
Immigrant Self-Employment

Testing Hypotheses About the Role of Origin- and Host-Country Human Capital and Bonding and Bridging Social Capital

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Using large-scale data on immigrants in the Netherlands, the authors tested competing arguments about the role of origin- and host-country human capital and bonding and bridging social capital in immigrants' self-employment. When taking job-skill level into account, immigrants with a higher level of origin- and destination-country education are less likely to be self-employed than salary employed. Likewise, the likelihood of self-employment decreases with origin-country work experience but not with host-country work experience. The presumed positive effect of bonding social capital is not found, but this study's results suggest that immigrants with an access to bridging social capital are more likely to be self-employed than those without such contacts.

Keywords: *self-employment; human capital; social capital; immigrants; the Netherlands*

Self-employment is an important aspect of the labor force participation of immigrants. Self-employed people comprise about 14% of all economically active immigrants in Australia, 10% in Canada, Germany, and the Netherlands, and 20% in Portugal and Spain (Organisation for Economic Co-operation and Development [OECD], 2001). In addition, recent figures in several Western societies suggest an increase in immigrant self-employment

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(OECD, 2006). In the Netherlands, for instance, the number has almost trebled between 1994 and 2004 (Dagevos & Gesthuizen, 2005). In migration literature, self-employment is often considered as a solution to immigrant unemployment and poverty (e.g., Raijman & Tienda, 2000; Waldinger, Aldrich, & Ward, 2006; Yoon, 1991).

An important issue in the literature on immigrant self-employment is the role of country-specific human capital in regard to the countries of origin and destination (Bates, 1997; Le, 1999; Sanders & Nee, 1996). Earlier studies have theorized that immigrants who acquired their education and work experience in the country of origin are more likely to be self-employed than salary employed. It has been argued that education and work experience in the country of origin are often of lower quality and difficult to transfer. In addition, employers may find origin-country knowledge and skills difficult to assess (Bates, 1997; Nee & Sanders, 2001; Sanders & Nee, 1996). In contrast, education and work experience acquired in the host country tend to better fulfill the needs of the host-country labor market, and employers are better prepared to evaluate host-country diplomas and occupational careers. Thus, human capital acquired in the host country would appear to increase the set of opportunities for salaried employment and decrease the likelihood of self-employment (Bates, 1997; Bean, Leach, & Lowell, 2004; Donato, Wakabayashi, Hakimzadeh, & Armenta, 2008; Sanders & Nee, 1996).

Several authors, however, have questioned the assumption that knowledge and skills acquired in the host country are more important for salaried employment than for self-employment (Constant & Zimmermann, 2006; Evans, 1989; Le, 2000). They argue that host-country human capital provides increased knowledge about markets and facilitates interactions with financial institutions and suppliers, thereby contributing to more self-employment.

Despite much theorizing about the presumed impact of origin- and host-country human capital, little is known empirically. To our knowledge, only a few studies have addressed this question: two studies on immigrants in Australia (Evans, 1989; Le, 2000), two studies in Germany (Constant, Shachmurove, & Zimmermann, 2003; Constant & Zimmermann, 2006) and one in the United States (Sanders & Nee, 1996). However, all but the German studies relied on general population surveys that did not contain direct measures of human capital acquired in either the country of origin or the host country. As argued by Chiswick and Miller (1994), using indirect measures can lead to substantial measurement error.¹

In this study, we use the competing arguments from previous research and examine the impact of origin- and host-country specific human capital on immigrant self-employment versus salaried employment, providing a

sound empirical basis by using direct measures of pre- and postmigration schooling and quite direct measures of pre- and postmigration labor market experience.

We also test an alternative explanation for the effect of host-country human capital on immigrant self-employment. Rather than focusing on the importance of host-country language skills and pre- and postmigration investments in education and work experience, researchers have argued that social capital plays a major role in self-employment. There is ample research in sociology, as well as in economics, which considers the impact of social capital on immigrant self-employment (Bates, 1997; Clark & Drinkwater, 2000; Flap, Kumcu, & Bulder, 2000; Waldinger et al., 2006). However, previous studies in both fields have focused predominantly or even exclusively on contacts within the migrant's own ethnic group (Bates, 1997; Flap et al., 2000; Min & Bozorgmehr, 2000; Sanders & Nee, 1996). In the literature, coethnic contacts are often viewed as bonding social capital, characterized by high-density networks within the same ethnic group and with people of similar socioeconomic status, whereas contacts with natives are referred to as bridging social capital (Putnam, 2007).

Several studies have shown that self-employed immigrants make extensive use of bonding social capital, mostly through access to financial capital, cheap and trustworthy labor, and business-related information (Min & Bozorgmehr, 2000; Rodriguez, 2004; Sanders & Nee, 1996). Although bonding social capital generally fosters self-employment among immigrants, it could be argued that contacts with natives of the host country increase salaried employment opportunities. Immigrants tend to have contact predominantly with members of their own ethnic group, who might be less familiar with the host-country labor market and less aware of job opportunities than natives. However, only a few studies have explicitly theorized about the effect of bridging social capital and examined it empirically.

By making a distinction between bonding and bridging social capital, we gain greater insight into the relationship between origin and destination human capital and immigrant self-employment. One important idea tested in this study is that the negative (or positive) effect of host-country human capital is partly indirect or even spurious when social contacts with natives are taken into account.

We make use of a repeated, cross-sectional immigrant survey that was conducted in 1991, 1994, 1998, and 2002 among four large immigrant groups in the Netherlands: Turks, Moroccans, Surinamese, and Dutch Antilleans. Specifically designed to study these four ethnic minority groups, the surveys contain large samples of each group and have been translated

into the minority languages. In addition, bilingual interviewers were used. Using these surveys, we have studied the influence of origin versus destination human capital and bonding and bridging social capital on the chances of immigrant self-employment as compared with salaried employment.

