

FORMAL EDUCATION AND NEW OPENINGS FOR SELF-EMPLOYMENT AMONGST FOREIGN-BORN PERSONS IN THE SWEDISH HEALTHCARE SECTOR

Abstract

This study contributes to the discussion on the value of education for self-employment among foreign-born persons in Sweden. The case of the deregulated healthcare sector is used to illustrate the importance of the acknowledgement of unaccustomed types of education with regards to a lack of access to the ordinary labour market and for starting a new business. Register-based data on all individuals in Sweden with an education in healthcare are used in the analysis. The overrepresentation of foreign-born persons amongst newly self-employed people is explained by what type of education they have, that is, a highly educated specialised occupation or educations at high and low levels that are classified as 'other' in the register.

Keywords

self-employment • entrepreneurship • immigrant entrepreneurship • formal education • health care

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1 Introduction

Measures to support self-employment are often viewed as important in improving the integration process for immigrants. Policy aimed at improving the preconditions for immigrant entrepreneurs to start up and run a business is often directed towards increasing education levels and giving access to economic and social capital (Rath & Swagerman 2015). Measures are seldom taken on a structural or institutional level. The role of structures and preconditions for opportunity structures for entrepreneurship is emphasised in the 'mixed embeddedness' model (Kloosterman, Van Der Leun, and Rath 1999; Kloosterman and Rath 2001; Kloosterman 2010). In this article, we argue that structural and institutional factors are also important in determining the value of different types of education for employment and self-employment. Different levels of self-employment amongst natives and foreign-born persons are not explained solely by the level of education. It is important to take into account the types of education, as well as the value given to it within the opportunity structures for employment and self-employment. The option to become employed or self-employed seems to follow different logics, and education plays an important role. We, therefore, stress the importance of measures that not only are directed to raise individual levels of education but also target the upgrading and recognition of the usefulness of more unaccustomed types of education at the institutional level in the healthcare sector.

The deregulation of the public sector in Sweden is driven by the aim to offer more choices for the consumer but also to give more opportunities for entrepreneurs to enter new domains (Hartman 2011, Forsell and Jansson 2000). Because the sector has a large

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proportion of females and foreign-born persons, it is expected that deregulation would offer new possibilities for females and foreign-born persons. A shift in regulations that allows transformations from public to private companies is often presented as the development of new fields of opportunities for entrepreneurial innovations. Previous research suggest that the transformation of the healthcare sector in Sweden indeed has introduced new business opportunities that have been particularly embraced by foreign-born persons and females (cf. Pettersson 2012; Achtenhagen and Tillmar 2013; Essers et al. 2010; Pettersson and Hedberg 2013).

In recent discussions on the immigrant and ethnic minority entrepreneurship, 'mixed embeddedness' has emerged as an increasingly influential theoretical concept (Aliaga-Isla & Rialp 2013). Clearly, a reaction to previous research in the field, with its undue bias towards cultural explanations (Ram and Jones 2008), the concept encourages a broader, more contextual perspective, highlighting the way immigrant entrepreneurship is embedded within the political-economic structures of markets and states. New openings and the importance of changing rules and regulations are important ingredients in the 'mixed embeddedness perspective' on immigrant entrepreneurship. Kloosterman (2010) argued that changes in welfare state provisions and regulations have an important effect on the context for immigrant business. In light of the mixed embeddedness perspective, the changes in the public sector described in this paper represent a critical transformation in the political-economic structure that can be expected to provide new entrepreneurial opportunities (of

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both a high and a low threshold) in an area previously under state provision. Alongside concrete measures, the transformation is also supported by a heightened political rhetoric extolling entrepreneurship and favouring an increase in entrepreneurial activities.

This article focuses on the overrepresentation of self-employed foreign born in the healthcare sector. The healthcare sector has a higher proportion of foreign born compared to the total population in Sweden, both regarding employees and self-employed in the sector. The rate of self-employment amongst foreign born in the sector is, however, not explained only by their higher proportion in the sector. Their higher levels of self-employment can also be a result of hindrances to become employed because of discrimination, a lack of social capital, a lack of human capital such as country-specific knowledge and a lack of formal and informal knowledge and job experience (Andersson och Wadensjö 2004, Ram & Jones 2008). Immigrants' human capital might also be less transferable or not acknowledged by employers in the new national context (Chiswick & Millerc 2009). This article specifically analyses the variation in the propensity to start a new business in the healthcare industry in Sweden by different categories of education amongst foreign-born and native-born persons.

