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A cul-de-sac or a short cut to the main road of the labour market?

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Being employed by a co-national: A cul-de-sac or a short cut to the main road of the labour market?*

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Abstract

Self-employment is very common among some immigrant groups in Sweden and many of them hire co-nationals in their firms. One reason might be that they want to give newly arrived co-nationals the possibility to earn an income. But what are the consequences for the employees of being employed by a co-national? This paper analyzes the impact on labour income and future employment prospects of being employed by self-employed co-nationals shortly after arrival to Sweden. We find that immigrants in this group have substantially lower incomes than newly arrived immigrants with other forms of employment. We also find that they are less likely to work as employees in the private sector (other than being employed by a self-employed) in the future and are much more likely to become self-employed.

Keywords: ethnic economies, self-employment, income

JEL-codes: J15, J23, J31, L26

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1. Introduction

Self-employment is common among immigrants in Sweden, in particular among those from Middle Eastern countries, and it is common among self-employed immigrants to hire co-nationals (Andersson Joonas and Wadensjö, 2009). Explanations are that self-employed immigrants recruit co-workers from their networks, that they employ co-nationals who have recently arrived to Sweden in order to help them get started in the Swedish labour market, and that they employ co-nationals due to that they have specific skills needed in ethnic businesses. These small firms are often highly segregated with all or a majority of the workers originating from the same country or region.

The number of wage-earners who are employed by co-nationals is highly correlated with the number of self-employed individuals in the group; hence, we can expect that the group will increase if self-employment increases. The government wants to encourage immigrants to become self-employed as a way to decrease unemployment in the group. It is therefore important to learn more about how those who are employees in this type of firms fare on the labour market.

In this paper we analyze the consequences for wage-earning immigrants of having been employed in an immigrant-owned business shortly after their arrival to Sweden. What does it mean for initial and future income? Will it work as a short cut to a better position in the labour market or will it lock immigrants into low income jobs? These questions are analyzed using Swedish panel data for the period 2001-2005. The population is restricted to male immigrants who arrived in Sweden after 1993.

The concept 'ethnic economies' is closely related to the topic of this paper (see Light and Gold, 2000 and Zhou, 2009). Ethnic economics is defined by co-ethnicity of employers and employees. The workplaces we are interested in fit into this description well: we look at workplaces that are run by self-employed immigrants and who hire employees with the same

national background as their own. Advantages of seeking employment in an ethnic economy is that one has easier access to information on job-openings and can apply for the job using one's native language. Hence, we expect that some groups will have a higher probability of getting a job inside the ethnic economy than outside it. The disadvantages in working in the ethnic sector could be poor working conditions and low wages. It may also hamper future employment prospects through low incentives to learn the host-country language.

It has also been argued that immigrant employment in firms owned by co-nationals can work as a stepladder to own business ownership (Raijman and Tienda, 2000). Even if wages are low, this can be a way of accruing skills needed for running a firm of their own.

Segregation between natives and immigrants at the workplace also relates to the topic of this paper. For Sweden, Åslund and Nordström Skans (2009) measure segregation as overexposure to a particular group after having accounted for the distribution of human capital, industry and geography. They find considerable segregation between natives and immigrants and that the results vary between different ethnic groups. They also analyze the consequences of working in a segregated workplace on wages and find a negative association between segregation at the workplace and wages. They do not claim to have found a causal effect of immigrant overexposure on wages since sorting into firms is not random in terms of immigrant representation. It is possible that, for example, low productive workers are sorted into firms with higher immigrant representation.

Regarding the consequences of workplace segregation, Bayard et al. (1999) and Catanzarite and Aguilera (2002) get similar results for the U.S. and Hou (2009) finds that in Canada immigrant men who work mostly with co-ethnics have lower incomes than workers with few or no co-ethnic co-workers.

