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The Impact of Human Capital and Social Capital on the Immigrants' Employment Participation in the Netherlands

Master Thesis

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Abstract

The SPVA survey is a large-scale, cross-sectional, immigrant-specific survey. It contains detailed information on the socio-economic and socio-cultural position of four large non-Western immigrant groups (i.e., Turks, Moroccans, Surinamese and Dutch Antilleans) in the Netherlands. By using data of SPVA, 'To what extend the human capital and social capital have a positive impact on the employment participation of non-Western background immigrants in the Netherlands?' is examined in this thesis. This study differs from the previous studies with respect to data approach to perform the empirical analysis. Different from the earlier studies, the surveys are separately examined as it was originally designed instead of combining or pooling the data set. The main conclusions are as follows. In contrast to Kanas (2011), it is found that the immigrants who have not experienced difficulty while speaking Dutch are more likely to be employed in the Dutch labour market. Unlike Chiswick and Wang (2016), the immigrants who have lower education level which is obtained in the Netherlands are less likely to be employed. In addition to these, work experience acquired in the host country has a positive impact on the employment participation of the immigrants, whereas bad health status has a negative effect.

Keywords: Social Capital, Human Capital, Immigrants, Netherlands, Employment Participation.

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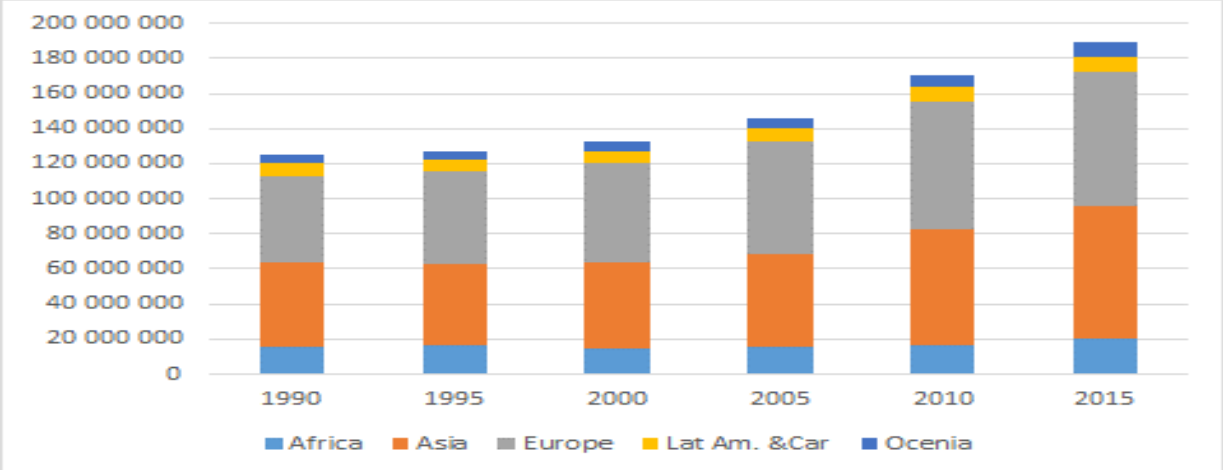
1. Introduction

The inescapable progress of globalisation has brought a new challenge to Europe such as migration. Meanwhile, labour markets have become more integrated due to trade openness. Thereby, the complementary effect of the significantly increasing number of international immigrants and continuously integrated labour market have made Migration Economics a fast-growing and exciting research area (Constant and Zimmermann, 2013; Zimmerman, 2005). These developments have brought debates in its wake the question whether the labour market performance of immigrants turns into an advantage in a host country. Therefore, the consequences of immigration have been a key topic on both the public and political agenda in almost all Western countries (Lancee, 2012). And, it seems to remain quite a while as reported by United Nations (UN). The first census of the UN showed that there were 150 million international immigrants in 1990. According to the latest reckoning of the UN, the number of international immigrants worldwide has continued to grow rapidly over the last quarter reaching 244 million in 2015. The report also indicates that nearly two-thirds of all international migrants live in Europe (76 million). Therefore, Western Countries are confronted to deal in a proper way with the increasing number of the immigrants and their descendants. Due to aforementioned reasons, a high number of scholars has drawn their attention to the topic of the labour market participation of immigrants in their host country, and many studies have been done on this topic in the last decades (e.g., Dustman et al., 2003; Baker & Benjamin, 1994; Chiswick and Wang, 2016; Carrasco et al., 2008).

Graph 1: *Number of International Migration Worldwide*



Source: UN Department of Economic and Social Affairs

Currently, about 21.3 percent of the Dutch population of 17 million people consist of either immigrants or children of immigrants with a foreign background. It means that one in five persons in the Netherlands is with a foreign background. A considerable amount of immigrants and their labour market participation has become more of an issue in Dutch labour market. Hence, it became an attractive research area. This figure includes all people with 'Western' and 'non-Western' background immigrants. In the classification of 'Western' and 'non-Western', the unfavourable socio-economic position of the immigrants in the Netherlands has been a major consideration (Lancee, 2012). This study focuses on four non-Western immigrant groups which are socio-economically disadvantaged which are Turks, Moroccans, Surinamese and Antilleans in the Netherlands (Bijl et al. 2005).

Figures of Immigrants in the Netherlands

The progress of migration after the WWII might be assessed under three distinct periods in the Netherlands. In the first period, Dutch-Indonesian and Moluccans migrated to the country after decolonization of Indonesia. The second period started with the policy of the Netherlands which targeted towards Mediterranean people in the 1960s with bilateral agreements to admit temporary workers. Guest workers, majorly consisted of the Turkish and the Moroccan, were accepted in order to compensate the shortcomings of the Dutch labour market. However, the communities of these ethnicities arose due to family reunification and formation rather than recruitment policy. During the last period, Surinam, which was a former Dutch colony, acquired political independence. After that, the vast majority of the Surinamese migrants arrived in the Netherlands. The immigration to the Netherlands continuously increased, and the origins of immigrants have become much more diversified since the late 1980s. Meanwhile, immigration among the Turks, the Surinamese, and the Moroccans has gradually increased (Entzinger, 2006). According to Statistics Netherlands (2014), the number of migrants to the Netherlands had significantly decreased until Poland joined the European Union in 2004. After participation, the number of Poles coming to live in the Netherlands has risen every year. Also, the number of people who obtain asylum has rapidly grown, majorly driven by Syrian refugees, in the Netherlands since Syrian Civil War in 2011. Recently, Syrians and Poles have a considerable majority among the immigrants in the Netherlands. However, they are not researched in this study because the appropriate data used is the SPVA, which is designed to monitor Turkish, Moroccans, Surinamese and Antilleans immigrants (Kanas, 2011). In addition to this, there is not a recent available data which contains Poles and Syrians so far.

Exclusiveness of Theoretical Approach: Human and Social Capital

In general, the studies regarding immigrants have sought an answer to whether they are participating in the labour market of the host country and/or what are the factors that help immigrants to participate in the labour market of the host country. Numerous studies on the economics of immigrants either addressed the impact of human capital or social capital on labour market performance immigrants (e.g., Hall & Farkas, 2008; Lancee, 2012; Giziene et al., 2015; Piracha et al., 2014). There are just a few studies that have investigated both of them (e.g., Kanas, 2011; Byoun, 2014). In the meantime, language proficiency is also considered to be crucial for the social and economic integration of immigrants (Yao & van Ours, 2015). Although, language proficiency is a part of human capital, a lot of research has been done apart on the effectiveness of language proficiency on labour market performance of immigrants (e.g., Dustmann & Fabbri, 2003; Hayfron, 2001; Budría & Swedberg 2012). The main issue of this study is to investigate the impact of both human and social capital on the labour market participation of the immigrants. Substantially, Kanas (2011) and Chiswick and Wang (2016) be inspiration to this study regarding the data and indicators. However, this study differs from those studies in respect to methodological approach which is diffusively explained after.

Human capital is one of the factor that may affect immigrant employment status. Broadly, human capital refers to the capability to work productively. According to human capital theory, people are considered as resources for productivity (Aliaga, 2011). Therefore, human capital is related to investments in education as well as increasing job experiences and developing job skills that can be effectively utilized in the labour market (Becker, 1964; Schultz,1963). Besides of skills and learning capabilities, health conditions (e.g., physical, emotional, mental) of individuals is also considered as human capital (OECD, 2001). However, those typical human capital elements are not sufficient to explain human capital of immigrants because their knowledge and skills which are obtained in the origin country may not be useful in the host country. For this reason, host-country language proficiency, which increases opportunities in the labour market, has been conceptualized as another element for human capital (Finnie & Meng, 2002). Furthermore, there is an additional important distinction for human capital of immigrants between origin-country human capital, and host-country human capital (Behtoui, 2004). According to Friedberg (1996), the national origin of individual's human capital is a crucial determinant of its value in the labour market. For instance, an individual who acquired domestically education receives a higher return than an individual with education acquired abroad. In addition to that Bratsberg and Ragan (2002) claim that the returns to education is

also associated to economic development of the host country, host country language proficiency, whether or not the immigrant acquired schooling in the host country, and educational attainment of the immigrant. Thereby, the human capital that was gained in the origin country could be less valuable to employers in the host-country. Moreover, immigrants' diploma that have been received from origin-country could not be valid in the host country due to agreement of equivalency of qualifications and academic degrees although they are relatively over-educated than native-born (Peixoto, 2001).

In general, the social capital theory implies that people who effectively use available resources from their social network are better to reach their goals (OECD, 2001). Social capital has been defined variously by authors (e.g., Field, 2003; Coleman, 1988). Although the concept of social capital has been used widely, there is not any commonly accepted definition of it (Field, 2003). According to Byoun (2014), scholars hold the same idea that the ultimate goals of the social capital are individual economic benefits or social benefits. Furthermore, most of the definitions emphasized the following three elements; social networks, norms of reciprocity, and trust. Distinctly, social networks have been considered as a core element which generates trust and norms in the literature (e.g., Bourdieu, 1986; Coleman, 1988). However, the social capital theory and social network theory are distinguished by the scholars in some aspects. This study will deal with social capital by using social contacts variables such as frequency of Dutch contact, organisation membership and ethnicity of partner (Kanas, 2011; Byoun, 2014)

Research Question

Many studies approached labour market participation of the immigrants in the Netherlands from various perspectives. As it was mentioned above, most of the existing studies with regard to labour market participation of immigrants in the Netherlands have been addressed either by social capital or human capital i.e. the impact of language proficiency on immigrants' labour market performance (Yao & van Ours, 2015); interethnic marriage and labour market integration of immigrants (Gevrek, 2009). There are also a few studies that used both social capital and human capital to assess the labour market performance of immigrants in the Netherlands i.e. the impact of social contact and human capital on labour market performance of immigrants (Chiswick and Wang, 2016); The economic performance of immigrants: the role of human and social capital (Kanas, 2011). Among these studies, Chiswick and Wang (2016) used data of SPVA to create a longitudinal data set. The reason that SPVA is preferred is that the survey includes detailed information about origin and host country specific schooling and

contacts with co-ethnics and natives (Kanas, 2011). Chiswick and Wang (2016) followed the same method that Martinovic et al. (2009) did to test social contacts, Dutch language, and immigrant economic performance. By this method, the participants who participated more than once in the survey are registered as belonging to the panel groups. By combining information about all panel respondents, a pooled data set is obtained. The responses are recorded on two occasions that are separated by a time distance of 3-4 years (Martinovic et al., 2009). However, as it was acknowledged, the level of attrition in the panel data that is created is rather high since the survey was originally set up as a cross-sectional design. Furthermore, the number of respondents who are present in three waves (206) and in four waves (28), is rather low. Whereas, the aim of the longitudinal study is to follow the same respondents with same variables over period of time to examine the developments (Menard, 2002). The study of Chiswick and Wang (2006) is more like a pooled panel study data which consists of different panel groups. Whereas, the participants do not differ within in the panel groups, the respondents differ among the panel groups. Namely, data consists of different respondents with same variable over time rather than a longitudinal study when the data handled as a whole. In other respect, Kanas (2011) combined 1998 and 2002 waves of SPVA in order to increase the number of observations to test the impact of origin and host country schooling in the economic performance of immigrants. Furthermore, Kanas (2011) used the data as cross-sectional design. There are more than a thousand respondents which are participated in both survey. These surveys were conducted 4 years interval. Thereby, it is most likely that the position and status of the respondents in the host country would be changed after 4 years. By combining the data and using as cross-sectional design, the possible changes in the position and status of the respondents are ignored e.g., Kanas (2011). In order to redress the balance of the data, the observations who participated only once in the survey are excluded in this study. Unlike Chiswick and Wang (2016), this research used the cross-sectional data of SPVA as it was originally designed in order to avoid potential spurious and incorrect results that might be occurred due to aforementioned reasons. Namely, the impact of origin and host country human capital, and social capital on being employed are separately examined by years of the surveys which are conducted by using the logistic method. This study differs from studies above with respect to data approach to perform the empirical analysis. So far, no research has been particularly done in this way on this topic. Therefore, more different results are expected than exiting studies (e.g., Kanas, 2011; Chiswick and Wang, 2016). The main research question is determined as ‘to what extent the human capital and social capital have a positive impact on the employment participation of the immigrants in the Netherlands?’.