In 2003, about 4.1% of non-Western immigrants were self-employed in the Netherlands. Although this number is relatively small compared with the number of self-employed Dutch natives (9.2%) and Western immigrants (7.2%), non-Western immigrants experienced the highest increase in the rate of self-employment between 1999 and 2002 (of about 30%). Among non-Western immigrants, about 5.1% of Turks are self-employed, followed by 3.4% of immigrants from Suriname and 2.3% of Moroccans and Antilleans. In 2002, the majority of immigrants were self-employed in the hotel and industry sector (31%) followed by trade and repairing business sectors (21%), and producer services and business-to-business sectors (Rusinovic, 2006).

Theories and Hypotheses

Human Capital Theory

There are conflicting arguments in the literature about the role of origin- and destination-country specific human capital in immigrant self-employment. One dominant view in the literature is that origin-country human capital restricts salaried employment opportunities and as a result pushes immigrants into self-employment. Because many immigrants come from developing countries, origin-country education and work experience are often considered of lesser quality and difficult to transfer to the host-country labor market. Furthermore, native employers are often reluctant to grant full recognition to origin-country human capital simply because they are unsure of the level of knowledge and skills that these credentials provide (Bratsberg & Ragan, 2002; Friedberg, 2000; Zeng & Xie, 2004). Although coethnic employers can recognize the value of the education and work experience acquired in the country of origin, it is argued that the positions offered by coethnics are often poorly paid, with little chance for upward mobility (Sanders & Nee, 1996; Sanders, Nee, & Sernau, 2002).

It has also been suggested that human capital acquired in the country of origin can be crucial for self-employed immigrants (Min, 1993; Sanders & Nee, 1996). For example, ethnic language skills may present a real advantage in contacts with coethnic employees, customers, and suppliers (e.g.,

Evans, 1989; Waldinger et al., 2006). Using the ethnic language can also help immigrants to strengthen ties with the ethnic community and thus acquire access to ethnic resources (Min & Bozorgmehr, 2000). Similarly, an awareness of ethnic norms and practices or ethnic customers' preferences could be equally rewarding in self-employment (e.g., Waldinger et al., 2006). This line of reasoning would lead to the following hypothesis:

Hypothesis 1a: Immigrants with more origin-country specific human capital are more likely to be self-employed than salary employed.

According to another view of immigrant self-employment, however, immigrants who acquired their knowledge and skills in the country of origin are less likely to be self-employed than salary employed (Evans, 1989; Le, 2000). According to Evans (1989) and Le (1999, 2000), the arguments about the lower quality of origin-country education and work experience, and problems with transferability, are more important for self-employed than for salaried immigrants. After all, many immigrants have jobs with few skill requirements (e.g., cleaning, gardening, construction work, etc.), where issues of skill evaluation or transferability play a minor role. Consequently, origin-country human capital does not necessarily restrict salaried employment chances. In contrast, a large amount of business-related information such as market size, consumer products, or reliable suppliers is country specific and rather difficult to transfer across countries. This would suggest that origin-country human capital is of little use in immigrant self-employment (Evans, 1989; Le, 2000). Moreover, several authors suggest that immigrants who have worked longer in the country of origin before migrating tend to have worse socioeconomic outcomes (e.g., Bell, 1997; Duvander, 2001), so it would seem probable that these immigrants would also have a lower likelihood of self-employment. Hence, according to these arguments,

Hypothesis 1b: Immigrants with more origin-country specific human capital are less likely to be self-employed than salary employed.

Researchers also theoretically disagree on the role of destination-country specific human capital in immigrant self-employment. On the one hand, according to Bates (1997), Nee and Sanders (2001), and Sanders and Nee (1996), immigrants who have obtained their education and work experience in the host country face broader opportunities for salaried

employment and therefore are less likely to be self-employed. As discussed above, host-country education and work experience provide immigrants with credentials that are fully recognized in the host-country labor market. Employers are familiar with those diplomas and occupations. Furthermore, the knowledge and skills acquired on the job in the host country are presumably more transferable and more compatible with the requirements of the host-country labor market (Bratsberg & Ragan, 2002; Friedberg, 2000; Zeng & Xie, 2004). This line of reasoning leads to the following hypothesis:

Hypothesis 2a: Immigrants with more destination-country specific human capital are less likely to be self-employed than salary employed.

On the other hand, however, Constant and Zimmermann, (2006), Evans (1989), and Le (2000) suggest that human capital specific to the host country increases the likelihood of self-employment compared to salaried employment. For example, the importance of host-country language skills may be greater for self-employment than for salaried employment since self-employment is often customer intensive and people oriented (Constant et al., 2003; Evans, 1989; Le, 2000; Sanders & Nee, 1996). Host country language skills are less crucial for low-skill jobs, especially among coethnics (Sanders et al., 2002). Similarly, researchers argue that education and work experience acquired in the host country may be more important for self-employment than for salaried employment (Constant & Zimmermann, 2006; Kloosterman, van der Leun, & Rath, 1999; Le, 2000). Host-country experience can be crucial in gaining information and knowledge about working permits and regulations for self-employment, in how to deal with host-country institutions such as banks and tax offices. Furthermore, according to Kloosterman et al. (1999), in many countries, including the Netherlands, entry into self-employment often depends on obtaining host-country credentials and qualifications. In contrast, additional investments in human capital may be redundant for immigrants who have jobs at the bottom of the occupational structure (e.g., cleaners or gardeners, but also researchers or artists). Moreover, Evans (1989) suggests that the years spent in the host-country labor market are decisive in building up personal savings. Based on these arguments the following hypothesis emerges:

Hypothesis 2b: Immigrants with more destination-country specific human capital are more likely to be self-employed than salary employed.

