Group	Number of observations	Year	Mean	St.dev.	Min.	Max.	Median
All	18 173	1998	123 260	105 716	0	1 095 072	108 723
		1999	156 164	94 773	180	980 191	147 936
		2000	189 120	108 800	0	1 173 500	185 618
Natives	15 741	1998	127 467	107 150	0	1 095 072	115 760
		1999	158 189	96 608	180	980 191	149 265
		2000	190 540	110 416	0	1 173 500	185 706
Immigrants	2 432	1998	96 027	91 366	0	552 144	75 285
		1999	143 057	80 704	187	712 131	136 789
		2000	179 929	97 221	0	805 666	184 532
Employed in a TEA in 1998, 1999 and 2000. All	3 943	1998	175 153	102 648	3 386	945 000	162 800
		1999	193 913	101 186	198	952 000	176 726
		2000	203 808	117 017	174	995 763	183 215
Unemployed in 1998 and employed in another industry in 2000. All	561	1998	23 521	32 545	0	192 501	11 317
		1999	107 643	51 302	4 942	309 697	104 068
		2000	201 696	71 051	5 458	423 042	202 867
Employed in a TEA in 1998, 1999 and 2000. Natives	3 493	1998	177 681	103 872	3 386	945 000	163 827
		1999	195 557	103 086	198	952 000	176 569
		2000	205 268	118 949	174	995 763	182 909
Unemployed in 1998 and employed in another industry in 2000. Natives	444	1998	24 708	33 961	0	192 501	12 054
		1999	106 443	49 364	15 431	309 697	103 715
		2000	198 336	69 744	5 458	423 042	199 169
Employed in a TEA in 1998, 1999 and 2000. Immigrants	450	1998	155 524	90 317	12 257	552 144	151 774
		1999	181 152	84 016	6 268	597 962	178 551
		2000	192 474	100 160	4 565	733 368	186 236
Unemployed in 1998 and employed in another industry in 2000. Immigrants	117	1998	19 015	26 131	0	128 107	8 233
		1999	112 195	58 084	4 942	304 530	108 662
		2000	214 447	74 748	12 793	368 560	219 827

Table 14. Gross yearly labour income (earnings and employment-related transfer payments) for those working in a TEA in 1999 for groups with different mobility pattern; all, natives, immigrants.

Group	Number of observations	Year	Mean	St.dev	Min	Max	Median
All	18 173	1998	135 954	102 471	0	1 095 072	131 438
		1999	168 477	90 599	800	980 191	161 585
		2000	201 915	101 767	0	1 173 500	193 745
Born in Sweden	15 741	1998	139 846	103 832	0	1 095 072	136 607
		1999	170 107	92 554	800	980 191	162 259
		2000	202 944	103 687	0	1 173 500	193 681
Immigrants	2 432	1998	110 768	89 184	0	552 144	96 831
		1999	157 928	75 920	9 463	712 131	157 024
		2000	195 259	88 061	0	805 666	194 294
Employed in a TEA in 1998, 1999 and 2000. All	3 943	1998	184 956	98 223	10 191	945 000	167 361
		1999	203 940	95 244	800	952 000	181 095
		2000	217 478	108 733	6 004	995 763	190 687
Unemployed in 1998 and employed in another industry in 2000. All	561	1998	75 788	44 282	1 200	219 801	71 565
		1999	139 287	45 688	39 486	309 930	140 184
		2000	216 702	60 295	15 334	423 042	211 328
Employed in a TEA in 1998, 1999 and 2000. Natives	3 493	1998	187 055	99 564	10 191	945 000	167 861
		1999	205 317	97 313	800	952 000	181 039
		2000	218 856	110 736	6 004	995 763	190 687
Unemployed in 1998 and employed in another industry in 2000. Natives	444	1998	77 086	45 310	1 200	219 801	73 293
		1999	138 399	43 131	39 486	309 697	140 187
		2000	213 401	59 235	56 116	423 042	208 414
Employed in a TEA in 1998, 1999 and 2000. Immigrants	450	1998	168 340	85 421	12 657	552 144	164 110
		1999	193 249	76 578	23 400	597 962	181 511
		2000	206 784	91 113	30 000	733 368	190 911
Unemployed in 1998 and employed in another industry in 2000. Immigrants	117	1998	70 864	39 941	4 300	177 300	67 142
		1999	142 659	54 390	47 040	309 930	139 734
		2000	229 229	62 849	15 334	376 793	225 882