Appropriate Data and Analytical Method

A majority of the existing studies on this topic have been done either a longitudinal study (e.g., Chiswick and Wang, 2016; Yao & van Ours, 2015) or a cross-national study (e.g., Dustman et al., 2003; Baker & Benjamin, 1994; Carrasco et., 2008). The number of longitudinal studies that have been done is small relatively cross-national studies so far. The reason could be that a longitudinal approach is relatively expensive, time-consuming and labour-intensive. Moreover, a longitudinal approach may require more advanced statistical techniques than cross-national approach due to possible correlated observations. However, a longitudinal approach provides the patterns of the certain group of individuals over time in which cross-national approach is not able to do (Schmidt & Teti, 2005). Initially, a special immigrant LISS (Longitudinal Internet Studies for the Social Sciences) panel data was decided to be used to observe the development of human and social capital, and labour market position of immigrants over time. However, the data did not contain the variables that allow making a distinction between host and origin country human capital. Therefore, the data of SPVA, which contains both host and origin country human capital variables, has been decided to use in order to examine employment participation of the immigrants in the Netherlands.

Logistic Regression is believed to be the most appropriate methodological approach that can be used in this research because the potential dependent variable 'employment status' consists of two categories, the dichotomous variable, as being employed including self-employed immigrants and being unemployed (searching for a job) or non-employed (not in the labour market). The model allows one to predict a discrete outcome such as group membership from a set of variables that may be continuous, discrete, dichotomous, or a mix (Tabachnick & Fidell, 2012). In other words, it emphasises the probability of a particular outcome between categorical dependent variable and one or more independent variables.

Expectations from the Study

According to Lancee (2012), bridging social capital helps the immigrants to find employment. Piracha et al. (2014) examined the role of social capital in labour market performance of immigrants. They found that social capital is very much significant for both labour market performances of natives and immigrants in Australia. They claimed that social capital is especially important for women and to access-white-collar jobs. Regarding human capital, Kanas (2011) found that host-country language, acquiring education and employment and work experience in the host country facilitate the likelihood of immigrant employment. Furthermore,

Chiswick and Wang (2016) found that language proficiency has positive impacts on labour market outcomes. However, the strength of the effects varies by degree of the transferability of their pre-migration skills and their motivation for migration. In general manner, based on these two studies (e.g., Kanas, 2011; Chiswick and Wang, 2016), it is expected that both human capital and social capital have a positive impact on the employment participation of immigrants. In addition, human capital and social capital could also be positively correlated. This is to say, a higher level of human capital might lead to higher level of social capital or vice versa.

The study is set up as follows. Section 2 summarises previous studies on the topic. Section 3 describes and discusses the data of SPVA. Section 4 presents the methodology and empiric analysis, and discusses the parameter estimates. The final section provides concluding remarks and discusses avenues for future research.

2. Literature Review

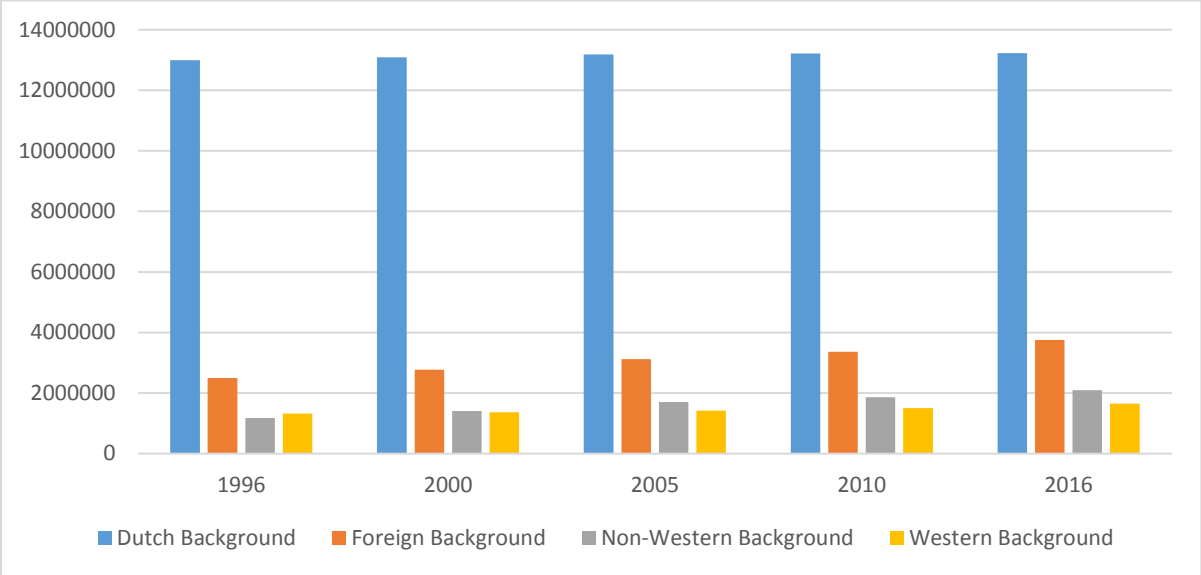
2.1. Immigrants in the Dutch Labour Market

In the first section of the study, the figures of the immigrants have been evaluated with broad strokes to emphasise the importance of the immigrants in the economy of the Netherlands. In this section, the figures and trends of the population of immigrants are assessed in-depth to understand how the population of non-Western immigrants in the Netherlands has been shaped until now.

2.1.1. Recent Development of Immigrants in the Netherlands

Statistics Netherlands (CBS) reports that the population of the Netherlands increased by 79 thousand in 2015. Although the population of Dutch background has increased, the annual rate of Dutch background population to total population has decreased since 2000. This is to say, the annual rate of immigrants' population (annual immigrants' population to the total population of the Netherlands) has increased relatively higher than the rate of Dutch background population (annual Dutch background population to the total population of the Netherlands) last 15 years. It goes without saying that certain events have been contributed to the population of the immigrants such as bilateral agreements to admit temporary workers with Turkey and Morocco, political independence of Surinam. It means that the relatively greater population of immigrants has not naturally emerged in the Netherlands.

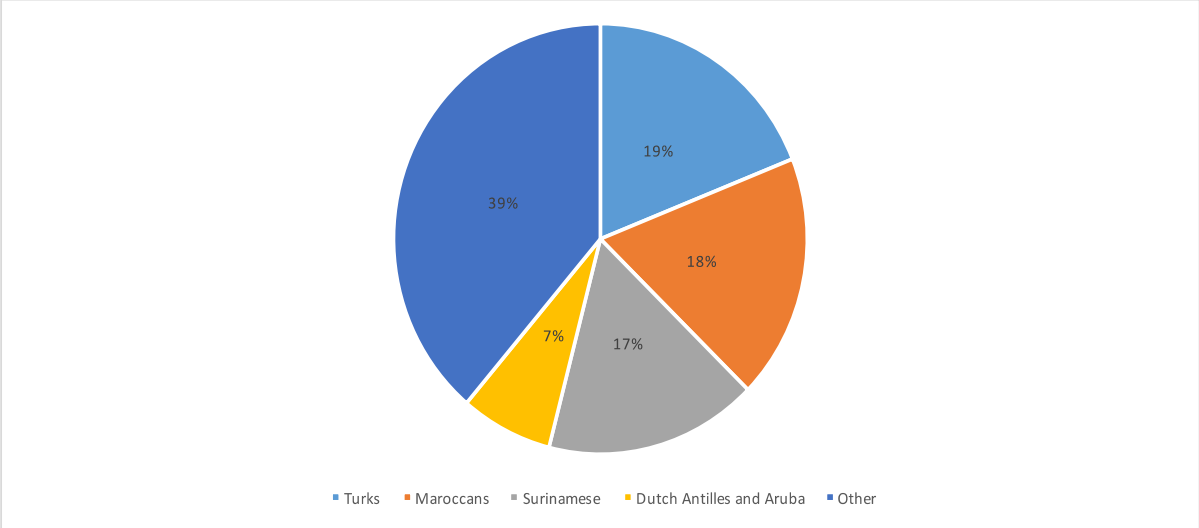
Graph 2: *Population by Origin in the Netherlands*



Source: CBS

CBS reports that 21.7 percent (3752291) of the population of the Netherlands consisted of foreign background people in the Netherlands in 2015. Recently, Germans, Indonesians, and Poles have the greatest majority among the Western background immigrants. Non-western background immigrants formed 12 percent (2096592) of the country's total population. According to CBS (2016), the Turkish immigrants have the highest population among non-Western background immigrants with 397,471 (2.3% of the total population). With number of 385,761 (2.2% of the total population), Moroccans have the second highest population among non-Western background immigrants. Surinamese immigrants form 2.0% (349,022), and Dutch Antilles and Aruba 0.8% (150,981) form the total population of the Netherlands. The remained 4.7% (813,357) is formed by other non-Western background immigrant groups such as Syrians, Iraqis.

Graph 3: *The Population Share of Non-Western Immigrants in the Netherlands*



Source: CBS

More than two-thirds i.e. 56 thousand of the population growth has occurred due to net migration in 2015. The high number of a high mortality with a low birth date led to a relatively lower increase in the natural population increase i.e. 23 thousand. As it was mentioned before, the high number of immigration was majorly driven by Syrians and Poles in 2015. The number of Poles immigrants has increased in the Netherlands after Poland joined the European Union since 2004. However, they are treated as Western-background immigrants. Although there has been a huge flow of Syrian asylum seekers due to civil war, they are only allowed to register to Dutch municipality when they obtain a residence permit, or they live at least six months in the centre of refugees. Therefore, asylum seekers who do not meet those requirements are not counted in the population of the Netherlands.

According to annual report on integration of CBS (2016), 6% of Dutch natives were unemployed in 2015. Moreover, the total unemployment rate of Western background immigrant was 9 percent. An immigrant with a non-western background was nearly three times more likely to be unemployed than a native Dutch with 15% in 2015. The unemployment rates of non-Western immigrant groups did not differ much from each other. Moroccan (18%) and Antilleans Antilleans (17%) origins had the highest unemployment rate and among the non-Western immigrant groups, followed by Surinamese (15%) and Turkish (14%) migrant groups.

2.2. Theoretical Approach and Hypotheses

This part of the study aims to scrutinise and summarise the social and human capital theories from the previous studies on this topic. Moreover, based on the literature, expectations and hypotheses are set up under this heading. This part of the study is mainly inspired from Kanas (2011) and Byoun (2014).

2.2.1. Human Capital Theory

The theory of the human capital has been used by existing studies to purge the fog on the debate of the labour market performance of the immigrants such as immigrants' labour market participation (e.g. Bevelander and Veenman 2004), income (e.g., Zhou and Logan, 1989), occupational status (e.g., Raijman and Semyonov, 1995), and job tenure (e.g., Aguilera, 2003). Furthermore, the large majority of the previous studies measure the human capital by using education, labour market experience and language proficiency (e.g., Kanas et al., 2009; Aguilera, 2003; Byoun, 2014). According to the theory of human capital, the people who are more talented, skilled and capable are more often employed in the labour market. This is to say, people with a higher education, work experience, and language proficiency are more likely to be employed in the labour market.

However, the previous studies show that even the immigrants who have the same or similar level of education and work experience, are more often unemployed than natives (e.g. Chiswick, 1978; Zeng and Xie, 2004). In order to explain ethnic disadvantage and/or discrimination against immigrants, the researchers made a distinction between host and origin country human capital in the field of immigration economics (e.g., Friedberg, 2000; Bratsberg and Ragan, 2002). Mainly, the problem of labour market participation of immigrants arises due to lack of host-country-specific skills that are required in the host country labour market (Duleep and Regets, 1999). By host-country-specific skills, researchers generally mean education and work experience that are obtained in the host-country. It is argued by several authors that the educational qualifications and work experience that have been acquired from the origin country might be less valued, difficult to transfer. Furthermore, employers may be more uncertain about the skills of immigrants relative to which are acquired in the host country (Kanas and Tubergen, 2009). Based on four non-Western immigrant groups, this study examines whether or not host and origin country human capital has an impact on the employment participation of the immigrants in the Dutch labour market.

Education Level

Although education is a significant factor of employment status, the impact of formal education that is acquired from origin-country might be weaker than the formal education of host country (Cohen and Bianchi, 1999). The reason for this is that the formal education acquired from origin country might hard to be transferred to the labour market of host-country or undervalued due to poor quality. (Friedberg, 2000; Kanas and Tubergen, 2009). Moreover, the formal education that is acquired in the host country is more easily recognized by employers not only due to a certainty of diplomas of degrees but also because education matches better with the needs of the labour market in the host country. For that reason, the immigrants who have formal education only from origin country are relatively disadvantaged than who have a host country formal education in the labour market (Byoun, 2014). Besides, there is also some specific further reasons of educational mismatch such as discrimination. For instance, immigrants might be exposed to discrimination due to different ethnic background in the labour market. Therefore, immigrants might need to acquire more education for being employed (Piracha and Vadean, 2013). Regarding self-employment, earlier studies theorized that the immigrants who acquired their education in the country of origin are more likely to be self-employed than salary employed (e.g., Sanders and Nee, 1996). However, Kanas (2011), found that origin country education decreases the likelihood of being self-employed. Hence, according to these arguments, it is expected that

Hypothesis 1:

The immigrants who acquired formal education from the Dutch schools are more likely to be employed than the immigrants who acquired formal education from origin country in the Dutch labour market.

Work Experience

Very much alike to formal education, it is suggested that work experience obtained in origin country of an immigrant is also often undervalued in the host country (Byoun, 2014). Since, market skills and experiences that are obtained from origin country of the immigrants are not perfectly transferable to the host-country (Bates 1997; Nee and Sanders, 2001). Namely, they are not expected to be productive and utilizable as natives in the labour market of host-country even though they are highly skilled foreign workers. Therefore, they are less likely to be employed in the labour market of the origin-country (Bevelander, 1999; Matto et al., 2008).