Social Capital Theory

Social capital refers to the importance of resources available to a person through his or her social relations (Flap, 1999). Although there is no single coherent theory of social capital, three assumptions are commonly made: the amount of social capital depends on (a) the number of contacts a person has, (b) the willingness of others to offer help, and (c) the resources available (De Graaf & Flap, 1988). Taken together, it is assumed that the more contacts immigrants have, the more willing others are to help them, and the better the resources of others, the more social capital immigrants have and the better their economic position. In this article, we apply the three assumptions about social capital to formulate our hypotheses on the role of bonding and bridging social capital in the likelihood of self-employment versus salaried employment of immigrants.

Bonding social capital refers to dense networks of homogenous groups of people, and bridging social capital to loose networks of heterogeneous groups (Putnam, 2000). Researchers have argued that immigrants mostly have access to high-density networks of the same ethnicity and similar socioeconomic status (i.e., bonding social capital) rather than to social contacts that bridge groups (Portes & Sensenbrenner, 1993; Sanders & Nee, 1987).

It is argued that bonding social capital is useful for self-employed immigrants because of solidarity and trust, which facilitate cooperation and help, and reduce free riding (Portes & Sensenbrenner, 1993; Sanders & Nee, 1987; Waldinger et al., 2006). There is ample empirical evidence that bonding social capital increases self-employment among immigrants (Bates, 1997; Flap et al., 2000; Min & Bozorgmehr, 2000; Sanders & Nee, 1996). For example, several authors have shown that ethnic group membership provides access to ethnic business organizations such as rotating credit associations, which help generate capital for starting businesses (Bates, 1997; Min, 1993; Yoon, 1991).

Bonding social capital may also facilitate immigrant self-employment by providing access to low-paid, trusted labor (Flap et al., 2000; Ram, Edwards, & Jones, 2007; Rodriguez, 2004; Sanders & Nee, 1996). According to Sanders and Nee (1987), the beneficial effect of coethnic networks reflects the limited opportunities for salaried employment of some immigrants, who often work longer hours for less pay (see also Catanzarite's, 2002, research on occupational segregation of immigrants). Moreover, it has been suggested that by creating a demand for special goods and services, such as *halal* meat or traditional Chinese medicine, coethnic customers may also increase the likelihood of self-employment

among immigrants (Fairlie & Meyer, 1996; Kloosterman et al., 1999). Finally, it is argued that self-employed immigrants profit from bonding social capital by having access to additional business-related information, for example, available business sites, laws and required permits, and reliable suppliers and labor (Flap et al., 2000; Waldinger et al., 2006). These arguments lead to the following hypothesis:

Hypothesis 3: Immigrants with more bonding social capital are more likely to be self-employed than salary employed.

In the migration literature, bridging social capital refers to contacts with natives, as these contacts bridge immigrants with people of different ethnicities and socioeconomic positions (Putnam, 2007). One argument is that bridging social capital may be significant for immigrants because it provides them with nonredundant information about labor market opportunities and influence (see Granovetter, 1973, for his discussion of strength of weak ties; and Burt, 1992, for his discussion of structural holes). Natives have access to more and better information about salaried employment than immigrants do, having naturally been longer exposed to the host-country labor market. For instance, they are generally better informed about specific job openings, about how to find jobs, and about how to present themselves to employers. Natives are also less often unemployed, generally higher educated, and hold more prestigious jobs than immigrants. Contacts with natives can improve immigrants' entry into the host-country job market. Conversely, contacts with natives lack the in-group solidarity and trust that facilitate the willingness to help and cooperate in making social capital resources available. This implies, for example, that the financial capital, or the cheap and trustworthy labor that is often derived from coethnic social capital, and which helps self-employed immigrants succeed, is unlikely to be mobilized through relations with natives. Based on these arguments, the following hypothesis emerges:

Hypothesis 4: Immigrants with more bridging social contacts are less likely to be self-employed than salary employed.

Social Contacts With Natives and Host-Country Human Capital

Most of the previous studies on the role of social capital in immigrant self-employment have focused exclusively on *bonding* social capital. In this

article, we distinguish between the contacts of immigrants within their own ethnic community and contacts with natives. Introducing this distinction between bonding and bridging social capital sheds new light on the presumed impact of destination human capital on immigrant self-employment. From the perspective of social capital theory, one could argue that immigrants who have more destination-country human capital benefit from skills acquired by increased contacts with the native population. However, because of the difficulty in predicting the effect of host-country human capital on self-employment, there are different plausible scenarios for the relationship between social contacts with natives and host-country human capital. For example, people who learn the language and attend school and work in the host country are more likely to develop contacts with natives (e.g., at school, at work) which promote salaried employment (Perreira, Harris, & Lee, 2007). In this scenario, the effect of host-country human capital on immigrant self-employment is indirect: Investing in knowledge and learning skills within the host country leads to increased contacts with natives, which, in turn, promotes salaried employment of immigrants. In a more extreme scenario, the effect of host-country human capital is even spurious. For example, one could argue that immigrants having contacts with natives are more likely to learn the language of the host country and obtain education and work. This implies that social contacts with natives lead to both postmigration investments in human capital and better salary employment opportunities, not that such postmigration investments have an effect on immigrants' economic chances.

In a similar manner, one could argue that the (expected) positive effects of bridging social capital on salary employment are indirect. It could be that immigrants who have more connections, particularly with natives, more strongly improve their language skills and perform better in school and at work in the Netherlands than immigrants with fewer ties. In this way, bridging social capital helps produce host-country human capital (Coleman, 1990), which, in turn, facilitates salary employment of immigrants.