A number of studies in the Swedish context have argued that immigrants in Sweden experience downward economic mobility, with highly educated immigrants becoming small business owners and experiencing downward occupational mobility in the period following immigration (Najib 1994). The main argument is that this downward mobility results from their restricted opportunities in the Swedish labour market, which pushes individuals into self-employment (Feldman 2006, Andersson and Wadensjö 2007). Immigrants' human capital might not be transferable, or not acknowledged, to the Swedish labour market (cf. Hammarstedt 2001, 2004, 2006; Ohlsson et al. 2012). This conclusion is supported by previous studies in, for example, the United Kingdom (Clark and Drinkwater 2000), which show that differences in an individual's expected earnings in paid employment and self-employment correlate with self-employment decisions. Interview studies with female immigrant entrepreneurs in the Swedish home-care sector show that there are also other motivations to become self-employed, such as the possibility to provide better service (Pettersson & Hedberg 2013).

The focus on different types of education adds knowledge to the discussion of the broader concept of human capital and immigrant entrepreneurship raised by Kloosterman (2010). He argued that education is important in terms of gaining access to high-profit openings in a set opportunity structure for entrepreneurship. In this article, in turn, we argue that previous research on entrepreneurship has focused on education as an individual asset and has thus failed to acknowledge that the value of formal education is determined in a structural context. A specific type of formal education may be of different value or usefulness for landing a job with an employer versus starting a business.

After outlining our theoretical framework and key references from previous research, we provide a short description of the transformation of the Swedish healthcare sector. We then describe the data and the definition of key variables. Thereafter, we conduct an analysis to investigate start-ups in Sweden's healthcare sector with a major focus on the interaction between entrepreneurial opportunities and constraining forces in the regular labour market. Our final section discusses the theoretical and policymaking relevance of this nuanced conclusion.

2 Immigrant entrepreneurship and the value of education – formal education in previous research

Over a long period since the 1970s, the dominant explanations of immigrant entrepreneurship have heavily emphasised ethnicity, family and cultural traits (Light and Gold 2000). The concept of the 'ethnic economy' has thus been used in the discussions on the overrepresentation of ethnic groups in certain industries, particularly within an American context (Zhou 2004). Culture, access to information, loyal ethnic customs, pooled capital and cheap flexible labour have been identified as key elements in this ethnic economy (Bonacich and Modell 1980; Borjas 1986; Waldinger et al. 1990; Ohlsson, Broomé, and Bevelander 2012). Overall, writers in the field have tended either to portray immigrants as successful entrepreneurs on the basis of the effective supportive social networks or to see them as forced into self-employment because of the existing barriers in the labour market.

In effect, the mixed embeddedness approach breaks away from this stalemate by placing the immigrant business economy in its institutional, regulatory, economical, national and regional context and thereby attempting to encompass the interplay between social, economic and institutional aspects (Kloosterman, Van Der Leun, and Rath 1999). This study further illustrates the role of structures in terms of changing rules and regulations as an important explanation for immigrants' proposition to embrace the new self-employment opportunities in the healthcare sector. We also add to the discussion, and provide concrete empirical data, on the importance of formally acknowledged education. Our rationale for focusing on a single selected sector is that it allows us to isolate a specific institutional context – in terms of specific changes in rules and regulations – and to study how certain conditions peculiar to that sector interact with human capital, formal education and entrepreneurship (Jones and Ram 2007). There is considerable variation in many aspects in the sector, between different subsectors and regions. The Swedish healthcare sector might nevertheless, as a whole, be considered a particularly critical case, an illustrative example of the effects of a profound shift in the state regulatory regime on self-employment (Kloosterman 2010). In the case of Swedish healthcare, we witness the opening up of market opportunities in a country with a strong social democratic tradition, where neo-liberal deregulation is a much more recent occurrence than in the United Kingdom and the United States (Harvey 2005).

In his later elaboration of mixed embeddedness theory, Kloosterman (2010) underlined that human capital and formal education are key resources that allow immigrant firms their normal fate, which is entrapment in low-level market sectors (Davidsson and Honig 2003; Gimeno et al. 1997). In this article, we focus on one aspect of human capital, that is, formal education. Davidsson and Honig (2003) argued that 'formal education is one component of human capital that may assist in the accumulation of explicit knowledge that may provide skills useful to entrepreneurs' (p. 306). A basic argument introduced by Davidsson and Honig (2003) is that individuals with higher-quality education are better at perceiving and exploiting opportunities.