Self-employment is often considered as a solution to unemployment and poverty of immigrants in the literature of migration economics (Waldinger et al., 2006; Yoon, 1991). Because, the immigrants who lack host country human capital could be disadvantaged in the host country labour market. Therefore, self-employment seems to be an attractive opportunity to economic progress for immigrants who obtain origin country human capital and live in the host country (Logan et al., 1994). However, Kanas (2011) found that origin county work experience decreases the odds of immigrant self-employment compared to salary employment.

On the contrary, work experiences and skills that are obtained in the host country are more likely to be matched with the needs and expectations of the labour market of the host country (Zeng and Xie, 2004). Therefore, acquiring credentials and job-related experiences in the host country increases the employment participation of immigrants in the labour market (Bratsberg and Ragan, 2002; Friedberg, 2000). According to this line of reasoning;

Hypothesis 2: The immigrants who acquired work experience in the Dutch labour market are more likely to be employed in the Netherlands.

Language Proficiency

Language proficiency has been conceptualised as another element of human capital (Finnie and Meng, 2002). Many studies have shown that host-country language proficiency improves employment opportunities and economic status of immigrants (e.g., Chiswick and Miller, 1995, 2002; Dustman and Van Soest, 2002; Shields and Wheatly Price, 2002). Even, Kanas (2011) argued that the host country language proficiency is the most influential skill among the elements of human capital on labour market participation of immigrants. However, the large majority of the population of immigrants has a different mother tongue than the official language of the host country in many of Western countries. Therefore, most of the immigrants have poor skills of host country's official language (Espenshade and Fu 1997; Van Tubergen and Kalmijn 2005). Besides, language skills of origin country are clearly less valued in the host country's labour market (Kanas, 2011). Nevertheless, the impact of the language of origin-country on labour market participation of immigrants in the co-ethnic community should not be ignored. Origin-country's language proficiency could provide a real advantage in the co-ethnic community in the event of that they have their own business. Since, they usually contact and communicate with co-ethnic employees, clients, traders in the co-ethnic community (Evans, 1989; Waldinger et al., 2006). Beside of positive effect of language proficiency of host-

country, it can be argued that the effectiveness of host-country language proficiency on labour market participation of immigrants depends on required skills of existing jobs. For instance, an immigrant, especially males, who has poor host country language skills might conduct manual abundant works where communication is not important. However, the data prevents to deal with this dependency in the empirical analysis. Nevertheless, an immigrant who acquired host country's language skills is more likely to be employed where he/she arrived rather than an immigrant who has poor host country language proficiency (Chiswick and Miller 1995, 2002).

Hypothesis 3: The immigrants who learnt the Dutch language are more likely to be employed in the Netherlands.

2.2.2. Social Capital Theory

According to Byoun (2014), the strength of the social capital (i.e. strong and weak ties) are often used with the diversity of social capital (i.e. bonding and bridging ties) by some scholars (e.g., Islam et al., 2006; Van Oorschot et al., 2006). Ferlander (2007) claims that social capital forms of strength (strong and weak ties) are often used with those of diversity (bonding and bridging ties). Because the effects of strength of social capital form is similar to the form of bounding ties of social capital. And, weak form of social capital is similar to bridging ties of social capital (Ferlander, 2007). Bonding social capital implies having dense ties and full trust. Lancee (2012) defines individual bonding social capital as the collection of resources owned by the members of an individual's close and dense social network, which may become available to the individual as a result of the history of these relationships (p.24). Bonding ties are often used to refer to close relationships such as family, close friends, and relatives (Putnam, 1993). On the other hand, individual bridging social capital is defined by Lancee (2012) as the collection of resources owned by the members of an individual's wide social network, which may become available to the individual as a result of the history of these relationships (p.27). However, it is often used to refer to more distant relationships, e.g., members within voluntary associations (Putnam,1993).

Although the role of social capital in the job market has been widely developed and theoretically analysed in the economic and sociological literature, empirical applications are still limited. In general, the crux of the limitation is to quantify social capital and to obtain data from the limited available social capital measurements. However, the existing empirical studies support that social contacts do affect labour market outcomes. Moreover, the role of social capital on

employment status has been empirically proved as one of the driving forces of individual disparity in conjunction with human capital and external factors (Xue, 2008).

It is commonly known that contacts with co-ethnics are helpful for economic integration of immigrants into host country. Immigrants mostly rely on co-ethnic contacts upon arrival to the host country. Since, co-ethnic contacts facilitate bounded solidarity and reciprocity, and co-ethnic contacts are often ready to cooperate and provide help (Kanas, 2011). Bonding social capital may also provide access to low-paid, trusted labour to self-employed immigrants (Sanders and Nee, 1996). Therefore, there are mutual benefits to immigrants who are seeking for job and self-employed immigrants. It is empirically proved that bonding social capital increases self-employment among immigrants (Flap et al., 2000). Moreover, by relying on co-ethnic contacts, immigrants gain access to knowledge, assistance and other resources that facilitate their economic integration into the host country (Portes and Sensenbrenner, 1993; Aguilera and Massey 2003). For instance, they could get information about which jobs are available or how to present themselves to the employers from existing co-ethnic contacts. In the literature, it has been demonstrated that co-ethnic social contacts are positively associated with the labour market outcomes such as employment status (e.g. Bevelander and Veenman 2004). In line with arguments;

Hypothesis 4: The immigrants who have membership in one of the co-ethnic organization or/and who have co-ethnic partner are more likely to be employed in the Netherlands.

According to Kanas (2011), contacts with natives are particularly important for information diffusion and provision of recommendations. Since, natives in the host country have better resources, information and access to the labour market of host-country than immigrants. For instance, they have much more and better information about available jobs in the country, and they know better the country specific application procedure in comparison to immigrants. Furthermore, natives are also less often unemployed, have higher education level, and hold more prestigious jobs than immigrants. Therefore, contacts with natives might improve immigrants' entry into the host-country labour market and might provide a more diverse set of resources than co-ethnic contacts (Kanas, 2011).

Hypothesis 5: The immigrants who have social contacts with either Dutch natives or co-ethnics, or have a native partner are more likely to be employed.

The findings of inspired literatures (i.e., Kanas, 2011; Chiswick and Wang 2016) are evaluated and compared with the results of this study in chapter 4.

3. Variables and Description of the Data

3.1. Variables

3.1.1. Dependent Variable

Employment: The main objective of the study is whether human and social capital contributes to employment participation of four groups of non-Western immigrants in the Netherlands. Therefore, employment variable is used as a dependent variable to measure whether immigrants who are defined as potential labour force being employed or not (i.e., Kanas, 2011; Chiswick and Wang, 2016). By using of employment variable, it is aimed to measure whether human and social capital has an impact on employment participation of immigrants in the Netherlands. In order to measure employment participation of immigrants, respondents were asked about their employment status. It is a dichotomous variable. Those who are employed, including self-employed immigrants, the dichotomous variable equals '1', whereas the variable equals to '0' if the respondent is being unemployed (searching for a job) or non-employed (not in the labour market).

3.1.2. Explanatory Variables

The measures of human capital and social capital are included as independent variables. In the study, both human capital and social capital are measured by several representative variables. Human capital is measured by three representative indicators as educational attainment, work experience, and language proficiency. In the literature, these indicators are commonly used to examine human capital (e.g., Chiswick and Wang, 2016; Yao & van Ours, 2015; Kanas, 2011; Byoun, 2014). In addition to this, the data of SPVA allows making a distinction between origin country human capital and social capital, and host country human capital and social capital (Kanas, 2011). Therefore, human capital is evaluated regarding host country and origin country.

Education: To measure *host country education*, participants were asked their highest completed degree of education in the Netherlands. It is measured by five categorical variables as no education, Primary education (LO), lower secondary education (LBO/MAVO), intermediate education (MBO/HAVO/WO), and higher education (HBO/WO). The categorization of Dutch education level is inspired from Oosterbeek (1992). *Origin country education* refers to the

highest education degree that non-western immigrants obtained from the country that they come from. It is also measured by five categorical variables (Kanas, 2011).

Work Experience: The survey of SPVA provides a direct measure of *host country work experience*. The respondents were asked to report the number of years of work experience in the Netherlands. On the contrary, the survey does not include any questions about *origin country work experience*. Therefore, work experience abroad is measured by using information of age at immigration and the total years of schooling in the country of origin. It is calculated as; origin country work experience = age at migration – years of schooling on origin country – 6 (Kanas, 2011).

Dutch Language Skills: Respondents were addressed two separate questions to indicate their *language skills in Dutch*. The first question indicates whether participants experience difficulties with speaking Dutch. The second question indicates whether participants experience difficulties with reading Dutch. The participants have chosen among 'never', 'often' and 'sometimes'. The answers to both questions are defined as a dummy variable which equals 1 if the individual has problems in speaking or reading, and 0 if the individual does not often have a problem with speaking or reading in Dutch language.

Social capital is commonly measured by three representative indicators (i.e., social contacts, organization membership and ethnicity of partner) in previous studies (e.g., Kanas, 2011; Chiswick and Wang, 2016). The data of SPVA allows measuring social contact of non-western immigrants with both co-ethnic and native Dutch people, ethnicity of partner, and whether they are member of a co-ethnic or Dutch organization. The measures and descriptions are as below.

Social Contacts: It is important to determine whether a respondent has or does not have social contacts with natives. Therefore, *social contact* is used as one of the indicators of social capital. The respondents were asked whether they sometimes associate either with Dutch natives or co-ethnics during their free time. Respondents could choose among 'never', 'sometimes', and 'often'. The reference category of this variable is determined as 'never' in the study.

Organizations Membership: Firstly, the respondents were asked whether they were a member of any organisation in the Netherlands. If the answer was yes, the question whether the composition of the organisation is predominantly Dutch or co-ethnic was posed to them. By

following the approach of Kanas (2011), a variable with three categories is constructed (i.e., 'no membership', 'member of a predominantly co-ethnic organization', and 'member of a predominantly Dutch organization'. The category of 'no membership' is determined as reference category and two dummy variables are included.

Ethnicity of Partner: According to the Social Capital Theory, intermarriage leads immigrants to socially and economically integrated into the host country labour market by increasing their knowledge about the culture, language, and rules regulating the labour market (Gevrek, 2009). Therefore, *ethnicity of partner* is an important factor as a measure of social capital which might have a potential impact on being employed or not in the labour market. The participants of the survey are asked whether they are married or cohabitate. Moreover, they are asked about the country of birth of their partner. A dichotomous variable with three categories is constructed i.e. 'single', 'co-ethnic partner' and 'Dutch native partner'.

3.1.3. Control Variables

Along with human capital and social capital variables, other background characteristics of non-western background immigrants are also included.

Health: According to Portes and Rumbaut (1990), individual skills are important both for the successful adaptation of immigrants and natives in the host country labour market. Generally, health is used as a measure of human capital in empirical research (e.g., Becker, 1993; Byoun, 2014). However, Dean and Wilson (2009) found unemployment was not related to poor health. Even, the unemployed immigrants were very healthy. This is to say, the immigrants who treated themselves as healthy could be unemployed or vice versa. Therefore, health is decided to use as a control variable in this study. The respondents assessed their health status with a Likert scale. The possible answers were 'excellent', 'good', 'neutral', 'bad', 'very bad' to assess their health condition. The answers 'excellent' and 'good' are grouped as a 'good health status', and 'bad' and 'very bad' are grouped as a 'bad health status' in the analysis. The category of 'neutral' is determined as reference category and two dummy variables 'bad' and 'good' health status are included.

Ethnicity: A few studies identified ethnicity as an important aspect for immigrants' employment participation. Differences in employment participations may exist among different ethnic group of immigrants. Therefore, ethnicity of the immigrants is included as a control variable in the

analysis (Byoun, 2014). The ethnic groups might differ with respect to their socio-cultural integration. The longstanding connection between Surinam and the Netherlands, and Dutch Antilles and the Netherlands have resulted in several advantages for immigrants from these countries such as knowledge of the Dutch language, familiarity with the Dutch educational system and a long tradition of cultural exchange (Kanas, 2011). Therefore, Dutch Antilleans and Surinamese are expected to have higher employment participation rather than Turks and Moroccans. Participants reported their *ethnicity* themselves, including Turks, Moroccans, Surinamese, and Antilleans. The ethnicity of Turks is used as the reference category, and four dummy variables are included.

Years since Migration: The number of years spend in the host country is an influential factor on assimilation process of immigrants (Borjas, 1994). Therefore, immigrants who have been for a longer time in the host country might have acquired more country-specific skills. Furthermore, it may have contributed to the employment status of the immigrants in the labour market. Higher *years since migration* is expected to correlated with nationality because the immigrants who have lived longer in the Netherlands are more likely to become Dutch citizen due to naturalization conditions of the Netherlands. 'How many years that respondents have been living in the Netherlands?' was asked to the respondents.

Nationality: In the survey of SPVA, respondents were asked whether they have a Dutch nationality. To control whether immigrants having Dutch nationality are more likely to be employed rather than who do not have, the measure that indicates the nationality of immigrants is added. The dichotomous variable is constructed as having Dutch nationality '1'(citizenship) or not '0'.