However, it could be that host-country human capital and social contacts with natives affect immigrant self-employment in opposite ways. For example, it could be that host-country human capital increases the likelihood of immigrant self-employment, and contacts with natives are negatively associated with self-employment. Combined, these two opposing effects of host-country human capital and social contacts with natives on self-employment will result in a suppression effect. By simultaneously studying human and social capital, we examine whether the effects of host-country specific skills and bridging social capital on self-employment are indirect, suppressed, or even spurious.

Data and Method

The hypotheses are tested using the data from the Dutch survey “Sociale Positie en Voorzieningsgebruik van Allochtonen” (SPVA; De Koning & Gijssberts, 2002; Martens, 1994; Martens & Tesser, 1998; Martens & Veenman, 1991). The first survey was conducted in 1988 and was followed in 1991, 1994, 1998, and 2002. The SPVA survey is a large-scale, cross-sectional, immigrant-specific survey, containing detailed information on the socioeconomic and sociocultural position of four large ethnic minority groups in the Netherlands: Turks, Moroccans, Surinamese, and Dutch Antilleans. Based on the geographical concentration of the four groups, random samples were drawn in a number of cities, including the largest cities in the Netherlands (Amsterdam, Rotterdam, The Hague, Utrecht, and Eindhoven).

An advantage of this survey is that it contains direct questions on pre- and postmigration schooling, as well as quite direct measures of pre- and postmigration labor market experience. Another advantage is that special measures (i.e., bilingual interviewers) were used to ensure the inclusion of respondents who were less culturally and economically integrated (Martens, 1999).

The data have some limitations. One issue is the cross-sectional design, which makes it impossible to study the transitions into and out of self-employment from and to salary employment and unemployment. With the cross-sectional data, we also cannot examine causality between certain variables. For example, although we hypothesize that social contacts with coethnics increase the odds of self-employment, the opposite may occur, namely, that being self-employed increases social contacts with coethnics. Concerning social contacts, we will retain a cautionary note and talk about empirical associations. The issue of reversed causality is less problematic for the presumed effects of human capital.

Another issue is the response rate in the surveys. Over the years, the response rate declined from 51% to 79% in 1988 to 44% to 52% in 2002 (Martens, 1999). The response rate was especially low among the Surinamese group.² However, there are several reasons to believe that the low response rate is a minor concern to our conclusions. There is no evidence for systematic nonresponse in our survey with regard to core indicators such as gender and education (Groeneveld & Weijers-Martens, 2003; Martens, 1999). Furthermore, we use a survey specifically designed to study immigrants, in which the interviewers belong to the same ethnic

minority group as the respondent (Van Ours & Veenman, 2003). It is also important to emphasize that the nonresponse rates in our study are comparable with those from surveys among the Dutch native population. The relatively high nonresponse rates in the Netherlands have been examined in several studies, and there was no strong evidence for systematic bias. Finally, to see whether the low response rate of Surinamese respondents biases our results, we performed an additional analysis without this group. Our results do not change substantively, however (results available on request).

Our analysis is restricted to the economically active population of male and female immigrants between the ages of 18 and 64 years.³ Immigrants (i.e., first-generation immigrants) are defined as those who were born outside the Netherlands. Because we do not have any information on social contacts for the native-born Dutch population, we focus only on the four immigrant groups in the analysis. The analysis includes 6,963 respondents, of whom 418 are self-employed.

Dependent and Independent Variables

The dependent variable of *self-employment* was measured as follows: Respondents were asked about their type of employment. Those who were self-employed, including freelancers, were contrasted with salaried workers.⁴

We included measures of origin- and host-country human capital, bonding and bridging social capital, and controls. Human capital was measured by three indicators.

Education. Respondents were asked about the highest level of completed education in their country of origin and in the Netherlands. To facilitate comparisons between education obtained in the country of origin and destination country, we constructed five categories: (a) no education, (b) primary, (c) lower secondary, (d) higher secondary, and (e) tertiary. We included education in both the country of origin and in the Netherlands as categorical variables.

Work experience. The surveys provide a direct measure of work experience in the Netherlands and a more indirect measure of experience in the country of origin. A separate question asks respondents to report years of work experience in the Netherlands. Only the 1991 survey included a

question on work experience in the country of origin. For the subsequent surveys of 1994, 1998, and 2002, we used the age at the time of migration and the total years of schooling in the country of origin to give an indirect measure of work experience in the country of origin: age at migration minus years of schooling abroad minus six. This provides information on actual work experience in the Netherlands and potential work experience in the country of origin.

Good language skills. Respondents were asked whether they experienced difficulties in speaking the Dutch language. We compared those who reported never experiencing problems with the Dutch language with those who said they sometimes or always experienced problems with Dutch.

We included several measures of bonding and bridging social capital.

Contacts with Dutch. Respondents were asked whether they were ever visited by Dutch friends or neighbors. We constructed a variable with three categories: (a) often meet Dutch, (b) sometimes meet Dutch, and (c) never meet Dutch. Preferably, we would like to have comparable measures of coethnic contacts. We do include, however, the ethnicity of the partner, coethnic organization membership, and the percentage of non-Western immigrants in the neighborhood in the analysis.

Partner. Respondents were asked about the country of birth of their partner. We constructed a variable with three categories: (a) single, (b) cohabiting/married to a coethnic partner, and (c) cohabiting/married to a Dutch partner.

Membership organization. Respondents were asked whether they were a member of an organization and whether the organization was predominantly coethnic or Dutch. We constructed a variable with three categories: (a) no membership, (b) member of a predominantly coethnic organization, and (c) member of a predominantly Dutch organization.