A third strand of the literature related to the topic of this paper concerns the consequences of getting a job through different search channels. To be employed by a self-

employed co-national often means that one has found the job via informal channels such as family, relatives or friends. If one gets a job in the public or private sector (other than being employed by a self-employed), it is more likely that the job has been found via formal methods such as applying to job openings posted at the public employment office. Earlier research shows that non-western immigrants who received their job through informal contacts receive about 3 per cent lower wages than comparable immigrants who received their job via formal methods (Bethoui, 2008). Natives who found their job via informal methods on the other hand receive higher wages than comparable natives who found their job by other methods. This is interpreted as that the networks of immigrants are of lower “quality” than those of natives. Immigrants who recommend have weaker positions in the labour market on average than native recommenders. This means that immigrants and natives recommend people to different types of jobs.

A fourth strand of the literature underlines the importance of the ethnic economy. Those working as employees in that sector, employed by a co-ethnic, are getting trained both for other jobs and especially for starting a business of their own. See Bailey and Waldinger (1991), Zhou (2004) and Fairchild (forthcoming).

In sum, previous research shows that the consequences for immigrants of working in a firm with a high share of co-ethnics or having received the job via informal search channels are negative regarding the wages they receive. We therefore expect to find a negative association between income and being employed by a self-employed co-national. The consequences for future employment prospects are however more uncertain. They may have more difficulties in getting a job other than those in firms owned by co-ethnics but may have learnt how to start a business of their own.

The rest of the paper is organized as follows. In section two, the data and variables are described, in section three we present the results from the income regressions, in section four

the results for future employment prospects are presented, and in section five we summarize our results and some conclusions are drawn.

2. Data and variables

We use annual register data which is administered by Statistics Sweden for the period 1998–2005. The main register is the employment register. The data is available from 1998 and onwards but information on occupation is only available from 2001 and onwards. Therefore, we only make use of data for the period 2001–2005. We use an unbalanced panel that includes all male immigrants who had immigrated to Sweden between 1993 and 2005. The individuals are at least 16 years of age in 1998 and not older than 71 years in 2005. The sample includes 227,279 individuals who are observed at least one year and at most eight years. The countries or regions of origin mostly represented in this period are Bosnia (13.9 per cent), Iraq (13.1 per cent), and other countries of former Yugoslavia (Yugoslavia, Croatia, and Macedonia) (11.5 per cent). Immigrants from Bosnia mainly arrived in 1993 and 1994 (75.6 per cent). Immigrants from Yugoslavia, Croatia, and Macedonia arrived in the same period but also in 1997. Immigrants from Iraq arrived later, mainly from 1997 to 2002.

We define six employment status groups: employed by a self-employed co-national, employed by another self-employed, employed in the public sector, employed in the private sector, not employed at all, and self-employed¹. In Table A1 the share in each group is presented separately for the years 2001–2005. In all years, the largest group is those who were not employed, 55.2 per cent in 2001 and 56.1 per cent in 2005. The share employed by a self-employed co-national is small. It ranges from 0.6 per cent in 2001 to 1.4 per cent in 2005. Since the panel is unbalanced, the difference between the years can both be explained by the time spent in Sweden and by that the sorting into different groups among the newly arrived

¹ Individuals are defined as self-employed if their largest income in November is from self-employment. The self-employment income is multiplied by the factor 1.6 when the comparison is made, in order to account for that self-employed on average report lower incomes than wage-earners in the same line of work.

immigrants varies. If we only look at those who are employed, the share employed by self-employed co-nationals varies between 1.4 (2001) and 3.1 (2005) per cent.

There is substantial geographical variation in the share among all employed who are employed by self-employed co-nationals. In Botkyrka, an immigrant dense suburb south of Stockholm, 6.1 per cent were employed by co-nationals in 2005. This is the municipality with the highest share, with the exception of some small municipalities. The average for the entire Stockholm area is 3.2 per cent.

There is also a large variation between immigrant groups. Among employed immigrants who were born in Turkey almost 9 per cent were employed by self-employed co-nationals in 2001, while among immigrants from Bosnia, the largest immigrant group in the sample, only 0.5 per cent belong to this group. We also find that a relatively high share of immigrants from the Middle East is employed by self-employed co-nationals. See Table A3.