3.2. Description of the Data

The Dutch Survey 'Social Position and Use of Public Facilities by Immigrants' (SPVA) is used as data to test the stated hypotheses. SPVA is a large cross-sectional survey. The survey was conducted in the years of 1988, 1991, 1994, 1998, and 2002 (Veenman, 1988; Martens and Veenman, 1991; Martens and Veenman, 1994; Martens and Tesser, 1998; De Koning and Gijsberts, 2002). The SPVA survey is the main data for monitoring the socio-economic and socio-cultural position of four major non-western immigrant groups i.e. Turks, Moroccans, Surinamese, and Antilleans, in the Netherlands (Kanas 2011; Martinovic, et al., 2009). The

survey also contains a native Dutch sample. However, they were not surveyed about social capital (Lancee, 2012).

The repeated cross-sectional surveys were collected by using a stratified random sampling method to target municipalities with a substantial percentage of immigrants. In order to obtain large enough random sample of members, the survey was conducted in ten to thirteen municipalities (depending on the year of survey) in which the population of immigrant was most intensively concentrated at the time of the surveys (Kanas, 2011). According to Lancee (2012), although the SPVA is a unique data set, there are some limitations. First of all, it is hard to infer causal relationship by using of SPVA since the data only provides a snapshot in time (Lancee, 2012; Kanas 2011; Martinovic et al., 2009). For instance, even, an immigrant who has social contacts with natives is expected to increase the odds of being employed as it hypothesized, or vice versa. Kanas (2011) claims that it is more problematic to examine causality between certain variables such as social contacts and employment by using cross-sectional data. However, Kanas (2011) mentions also that drawing causal conclusion is less problematic about the presumed effects of human capital on employment. Therefore, this issue will be taken into account while interpreting the empirical results with respect to health status and social contacts. Secondly, the non-response rate was quite high for Turks (48%) and Surinamese (56%), and there are no indications for systematic non-response (Groeneveld & Weyers-Martens, 2003). Thirdly, the SPVA sample is not entirely representative of all social-demographic characteristics of the total immigrant population in the Netherlands (Groeneveld & Weyers-Martens, 2003). In other respects, the survey includes some specific information about contacts with co-ethnics and natives, and origin and host country schooling (Kanas, 2011).

This study differs from the previous studies regarding the way the data has been approach in the empirical analysis. As it was motivated above, the data which are conducted in 1998 and 2002 are separately performed to test the impact of origin and host country human capital, and social capital on being employed in the Dutch labour market.

The sample is restricted to conducted years of 1998 and 2002. The first reason is that the measure that indicates employment participation is included only in the last three waves i.e. 1994, 1998, and 2002. Secondly, the partner's country of birth as a social capital variable was

not included in the first three surveys i.e. 1988, 1991 and 1994. Thirdly, the questionnaire did not contain the indicator of respondents' health until the survey of 1998.

Since 1991, the respondents were asked whether they would be willing to take part in the survey. Those who confirmed participated again at the time of the following survey. The immigrants who participated more than once in the survey are used in the empirical analysis of employment participation of the immigrants in the Netherlands. The respondents who participated once are excluded to avoid spurious and incorrect results. Therefore, the data can be described as strongly balanced regarding a number of observations.

This study makes use of respondents whose ages ranges from 20-64. Although the lower limit of 15 years is used in some of the economic research (e.g. Yao & van Ours, 2015), CBS defined age ranges of the potential labour force between 20 and 64 (CBS, 2010). The logic behind selecting the bottom and top age threshold is that respondents who are older than twenty are assumed to have finished their studies and be active on the labour market; sixty-five is the official retirement age in the Netherlands (Lancee, 2012).

Table 1: *Descriptive Statistics of 1998*

Statistics	Num. Obs	Mean	Std. Dev.	Min	Max
Employment	1,334	0.5262369	0.4994984	0	1
Social Contact (Co-ethnic)	1,334	0.2871064	0.4525814	0	1
Social Contact (Dutch)	1,334	0.2616192	0.4396811	0	1
Social Contact (Balanced)	1,334	0.2713643	0.4448304	0	1
Organization Membership (Co)	1,334	0.7436282	0.4367932	0	1
Organization Membership (None)	1,334	0.0704648	0.2560246	0	1
Organization Membership (Bal)	1,334	0.1101949	0.31325	0	1
Partner (Dutch)	1,334	0.5982009	0.4904456	0	1
Partner (Co-ethnic)	1,334	0.2421289	0.4285326	0	1
Partner (Other)	1,334	0.1214393	0.3267596	0	1
Work Experience NL	1,334	4.193403	1.998518	0	7
Work experience OC	1,334	3.35907	6.236704	0	23
Dif. In Speaking (Always)	1,334	0.011994	0.1088992	0	1
Dif. In Speaking (Never)	1,334	0.2878561	0.4529335	0	1
Dif. In Speaking (Sometimes)	1,334	0.1964018	0.3974249	0	1
Dif. In Reading (Always)	1,334	0.5134933	0.5000053	0	1
Dif. In Reading (Never)	1,334	0.1806597	0.3848802	0	1
Dif. In Reading (Sometimes)	1,334	0.2173913	0.4126257	0	1
Health (Goed)	1,334	0.1634183	0.3698855	0	1
Health (Neutral)	1,334	0.4452774	0.4971828	0	1
Health (Bad)	1,334	0.2173913	0.4126257	0	1
Higher Educ. in OC	1,334	0.101949	0.3026947	0	1
Intermed Educ. in OC	1,334	0.2076462	0.4057742	0	1
Lower Educ. in OC	1,334	0.3230885	0.4678316	0	1
Primary Educ. in OC	1,334	0.3223388	0.4675472	0	1
Higher Educ. in NL	1,334	0.1184408	0.3232505	0	1
Intermed Educ. in NL	1,334	0.0757121	0.2646362	0	1
Lower Educ. in NL	1,334	0.6986507	0.4590162	0	1
Primary Educ. in NL	1,334	0.041979	0.2006164	0	1
Ethnicity (Antilleans)	1,334	0.1664168	0.372594	0	1
Ethnicitiy (Maroccan)	1,334	0.1469265	0.3541654	0	1
Ethnicity (Turks)	1,334	0.3350825	0.4721963	0	1
Ethnicity (Surinamese)	1,334	0.314093	0.4643277	0	1
Ethnicity (Dutch)	1,334	0.0374813	0.1900092	0	1
Dutch Nationality	1,334	0.2736132	0.4459799	0	1
Other Natonality	1,334	0.0172414	0.1302184	0	1
Dual Nationality	1,334	0.5209895	0.4997466	0	1
YSM max 2 years	1,334	0.0322339	0.1766869	0	1
YSM 2-4- years	1,334	0.1469265	0.3541654	0	1
YSM 5-9 years	1,334	0.1086957	0.3113737	0	1
YSM 10-14 years	1,334	0.1806597	0.3848802	0	1
YSM 15-19 years	1,334	0.2068966	0.4052326	0	1
YSM 20-24 years	1,334	0.2046477	0.4035952	0	1
YSM +25 years	1,334	0.0997001	0.2997121	0	1

Table 2: *Descriptive Statistics of 2002*

Statistics	Num. Obs	Mean	Std. Dev.	Min	Max
Employment	1,334	0.5532234	0.4973456	0	1
Social Contact (Co-ethnic)	1,334	0.2263868	0.4186493	0	1
Social Contact (Dutch)	1,334	0.2833583	0.4507979	0	1
Social Contact (Balanced)	1,334	0.2871064	0.4525814	0	1
Organization Membership (Co)	1,334	0.7083958	0.4546715	0	1
Organization Membership (None)	1,334	0.0772114	0.2670267	0	1
Organization Membership (Bal)	1,334	0.1641679	0.3705668	0	1
Partner (Dutch)	1,334	0.2901049	0.4539808	0	1
Partner (Co-ethnic)	1,334	0.4407796	0.4966668	0	1
Partner (Other)	1,334	0.125937	0.3319028	0	1
Work Experience NL	1,334	4.193403	1.998518	0	7
Work experience OC	1,334	3.49925	6.346668	0	22
Dif. In Speaking (Always)	1,334	0.005997	0.0772367	0	1
Dif. In Speaking (Never)	1,334	0.32009	0.4666858	0	1
Dif. In Speaking (Sometimes)	1,334	0.1574213	0.3643341	0	1
Dif. In Reading (Always)	1,334	0.5262369	0.4994984	0	1
Dif. In Reading (Never)	1,334	0.2016492	0.4013821	0	1
Dif. In Reading (Sometimes)	1,334	0.2023988	0.4019386	0	1
Health (Goed)	1,334	0.1446777	0.3519075	0	1
Health (Neutral)	1,334	0.404048	0.4908909	0	1
Health (Bad)	1,334	0.2511244	0.4338226	0	1
Higher Educ. in OC	1,334	0.1371814	0.3441678	0	1
Intermed Educ. in OC	1,334	0.2098951	0.4073862	0	1
Lower Educ. in OC	1,334	0.3785607	0.4852102	0	1
Primary Educ. in OC	1,334	0.2331334	0.4229851	0	1
Higher Educ. in NL	1,334	0.1476762	0.3549117	0	1
Intermed Educ. in NL	1,334	0.101949	0.3026947	0	1
Lower Educ. in NL	1,334	0.631934	0.4824603	0	1
Primary Educ. in NL	1,334	0.0307346	0.1726626	0	1
Ethnicity (Antilleans)	1,334	0.1776612	0.3823706	0	1
Ethnicitiy (Maroccan)	1,334	0.1484258	0.3556549	0	1
Ethnicity (Turks)	1,334	0.3388306	0.4734897	0	1
Ethnicity (Surinamese)	1,334	0.3350825	0.4721963	0	1
Dutch Nationality	1,334	0.2278861	0.419626	0	1
Other Natonality	1,334	0.023988	0.1530691	0	1
Dual Nationality	1,334	0.5457271	0.4980914	0	1
YSM max 2 years	1,334	0.0082459	0.0904656	0	1
YSM 2-4- years	1,334	0.05997	0.2375203	0	1
YSM 5-9 years	1,334	0.1581709	0.365038	0	1
YSM 10-14 years	1,334	0.0997001	0.2997121	0	1
YSM 15-19 years	1,334	0.1896552	0.3921752	0	1
YSM 20-24 years	1,334	0.3913043	0.4882253	0	1
YSM +25 years	1,334	0.0929535	0.2904762	0	1

4. Methods and Empirical Analysis

Formulation of Logistic Regression Model

In this study, the dependent variable that indicates the employment participation of the immigrants is a dichotomous variable. It only contains data coded as '1' being employed and '0' not employed. Therefore, the logistic regression is the appropriate model to analyse the employment participation of immigrants in the labour market of the Netherlands. Logistic regression is a statistical method to describe a dataset and explain the relationship between a dichotomous (nominal) dependent variable and one or more independent variables (O'Connell, 2006). The illustration logistic regression model with a multiple predictor is as:

$$logit(p) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + \beta_n X_n$$

Where p is the probability of presence characteristic of interest:

$$logit(p) = log\left(\frac{p(y=1|x)}{p(y=0|x)}\right)$$

The logit begins by transforming probabilities into odds. Probabilities vary between 0-1, and express the likelihood event as a proportion of both occurrences and nonoccurrence. Odds express the likelihood of an occurrence relative to the likelihood of non-occurrence (Pampel, 2000). Exponentiated logistic regression can be interpreted as odds ratios:

$$odds = \left(\frac{p(y=1|x)}{p(y=0|x)}\right) = e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + \beta_n X_n}$$

Linktest

A frequently used formal test for a correct model specification is the linktest function in Stata. The idea behind it is that if the model is properly specified, no additional explanatory variables should be significant above chance (Curini, 2014). This test considers whether the dependent variable _hat needs to be transformed (linked) to accurately relate to the independent variables, by adding the squared independent variable _hatsq to the model. An incorrectly specified model will have a nonsignificant t-test versus the unsquared version.

Table 3: *Linktest*

	Employment Part. 1998		Employment Part. 2002	
	Coef	Std. Err.	Coef	Std. Err.
_hat	1.00746***	0.0604743	1.02115***	0.0630224
_hatsq	-0.033564	0.0431589	-0.0581849	0.0437453
_cons	0.039172	0.0819789	0.0661551	0.0823189

***p<0.01; **p<0.05; *p<0.1

In Table 3, there are the results of tests for both the logistic models of 1998 and 2002. Based on highly significant _hat and insignificant _hatsq for both years, it appears that the model using for independent variables under the heading of social and human capital is correctly specified.

4.1. Logistic Regression Analysis of SPVA 1998

4.1.1. Results

Table 4 presents the regression estimates employment status for 1998. Column (1) is a regression model that measures the impact of social capital on the employment status of the immigrants in the Netherlands. Column (2) presents the effect of human capital immigrants on the employment status of immigrants. Column (3) includes both social and human capitals. Column (4) is a regression model that estimates the impacts of social capital and human capital including control variables on immigrants labour market participation in the Netherlands.

Test for Multicollinearity

In logistic regressions, Stata automatically removes a variable that is a perfect linear combination of others (Chen et al., 2003). In addition to this, the Variance Inflation Factor (VIF) and Pearson's correlation are calculated for each independent variable in order to test for potential multicollinearity (Table 1; Appendix Table A3). The calculated VIFs range from 1.05 to 2.77, well below the critical threshold of 5. Moreover, the values of Pearson's correlation are less than critical threshold of 0,70. Based on these results, there is no multicollinearity among variables.