Percentage of non-Western immigrants. Along with the direct measures of social capital, we also included a variable that measures the opportunity for social relations with natives and ethnic minorities, namely, the percentage of first- or second-generation immigrants with a non-Western background in the neighborhood (4-digit zip codes). Non-Western minorities predominantly include immigrants from Turkey, Morocco, Suriname, and Dutch Antilles (Statistics Netherlands, 1998). We used figures for the year 1998. Information on group-specific measures at the neighborhood level is unavailable.⁵

We also included several control variables: *Caribbean*: We contrasted immigrants from Turkey with immigrants from Morocco, Suriname, and the Dutch Antilles and combined the last two groups into one Caribbean category because they are homogeneous regarding language, religion, and economic development.⁶ *Male*: We constructed a dummy variable where we distinguished between female and male respondents. *Survey*: To control for survey effects, we included one dummy variable per survey.

Job-Skill Level

A control variable that needs special attention is the job-skill level. Several studies suggest including the occupational status (or job-skill level) in the self-employment model (Evans, 1989; Le, 1999, 2000; Sanders & Nee, 1996). An important argument in favor of controlling for this variable is the fact that the requirements for origin- and destination-country specific human capital vary across occupational positions. By controlling for job-skill level, we take into account, for example, the fact that many immigrants hold jobs with a low occupational status where little human capital is required.⁷ Indeed, several studies have shown that the effects of education are contingent upon whether the variable for occupational status is included in the model. For example, Borjas (1986), Fairlie and Meyer (1996), Li (2001), and Raijman (2001) did not control for occupational status and found that years of education *increased* the likelihood of self-employment compared with salaried employment. Controlling for occupational status, Evans (1989) and Le (2000) reported that higher levels of education *decreased* the likelihood of self-employment. Sanders and Nee (1996) also controlled for immigrant professional status and found that immigrants with higher levels of education from the country of origin were more likely to be self-employed than salaried but the opposite was true for those who acquired additional education in the host country. To get more insight into this, we present an additional model where we do not control for job-skill level.

Job-skill level. Respondents were asked about their current job and the skill requirements for this type of job. Based on this information and the educational requirement for this kind of job, the respondent's job-skill level was determined using the standard profession classification (Standaard Beroepenclassificatie) in the Netherlands (Statistics Netherlands, 2001). According to this classification, a basic job-skill level corresponds to assembly line jobs; a lower job-skill level to metal work, construction work, or vehicle driver jobs; a middle job-skill level to nursing jobs, baker

jobs, or secretarial work; and a high job-skill level to teaching, scientists, or writers. The job-skill level is measured in four categories: (a) basic, (b) lower, (c) middle, and (d) higher.

Table 1 presents descriptive statistics for the independent and dependent variables. We checked for multicollinearity among the independent variables, but correlations do not exceed critical levels (variance inflation factor <2.5 and Pearson correlations $<.54$). Note, however, that precisely to avoid high multicollinearity we did not include additional controls such as age at migration or length of stay.

Before we present the multivariate results, we briefly discuss the descriptive statistics for self-employed immigrants, which constitute about 6% of the immigrant workforce in our sample. Regarding social capital variables, the proportion of self-employed immigrants is slightly larger among single people than among those married or cohabiting with a Dutch or coethnic partner. Interestingly, self-employed immigrants are also overrepresented among those who often meet Dutch people (8%) than among those who never meet Dutch (4.5%). There are also a slightly higher number of self-employed immigrants among Dutch and coethnic organization members, 6.8% and 6.5%, respectively, compared with 5.7% among nonmembers.

Regarding human capital variables, self-employed immigrants are overrepresented among people with none or primary origin-country education, and less than 7 years of work experience. By contrast, the proportion of self-employed immigrants is much larger among those with Dutch tertiary education and work experience of more than 12 years. Almost the same proportion of self-employers has good Dutch language skills and experiences problems with Dutch languages, 6.1% and 5.9%, respectively.

Method

We analyzed immigrant self-employment using logistic regression. To adjust for the fact that respondents' answers are correlated within 350 neighborhoods, we used cluster correction within Stata 10.

Results

Table 2 presents the results of the logistic regression analysis of self-employment versus salary employment. Model 1 is a baseline model; it

Table 1
Mean and Standard Deviation (*SD*) of Dependent
and Independent Variables

Variables	Range	Mean	<i>SD</i>
Dependent variable			
Self-employed	0/1	0.060	
Independent variables			
Social capital			
Partner			
Ethnic	0/1	0.597	
Dutch	0/1	0.112	
Single	0/1	0.291	
Contacts with Dutch			
Often meet Dutch	0/1	0.254	
Sometimes meet Dutch	0/1	0.464	
Never meet Dutch	0/1	0.282	
Membership organization			
Ethnic	0/1	0.125	
Dutch	0/1	0.174	
No membership	0/1	0.701	
Percentage of non-Western immigrants (neighborhood)	0-79.94	30.875	20.855
Human capital			
Education in the country of origin			
No education	0/1	0.282	
Primary	0/1	0.329	
Lower secondary	0/1	0.202	
Higher secondary	0/1	0.141	
Tertiary	0/1	0.045	
Education in the Netherlands			
No education	0/1	0.519	
Primary	0/1	0.111	
Lower secondary	0/1	0.128	
Higher secondary	0/1	0.143	
Tertiary	0/1	0.099	
Work experience (origin; years)	0-47	6.486	7.270
Work experience (the Netherlands; years)	0-46	11.617	8.357
Good language skills	0/1	0.588	
Control variables			
Male	0/1	0.735	
Job-skill level			
Basic	0/1	0.228	
Lower	0/1	0.317	
Middle	0/1	0.287	
Higher	0/1	0.130	

(continued)

Table 1 (continued)