The dependent variable in the income regressions is annual income from labour. This measure includes both earnings and income from self-employment during the year. In Sweden, reported incomes from self-employment are generally lower than earnings so we expect that the self-employed have lower incomes than wage-earners (Andersson and Wadensjö, 2004). As we use annual income, income differentials can be attributed to both differences in remuneration per hour and differences in hours worked during the year.

In all regressions we control for age, education (seven categories), place of residence (county), immigration year, and birth region (34 categories). For those employed we also control for characteristics of the firm: number of employees and industry (11 categories). In addition, we also control for occupation (10 categories). The variables industry, occupation and place of residence are possible to divide into more categories. The regressions have been re-estimated using more detailed classifications, but the main results do not change. We therefore present the results from the regressions containing fewer categories.

Some of those employed by self-employed immigrants are relatives or even close family. We cannot observe such relations in the data, however. Close family members might receive a low income if they are rewarded for their work in other ways, for example through free meals if they work at a restaurant. It is also possible that some employees in these small firms, including employees in small firms owned by non-co-nationals, receive part of their wage as non-taxed income. These factors likely lead to an underestimation of the incomes received by those employed by co-nationals and the estimate of the income differential will be biased upwards.

In table A4 the sample means for 2001 are presented by employment type. Those who are employed by self-employed co-nationals are younger, have lower education, fewer years in Sweden, live in a metropolitan area to a greater extent, and come from a Middle Eastern country, Iraq or Turkey to a greater extent than other employees. Immigrants in the public sector have the highest educational level and employees in the private sector the highest annual incomes.

3. Incomes for those employed by co-nationals

The sample only includes male immigrants who immigrated to Sweden after 1993. This means that those employed by self-employed co-nationals can be employed by the self-employed in the sample, but they can also be employed by self-employed co-nationals not included in the sample, e.g. males who immigrated before 1993 or female immigrants. In the income regressions we include the whole sample, not only those employed (wage-earners and self-employed). This approach has some advantages. In the fixed effects regressions the effect of “employment type” on annual income is not only identified through those who change between different employment types but also by those who become employed or unemployed.

In the sample there are many with zero annual income. In the regressions, annual income is expressed either in euros or as log of annual income. When log annual income is the dependent variable, those with zero income are excluded.

The estimates of “employment type” in the pooled cross sectional regressions are likely to be biased since the selection into different forms of employment is not random. There is probably a correlation between some unobservable characteristics and the sorting into being or not being employed and into employment type if employed. The estimates can therefore not be interpreted as measures of the causal effect on annual income. Fixed effects estimations will to some extent take care of this problem. In these estimations the effect is identified through individuals who switch between different types of employment or between not being and being employed.

The pooled cross section regressions show that all types of wage-earners have higher annual incomes than those who are employed by self-employed co-nationals and as we expected, the self-employed have lower annual incomes than all groups of wage-earners. In terms of euros, those employed by co-nationals receive on average 3,355 less than those employed by other self-employed and 6,680 less than wage-earners in the private sector.

The estimates from the fixed-effects regressions are smaller in magnitude than the corresponding estimates in the pooled cross section regressions. This means that a part of the earlier estimated differences is explained by differences in unobservable characteristics between the groups.

The regressions have also been estimated for only those with positive income. The sample size is substantially reduced. In the fixed-effects regression, the effect is now identified by those who change employment status, while those who change between not having received any income and some form of employment, are excluded. The estimates in the fixed-effects regressions are all smaller than the OLS-estimates. The income advantage for

those employed by other self-employed is reduced from 19 to 14 per cent and for those in the private sector from 29 per cent to 18 per cent. The income disadvantage for the self-employed is reduced from 26 per cent to 17 per cent.