Table 4: *Logistic Regression Analysis of Employment Participation Using 1998 SPVA*

	Column 1			Column 2			Column 3			Column 4			
Statistics	Coef	Odds	t	Coef	Odds	t	Coef	Odds	t	Coef	Odds	t	VIF
Social Contact (Co-ethnic)	-0.5452977***	0.5796692***	-3.91				0.1593655	0.8578199	0.336	-0.092294	0.911837	-0.55	1.25
Social Contact (Dutch)	0.3087979**	1.361787**	2.18				-0.0273935	0.9729783	-0.17	-0.0775887	0.9253449	-0.47	1.35
Organization Membership (Co)	-0.2119364	0.8090161	-1.41				0.044844	1.045865	0.26	0.0269037	1.027269	0.15	1.36
Organization Membership (None)	0.3915469	1.479.267	1.47				0.4804561	1.616812	1.64	0.4782963	1.613323	1.57	1.30
Partner (Dutch)	-1.081932***	0.33894***	-5.92				-0.361179*	0.6968543*	-1.74	-0.4493192*	0.6380624*	-1.88	2.39
Partner (Co-ethnic)	-1.175009***	0.3088163***	-5.85				-0.4660538**	0.6274735**	-2.05	-0.6582139**	0.5177753**	-2.68	2.21
Work Experience NL				0.2800278***	1.323167***	8.42	0.2612775***	1.298588***	7.55	0.3141003***	1.369027***	8.00	1.13
Work experience OC				0.0218495**	1.02209**	2.05	0.0246016**	1.024907**	2.30	0.010888	1.010947	0.95	1.17
Dif. In Speaking (Always)				-0.0031365	0.9968684	-0.01	0.0462338	1.047319	0.08	-0.0641729	0.9378428	-0.10	1.05
Dif. In Speaking (Never)				0.6723528**	1.958841**	3.31	0.6347563**	1.886562**	3.06	0.4493439**	1.567284**	2.07	2.30
Dif. In Reading (Always)				0.6437477***	1.903602***	3.60	0.5609555**	1.752346**	2.91	0.2040061	1.226306	0.93	2.38
Dif. In Reading (Never)				-0.4103392**	0.6634252**	-2.01	-0.4369802**	0.6459842**	-2.13	-0.3349142	0.7153995	-1.58	1.65
Higher Educ. in OC				0.5478906**	1.729601**	2.31	0.5400783**	1.716141**	2.26	0.4123132*	1.510307	1.66	1.23
Intermed Educ. in OC				0.2741382	1.315397	1.54	0.2521448	1.286782	1.40	-0.0140447	0.9860535	-0.07	1.36
Lower Educ. in OC				-0.2920314*	0.7467451*	-1.83	-0.3058684*	0.7364835*	-1.90	-0.3803108**	0.6836489**	-2.27	1.43
Higher Educ. in NL				0.2313567	1.260309	0.79	0.2308262	1.25964	0.78	0.1787449	1.195716	0.59	1.91
Intermed Educ. in NL				0.0638278	1.065909	0.20	0.1156252	1.122575	0.36	0.0563059	1.057921	0.17	1.64
Lower Educ. in NL				-0.8395634***	0.431899***	-3.59	-0.758292***	0.4684659***	-3.17	-0.7169047**	0.4882612**	-2.88	2.77
Health (Goed)										0.1319471	1.141048	0.67	
Health (Bad)										-1.128806***	0.3234192***	-7.65	
Ethnicity (Antilleans)										0.4435552*	1.558237*	1.70	
Ethnicitiy (Maroccan)										-0.5792754**	0.5603042**	-2.05	
Ethnicity (Turks)										-0.3304073	0.718631	-1.36	
Ethnicity (Surinamese)										0.3950777*	1.484499*	1.90	
Dutch Nationality										-0.2029799	0.8162947	-1.09	
Other Natonality										-1.691409**	0.1842596**	-2.51	
YSM 2-4 years										0.2941463	1.34198	0.93	
YSM 5-9 years										0.0388681	1.039633	0.12	
YSM 10-14 years										-0.2582592	0.772395	-0.79	
YSM 15-19 years										-0.1901919	0.8268004	-0.58	
YSM 20-24 years										-0.628742*	0.5332622*	-1.87	
YSM +25 years										-0.8624796**	0.4221141**	-2.28	
Log Likelihood	-870.66909	-870.66909		-752.00095	-752.00095		-747.4783	-747.4783		-718.73373	-718.73373		
R-square	0.0565	0.0565		0.1851	0.1851		0,1900	0,1900		0.2212	0.2212		
Num. Obs.	1,334	1,334		1,334	1,334		1,334	1,334		1,334	1,334		
Mean													1.70

***p<0.01; **p<0.05; *p<0.1,

The dependent variable is employment participation of immigrants in the Netherlands

Results of Social Capital

Initially, it is good to refresh memory about the expectation with regards to the impact of social capital on employment participation. Generally speaking, social capital is expected to contribute to employment participation of immigrants in the Netherlands. It was hypothesized that a membership in co-ethnic organizations or co-ethnic partner has a positive effect on immigrants' employment participation in the Dutch labour market (H4). In Column (1), co-ethnic organization membership is negatively associated with employment status. However, it is not statistically significant. Moreover, co-ethnic partner is statistically highly significant at the 1% level. As such in co-ethnic organization membership, it is negatively associated with employment status. A possible explanation for this negative association is that immigrants could have a membership in co-ethnic organization in which the people do not know the host country labor market as well as natives and who have less information on job opportunities than natives. In contrast to the hypothesis 4, co-ethnic partner has a negative contribution to the immigrants' employment participation in the Dutch labour market. Regarding social capital, it was hypothesized also that the immigrants who have social contacts with either Dutch natives or co-ethnics, or have a native partner are more likely to be employed (H5). In Column (1) social contact with natives is statistically significant at 5% level and has a positive relationship with employment participation of immigrants. Beside, the results show that native partner is statistically highly significant at the 1% level. However, it is negatively associated with employment participation. According to the empirical results, having social contacts with natives contributes to employment participation of the immigrants in the Netherlands. In contrast to the expectations, the immigrants who have a Dutch partner are less likely to be employed in the labour market.

Results of Human Capital

As dealing with human capital entirely, both origin and host country-specific skills, language proficiency in Dutch are expected to be positively associated with the employment participation of immigrants in the Netherlands. It was hypothesized that who acquired work experience are more likely to be employed in the Netherlands (H2). Empiric results of Column (2) show that work experience both in origin country and in the Netherlands are statistically significant respectively at 5% and 1% level. The immigrants who have work experience in the Netherlands are 32.3% (odds ratio=1.323) more likely to be employed. On the other hand, the immigrants who have work experience which is obtained in the origin country is likely to be employed with

2.1%. This is to say, work experience in the Netherlands is more important than work experience which is acquired in the origin country in the Dutch labour market. In the meantime, it should be remembered that whereas work experience in the Netherlands is estimated by direct measure, an indirect measure is used for origin country work experience (origin country work experience = age at immigration – years of schooling on origin country – 6). By this indirect measure, immigrants are assumed to work until they migrated to the Netherlands. And, origin country work experience is calculated by excluding age of starting school, and years of schooling in the origin country. Furthermore, it was also hypothesized that the immigrants who learnt the Dutch language are more likely to be employed (H3). The language proficiency in Dutch was evaluated in two categories as speaking and reading difficulties in Dutch. The variable that indicates whether immigrants do not experience any speaking difficulties is statistically significant at the level of 5%, and it is positively associated with employment status. The results show that the immigrants who do not find hard to speak Dutch language are likely to be employed in the labour market. Besides, the variables that indicate whether or not immigrants experience difficulties while reading and speaking Dutch are both statistically significant. Unlike hypothesis 3, the immigrants that find it difficult to read in Dutch are 90% (odds ratio= 1.903) likely to be employed. Although, the data prevents to say more about this, the reason could be that the most of the immigrants who participate in the survey might be employed in the manual labour jobs where the language proficiency is disregarded or self-employed. Thereby, it can be concluded as the speaking skills have an influential impact on employment participation of the immigrants in the Dutch labour market. Further, it was hypothesized that the immigrants who acquired formal education from the Dutch schools are more likely to be employed than the immigrants who acquired formal education from origin country in the Dutch labour market (H1). Lower education both in origin country and in the Netherlands are statistically significant (in OC at 10% level; in the Netherlands 1% level). And, these two variables have a negative relationship with employment status. It means that both lower education level which is acquired either in host country or origin country have a negative impact on employment participation. In addition to that, higher education in origin country is statistically significant at 5% level and positive. Namely, an immigrant graduated from a higher level of education in origin country is 72.6% (odds ratio=1.729) more likely to be employed in the Netherlands.

Results of Human and Social Capital (Robustness Checks)

After gathering the variables of social and human capital in Column (3), both social contact with Dutch and co-ethnic are not statistically significant anymore. In other words, the results suggest that both social contacts are sensitive to inclusion of human capital indicators in the analysis. However, the variables that indicate whether immigrants have a Dutch or co-ethnic partner are still statistically significant even if the level of significance was decreased. On the other hand, the human capital variables which were significant when the regression was performed including only human capital variables, remain to be statistically significant after adding the variables of social capital.

Results of Human and Social Capital including Control Variables

In column (4) beside of human capital and social capital indicators, control variables are also included in the analysis. Although the statistical significance levels of the Dutch ($p<0.1$) and co-ethnic partner ($p<0.05$) are weakened, they are the only social capital variables that remain statistically significant. In addition to that, both variables are still negatively associated with employment status. Work experience in the Netherlands ($p<0.01$), speaking Dutch language without difficulty ($p<0.05$), bad health status ($p<0.01$), lower education in origin country ($p<0.05$), and lower education in the Netherlands ($p<0.05$) are still statistically significant, after gathering human and social capital variables and including control variables into the analysis. However, the variables of social contacts with co-ethnic and natives, work experience in origin country, difficulty in reading Dutch and reading Dutch without difficulty, and higher education in origin country lost the statistical significance after gathering human capital and social capital variables and including the control variables. As it was expected, immigrants who have worked in the Netherlands before are advantaged with 36.9% (odds ratio = 1.369) in the Dutch labour market. The result indicates that immigrants who have not experienced any difficulty while speaking Dutch are being employed proportionally 56.7% (odds ratio=1.567) higher than immigrants who have often or sometimes experienced difficulties while speaking Dutch. The immigrants who feel bad concerning their health condition are 32.3% (odds ratio=0.323) less likely to be employed in the Dutch labour market. Immigrants who obtain a lower level of education in origin country and host country respectively 68.3% (odds ratio=0.683), 48.8% (odds ratio=0.488) are less likely to be employed in the Netherlands. This is opposed to the fact that immigrants who obtained a higher level of education in the origin country are 51% (odds ratio=0.510) more likely to be employed in the Dutch labour market. In respect to health status, bad health condition is highly statistically significant ($p<0.01$) and negatively associated with

employment participation. Besides, all the ethnicity variables are statistically significant except ethnicity of Turks. While the ethnicity of Antilleans and Surinamese have a positive association, Moroccans are negatively related to the employment status. Moreover, having a nationality other than Dutch is also statistically significant and negatively associated. Lastly, years of migration between 20-24 years and more than 25 are statistically significant. However, both of these dummy variables are negatively related with employment participation of immigrants in the Netherlands

4.2. Logistic Regression Analysis of SPVA 2002

4.2.1. Results

Table 5 presents the regression estimates employment status for 2002. Column (1) is a regression model that measures the impact of social capital on the employment status of the immigrants in the Netherlands. Column (2) presents the effect of human capital immigrants on the employment status of immigrants. Column (3) includes both social and human capitals. Column (4) is a regression model that estimates the impacts of social capital and human capital including control variables on immigrants' labour market participation in the Netherlands.

Test for Multicollinearity

To test for multicollinearity, the Variance Inflation Factor (VIF) and Pearson's correlation are calculated for each independent variable (Table 1; Appendix Table A4). The calculated VIFs range from 1.04 to 3.18, well below the critical threshold of 5. Moreover, the values of Pearson's correlation are less than critical threshold of 0,70. Based on these results, there is no multicollinearity among variables.

Results of Social Capital

In Column (1), co-ethnic organization membership dummy variable is statistically significant at the 1% level and it is negatively associated with employment status of the immigrants in the Dutch labor market. Furthermore, co-ethnic partner is statistically significant ($p<0.05$) and has a positive relationship with employment participation. In contrast to the previous analysis, co-ethnic partner has a positive contribution to the immigrants' employment participation in the labour market. Aforementioned, the surveys of SPVA are conducted 4 years interval. Therefore, the possible reason could be that an immigrant with a co-ethnic partner who used to be unemployed might be employed after 4 years due to developments of his or her skills. On the other hand, co-ethnic organization membership has a negative impact on employment

participation. The results regarding to hypothesis 5 are as follows. In Column (1), social contact with co-ethnics is statistically significant however it has a negative relationship with employment status. The reason could be that the members of co-ethnic groups may not know well about the salaried job opportunities or situations of the host country labour market than natives (Byoun, 2014). Although social contacts with Dutch has a positive relationship with employment participation of immigrants, it is not statistically significant. Beside, the results show that native partner is statistically significant at the 5% level. However, it is negatively associated with employment participation. The results show that the immigrants who have co-ethnic social contacts are less likely to be employed in the Netherlands. As such in previous analysis, having a Dutch partner has a negative effect on employment participation of immigrants.