Variables	Range	Mean	SD
Ethnic group			
Turkish	0/1	0.275	
Moroccan	0/1	0.220	
Caribbean	0/1	0.504	
Survey year			
1991	0/1	0.189	
1994	0/1	0.138	
1998	0/1	0.391	
2002	0/1	0.282	

includes the origin- and destination-country human capital and control variables without job-skill level. Model 2 repeats Model 1 and includes job-skill level. Model 3 includes only measures of social capital and control variables and Model 4 is a full model, and it includes all measures of human and social capital and control variables. We compared the coefficients of Model 4 (full model) with those of Model 2 (human capital and control variables) and Model 3 (social capital and control variables) to see whether the coefficients of destination-country human capital (bridging social capital) changed when bridging social capital (destination human capital) was not taken into account. We compared the coefficients of these different models by a method proposed by Clogg, Petkova, and Haritou (1995). In addition to the variables mentioned, we included controls for gender, ethnic group, and survey in each model.⁸

Human Capital

Our findings favor the hypothesis that origin-country education and work experience *decrease* the likelihood of being self-employed (Hypothesis 1b). Model 4 shows that immigrants with higher secondary and tertiary education from the country of origin had 26.2% and 59.1%, respectively, lower odds of self-employment as compared with those without any origin-country education [$(e^{-.304} - 1) \times 100$] and [$(e^{-.895} - 1) \times 100$]. We did not find significant differences, however, for the lower levels of origin-country education. Furthermore, we found that each additional year of work experience in the country of origin decreased the odds of self-employment by 1.9%. It should be remembered that whereas we had a direct measure of

Table 2
Logistic Regression of Self-Employment Versus Salaried Employment (Unstandardized Coefficients)

Variables	Model 1		Model 2		Model 3		Model 4	
	B	SE	B	SE	B	SE	B	SE
Independent variables								
Social capital								
Partner								
Ethnic			-0.452**	0.146	-0.515**	0.149	-0.583**	0.208
Dutch			Ref		Ref		Ref	
Single								
Contacts with Dutch			0.677**	0.170	0.677**	0.169	0.242**	0.133
Often meet Dutch			0.231*	0.136	Ref		Ref	
Sometimes meet Dutch								
Never meet Dutch								
Membership organization								
Ethnic			-0.036	0.149	0.005	0.152	0.049	0.135
Dutch			-0.004	0.135	Ref		Ref	
No membership			0.003	0.003	0.003	0.003		0.003
Percentage of non-Western immigrants								
Human capital								
Education in the country of origin								
No education			Ref		Ref		Ref	
Primary			-0.108	0.123	-0.094	0.124	-0.077	0.125
Lower secondary			-0.050	0.155	-0.107	0.152	-0.100	0.152
Higher secondary			-0.168	0.175	-0.319*	0.179	-0.304*	0.177
Tertiary			-0.355	0.286	-0.946**	0.310	-0.895**	0.310
Education in the Netherlands								
No education			Ref		Ref		Ref	
Primary			-0.086	0.194	-0.184	0.191	-0.184	0.192
Lower secondary			-0.269	0.204	-0.410*	0.210	-0.424**	0.214
Higher secondary			-0.028	0.195	-0.456**	0.214	-0.523**	0.213
Tertiary			0.259	0.207	-0.658**	0.244	-0.763**	0.246

(continued)

Table 2 (continued)

Variables	Model 1		Model 2		Model 3		Model 4	
	B	SE	B	SE	B	SE	B	SE
Work experience (origin; years)	-0.023**	0.010	-0.022**	0.010			-0.019**	0.010
Work experience (the Netherlands; years)	0.015**	0.008	0.013*	0.008			0.015*	0.008
Good language skills	0.308**	0.133	0.136	0.131			0.076	0.132
Control variables								
Male	0.702**	0.166	0.675**	0.166	0.916**	0.171	0.866**	0.173
Job-skill level								
Basic			Ref		Ref		Ref	
Lower			0.350*	0.187	0.357*	0.184	0.346*	0.189
Middle			1.214**	0.189	1.110**	0.173	1.185**	0.188
Higher			1.999**	0.222	1.588**	0.186	1.944**	0.225
Ethnic group								
Turkish	Ref		Ref		Ref		Ref	
Moroccan	-0.628**	0.164	-0.606**	0.164	-0.606**	0.156	-0.652**	0.162
Caribbean	-0.738**	0.157	-0.898**	0.154	-1.081**	0.149	-1.080**	0.158
Survey year								
1991	-0.380**	0.163	-0.435**	0.166	-0.283*	0.158	-0.437**	0.166
1994	0.118	0.169	0.118	0.178	0.108	0.170	0.126	0.180
1998	-0.290**	0.138	-0.203	0.137	-0.242*	0.133	-0.190	0.141
2002	Ref		Ref		Ref		Ref	
Constant	-2.823**	0.244	-3.249**	0.252	-3.563**	0.286	-3.325**	0.318
Number of neighborhoods	350		350		350		350	
Number of respondents	6,963		6,963		6,963		6,963	
Pseudo R ²	.035		.075		.075		.086	

* $p < .10$, two-tailed test. ** $p \leq .05$, two-tailed test.

total work experience in the Netherlands, work experience in the country of origin was estimated indirectly and actually refers to potential work experience (i.e., experience = age at migration minus years of schooling abroad minus 6).