That the estimates in the fixed-effects models are lower than the corresponding estimate in the OLS regression leads us to believe that there is a negative correlation between the unobserved heterogeneity and income. Sources of this negative correlation might for example be that Swedish language proficiency is lower among those employed by co-nationals. The assumption of the fixed-effects model is that the unobserved heterogeneity is constant for each individual over time. This might not be true for proficiency in Swedish since immigrants gradually learn Swedish and some learn it faster than others. If those who are employed by co-nationals on average improve their language skills slower than other wage-earners then the estimates of the effect of employment type on income in the fixed-effects models will be biased upwards. Keeping this limitation of the fixed-effects models in mind, we still conclude that being employed by a co-national shortly after arrival to Sweden will lead to lower incomes than other forms of employment. This holds true even when we control for job characteristics; the size of the workplace, industry and occupation.

These results support the previous finding that working in an ethnic economy in general leads to worse economic outcomes than working in other parts of the labour market (Åslund and Nordström Skans, 2009, Bayard et al., 1999 and Hung, 2009).

Non-western immigrants are highly over-represented in the restaurant industry, about 36 per cent of those employed by co-nationals work in this sector. It is possible that employment conditions in these industries determine the results. To investigate this, the pooled cross-sectional models presented in the first columns of Table 1 and 2 are re-estimated excluding restaurants. A relatively large income disadvantage of being employed by a co-national

compared to other forms of employment is still found. The results are presented in Tables A5 and A6.

[Table 1 about here]

[Table 2 about here]

4. Future Employment Prospects

This section explores the link between employment types in 2001 and 2005.² We use a balanced panel of men who have immigrated to Sweden between 1993 and 2001, i.e. we observe them every year between 2001 and 2005.

In Table 3 we present employment type in 2005 separately by employment type in 2001, i.e. the table shows what people of different employment types in 2001, do in 2005. The first thing to note is the high degree of state dependence as seen from the high shares in the diagonal cells. For example, 63 per cent of those who were employed in the private sector in 2001 also hold a job in this sector in 2005. Hence, employment type in 2001 is likely to be a good predictor of the employment type in 2005. A discussion of likely causes for state dependency is found in Hansen and Lofstrom (2009). In spite of this state dependency, there is still a substantial share that has changed employment type. Among those who were employed by co-nationals in 2001, 22 per cent still belonged to this group in 2005, 16 per cent worked in the private sector and 20 per cent were self-employed. Transitions into self-employment are higher for this group than for any other group, which is an interesting finding. Those not employed in 2001 are to a very high extent also not employed in 2005, but 18 per cent of them hold a job in the private sector.

Another way of looking at the correlation between employment type in 2001 and 2005 is to present each employment type in 2001 by employment type in 2005. This is done in Table 4. We see, for example, that of those who in 2005 are employed by co-nationals, almost 50

² Since we want to control for occupation in the regressions we use 2001 as the starting year.

per cent were out of work in 2001. This shows that the self-employed mainly recruit co-workers from the “non-employed”. It supports our hypothesis that self-employed immigrants recruit newly arrived co-nationals to help them to get a job and earn an income. It might also be the case that these firms offer very low wages and newly arrived immigrants are the only ones that are willing to accept these types of jobs at the offered wage.

The transition rate out of employment in a firm owned by a co-national is fairly high. This finding shows that such a job can serve as a stepping-stone. That does, however, not mean that this alternative is better than other available options for newly arrived immigrant.

[Table 3 about here]

Up to now we have not considered that there might be differences in the distribution of individual characteristics or across industry between people with different employment types. To ascertain if the pattern is robust we estimate a number of regressions. First we estimate the probability of being employed in 2005. This is done primarily to find out if those who were employed by co-nationals in 2001 are more or less likely to hold a job in 2005 than those who were not employed at all in 2001. The results are presented in Table 5, column one. We find that the probability is 18 percentage points lower than the non-employed are employed in 2005 compared to our reference category. Even when we exclude self-employment from the definition of being employed (column two) we find that the probability to be employed is 6 percentage points lower for the non-employed.

The most relevant comparison is between our reference group and those who are employed by self-employed who are not co-nationals but are employed in firms in the same industry and in firms of the same size. The probability of being employed is 4 percentage points higher for those employed by other self-employed than co-nationals. This difference increases to 14 percentage points when only those becoming wage-earners are considered. On the other hand, when the outcome is self-employment in 2005 (column 3) we find that our

reference group has a 10 percentage point higher probability of being self-employed than wage-earners who are employed by self-employed other than co-nationals.