Table 5: *Logistic Regression Analysis of Employment Participation Using 2002 SPVA*

	Column 1			Column 2			Column 3			Column 4			
Statistics	Coef	Odds	t	Coef	Odds	t	Coef	Odds	t	Coef	Odds	t	VIF
Social Contact (Co-ethnic)	-0.4575674**	0.0930142**	-3.11				0.1690651	0.9708195	-0.18	0.0744	1.077238	0.42	1.35
Social Contact (Dutch)	0.0827661	1.086288	0.60				0.0385569	1.03931	0.25	0.1043736	1.110015	0.66	1.21
Organization Membership (Co)	-0.6159906***	0.5401056***	-4.24				-0.3601917**	0.6975426**	-2.23	-0.3400875**	0.711708**	-2.02	1.35
Organization Membership (None)	-0.0548621	0.9466157	-0.21				-0.1490657	0.8615125	-0.54	0.0217735	1.022012	0.08	1.30
Partner (Dutch)	-0.451229**	0.636845**	-2.93				-0.1193296	0.8875152	-0.66	-0.3963027	0.672803	-1.06	1.81
Partner (Co-ethnic)	0.3216906**	1.379458**	2.30				0.1382368	1.148247	0.86	-0.2633259	0.7684914	-1.24	1.62
Work Experience NL				0.1048612**	1.110556**	3.33	0.10574**	1.111533**	3.24	0.218612***	1.244348***	5.73	1.11
Work experience OC				-0.0029675	0.9970369	-0.29	-0.0030452	0.9969594	-0.30	-0.014977	0.9851346	-1.33	1.18
Dif. In Speaking (Always)				0.9911142	2.694235	1.20	0.9613086	2.615116	1.16	1.198011	3.313521	1.36	1.04
Dif. In Speaking (Never)				0.5945342**	1.812187**	2.70	0.5488528**	1.731266**	2.42	0.5301209**	1.699138**	2.21	2.94
Dif. In Reading (Always)				0.965924***	2.627214***	4.95	0.8407651***	2.31814**	3.88	0.5971888**	1.817004**	2.54	3.18
Dif. In Reading (Never)				0.2380794	1.26881	1.17	0.2428858	1.274923	1.19	0.1775292	1.194263	0.83	1.87
Higher Educ. in OC				0.5035616**	1.654604**	2.38	0.4949235**	1.640373**	2.32	0.2122937	1.236511	0.93	1.40
Intermed Educ. in OC				0.8315845***	2.296955***	4.37	0.7762486***	2.173304***	4.03	0.404689*	1.498836*	1.93	1.54
Lower Educ. in OC				0.2222096	1.248833	1.35	0.2190875	1.24494	1.32	0.0275655	1.027949	0.15	1.73
Higher Educ. in NL				-0.0703217	0.9320939	-0.25	-0.0578485	0.9437929	-0.21	-0.1615097	0.8508582	-0.56	2.00
Intermed Educ. in NL				-0.5389601*	0.5833546*	-1.88	-0.4856402*	0.6153032*	-1.68	-0.6061162**	0.5454653**	-2.03	1.77
Lower Educ. in NL				-1.195755***	0.3024754***	-5.22	-1092154***	0.335493***	-4.68	-1.138141***	0.3204143***	-4.63	2.89
Health (Goed)										-0.0825186	0.9207944	-0.40	
Health (Bad)										-1.041377***	0.3529683***	-7.28	
Ethnicity (Antilleans)										0.2611767	1.298457	0.77	
Ethnicitiy (Maroccan)										-0.9260913**	0.3960989**	-2.94	
Ethnicity (Turks)										-0.2611767	0.7701448	-0.77	
Ethnicity (Surinamese)										0.0032209	1.003226	0.01	
Dutch Nationality										-0.4914418**	0.6117437**	-2.75	
Other Natonality										-2.325805***	0.0977048***	-4.44	
YSM 2-4- years										0.3195715	1.376538	0.45	
YSM 5-9 years										0.2846889	1.329348	0.42	
YSM 10-14 years										-0.1740675	0.8402402	-0.25	
YSM 15-19 years										-0.2402663	0.7864184	-0.35	
YSM 20-24 years										-1.000064	0.367856	-1.47	
YSM +25 years										-0.467068	0.6268375	-0.66	
Log Likelihood	-875.06606	-875.06606		-764.46125	-764.46125		-760.71916	-760.71916		-714.82337	-714.82337		
R-square	0.0458	0.0458		0.1664	0.1664		0,1705	0,1705		0.2205	0.2205		
Num. Obs.	1,334	1,334		1,334	1,334		1,334	1,334		1,334	1,334		
Mean													1.70

***p<0.01; **p<0.05; *p<0.1

The dependent variable is employment participation of immigrants in the Netherlands

Results of Human Capital

Regarding the human capital variables, the results of Column (2) show that work experience in the Netherlands is statistically significant at 5% level and positively associated with employment participation. In contrast to previous analysis and earlier researches, work experience which is obtained in the origin country is not statistically significant. The immigrants who have work experience in the Netherlands are 11% (odds ratio=1.110) more likely to be employed. Furthermore, the variable that indicates whether immigrants do not experience any speaking difficulties is statistically significant at the 5%, and it is positive. An immigrant who does not experience any difficulty while speaking Dutch is 81.2% (odds ratio=1.812) more likely to be employed in the Netherlands. Besides, the variable that indicates whether immigrants find it difficult to read in the Dutch language is highly statistically significant ($p<0.01$) and positive. In an economic point of view, the reason may be that the majority of immigrants work in a low-skilled job, and language proficiency is not a must in that level of jobs. Based on these results, it can be concluded that the speaking skills have an influential impact on employment participation of the immigrants in the Dutch labour market, as well as in the previous empirical analysis. Further, both higher (at 5% level) and intermediate level (at 1% level) of education in the origin country are statistically significant and positively associated with employment participation. It means that both higher and intermediate education levels which are acquired in the origin country have positive impacts on employment participation of the immigrants. On the other hand, the lower education and intermediate education levels that are obtained in the Netherlands are statistically significant (respectively at the 1% and 5% level) and negatively associated with the dependent variable. Therefore, it can be said that lower and intermediate level of schooling have negative influence on employment status in the Dutch labour market.

Results of Human and Social Capital (Robustness Checks)

After gathering the variables of social and human capital in Column (3), it is observed that only social contact with co-ethnic, having Dutch and co-ethnic partner variables of social capital lost statistical significance. This is in contrast with the human capital variables, which were significant when the regression was performed including only human capital variables, remain to be statistically significant after adding social capital variables.

Results of Human and Social Capital including Control Variables

In column (4) beside of human capital and social capital indicators, control variables are also included in the analysis as it was done in the analysis of 1998. After adding all variables into the analysis, among social capital variables, only membership of co-ethnic organisation has remained statistically significant even if it has decreased to 5% level. In respect to human capital, work experience in the Netherlands ($p<0.01$), speaking Dutch without difficulty ($p<0.05$), difficulty in reading Dutch ($p<0.05$), bad health status ($p<0.01$), intermediate level of education in origin country ($p<0.1$), and intermediate ($p<0.05$) and lower level of education ($p<0.01$) in the Netherlands are still statistically significant. However, the variables of social contacts with a co-ethnic, Dutch and co-ethnic partner, a higher level of education in origin country lost the statistical significance after gathering human capital and social capital variables and including the control variables. An immigrant who has a membership of the co-ethnic organisation is 71.1% (odds ratio= 0.711) less likely to be employed in the Netherlands. As it is expected, immigrants who have worked in the Netherlands before are advantaged with 24.4% (odds ratio = 1.244) in the Dutch labour market. The results of the language proficiency variables show that the odds of immigrants who have not experienced any difficulty while speaking Dutch to be employed is higher than immigrants those who have often or sometimes experienced difficulties while speaking Dutch. Besides, the odds ratio indicates that the immigrants who find it difficult to read in Dutch are 81.7% more likely to be employed. However, the reason could be that most of the first generation immigrants are not highly educated and work in the manual labour jobs where the high skill of language proficiency is disregarded. Therefore, high participation of immigrants those who find reading in Dutch difficult in manual labour jobs may have an influential effect on this result. In respect to health status, the immigrants who feel bad concerning their health condition are 35.2% (odds ratio=0.352) less likely to be employed in the Dutch labour market. Immigrants who obtain the intermediate level of education in origin country and the host country, and lower education in the Netherlands are, respectively 49.8% (odds ratio=0.498), 54.5% (odds ratio=0.545), and 32% (odds ratio=0.320) are less likely to be employed in the Netherlands. In respect to health status, bad health condition is highly statistically significant ($p<0.01$) and negatively associated with employment participation. The odds ratio of bad health status shows that the immigrants those who have serious health problems are 34.1% (odds ratio = 0.341) less likely to be employed in the Dutch labour market. Among the control variables, ethnicity of Moroccan is statistically significant at the 5% level and negative. Moreover, both immigrants with Dutch nationality and

with other nationality variables are statistically significant respectively with 5% and 1% level. Variables that represents having Dutch or other nationality are negatively associated with the employment status of immigrants.

4.3. Comparison of the Results of Logistic Regression Analysis of SPVA 1998 and 2002

The years of 1998 and 2002 data are analysed and evaluated above. In this section, the final results of each year are compared with each other (Table A2). And, the significant results are evaluated in the case they are matched with each other in the analyses. Regarding human capital, the variables of work experience in the Netherlands are consistently significant in both analysis and positively associated with employment participation of immigrants in the Netherlands. As it was hypothesized (H2), it is found that years of work experience which is obtained in the Netherlands contributes to the employment participation of the immigrants in the Dutch labour market. Similarly, the variable that indicates the immigrants those who have never experienced any difficulty while speaking Dutch is significant and has a positive relationship with the employment status of the immigrants in the Dutch labour market in both the years of 1998 and 2002. As it is specified in hypothesis 3, speaking skills in Dutch language have an influential impact on employment participation of the immigrants in the Netherlands. In addition to these, lower education that is obtained in the Netherlands by the immigrants is statistically significant and negatively related to the employment status of immigrants in the Dutch labour market. Namely, the immigrants who acquired lower education in the Netherlands are less likely to be employed in the Dutch labour market. However, it would be wrong to generalize these results as host country schooling has a negative impact on being employed in the labour market. Since, the indicator of host country schooling used as a dummy variable (i.e. lower, secondary, intermediate, high) and only lower education level obtained in the host country is significant. The reason could be that, especially among Turkish and Moroccans immigrants, women do not often have higher educational level and participate less to the labour market than males due to the religious beliefs, culture etc. Therefore, women's less employment participation might have a negative effect on host country lower education variable (Lancee, 2012).

As it was mentioned before, it is likely that the impact of human and social capital measures on employment participation might change after four years. Because the immigrants could invest in education, increase job experiences, develop job skills and/or widen their social network in the Netherlands between 1998 and 2002. The common characteristic of education, work

experience and language proficiency is that these three human capital measures are time variant and can be improved however these cannot be declined over time. Furthermore, it would not be wrong to say that these three measures are the most important determinants on employment participations of the immigrants. Therefore, it is likely that work experience in the Netherlands, and language proficiency are consistently significant in both analyses. Regarding the measure of bad health condition, the reason why this measure is steadily significant in both analyses could be permanent disease. The immigrants could have permanent diseases which did not allow immigrants to work.

With respect to the human capital, Kanas (2011) also found that work experience acquired in the host country significantly and positively affects the employment. Unlike this study, she did not find any significant result with regard to Dutch language proficiency. Furthermore, the author found that both education acquired from origin and host country positively and significantly affect the employment participation of the immigrants in the Netherlands. And, the results show that the returns to origin country education are lower than to host country education.

As well as in this study, the results of Chiswick and Wang (2016) show that Dutch language proficiency has significant and positive impact on employment participation of the immigrants in the Netherlands. However, they did not find any significant effect of host country work experience on employment status. Although, this study did not find any significant result with respect to social capital variables, Chiswick and Wang (2016) found that the immigrants who have participated in the Dutch organization is significantly associated with a higher probability of being employed. According to Kanas (2011), only immigrants who do not have any membership to any organization has negatively and significantly impact on the employment status.

Although Kanas (2011) and Chiswick and Wang (2016) used the data of SPVA as similar as this study, the results differ from each other. The different results of Chiswick and Wang (2016) might stem from using 4 waves of the data (i.e., 1991, 1994, 1998 and 2002), whereas this study used only two waves (i.e., 1998 and 2002). Originally, SPVA is a large scale cross-sectional survey. Nevertheless, Chiswick and Wang (2016) pooled the four cross-sectional surveys to create a longitudinal data. However, there were not sufficient four-faces participants. Therefore, the study of Chiswick and Wang (2016) cannot be evaluated as a real longitudinal study. The

different findings of Kanas (2011) can be due to combining two waves of SPVA (i.e., 1998 and 2002) to increase the number of observations without excluding the participants who participated once either the survey of 1998 or 2002. Therefore, it is likely that the same participant might be appeared twice in the OLS regression. In contrast to Kanas (2011), the waves of 1998 and 2002 are separately examined with the participants who participated both of the surveys in this study. Namely, this study used the data of SPVA as it was originally designed in order to prevent any potential spurious and incorrect results.

According to this study, bad health status is highly statistically significant in both analyses and it is negatively associated with employment participation of the immigrants those who live in the Netherlands. It means that the immigrants who have relatively bad health status are less likely to be employed in the Netherlands. Beside, ethnicity of Moroccan and immigrants who have other nationality rather than Dutch or origin country are statistically significant among the other control variables. In addition to this, both of them are negative in terms of coefficient values.

5. Conclusion and Suggestion

Conclusion

This study examined 'to what extend the impact of social and human capital have a positive impact on the employment participation of the four large non-Western immigrant groups in the Netherlands?'. The cross-sectional data of SPVA for the years 1998 and 2002 were used. Different from the existing studies which have focused on the same topic and used same dataset (e.g., Kanas 2011; Chiswick and Wang 2016), the main contribution of this study is that the cross-sectional data of SPVA was used as it was originally designed. In other words, the years of 1998 and 2002 were separately examined as a cross-sectional design and the results were compared with each other. In addition to this, the respondents who have participated once either in the survey of 1998 or 2002 were excluded from the data in order to redress the balance in order to prevent spurious and incorrect results. Namely, the same respondents, who participated in both survey, are used in the empirical analysis.