Empirical research has demonstrated various results regarding the relationships amongst education, entrepreneurship and success, that is, education frequently produces nonlinear effects in supporting the probability of becoming an entrepreneur or in achieving success (Bellu et al. 1990; Evans & Leighton 1989; Gimeno et al. 1997; Honig 1998; Reynolds 1997). Other studies have found formal education

to be particularly important for female entrepreneurs but that men's returns to education are conditional on both the industry and higher levels of education, such as college or graduate studies (Bates 1995; Honig 1998). Davisson and Honig (2003) also showed that the role of formal education explains who will attempt to engage in nascent activities. However, formal education is not a 'factor in determining success in the exploitation process, neither in terms of the frequency of gestation activities over time nor in predicting those who succeeded with a first sale or a profitable venture' (Davisson and Honig 2003, p. 304).

The (relative) importance of formal education also has to be examined in terms of its type of business and the logic of the sector. Kloosterman (2010:29) argued that the importance of human capital is highly dependent on aspects not only determined by the intrinsic qualities of work, business, industry and innovation height but also, in many cases, stipulated as part of state regulations. Kloosterman's discussion of the role of human capital differs somewhat from earlier discussions on human capital and immigrant entrepreneurship; he noted the importance of taking into account both individual and structural factors to understand the role and value of human capital (as formal education) as a resource in the process of becoming self-employed.

As declared earlier, this study aims to contribute to the discussion on the role of formal education within the framework of mixed embeddedness. In many respects, the new opportunities for private enterprises in the Swedish healthcare sector provide an illustrative example of the importance of specific formal knowledge education and training. We identify two different perspectives to understand the role of formal education in becoming self-employed. On the one hand, mainstream entrepreneurship research argues that formal education is an important factor in explaining self-employment and entrepreneurship. On the other hand, we need to discuss the role of formal education in relation to the wider societal structure. In this study, we argue that it is important to go beyond the focus frequently found in previous research on the importance of the level of education (defined more or less as an individual asset) for self-employment and entrepreneurship because this focus fails to acknowledge that the value of specific types of education, for employers or self-employment, is determined in a structural context.

3 The Swedish healthcare sector – a field of new opportunities for new business

The main change in the Swedish healthcare sector since the mid-1990s is that publicly financed social care and healthcare has been opened up to competition, and, following deregulation, private enterprises can now operate at national, regional and municipal levels. Therefore, there are new openings available specifically in elderly care and the care of disabled persons, child care and even hospitals in Sweden (Pettersson & Hedberg 2013). This shift is a rapid trend, confirmed by the different choice models through which patients and customers may choose amongst private and public providers. Understandably, these changes have led to the rapid development of the entire sector, with new firms entering the market and some existing firms undergoing rapid growth. The value added of firms in the social and healthcare sector grew from approximately SEK 30 billion in 2006 to SEK 51 billion in 2009. Furthermore, the number of people employed by these firms increased over the course of the same period by approximately 65% (Tillväxtverket 2012a). The

sector is also one of the industries with the highest percentage of women; approximately 50% of companies (0–49 employees) are run by women (Sköld 2013). The education level is also relatively high. The proportion of managers with a university degree is higher than the average for self-employed persons in Sweden. Within the healthcare sector as a whole, the proportion of self-employed persons with a foreign background in small businesses (0–49 employees) is approximately 13% (Tillväxtverket 2012b).

The transformation of the healthcare sector in Sweden is characterised by increased competition through the increased outsourcing of operations, internal organisational changes and changes in relationships with consumers and customers (Forsell and Jansson 2000). The transformation primarily follows two different models – procurement of private providers for public service and openings for caretakers to freely choose between approved providers – other variations of framework agreements and contracts also exist (Hartman 2011). The model applied also affects the opportunities for and conditions of employment and entrepreneurship. The design of the different models also varies between sub-sectors, thus providing different conditions for creations and start-ups for those who are already active in various sub-sectors. Swedish trends follow international ones; reforms focus primarily on (re)casting the role of the state as an integrating force for increased privatisation in society (Pollitt 2004). The trend towards increased privatisation, which has been prominent in Anglo-Saxon countries, has not been as far-reaching in the Swedish context. The developments in Sweden can instead be described as a shift from a welfare state to a welfare society (Hartman 2011). The logic behind this shift is that welfare should remain publicly funded, but production and the parties delivering welfare have changed with the inclusion of private-sector actors.

The reorganisation of the healthcare sector is supposed to provide unique opportunities for new groups of self-employed persons and entrepreneurs to develop new firms and business ideas in the healthcare sector, thus stimulating opportunity-driven entrepreneurship. However, reforms in line with new public management have also been accused of increasing necessity-driven entrepreneurship because there are fewer jobs available in the public sector (cf. Sundin 2011). Shane (2008) argued that one of the most important factors for entrepreneurship, defined as the creation of new business, is not deregulation or the self-transformation of employees within a particular sector into entrepreneurs, it is unemployment.