Lastly, we look at the probability of being employed in the private sector in 2005 (column 4). The private sector is used as a “successful” outcome in 2005 since wage-earners in this sector have the highest annual incomes and this is the largest employment group on the Swedish labour markets (see Table A2). Here we find a small difference of 3.2 percentage points between our reference group and those who are employed by other self-employed.

The conclusion drawn from this section is that transitions into self-employment are more frequent among those who have been employed by co-nationals than in any other group, even after controlling for industry and occupation in 2001. This is in accordance with studies on the U.S., see Bailey and Waldinger (1991) and Zhou (2004) for references to different studies.

In a study comparing the pathways to entrepreneurship for different ethnic groups, Rajzman and Tienda (2000) find that all non-Hispanic whites and Koreans in the sample reported that their previous employer had the same ethnicity. The co-ethnic share was also high for the Hispanic self-employed in the study.

Judging from estimates for different industries (results not presented here), transitions into self-employment occurs most frequently in the restaurant and transportation sectors. The high self-employment entry rate in the restaurant sector is in line with the findings of Wahlbeck (2007). Based on an interview study among Turkish immigrants in Finland, he finds that many work as employees in the fast food industry with the intention to start firms of their own later.

One might wonder if those who are employed by co-nationals in 2001 and become self-employed in 2005, became self-employed in the same industry as the one they were wage-earners in. The results presented in Table 7 show that they stay in the same line of business more often than other wage-earners.

The results on the transitions probabilities, and in particular transitions into self-employment, cannot be given a causal interpretation. It is possible that many of those who are employed by co-nationals in 2001 had entrepreneurial aspirations already from the start and they see this employment spell as a way of learning the trade.

[Table 4 about here]

5. Summary and Conclusion

Self-employment is very high among some immigrant groups in Sweden and it is quite common among the self-employed immigrants to hire co-nationals. One reason might be that they want to offer newly arrived co-nationals the possibility to earn an income. In this paper we study the consequences for the employees of being employed by self-employed co-nationals by looking at their annual incomes and future employment prospects. Is it a cul-de-sac or a short cut to the regular labour market?

We find that immigrants who are employed by self-employed co-nationals have lower incomes than newly arrived immigrants who work in the private sector but also lower than those who work in the public sector or are employed by self-employed who are not co-nationals. This result is supported in the fixed effects regression analysis. This suggests that the result is not only a question of selection into this form of employment.

We also find that having been employed by a self-employed co-national shortly after arrival to Sweden increases the probability of being self-employed some years later compared to other forms of employment. Being employed by a co-national may be a training ground for self-employment. We cannot, however, rule out that those who are employed by co-nationals are more likely to have had entrepreneurial aspirations already when choosing this employment form. Hence, the high transition into self-

employment among this group may not be a result of that they have worked in firms owned by co-nationals but rather by selection.

The size of the group of employees employed by co-nationals is highly correlated with the number of self-employed individuals in the group. The group grows if self-employment becomes more common. The government wants to encourage immigrants to become self-employed in order to increase employment rates in this group. This is one reason for why it is important to learn more about how the employees of self-employed co-national fare on the labour market.

In the data, there are some indications of that it is more common to be employed by a self-employed co-national in immigrant dense areas. This is to be expected since we can assume that many of these employees get their job via informal search channels. There is a large academic literature and an ongoing debate in Sweden about residential segregation and the consequences thereof. The results presented in this paper are also relevant for the discussion of the consequences of segregation. Newly arrived immigrants who live in areas with a low share of co-nationals may have a better chance of getting employed by a self-employed person who is not a co-national, or in a larger private firm, and we have found evidence of that these groups of employees fare better on the labour market than comparable immigrants who are employed by co-nationals. They may on the other hand less often be employed by a self-employed co-national and as a result of that less often become self-employed later on.