Turning to the effect of host-country human capital, the results in Model 4 provide some support for the hypothesis that immigrants with host-country human capital are less likely to be self-employed than salary employed (Hypothesis 2a). Specifically, we found that education received in the Netherlands decreased the likelihood of self-employment, compared with salaried employment. Immigrants who acquired their lower secondary diploma in the Netherlands were 34.6% less likely to be self-employed compared with those without any Dutch education. Likewise, obtaining a higher secondary diploma or tertiary education in the Netherlands decreases the odds of self-employment by 40.7% and 53.4%, respectively. In contrast, our findings suggest that each year of work experience in the Dutch labor market increases the likelihood of self-employment by 1.5%. Interestingly, we did not find any significant effect of language skills on the likelihood of self-employment. This suggests that host-country language skills are equally important for salary employment as for self-employment.

Social Capital

Before looking at the effect of bonding and bridging social capital, we should bear in mind that with regard to social capital, we cannot rule out issues of reverse causality, implying that we expect to find at least associations. Looking at Model 4, we reject the hypothesis that bonding social capital is positively associated with the likelihood of self-employment (Hypothesis 3). Our results show that immigrants living with a coethnic partner are 40.2% less likely to be self-employed than salary employed, compared with those without a partner. A possible explanation for this negative association is the economic instability related to self-employment that makes it less attractive particularly for married male immigrants, whose household entirely depends on their income. However, we did not find a significant association between other indicators of bonding social capital—the percentage of non-Western immigrants in the neighborhood and coethnic organization membership—and the likelihood of self-employment.⁹

We further hypothesized that immigrants with more bridging social contacts are less likely to be self-employed than salary employed (Hypothesis 4). We found only weak support for this hypothesis. Model 4 shows that immigrants living with a Dutch partner are about 44.2% less likely to be

self-employed than those who are single. Contrary to our hypothesis, we found that socializing with Dutch people in the free time is positively associated with immigrant self-employment. We did not find a significant association between immigrant self-employment and membership in Dutch organizations.

Finally, our results show that the likelihood of self-employment is much higher among male immigrants compared with female immigrants, and among Turks compared with Moroccans and immigrants from the Caribbean region.

Model Comparison

Are our results for origin- and destination-country human capital independent of job-skill level? Our results show that job-skill level is positively associated with immigrant self-employment, suggesting that the qualification requirements in self-employment are higher than those in a comparable position in salary employment.¹⁰ Furthermore, a comparison between Model 1 and Model 2 shows that when the job-skill level is excluded from the model, the effect of higher levels of origin- and destination-country education is insignificant. These results seem to suggest that higher levels of origin- and destination-country education capture opposing but equally strong influences. On the one hand, education, regardless of where it was obtained, facilitates the entry into salaried employment and thus makes the choice of self-employment less likely. On the other hand, higher levels of education correlate positively with job-skill level. Because there is a positive association between job-skill level and self-employment when we exclude job-skill level from the model, the positive effect of origin- and destination-country education on job-skill level and its negative effect on self-employment cancel each other out. This leads to insignificant origin- and destination-country education coefficients.

Our results also suggest that the effect of host-country language skills on self-employment is sensitive to the inclusion of job-skill level in the analysis. More specifically, Dutch language fluency has a positive effect on self-employment in Model 1 ($b = .308, p = .021$) but it becomes insignificant after controlling for job-skill level in Model 2 ($b = .136, p = .299$). Finally, the coefficients of work experience from origin and destination countries remain almost the same in both models, suggesting that most of their negative and positive, respectively, effects on self-employment are direct and cannot be explained by job-skill level.

What do the results show for destination-country human capital (bridging social capital) when we do not control for bridging social capital (destination-country human capital)? We found that the negative coefficients of higher secondary and tertiary education in the Netherlands significantly increased when we included social capital in the model. A possible explanation could be that the higher levels of destination-country education and contacts with Dutch people are positively correlated but have opposite effects on self-employment. These opposing effects suppress each other when we do not control for Dutch contacts in the model. Other indicators of host-country human capital—Dutch language proficiency, lower levels of education, and work experience in the Netherlands—did not change significantly, however.¹¹ All in all, despite a small suppression effect, the estimates of host-country education remain quite consistent across models, suggesting that for the most part, destination-country human capital has a direct effect on immigrant self-employment and it even increased when including social contacts with natives.

With respect to the effects of bridging social capital, our conclusions do not differ when destination-country human capital variables are not taken into account. The comparison between Model 3 and Model 4 shows that all coefficients of Dutch partner, contacts with Dutch, and Dutch organization membership remained the same when human capital variables were included in the model. Thus, most of the negative association between Dutch partner and self-employment and positive association between Dutch contacts and self-employment is direct and cannot be explained by increased host-country human capital variables.

Discussion

In this article, we studied the role of human and social capital in the self-employment of immigrants. We have examined the competing arguments for the impact of origin- and destination-country specific human capital, and similarly, we have assessed the connections that immigrants have within their own ethnic group vis-à-vis the ties they maintain with natives. Moreover, by studying human and social capital simultaneously, we were able to see whether and to what extent the effects of human or social capital are over- or underestimated. Using a survey that was specifically designed to study immigrants, we examined the likelihood of self-employment compared to salary employment among the first-generation immigrants from

four ethnic minority groups in the Netherlands: Turks, Moroccans, Surinamese, and Antilleans.

One of our main findings is that origin-country human capital decreases the likelihood of immigrant self-employment compared with salaried employment. The results also show that immigrants with more host-country human capital (credentials) are less likely to be self-employed than salary employed. However, this negative relationship seems untrue for host-country work experience. Although our data prevents us from saying more about this, the positive effect of host-country work experience on self-employment in our study could mean that labor market experience in the Netherlands is important for acquiring relevant knowledge and skills or that it is crucial for accumulating financial capital.