As it was hypothesized, it is found that the work experience which is obtained in the Netherlands has a positive impact on the employment participation of the immigrants in the Dutch labour market. Besides, the results show that the immigrants those who have never experienced any difficulty while speaking Dutch are more likely to be employed in the Netherlands. However,

there is no statistical finding with regards to writing skills in Dutch. This is to say, speaking skills of the host country language as an indicator of human capital contributes to employment participation of the immigrants. In contrast to these findings, it is statistically proved that bad health status of the immigrants has a negative impact on being employed in the Dutch labour market. It means that the immigrants who have bad health status are less likely to be employed in the Dutch labour market. Moreover, it is found that lower education level which is acquired in the Netherlands has a negative effect on immigrants' employment participation in the Netherlands.

Regarding the effects of the social capital on employment participation, no significant results have been found in the empirical analysis. Nevertheless, the simultaneous analysis of human capital and social capital revealed some important insights. Social contacts of immigrants with co-ethnics is sensitive to human capital. Namely, human capital of immigrants has an effect on social capital. However, the cross-sectional data prevents to say more about this sensitiveness. Furthermore, there is no common statistical difference after adding control variables into the analysis.

This study demonstrates that the importance of human capital on employment participation of the immigrants in the Netherlands. On the other hand, there has not been any findings with respect to importance of social capital on employment participation of the immigrants.

The results of this study, and the previous studies (i.e., Kanas 2011; Chiswick and Wang, 2016) contradict with each other. In contrast to this study, Kanas (2011) did not find any significant result with regard to Dutch language proficiency. Beside, Chiswick and Wang (2016) did not find any significant effect of host country work experience on employment status. The data approach of Kanas (2011) and Chiswick and Wang (2016) are evaluated and criticized above. It is emphasized that the results of existing studies which have examined causality (i.e., Kanas, 2011; Chiswick and Wang, 2006) could be spurious and incorrect due to using inappropriate data approach. Whereas, those studies used alternative data approach (combined dataset, pooled dataset), this study used the SPVA data as it originally designed. This increases the probability that the findings of Kanas (2011), and Chiswick and Wang (2016) might be partially incorrect.

Furthermore, the main shortcoming of migration economics is the scarcity of the longitudinal data. There are just two existing data (i.e., SPVA and LISS) which particularly have focused

on the socio-cultural and socio-economic position of the immigrants in the Netherlands. LISS is the one and only which is designed as longitudinal data. However, it does not make a distinction between origin and host country human capital, nor does it include all measures that are mentioned in the literature. Although SPVA includes all direct measures of human and social capitals that are mentioned in the literature and distinguishes origin and host country human capital, it is designed as cross-sectional data. There is a need of more recent longitudinal data which involves migration-specific measures, repeated observation in multiple point of time for future research. In the case that the appropriate longitudinal data is obtained, the causality should be tested more accurately in future research.

A better measure of social contacts should be included in the questionnaire of SPVA. For instance, the participants can be asked whether they acquired their job through formal methods (e.g., written application, employment agency) or through informal search strategies (e.g., having heard about a vacancy from a third person). Furthermore, for those respondents who acquired their job via informal methods could be asked further information such as type of contact, ethnicity, intimacy. These different questions will reveal complexity of social capital and features of social contacts that are relevant to employment participation of the immigrants (Kanas, 2011). In addition to this, the missing direct measure of origin country should also be included in the questionnaire of SPVA.

The previous studies which examined the economic outcome of the immigrants in the Netherlands have used the same data. Therefore, they only focused on four large non-Western immigrant groups. The future research should focus more on recent immigrants. Because the investments in host country social capital and human capital mostly take a place within a few years of migration. Therefore, Syrian immigrants could be a good subject in the future researches. My suggestion for future research would be the impact of social capital and human capital on employment participation of the Syrian refugees. Moreover, it would also be interesting to examine the impacts of human capital and social capital on employment participation of Syrian refugees cross-countries within Europe.

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7. Appendix

Table A1: Multicolliniearity Test (Tolerance)

	Tolerance	
	1998	2002
Social Contact (Co-ethnic)	0.7413	0.7423
Social Contact (Dutch)	0.7995	0.8254
Organization Membership (Co)	0.7335	0.7390
Organization Membership (None)	0.7730	0.7681
Partner (Dutch)	0.4182	0.5521
Partner (Co-ethnic)	0.4522	0.6163
Work Experience NL	0.8866	0.8969
Work experience OC	0.8577	0.8473
Dif. In Speaking (Always)	0.9569	0.9575
Dif. In Speaking (Never)	0.4344	0.3403
Dif. In Reading (Always)	0.4192	0.3147
Dif. In Reading (Never)	0.6048	0.5345
Health (Goed)	0.1611	0.6124
Health (Bad)	0.1058	0.5777
Higher Educ. in OC	0.8146	0.7155
Intermed Educ. in OC	0.7315	0.6483
Lower Educ. in OC	0.6980	0.5772
Higher Educ. in NL	0.5237	0.5004
Intermed Educ. in NL	0.6081	0.5646
Lower Educ. in NL	0.3604	0.3463

Multicollinearity if Tolerance < .10

Table A2: Comparison of the Results of Logistic Regression Analysis of SPVA 1998 and 2002

	1998				2002			
Statistics	Coef	Odds	t	VIF	Coef	Odds	t	VIF
Social Contact (Co-ethnic)	-0.092294	0.911837	-0.55	1.25	0.0744	1.077238	0.42	1.35
Social Contact (Dutch)	-0.0775887	0.9253449	-0.47	1.35	0.1043736	1.110015	0.66	1.21
Organization Membership (Co)	0.0269037	1.027269	0.15	1.36	-0.3400875**	0.711708**	-2.02	1.35
Organization Membership (None)	0.4782963	1.613323	1.57	1.30	0.0217735	1.022012	0.08	1.30
Partner (Dutch)	-0.4493192*	0.6380624*	-1.88	2.39	-0.3963027	0.672803	-1.06	1.81
Partner (Co-ethnic)	-0.6582139**	0.5177753**	-2.68	2.21	-0.2633259	0.7684914	-1.24	1.62
Work Experience NL	0.3141003***	1.369027***	8.00	1.13	0.218612***	1.244348***	5.73	1.11
Work experience OC	0.010888	1.010947	0.95	1.17	-0.014977	0.9851346	-1.33	1.18
Dif. In Speaking (Always)	-0.0641729	0.9378428	-0.10	1.05	1.198011	3.313521	1.36	1.04
Dif. In Speaking (Never)	0.4493439**	1.567284**	2.07	2.30	0.5301209**	1.699138**	2.21	2.94
Dif. In Reading (Always)	0.2040061	1.226306	0.93	2.38	0.5971888**	1.817004**	2.54	3.18
Dif. In Reading (Never)	-0.3349142	0.7153995	-1.58	1.65	0.1775292	1.194263	0.83	1.87
Health (Goed)	0.1319471	1.141048	0.67	1.80	-0.0825186	0.9207944	-0.40	1.63
Health (Bad)	-1.128806***	0.3234192***	-7.65	1.79	-1.041377***	0.3529683***	-7.28	1.73
Higher Educ. in OC	0.4123132*	1.510307*	1.66	1.23	0.2122937	1.236511	0.93	1.40
Intermed Educ. in OC	-0.0140447	0.9860535	-0.07	1.36	0.404689*	1.498836*	1.93	1.54
Lower Educ. in OC	-0.3803108**	0.6836489**	-2.27	1.43	0.0275655	1.027949	0.15	1.73
Higher Educ. in NL	0.1787449	1.195716	0.59	1.91	-0.1615097	0.8508582	-0.56	2.00
Intermed Educ. in NL	0.0563059	1.057921	0.17	1.64	-0.6061162**	0.5454653**	-2.03	1.77
Lower Educ. in NL	-0.7169047**	0.4882612**	-2.88	2.77	-1.138141***	0.3204143***	-4.63	2.89
Ethnicity (Antilleans)	0.4435552*	1.558237*	1.70		0.2611767	1.298457	0.77	
Ethnicitiy (Maroccan)	-0.5792754**	0.5603042**	-2.05		-0.9260913**	0.3960989**	-2.94	
Ethnicity (Turks)	-0.3304073	0.718631	-1.36		-0.2611767	0.7701448	-0.77	
Ethnicity (Surinamese)	0.3950777*	1.484499*	1.90		0.0032209	1.003226	0.01	
Dutch Nationality	-0.2029799	0.8162947	-1.09		-0.4914418**	0.6117437**	-2.75	
Other Natonality	-1.691409**	0.1842596**	-2.51		-2.325805***	0.0977048***	-4.44	
YSM 2-4 years	0.2941463	1.34198	0.93		0.3195715	1.376538	0.45	
YSM 5-9 years	0.0388681	1.039633	0.12		0.2846889	1.329348	0.42	
YSM 10-14 years	-0.2582592	0.772395	-0.79		-0.1740675	0.8402402	-0.25	
YSM 15-19 years	-0.1901919	0.8268004	-0.58		-0.2402663	0.7864184	-0.35	
YSM 20-24 years	-0.628742*	0.5332622*	-1.87		-1.000064	0.367856	-1.47	
YSM +25 years	-0.8624796**	0.4221141**	-2.28		-0.467068	0.6268375	-0.66	
Log Likelihood	-718.73373	-718.73373			-714.82337	-714.82337		
R-square	0.2212	0.2212			0.2205	0.2205		
Num. Obs.	1,334	1,334			1,334	1,334		
Mean				1.70				1.70

***p<0.01; **p<0.05; *p<0.1

The dependent variable is employment participation of immigrants in the Netherlands

Table A3: Multicollinearity Test for 1998 (Pearson's Correlation)