The section shows that deregulation in the Swedish healthcare sector has provided new opportunities for entrepreneurial activities. Entrepreneurship is affected by different models of competition and by other regional and local variations in terms of the conditions for entrepreneurship (cf. Hartman 2011; Tillmar 2004). Privately organised care, for example, is much more common in urban areas than in other areas (Szebehely 2011).

Sundin and Tillmar (2010) argued that the requirements for knowledge and capital, the competitive situation and laws and regulations are common barriers to entry and survival. For example, the two largest occupational groups in the Swedish labour market – nurses/nursing assistants and nursing assistants/personal assistants – have local government as their primary employer (Sundin 2011). These groups have found it particularly difficult to start a business, not only because of regulations and competition but also because they operate in a professional system in which they are subordinate to senior nurses and medical doctors (Sundin 2011).

4 Data and method

The analyses of the determinants of starting a new business in the healthcare sector in 2008 focus on the role of education in the start-up process. We used a register-based dataset that includes data on the entire population and their businesses in Sweden. The data, including data from tax registers and education registers, were delivered from Statistics Sweden and, hence, included only registered information.

From these data, we selected everyone with a registered education in the healthcare sector (including medical doctors, nurses, dentists, medical technicians, pharmacists, physical therapists and dieticians) in the age range of 20–65 years, as of 2008.¹ After removing those who immigrated in 2003 or later and those without any income (to exclude unregistered emigration), the dataset consisted of 475,656 individuals.

The dependent variable was the odds of starting a new business in the healthcare sector in 2008. Individuals who had the highest income from self-employment in 2008 in the healthcare sector were regarded as self-employed. A firm was regarded as a new business if the self-employed person was not self-employed during the previous year (2007).

The most interesting explanatory variable is the type and level of education. Education is measured using SUN2000 codes. The type and level of education in the health sector includes 53 original codes in seven education levels. We aggregated the type and level of education into 11 types of education. They are

1. *Medical education*
2. *Dental education*
3. *Dental education at the secondary level*: secondary or shorter university education for dental hygienists and dental assistants
4. *Nursing*: includes all nursing education, general and with different specialisations. Nursing, assistant nursing in elderly care and other nursing education are included.
5. *Pharmacist education* (pharmacists and dispensers)
6. *Occupational therapy education*
7. *Biomedical laboratory education*
8. *Other specialist education*: includes education for opticians, audiologists, orthotics, other technical healthcare, physical therapists and dieticians
9. *Secondary-level care*: general education in health, primarily at the secondary level, including education for the provision of healthcare for the sick, disabled and elderly. The educational emphasis is on care during illness and rehabilitation. This type is used as reference category in the regressions.
10. *Other post-secondary education*: To find out what type of education this code might include, we explored the most common industry codes for the newly self-employed in our data with this education. The most common codes were 'physiotherapeutic and the like' (such as physiotherapy, chiropractor, naprapathy), and 'other open healthcare, without physician' (which includes, amongst others, acupuncture, homeopathy, nutrition, psychotherapy, speech therapy). Of the new entrepreneurs in our data, 37.3% of the Swedish born had post-secondary education and 21.5% of the old migrants (arrived before 1998) and 17.6% of the new migrants (arrived 1998 or later) were engaged in these two widely defined sectors. The rest were distributed in a wide range of sectors. This finding indicates that the education amongst foreign-born persons with this code for education is somewhat more diversified when compared to natives.

¹The education variable was updated with the latest information in 2012 (changed to the latest available information with an examination date of 2008 or earlier).

11. *Other secondary education*: often appointed to foreign health education, which does not easily translate into the definitions of the Swedish educational system.

The changes in the organisation of the healthcare sector – the deregulation of the sector – is largely controlled by the Act on System of Choice in the Public Sector (SFS 2008:962) with the Swedish abbreviation 'LOV'. This act regulates the opening up of the system, that is, when authorities allow individuals to choose a supplier amongst approved suppliers in a system of choice. LOV applies to municipalities and regional counties when they introduce systems of choice for health and medical care and for social services – for example, primary healthcare or services in elderly care. Counties must have systems of choice in primary care (also known as healthcare choice). For municipalities and regional counties, introducing systems of choice is voluntary, which has resulted in a situation in which the permission of LOV varies across municipalities (and regional counties). The Stockholm municipality, for example, has developed an advanced system of public choice through which customers can choose from various publically financed private health and care providers. In practice, this system has led to the development of a considerable number of healthcare companies operating in that context. On the other hand, Malmö and Gothenburg municipalities do not use LOV at all. To sum up, the legislation on the freedom-of-choice system does not force the municipalities to change the system. Healthcare is evidently organised differently in different local and regional contexts and, therefore, offers different opportunities for self-employment and entrepreneurship. These differences lead to varying degrees of opportunities for private healthcare companies to sell their services. We thus controlled for residential area by including dummies for the three largest metropolitan areas in Sweden, that is, Stockholm, Gothenburg and Malmö.