Previous research has found that it is not unusual for immigrants to use an employment spell in a firm owned by a co-national, even at low wages, as a stepladder to own business ownership. In this paper, we find that transitions to self-employment is higher among this group of employees than for any other group on the labour market

and also higher compared to the non-employed. This is a novel finding in the Swedish context.

Tables

Table 1 Income from paid employment and self-employment, 2001-2005

	Annual income, euro	
	OLS	FE
Employed by self-employed co-national 2001		
Employed by other self-employed 2001	3,355.40 (90.37)**	1,761.13 (122.90)**
Public sector 2001	3,740.00 (112.20)**	2,269.67 (136.39)**
Private sector 2001	6,680.43 (91.73)**	2,647.01 (114.66)**
Not employed 2001	-10,328.16 (83.49)**	-7,915.98 (114.48)**
Self-employed	-3,111.57 (114.88)**	-1,844.27 (131.27)**
Number of observations	797,838	797,838
R-squared	0.51	0.25
Number of individuals	216,737	216,737

Notes: All models include controls for: are, age squared, education, number of employees in the firm, year of immigration, birth region, place of residence in Sweden, industry and occupation. The OLS regression also includes years dummies.

Robust standard errors in parentheses.*/** significant at 5/1 per cent level.

Table 2 Log income from paid employment and self-employment, 2001-2005. Only positive incomes

	Log annual income, only positive incomes	
	OLS	FE
Employed by self-employed co-national 2001		
Employed by other self-employed 2001	0.176 (0.007)**	0.132 (0.013)**
Public sector 2001	0.248 (0.009)**	0.245 (0.014)**
Private sector 2001	0.256 (0.007)**	0.161 (0.012)**
Not employed 2001	-1.805 (0.008)**	-1.380 (0.012)**
Self-employed	-0.299 (0.010)**	-0.191 (0.014)**
Number of observations	469,419	469,419
R-squared	0.67	0.42
Number of individuals	144,286	144,286

Notes: See Table 1

Table 3 Employment status in 2005 separately by employment status in 2001

	Employment status in 2001					
	Employed by a self- employed co-national	Employed by another self- employed	Employed in the public sector	Employed in the private sector	Not employed	Self- employed
Employment status in 2005						
Employed by a self-employed co-national	22.1	0.9	0.3	1.4	1.4	2.3
Employed by another self-employed	8.5	39.3	2.9	10.0	5.5	3.3
Employed in the public sector	1.2	2.3	66.3	3.2	5.4	1.8
Employed in the private sector	16.2	32.2	11.4	62.8	17.9	9.8
Not employed	29.3	19.4	17.7	18.4	65.8	26.9
Self-employed	19.8	5.8	1.6	4.1	4.0	55.8
Number of observations	757	4,642	6,697	36,377	59,568	3,342

Table 4 Employment status in 2001 separately by employment status in 2005

	Employment status in 2005					
	Employed by a self- employed co-national	Employed by another self- employed	Employed in the public sector	Employed in the private sector	Not employed	Self- employed
Employment status in 2001						
Employed by a self-employed co-national	10.2	0.7	0.1	0.4	0.5	2.4
Employed by another self-employed	2.6	20.1	1.2	4.1	1.8	4.3
Employed in the public sector	1.1	2.1	49.2	2.1	2.4	1.7
Employed in the private sector	31.6	40.1	13.0	63.0	13.6	23.9
Not employed	49.8	35.8	35.8	29.4	79.9	38.0
Self-employed	4.8	1.2	0.7	0.9	1.8	29.6
Number of observations	1,640	9,093	9,017	36,238	49,100	6,295

Table 5 Future employment prospects and income development

	Employed in 2005	Employed in 2005 – not self- employed	Self- employed in 2005	Employed in the private sector in 2005
Employed by self-employed co-national 2001				
Employed by other self-employed 2001	0.042 (0.018)*	0.145 (0.019)**	-0.103 (0.015)**	0.032 (0.016)*
Public sector 2001	0.051 (0.018)**	0.190 (0.020)**	-0.140 (0.015)**	-0.098 (0.016)**
Private sector 2001	0.051 (0.017)**	0.170 (0.018)**	-0.119 (0.014)**	0.326 (0.015)**
Not employed 2001	-0.180 (0.017)**	-0.064 (0.019)**	-0.116 (0.014)**	0.054 (0.015)**
Self-employed 2001	0.084 (0.018)**	-0.277 (0.019)**	0.361 (0.017)**	-0.071 (0.015)**
Number of observations	110,564	110,564	110,449	110,449
R-squared	0.29	0.29	0.17	0.26