Regarding the effects of bonding and bridging social capital on self-employment our results are mixed. With respect to bonding social capital, contrary to our expectation, immigrants with a coethnic partner are less likely to be self-employed than those who are single. We also found that neither the percentage of non-Western minorities in the neighborhood nor coethnic organization membership is positively associated with immigrant self-employment. As for bridging social capital, we found that having a Dutch partner is associated with a lower likelihood of self-employment. Finally, contrary to what we anticipated, contacts with Dutch natives are associated with a higher likelihood of self-employment.

The simultaneous study of human and social capital also revealed some important insights. Although social contacts with natives suppress the effect of host-country education on self-employment, our results mostly suggest that the strong negative effect of education from the destination country and the positive effect of work experience in the Netherlands are direct and that bridging social capital explains very little. Similarly, we show that the negative association between having a Dutch partner and self-employment, as well as the positive association between Dutch contacts and self-employment are mostly direct and cannot be explained by human capital variables.

Conclusion

The negative effect of origin-country education observed in our study on immigrants in the Netherlands contradicts previous theoretical arguments, which suggest that problems of quality and transferability assessment of foreign credentials push immigrants into self-employment, where the

returns to origin-country education are higher (e.g., Bates, 1997; Sanders & Nee, 1996). We also refute another influential idea in the migration literature, which implies that host-country credentials increase the managerial knowledge and skills needed to deal with host-country institutions and thus pull immigrants toward self-employment (Constant & Zimmerman, 2006; Le, 2000).

The conclusion that higher educated immigrants are less likely to be self-employed than salary employed suggests that in the Netherlands, self-employment provides an alternative strategy for economic assimilation among less educated immigrants whose employment opportunities in the Dutch labor market are often restricted by insufficient or nontransferable qualifications and discrimination. In this way, self-employment provides the second-best solution for immigrants who are at risk of unemployment and poverty.

Our results also contradict previous empirical findings that immigrants with more bonding social capital are more likely to be self-employed than salaried (Sanders & Nee, 1996). We found that none of the indicators of bonding social capital—having a coethnic partner, coethnic organization membership, and minority concentration—is positively associated with self-employment. Interestingly, these results for the Netherlands, and more generally for Europe (i.e., Clark & Drinkwater, 2000, 2002) are not consistent with U.S. studies, which show a positive association between bonding social capital and immigrant self-employment. Future research is encouraged to examine why these differences arise.

This study demonstrates that when distinguishing between bonding and bridging social capital, self-employed immigrants mostly benefit from having contacts with natives. This positive influence of contacts with natives is mostly direct and cannot be interpreted by increased host-country human capital. Therefore, self-employed immigrants benefit from social contacts with natives mainly because of the resources they provide and not because of improved host-country language skills or better school or work performance. This calls for further research studying the exact mechanisms involved in this positive effect of bridging social capital on self-employment.

Notes

1. To understand how important this measurement error is, consider the following example. An immigrant who has attended 5 years of education in his country of origin (i.e., from age 6 to 10 years), who migrated at 25 years of age and then attended school for 5 more years in the country of destination (i.e., from age 25 to 30 years) is estimated to have attended 10 years of education in the country of origin and not to have obtained any education after migration.

Furthermore, some studies (Evans, 1989; Sanders & Nee, 1996) only include the level of education and a dummy variable to indicate whether the highest level of education was (probably) obtained in the country of destination. In this way, however, those who are thought to have obtained their highest education in the receiving country also include people who were educated in their country of origin.

2. The nonresponse rates in the SPVA surveys per ethnic group and year were as follows:

	Percentage			
	Turks	Moroccans	Surinamese	Antilleans
SPVA-88	21	37	49	41
SPVA-91	24	41	52	44
SPVA-94	40	40	48	49
SPVA-98	39	51	50	48
SPVA-02	48	48	56	49

Source: Martens (1999).

3. It can be argued that younger immigrants tend to change jobs more often, which may affect our results. We performed a sensitivity test to see whether our results changed when we exclude immigrants younger than 40 years. Although the effects of secondary education and work experience in the Netherlands become statistically nonsignificant, other results do not change. Thus, even when analyzing the older age groups of immigrants our main conclusions would remain the same.

4. The distinction between freelancers and self-employed individuals was not made in all surveys; therefore, the two groups were combined into one category.

5. Information about the percentage of coethnics is provided only for 17 broader geographical units (municipality). We redid the analysis using this information. We did not find a significant relationship between the percentage of coethnics and self-employment, however.

6. A *t* test was conducted to see whether there was a significant difference between immigrants from Suriname and the Dutch Antilles with regard to self-employment compared to salaried employment, but this was not the case.

7. Among the self-employed, jobs at the bottom of the occupational hierarchy account for 33% of the Turkish, 43% of the Moroccans, and 17% of the immigrants from the Caribbean region. However, these percentages are much higher among those with salaried employment at the bottom of the occupational structure: 71% are Turkish, 68% are Moroccans, and 43% are from the Caribbean region.

8. We also conducted a *t* test to see whether there was a significant difference between immigrants who arrived in the Netherlands for different reasons (i.e., work, family, or other), but there was no difference. Several studies have argued that adult family members can be crucial as a potential source of capital and family labor for immigrant self-employed (e.g., Nee & Sanders, 2001; Sanders & Nee, 1996). We conducted a *t* test to see whether adult family members increased the likelihood of self-employment, but this was not the case.

9. We also tested whether the percentage of non-Western minorities has a nonlinear effect on self-employment, but this is not the case.

10. A subset of surveys includes information on job-skill level of the first job in the Netherlands. We redid the analysis using this information. The effect of *the first job-skill level*

in the Netherlands was insignificant, however, and other results remain substantively the same, except the percentage of non-Western minorities coefficient that become marginally significant (at $p = .06$).

11. Although the coefficients of good language skills decreases significantly $\chi^2(1) = 10.67$, $p = .001$, the effect remains insignificant in both models.

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