Immigrant status was controlled by birth country and the year of the latest immigration, drawn from the population register.

The ratio of individual income (by the employer who paid the highest salary during the year) to the total employment income of the population with same type and level of education from 2003–2007 was used to measure prior experience in the labour market. This measure did not take into account the lack of income because of parental leave and sickness. In the models, we used a dummy for those with incomes in the lowest and highest thirds. Being registered as unemployed in the national employment agency (Arbetsförmedlingen) between 2003 and 2007 also served as a proxy to measure (the lack of) success in the labour market. Unemployment was measured as a dummy for being registered as unemployed and seeking work by the national employment agency sometime during that period.

We also included sex and age in the models.

5 Results

5.1 Descriptive data

The newly self-employed in the healthcare sector differ from the rest of the population with an education in healthcare (people who are not already self-employed) in a number of respects (Table 1). They are more frequently male and foreign born, have a tertiary education and finished their education at least five years before the start-ups were founded. They more frequently have low previous incomes and have more often experienced. In comparison with those who were already self-employed in 2007, the newly self-employed are slightly

Table 1. Descriptive data for the newly self-employed and others with educations in health and care and the self-employed in 2007 (%)

	Newly self-employed in care sector	Others (not self-employed in 2007 or 2008)	Self-employed in 2007
	N = 1,803	N = 464,737	N = 9,116
Male	24.3	15.2	26.2
<i>Education</i>			
Medical education	7.9	5.7	4.9
Dental education	3.8	1.6	5.3
Secondary-level dental education	5.4	4.3	6.7
Nursing education	15.0	26.3	11.0
Pharmacist education	0.9	1.9	0.5
Occupational therapy education	1.7	2.2	1.0
Biomedical laboratory education	2.1	2.7	2.0
Other specialist education	10.3	4.8	16.5
Secondary-level care education	31.4	38.9	26.9
Other secondary education	0.9	0.7	0.4
Other post-secondary education	20.5	11.0	24.7
<i>Region</i>			
Other	56.9	65.9	56.0
Stockholm	29.2	17.7	28.3
Göteborg	8.0	9.3	8.6
Malmö	5.8	7.0	7.1
<i>Immigrant group</i>			
Latest year of migration 1998–2008	3.7	2.6	2.7
Immigrated before 1998	11.9	10.2	14.1
Born in Sweden	84.5	87.2	83.2
<i>Income group (three equally large groups based on individual's income/average income per type and level of education)</i>			
Income in the highest third	58.2	33.0	46.3
Income in the middle	22.1	34.6	20.2

more highly educated, more frequently had a health education by 2003, are more likely to be part of the 'old' migrant group, have had lower previous incomes and have experienced more unemployment.

The types of education that have noticeably higher rates of new self-employed persons relative to the proportion of employed persons are other post-secondary education, medical education, dental education and other specialist educations. This finding might reveal the areas of expertise in which (new) openings for entrepreneurship have been established.

Table 2 shows that foreign-born persons are overrepresented in education types that have higher rates of self-employed persons (i.e. other post-secondary education, medical education, dental education and other specialist educations). Newly arrived immigrants are particularly well represented amongst those with other secondary education and other post-secondary education. They are also well

represented amongst dental education .

The general overview of immigrant and native self-employed people and their education in the healthcare sector shows new entrepreneurial activities for both highly educated people and those with alternative medicine and 'other' education types. Immigrants' high representations in other secondary education and post-secondary education, particularly amongst the newly arrived, might signal a problem in terms of having foreign education validated. The fact that immigrants with health education are also overrepresented in high-status jobs, such as medical doctors and dentists, call into question common assumptions in the immigrant entrepreneurship literature. This finding adds to the discussion of the development of a parallel opportunity structure in the labour market, where blocked entrance into ordinary employment can be a catalyst for self-employment.