Note: See Table 1

Table 6 Probability of being in the same industry in 2001 and 2005 for those who become self-employed

	If self-employed in 2005, probability of being in the same industry as in 2001
Employed by self-employed co-national 2001	
Employed by other self-employed 2001	-0.065 (0.045)
Public sector 2001	-0.388 (0.060)**
Private sector 2001	-0.205 (0.038)**
Self-employed 2001	0.120 (0.036)**
Number of observations	3,883
R-squared	0.36

Note: See Table 1

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Appendix

Table A1 Share (%) of the whole sample in different employment groups

	2001	2002	2003	2004	2005
Employed by a self-employed co-national	0.6	0.8	1.0	1.4	1.4
Employed by another self-employed	3.8	4.6	4.3	6.6	6.8
Employed in the public sector	5.9	6.2	6.3	6.4	6.2
Employed in the private sector	31.6	29.5	28.5	25.7	25.3
Not employed	55.2	55.8	56.6	56.0	56.1
Self-employed	2.8	3.1	3.4	3.9	4.1
Number of observations	126,905	143,624	159,517	174,828	192,964

Table A2 Share (%) of all employed in different employment groups

	2001	2002	2003	2004	2005
Employed by a self-employed co-national	1.4	1.9	2.2	3.1	3.1
Employed by another self-employed	8.6	10.3	9.9	15.1	15.6
Employed in the public sector	13.2	14.0	14.6	14.5	14.1
Employed in the private sector	70.5	66.8	65.6	58.5	57.8
Self-employed	6.3	7.0	7.7	8.9	9.4
Number of observations	56,836	63,485	69,313	76,831	84,640

Table A3 Share (%) of all employed in different employment groups in 2001, selected countries

	Finland	Bosnia	Middle East	Turkey	China
Employed by a self-employed co-national	2.6	0.3	4.7	8.6	3.2
Employed by another self-employed	6.5	13.0	6.1	5.8	4.3
Employed in the public sector	13.0	8.4	10.6	4.9	28.7
Employed in the private sector	73.3	75.6	53.5	58.4	58.0
Self-employed	4.7	2.7	25.1	22.4	5.8
Number of observations	2,867	12,020	1,573	1,645	588

Table A4 Sample means, 2001

	Employed by a self- employed co-national	Employed by another self- employed	Employed in the public sector	Employed in the private sector	Not employed	Self- employed
Age	34.3	35.3	36.8	34.8	34.5	37.2
Education						
Compulsory education	13.6	5.7	2.5	4.6	7.6	7.3
Upper secondary education 2 years or less	15.5	10.9	5.4	9.0	15.8	12.2
Upper secondary education 3 years or more	14.8	22.2	9.8	17.2	10.2	14.7
Post secondary education less than 2 years	17.4	28.4	13.4	23.8	13.7	21.5
Post secondary education 2 years	10.3	11.9	10.8	11.5	9.3	12.7
Post secondary education 3 years or more	10.1	12.3	36.2	20.5	13.3	18.7
Post graduate education	0.6	0.7	14.6	2.9	2.1	1.6
Unknown	17.7	7.9	7.4	10.6	28.0	11.3
Number of years in Sweden	4.0	5.1	4.6	4.8	3.6	5.2
County						
Stockholm	48.9	24.9	30.5	36.6	27.4	32.6
Västra Götaland	12.3	14.5	15.2	19.3	18.7	16.9
Skåne	10.6	13.8	14.7	12.5	19.7	16.9
Occupations³						
1 Legislators, senior officials and managers	0.9	0.5	0.4	3.1		
2 Professionals	2.2	3.1	46.1	10.5		
3 Technicians and associate professionals	2.2	3.2	7.9	7.9		
4 Clerks	1.7	3.2	2.1	6.3		
5 Service workers and retail workers	13.4	6.5	25.4	7.1		
6 Skilled agricultural and fishery workers	0.9	1.8	0.4	0.6		
7 Craft and related trades workers	15.4	21.7	3.1	10.3		
8 Plant and machine operators and assemblers	13.8	30.0	0.9	24.2		
9 Elementary occupations	17.7	14.0	4.7	14.1		