Table 2. Education per immigrant group

	Latest year of immigration 1998-2008 (%)	Born abroad, immigrated before 1998 (%)	Born in Sweden (%)	N
Medical education	14.4	9.1	5.0	26,893
Dental education	3.6	2.8	1.5	8,120
Secondary-level dental education	2.7	5.0	4.3	20,538
Nursing education	21.7	21.3	26.6	123,310
Pharmacist education	1.5	1.8	1.9	8,771
Occupational therapy education	1.0	1.1	2.3	10,161
Biomedical laboratory education	1.4	3.0	2.7	12,703
Other specialist education	5.0	4.4	5.2	24,105
Secondary-level care education	16.2	35.0	39.7	183,839
Other secondary education	2.0	0.9	0.7	3,406
Other post-secondary education	30.4	15.8	10.2	53,810
Total	100	100	100	475,656

Table 3. Logistic regression of starting a new business in the healthcare sector (excluding self-employed in 2007). N = 466,540

	1		2		3		4		5	
	Exp (B)	Sign.								
Male	1.786	0.000	1.385	0.000	1.379	0.000	1.401	0.000	1.373	0.000
Age ²	1.096	0.000	0.999	0.000	0.999	0.000	0.999	0.000	0.999	0.000
Age	0.999	0.000	1.116	0.000	1.113	0.000	1.163	0.000	1.118	0.000
New immigrants	1.397	0.009	1.124	0.364	1.066	0.618	0.872	0.291	0.863	0.259
Old immigrants	1.143	0.069	1.058	0.445	0.969	0.677	0.878	0.083	0.869	0.061
Secondary care (ref)										
Medical education			1.411	0.000	1.324	0.005	1.362	0.002	1.540	0.000
Dental education			2.319	0.000	2.197	0.000	2.228	0.000	2.476	0.000
Secondary-level dental education			1.505	0.000	1.469	0.000	1.452	0.001	1.471	0.000
Secondary-level nursing education			0.672	0.000	0.652	0.000	0.642	0.000	0.716	0.000
Biomedical laboratory education			0.874	0.430	0.823	0.253	0.789	0.164	0.869	0.411
Pharmacist education			0.606	0.042	0.568	0.022	0.579	0.027	0.613	0.047
Occupational therapy education			0.976	0.894	0.956	0.808	0.896	0.554	0.936	0.723
Other specialist education			2.516	0.000	2.392	0.000	2.290	0.000	2.432	0.000
Other post-secondary education			2.166	0.000	2.025	.000	2.096	0.000	2.080	0.000
Other secondary education			1.885	0.011	1.777	.021	1.828	0.016	1.556	0.076
Stockholm					1.706	0.000	1.737	0.000	1.758	0.000
Göteborg					0.936	0.457	0.940	0.488	0.954	0.596
Malmö					0.880	0.214	0.860	0.145	0.888	0.252
Have care ed in 2003					0.985	0.877	0.926	0.417	1.179	0.080
MeanRelIncGr/Middle (ref)										
MeanRelIncGr/Low							2.794	0.000		
MeanRelIncGr/High							0.806	0.004		
Have been unemployed									2.400	0.000
Nagelkerke Rsq			0.22		0.27		0.51		0.36	

Table 4. Logistic regressions for starting a new business in the healthcare sector in 2008 (excluding the self-employed in 2007). Separate regressions for native men and women and foreign-born men and women.^a Log odds per education

	Native men N= 59,016		Native women N= 352,064		Foreign-born men N=11,971		Foreign-born women N= 43,489	
	Exp (B)	Sign.	Exp (B)	Sign.	Exp (B)	Sign.	Exp (B)	Sign.
Secondary care (ref)								
Medical education	1.416	0.050	1.031	0.862	1.439	0.002	1.062	0.878
Dental education	2.039	0.003	1.803	0.009	2.578	0.000	3.234	0.002
Secondary-level dental education	2.042	0.026	1.334	0.025	0.776	0.001	2.089	0.027
Secondary-level nursing education	0.415	0.001	0.676	0.000	0.112	0.000	0.783	0.362
Biomedical laboratory education	0.852	0.787	0.806	0.250	0.442	0.164	0.553	0.416
Pharmacist education	0.996	0.995	0.484	0.018	0.643	0.027	0.787	0.743
Occupational therapy education	0.000	0.993	0.975	0.893	0.000	0.554	0.697	0.722
Other specialist education	1.674	0.013	2.560	0.000	1.346	0.000	2.680	0.003
Other post-secondary education	1.659	0.004	2.362	0.000	1.694	0.000	1.762	0.012
Other secondary education	2.903	0.043	1.619	0.158	2.122	0.016	1.346	0.685
Nagelkerke Sq	0.057		0.047		0.055		0.054	

a) The regressions include controls for age, age², the dummy for having a health education since 2003, the residential region and the income group.

5.2 Determinants to be newly self-employed

The dependent variable in the above regressions (Table 3) is the odds ratio of being newly self-employed in the healthcare sector in 2008. Numbers above unity imply a positive relationship with the independent variable, and numbers below unity represent a negative relationship. Bold numbers indicate that the odds ratio is significant at a 5% level. The first model (model 1) shows that males, as expected, are overrepresented amongst the newly self-employed and that age is positively correlated with the odds of being newly self-employed. An age square is also included in the model to allow for a nonlinear effect of age. A total of 16 different birth country categories were first used (not shown), but they were no longer significant after the use of dummies for new migrants (arriving 1998 or later) and old migrants (arriving earlier). This finding indicates that there are no ethnic networks that are particularly important for starting up a new business, even though country of origin is a rather poor measure of ethnicity. The two categories, 'new' migrants and 'old' migrants, may represent the experience of Swedish society and Swedish 'knowledge', but they also include migrants from different countries of origin; newer migrants more often have arrived as refugees from more distant countries than older migrants who were part of a large labour migration to Sweden and a large migration from the Nordic countries. Newer migrants might also be more exposed to statistical discrimination because of their religions, accents and stigmatised skin colours. Both of these migrant groups have greater odds of having started a new business in the care sector in 2008 than native-born persons, but the newest migrants have a higher and more significant effect on the odds of starting a new business in 2008. This finding is not surprising because foreign-born persons are generally overrepresented amongst the self-employed, which is most often explained by blocked opportunities in the mainstream labour market.

In the second model, we included education. This inclusion made the effect of the migrant group insignificant (model 2). Other specialist (licensed) education and unspecified education, at both high and low levels, were, along with medical education and dental education, the educations that produced the most new start-ups. As has been previously discussed, the unspecified categories, along with dental education and medical education, are the education types in which immigrants are overrepresented, which explain why the education variable makes the effect of the immigrant group insignificant.

In the third model, we also included residential area because we knew that the share of self-employment varies across regions. Those living in the Stockholm region were more likely to start a new business than persons living in other parts of the country. Having an education in healthcare by 2003 was also included in these models, but its effect was not significant.

The fourth and fifth models (Table 3) were used to see whether one's prior experience in the labour market is of importance when starting up a business. In the fourth model, we can see that those belonging to the lowest third with regard to income were more likely to be self-employed than those with an average income (the middle group). This finding reveals the importance of the opportunity structures in the ordinary labour market that works in conjunction with the opportunity of becoming self-employed. Being in the highest-income group had a negative effect on the odds of becoming self-employed. We also let these two factors interact with the migrant groups, but this interaction produced no significant results (not shown). Measuring employment income as a measure of success in the labour market has some limitations because low income might also be caused by parental leave and sickness, not only because of mismatched occupations or unemployment. Therefore, we also used the experience of unemployment as a measure of (the lack of) success. A dummy was given for those who experienced unemployment income sometime between 2003 and 2007. The fifth

model showed that the experience of unemployment is positively associated with self-employment; we also tested this variable for interaction effects but found no significant results. The inclusion of the variables that measure previous experiences made the odds for starting a new business negative (close to significant for the older migrants) for the immigrant groups.

The general conclusion from this first set of models is that doctors, dentists and other specialist occupations, together with unrecognised education, low income and unemployment, seem to be important determinants for starting a new business in the healthcare sector in 2008. Having high income does not stimulate entrepreneurship in this sector. The fact that immigration history does not have an important effect after considering the level and type of education indicates that resources within the ethnic network and/or discrimination based solely on ethnicity are not the primary driving forces behind new start-ups in the sector. The overrepresentation of the newly self-employed amongst the foreign-born persons in this sector instead seems to be primarily explained by their education, which, in turn, likely relates to their access to employment.

Table 4 explores the differences between native and foreign-born men and native and foreign-born women using separate regressions. The table shows only estimates for education, but the controls in Table 4 are also used in these regressions. Native and foreign-born men show similar patterns, apart from secondary-level dental education, which gives relatively lower odds for foreign-born men to start a business. Foreign-born men, however, represent a small group, so differences should not be exaggerated. For women, some interesting differences arise; foreign-born women with a dental education seem to be more likely to become self-employed than native-born women with the same education. An additional regression on foreign-born women, which included birth country categories (not shown), showed that women born in Iran were particularly overrepresented amongst the self-employed. This finding indicates that ethnic networks may be somewhat important. The separate regressions foremost confirm that there are no large differences amongst natives and migrants in the relative odds to start a new business, when considering sex, age, type of education, residential region and previous negative experiences in the labour market.