³ This variable contains many missing values for the non-employed (90 per cent) and the self-employed (80 per cent). The results for those groups are not shown in the table.

0 Armed forces			100.0			
Selected industries⁴						
14 Metal industry	2.5	11.7	0.0	5.1		0.8
17 Means of transport industry	0.2	1.5	0.0	6.0		0.2
24 Transport and warehouse	14.3	6.8	0.27	8.1		6.8
31 Other industrial services	14.5	14.1	1.38	13.4		9.0
32 Education	1.0	0.5	30.64	1.2		0.4
34 Health care	0.0	0.3	19.15	0.9		0.9
36 Care about the elderly and disabled people	0.0	0.2	14.56	1.1		0.0
38 Restaurants (and hotels)	35.5	9.1	0.29	8.0		21.5
42 Public administration	0.0	0.0	10.42	0.1		0.0
Unknown/Not applicable	0.6	0.2	5.9	0.9		19.4
Other						
Firm size						
Number of employees	8.0	42.2	810.7	374.9		1.2
Birth region. Selected						
2 Finland	9.1	3.8	4.9	5.2	3.7	3.7
8 Mediterranean countries	8.4	2.1	3.2	2.4	2.5	2.7
11 Bosnia	3.7	32.2	13.5	22.7	12.1	9.1
13 Former Yugoslavia	9.1	16.3	11.6	14.3	11.8	8.5
25 The Middle East	9.1	2.0	2.2	2.1	3.8	11.0
27 Iraq	13.3	6.9	7.3	6.2	17.6	14.0
28 Turkey	17.4	1.9	1.1	2.4	2.5	10.2
30 China	2.3	0.5	2.2	0.9	1.5	0.9
Incomes, SEK						
Annual income, includes self-employment income	125,732	183,981	225,220	246,021	8,389	108,990
Number of observations	812	4,867	7,514	40,041	70,069	3,602

⁴ This variable contains many missing values for the non-employed (75 per cent) and the results for this group are therefore not shown in the table.

Table A5 Income from paid employment and self-employment, 2001-2005

	Annual income, euro	
	OLS	Restaurants excluded
Employed by self-employed co-national 2001		
Employed by other self-employed 2001	3,355.40 (90.37)**	3,436.19 (123.61)**
Public sector 2001	3,740.00 (112.20)**	3,409.12 (140.59)**
Private sector 2001	6,680.43 (91.73)**	6,879.79 (125.71)**
Not employed 2001	-10,328.16 (83.49)**	-11,284.37 (118.73)**
Self-employed	-3,111.57 (114.88)**	-3,920.95 (155.11)**
R-squared	0.51	0.51
Number of observations	797,838	746,646

Robust t statistics in parentheses.*/** significant at 5/1 per cent level.

Table A6 Log income from paid employment and self-employment, 2001-2005. Only positive incomes

	Log annual income	
	OLS	Restaurants excluded
Employed by self-employed co-national 2001		
Employed by other self-employed 2001	0.176 (0.007)**	0.136 (0.009)**
Public sector 2001	0.248 (0.009)**	0.187 (0.010)**
Private sector 2001	0.256 (0.007)**	0.216 (0.008)**
Not employed 2001	-1.805 (0.008)**	-1.891 (0.010)**
Self-employed	-0.299 (0.010)**	-0.384 (0.012)**
R-squared	0.67	0.68
Number of observations	469,419	418,637

Robust t statistics in parentheses.*/** significant at 5/1 per cent level.



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