Our data also show that immigrants more frequently have an education that is not classified in line with the ordinary statistical codes (i.e. educations that are difficult, for different reasons, to categorise and classify in the statistical register) and that immigrants with these types of education (generally at a high level) are those who more often start businesses. Circumstances such as the professionalisation and validation of education in the different submarkets of the healthcare sector regulate access to regular employment. In the healthcare sector, it seems that the foreign-born persons and natives who start new businesses fall into one of the two groups: highly educated people with a legitimised education or those with an 'other' alternative education.

6 Summary and final discussions

The healthcare sector is characterised by a professional logic that includes both specific (professional) formal training and new opportunities in healthcare services without high demands for professional formal training. The changes have thus opened up new possibilities for both high- and low-skilled individuals to become self-employed.

The study investigates the context of the transforming health sector in Sweden and highlights that migrant status as such is not important to explain the propensity to start a new business in the healthcare sector. Instead, we find that the difference between individuals born in Sweden and foreign-born persons is explained by different types of education. It is more common amongst foreign-born persons to have either a high education in sectors with a high level of self-employment or a type of education that is specified as 'Other' in the Swedish register. Unspecified education in healthcare education seems to be useful not for employment but for self-employment. Self-employment can, therefore, be described as a parallel opportunity structure, that is, self-employment as an alternative to employment.

On the one hand, the qualifications of the many self-employed immigrants in Swedish healthcare do not seem to be officially acknowledged; they are classified as 'other' or are simply unspecified by Statistics Sweden. The plausible non-acceptance of foreign education might block highly qualified immigrants from commensurate employment in the public or private healthcare sectors, which leads them to embrace new opportunities for self-employment. This finding confirms the Swedish public health system's and recruiters' problems with acknowledging and validating foreign education, a failure that makes it difficult for job seekers with foreign educations to obtain positions that match their qualifications. Another explanatory factor might be restrictions in the Swedish healthcare sector that accept certain methods but not other alternative methods for healthcare. On the other hand, we see that immigrants are overrepresented in high-prestige educations and that female immigrants with validated educations in highly qualified occupations also more frequently start new businesses than do native-born women.

Placing these findings in a comparative context, it is likely that the inability to validate education – which is a widespread problem for immigrants throughout the advanced Western world, with serious mismatches between qualifications and occupational levels (Nee and Sanders 2001, Virdee 2006) – is also of importance in the Swedish context. In the case of the United Kingdom, Jones, Mascarenhas-Keyes and Ram (2012) showed an easing of this problem over generations. In light of this finding, it is plausible that the Swedish case, given the widespread use of self-employment as a refuge from employment mismatches, might be seen as a time-lag effect that is destined to disappear as immigrants' children benefit from recognised Swedish educational credentials. Nevertheless, this hope needs to be tempered by Virdee's (2006) reminder that the improved recognition of British South Asians is not a seamless historical transition; it is instead the consequence of a half century of political struggle against racism both within and outside the workplace.

Our results reaffirm that entrepreneurial motivations are expressed by an intricate interplay of influences rather than by an opportunity/necessity dichotomy. Although deregulation can certainly create a new opportunity structure, the opportunities it presents are far from straightforward rewards for highly qualified immigrant entrepreneurs; they might instead be welcome refuges that individuals with education not valued in the Swedish context embrace by necessity. As paradoxical as it may seem, deregulation in this sector can be seen as a process of providing new opportunities both as genuine entrepreneurial choices and as an alternative way of making a living when other opportunities are blocked.

As a final contribution to the discussion of mixed embeddedness, although the mixed embeddedness approach presented by Kloosterman and Rath (2001) and Kloosterman (2010) provides a great inspiration and starting point for our study, we also find that the

assumption that immigrants who have low levels of education and will mostly be able to start businesses in low-threshold sectors is not corroborated. Our results show that there is no strong indication that ethnic networks are important in this field (it also seems unlikely that access to cheap labour and ethnic customers would be important in establishing a professional healthcare business and attracting customers because quality is likely more important than price in the healthcare sector), although ethnic networks do seem to be important for female Iranian dentists. Therefore, we argue that openings and opportunity structures for entrepreneurship must be understood in conjunction with opportunity structures in the ordinary labour market. Self-employment that is motivated by unacknowledged foreign education, and likewise the opportunity to establish an enterprise that provides alternative methods, should not be considered a problem

for the entrepreneur, but the neglect to accept and validate foreign education for ordinary employment could be considered a problem for the healthcare sector in Sweden.

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