	Employment Participation	Social Contact (Co-ethnic)	Social Contact (Dutch)	Organization Membership (Co)	Organization Membership (None)	Partner (Dutch)	Partner (Co-ethnic)	Work Experience NL	Work experience OC	Dif. In Speaking (Always)	Dif. In Speaking (Never)	Dif. In Reading (Always)	Dif. In Reading (Never)	Health (Goed)	Health (Bad)	Higher Educ. in OC	Intermed Educ. in OC	Lower Educ. in OC	Higher Educ. in NL	Intermed Educ. in NL	Lower Educ. in NL	Ethnicity (Moroccan)	Ethnicity (Turks)	Ethnicity (Surinamese)	Dutch Nationality	Other Nationality	YSM 2-4 years	YSM 5-9 years	YSM 10-14 years	YSM 15-19 years	YSM 20-24 years	YSM +25 years
Employment Participation	1.0000																															
Social Contact (Co-ethnic)	-0.1843	1.0000																														
Social Contact (Dutch)	0.1036	-0.3777	1.0000																													
Organization Membership (Co)	-0.1136	0.1525	-0.0450	1.0000																												
Organization Membership (None)	0.0911	-0.0776	0.0360	-0.4689	1.0000																											
Partner (Dutch)	-0.1162	0.1956	-0.0375	0.1316	-0.1149	1.0000																										
Partner (Co-ethnic)	-0.0455	-0.0686	0.0816	-0.0088	0.0495	-0.6897	1.0000																									
Work Experience NL	0.2602	-0.1212	0.0781	-0.0471	0.0393	0.0533	-0.2308	1.0000																								
Work experience OC	-0.0186	0.0862	0.0325	0.0605	-0.0318	0.0482	0.0430	-0.0599	1.0000																							
Dif. In Speaking (Always)	-0.0196	0.0214	0.0128	-0.0457	-0.0034	-0.0080	0.0342	0.0100	0.0080	1.0000																						
Dif. In Speaking (Never)	-0.0666	0.0503	-0.0206	0.0548	-0.0198	0.1090	-0.0270	-0.1270	0.0508	-0.0700	1.0000																					
Dif. In Reading (Always)	0.2239	-0.2774	0.1904	-0.1525	0.0922	-0.3327	0.1756	0.1265	-0.0597	-0.0168	-0.6465	1.0000																				
Dif. In Reading (Never)	-0.1164	0.0982	-0.0490	0.0303	-0.0151	0.1225	-0.0653	-0.0923	0.0817	0.0378	0.5966	-0.4824	1.0000																			
Health (Goed)	0.1554	-0.1147	-0.0324	-0.1166	0.0843	-0.0720	-0.0274	0.0283	-0.0547	-0.0301	-0.0392	0.1260	-0.1074	1.0000																		
Health (Bad)	-0.3268	0.1600	-0.1281	0.1127	-0.0502	0.0994	0.0412	-0.0593	0.0616	0.0311	0.0244	-0.1607	0.0211	-0.3346	1.0000																	
Higher Educ. in OC	0.0964	-0.0550	0.0249	-0.0235	-0.0056	-0.0119	0.0062	0.0133	0.0422	0.0767	0.0430	-0.0190	0.0221	0.0320	-0.0697	1.0000																
Intermed Educ. in OC	0.0786	-0.1043	0.0611	-0.0423	0.0035	-0.0667	0.0428	0.0392	0.0921	-0.0224	-0.0601	0.1322	-0.0386	-0.0213	-0.0381	-0.1725	1.0000															
Lower Educ. in OC	-0.1214	0.0470	-0.0210	0.0606	-0.0023	-0.0060	0.0436	-0.0540	0.2135	0.0270	0.1024	-0.1004	0.0922	-0.0452	0.0899	-0.2328	-0.3537	1.0000														
Higher Educ. in NL	0.1805	-0.1865	0.1091	-0.1248	0.0713	-0.2248	0.1069	0.0737	-0.0855	-0.0404	-0.1254	0.2500	-0.1299	0.1078	-0.1232	-0.0162	-0.0046	-0.0300	1.0000													
Intermed Educ. in NL	0.0900	-0.0751	0.0102	-0.0461	0.0208	-0.0544	-0.0030	-0.0050	-0.0847	-0.0315	-0.0505	0.1368	-0.0386	0.0728	-0.0577	-0.0683	-0.0138	0.0143	-0.1049	1.0000												
Lower Educ. in NL	-0.2894	0.2507	-0.1220	0.2018	-0.1064	0.2915	-0.0826	-0.1024	0.1846	-0.0027	0.1902	-0.3810	0.2107	-0.1958	0.2426	-0.0487	0.0462	0.0590	-0.5581	-0.4358	1.0000											
Ethnicity (Maroccan)	-0.1787	0.2749	-0.0832	0.1273	-0.0894	0.1328	-0.0121	-0.0582	-0.0497	-0.0068	0.0775	-0.2061	0.0913	-0.0231	0.0994	-0.0349	-0.1759	-0.0649	-0.0931	-0.0547	0.1526	1.0000										
Ethnicity (Turks)	-0.1725	0.1217	-0.1588	0.0749	-0.0279	0.4101	-0.2863	-0.0385	0.0299	0.0093	0.1906	-0.4497	0.2322	-0.0947	0.1094	0.0232	-0.1050	0.1242	-0.2258	-0.0711	0.3139	-0.2946	1.0000									
Ethnicity (Surinamese)	0.2119	-0.1938	0.2145	-0.1094	0.0913	-0.1767	0.1566	0.1180	-0.0141	-0.0004	-0.2519	0.4583	-0.2380	0.0504	-0.0592	-0.0198	0.1354	-0.0531	0.1618	0.1116	-0.2490	-0.2808	-0.4804	1.0000								
Dutch Nationality	-0.1956	0.2498	-0.1664	0.1293	-0.0836	0.3555	-0.2134	-0.0232	0.0181	-0.0676	0.1186	-0.4018	0.1445	-0.0803	0.1433	-0.0567	-0.1650	0.0578	-0.1625	-0.0422	0.2528	0.3532	0.3765	-0.3827	1.0000							
Other Nationality	-0.0819	0.0305	-0.0133	-0.0277	0.0310	0.0263	-0.0345	0.0102	-0.0390	0.0383	0.0048	-0.0093	0.0126	0.0505	-0.0404	0.0315	-0.0394	-0.0053	-0.0129	-0.0161	0.0117	0.0264	0.0524	-0.0152	-0.0813	1.0000						
YSM 2-4 years	0.0121	0.0923	-0.0736	0.0546	-0.0150	0.0335	0.0472	-0.2405	0.1819	0.0126	0.1103	-0.1086	0.0748	-0.0174	-0.0546	0.0841	0.0329	0.0121	-0.0604	-0.0227	0.0880	0.0311	0.0822	-0.1485	0.0873	-0.0224	1.0000					
YSM 5-9 years	-0.0063	0.0020	0.0387	0.0506	-0.0397	0.0406	0.0219	-0.1134	0.0475	-0.0385	0.1078	-0.0793	0.0802	0.0020	-0.0292	0.0415	0.0409	-0.0198	-0.0237	0.0002	0.0719	-0.0225	0.0582	-0.1118	0.0018	0.0093	-0.1449	1.0000				
YSM 10-14 years	-0.0071	-0.0396	0.0308	-0.0054	-0.0379	0.1305	-0.0471	0.0189	-0.0502	0.0378	-0.0231	-0.0107	0.0226	0.0138	0.0008	-0.0037	-0.0050	0.0089	-0.0153	0.0203	0.0239	-0.0023	0.0588	0.0475	0.0177	-0.0622	-0.1949	-0.1640	1.0000			
YSM 15-19 years	0.0213	-0.0133	0.0581	-0.0137	0.0546	-0.0155	0.0785	0.0654	-0.0460	-0.0053	-0.0223	0.0492	-0.0667	-0.0756	0.1017	-0.0681	-0.0105	0.0468	0.0361	0.0007	-0.0235	-0.0499	-0.0372	0.2086	-0.0727	-0.0392	-0.2120	-0.1784	-0.2398	1.0000		
YSM 20-24 years	-0.0099	-0.0139	-0.0525	-0.0171	0.0128	-0.0580	-0.0178	0.2876	-0.0510	0.0295	-0.1050	0.0662	-0.0450	-0.0282	0.0754	-0.0174	-0.0306	-0.0048	0.0096	-0.0398	-0.0394	0.0781	-0.0727	0.0490	0.0138	-0.0529	-0.2105	-0.1771	-0.2382	-0.2591	1.0000	
YSM +25 years	0.0151	-0.1061	0.0239	-0.0911	0.0452	-0.1968	-0.0654	0.0517	-0.1793	-0.0367	-0.0568	0.1287	-0.0522	0.1101	-0.1167	-0.0129	-0.0161	-0.0694	0.0948	0.0750	-0.1686	-0.0462	-0.1249	-0.0527	-0.1537	0.2442	-0.1381	-0.1162	-0.1563	-0.1700	-0.1688	1.0000

Table A4: Multicollinearity Test for 2002 (Pearson's Correlation)

	Employment Participation	Social Contact (Co-ethnic)	Social Contact (Dutch)	Organization Membership (Co)	Organization Membership (None)	Partner (Dutch)	Partner (Co-ethnic)	Work Experience NL	Work experience OC	Dif. In Speaking (Always)	Dif. In Speaking (Never)	Dif. In Reading (Always)	Dif. In Reading (Never)	Health (Goed)	Health (Bad)	Higher Educ. in OC	Intermed Educ. in OC	Lower Educ. in OC	Higher Educ. in NL	Intermed Educ. in NL	Lower Educ. in NL	Ethnicity (Moroccan)	Ethnicity (Turks)	Ethnicity (Surinamese)	Dutch Nationality	Other Nationality	YSM 2-4 years	YSM 5-9 years	YSM 10-14 years	YSM 15-19 years	YSM 20-24 years	YSM +25 years
Employment Participation	1.0000																														
Social Contact (Co-ethnic)	$0.1516	1.0000																													
Social Contact (Dutch)	0.0766	$0.3402	1.0000																												
Organization Membership (Co)	$0.1420	0.1224	0.0301	1.0000																											
Organization Membership (None)	0.0848	$0.1162	0.0612	$0.4508	1.0000																										
Partner (Dutch)	$0.1631	0.2068	$0.2187	$0.0042	$0.1354	1.0000																									
Partner (Co-ethnic)	0.1631	$0.2313	0.1320	$0.0682	0.1165	$0.5675	1.0000																								
Work Experience NL	0.1587	$0.1519	0.0257	$0.1501	0.0690	0.0067	$0.0844	1.0000																							
Work experience OC	$0.0733	0.0142	0.0376	0.0086	$0.0028	0.1491	$0.0963	$0.0248	1.0000																						
Dif. In Speaking (Always)	0.0112	0.0276	$0.0057	0.0071	$0.0225	0.0359	$0.0103	0.0265	0.0153	1.0000																					
Dif. In Speaking (Never)	$0.1106	0.0781	$0.0891	0.0831	$0.0841	0.1987	$0.2046	$0.0914	0.0673	$0.0533	1.0000																				
Dif. In Reading (Always)	0.2677	$0.3226	0.2102	$0.1331	0.1507	$0.4322	0.3555	0.1648	$0.1395	$0.0430	$0.7135	1.0000																			
Dif. In Reading (Never)	$0.0745	0.0585	$0.0424	0.0511	$0.0684	0.2180	$0.1752	$0.0702	0.1009	0.0820	0.6604	$0.5297	1.0000																		
Health (Goed)	0.1339	$0.0544	$0.0364	$0.1065	0.0567	$0.0657	0.1070	0.0359	$0.0885	$0.0043	$0.0903	0.1299	$0.1005	1.0000																	
Health (Bad)	$0.3080	0.0589	0.0011	0.0511	$0.0355	0.0554	$0.0882	$0.0504	0.1208	0.0126	0.1197	$0.1907	0.1101	$0.3498	1.0000																
Higher Educ. in OC	0.0822	$0.0283	0.0007	$0.0462	$0.0174	0.0524	$0.0205	0.0050	0.0150	$0.0310	$0.0074	0.0292	0.0331	0.0466	$0.1405	1.0000															
Intermed Educ. in OC	0.1448	$0.0765	0.1089	$0.0703	0.0509	$0.1388	0.1393	0.0929	0.0033	$0.0162	$0.0853	0.1536	$0.0572	0.0444	$0.0430	$0.2055	1.0000														
Lower Educ. in OC	$0.1069	0.0505	$0.0072	0.0417	$0.0115	0.1584	$0.0703	$0.0137	0.2597	0.0395	0.0442	$0.0983	0.0469	$0.0838	0.1441	$0.3112	$0.4023	1.0000													
Higher Educ. in NL	0.1956	$0.1595	0.1368	$0.0770	0.0854	$0.2195	0.2135	0.0686	$0.0654	$0.0050	$0.1678	0.2638	$0.1460	0.0270	$0.1314	$0.0002	0.0397	$0.0156	1.0000												
Intermed Educ. in NL	0.0835	$0.1231	0.0300	$0.0128	0.0046	$0.0898	0.0951	0.0033	$0.0706	0.0059	$0.0719	0.1609	$0.0520	0.0516	$0.0607	$0.0839	0.0332	0.0282	$0.1402	1.0000											
Lower Educ. in NL	$0.3138	0.2531	$0.1134	0.1806	$0.1519	0.3098	$0.3024	$0.1300	0.1630	0.0190	0.2771	$0.4440	0.2325	$0.1456	0.2114	$0.0391	$0.0418	0.1021	$0.5454	$0.4415	1.0000										
Ethnicity (Moroccan)	$0.1889	0.1621	$0.0332	0.1519	$0.0497	$0.2669	$0.2432	$0.0584	$0.0747	$0.0051	0.2107	$0.2162	0.1055	$0.0638	0.0935	$0.0684	$0.1634	$0.0998	$0.0906	$0.0989	0.1787	1.0000									
Ethnicity (Turks)	$0.1754	0.1956	$0.1936	0.0202	$0.1121	0.8930	$0.4282	$0.0384	0.1336	0.0264	0.2082	$0.4563	0.2363	$0.0873	0.0650	0.0690	$0.1551	0.1694	$0.2355	$0.0946	0.3296	$0.2989	1.0000								
Ethnicity (Surinamese)	0.1875	$0.2133	0.2267	$0.0896	0.1397	$0.4538	0.1886	0.1364	$0.0907	$0.0346	$0.3169	0.4764	$0.2578	0.0647	$0.0761	$0.0384	0.1372	$0.0302	0.1790	0.1335	$0.2979	$0.2964	$0.5082	1.0000							
Dutch Nationality	$0.2127	0.1545	$0.1513	0.0733	$0.0969	0.3694	$0.3707	$0.0052	0.0798	$0.0191	0.1635	$0.3399	0.1412	$0.1168	0.1100	0.0119	$0.1484	0.0329	$0.1758	$0.0945	0.2701	0.1954	0.3549	$0.2986	1.0000						
Other Nationality	$0.1055	0.0557	$0.0007	0.0036	0.0097	0.0077	$0.0504	0.0192	$0.0687	$0.0122	0.0080	$0.0279	$0.0177	0.0330	$0.0440	0.0372	$0.0207	$0.0618	0.0038	$0.0366	$0.0124	0.0861	0.0120	$0.0179	$0.0852	1.0000					
YSM 2-4 years	0.0111	0.0444	$0.0537	0.0717	$0.0376	0.0403	$0.0525	$0.1967	0.1473	$0.0196	0.0162	$0.0575	0.0304	0.0218	$0.0357	0.0645	$0.0527	$0.0344	$0.0339	$0.0538	0.0684	0.0366	0.0260	$0.0723	0.0961	$0.0190	1.0000				
YSM 5-9 years	0.0631	0.0453	$0.0173	0.0566	$0.0638	0.0353	0.0165	$0.2805	0.1246	$0.0337	0.0989	$0.0824	0.0791	0.0378	$0.0523	0.0959	0.0389	$0.0334	$0.0125	$0.0103	0.0497	$0.0018	0.0499	$0.1641	0.0241	$0.0008	$0.1095	1.0000			
YSM 10-14 years	0.0122	0.0412	$0.0205	0.0484	$0.0775	0.0685	$0.0031	$0.0811	0.0381	0.0066	0.0667	$0.0801	0.0635	0.0338	$0.0245	$0.0018	0.0189	0.0446	$0.0045	$0.0212	0.0361	$0.0263	0.0631	$0.0984	0.0280	$0.0358	$0.0841	$0.1442	1.0000		
YSM 15-19 years	0.0386	$0.0013	$0.0072	0.0075	$0.0468	0.0657	$0.1021	0.0498	$0.0706	$0.0128	$0.0040	$0.0235	0.0142	$0.0685	$0.0202	$0.0039	0.0324	0.0127	$0.0289	$0.0113	0.0600	$0.0137	0.0900	0.0090	0.0289	$0.0633	$0.1222	$0.2097	$0.1610	1.0000	
YSM 20-24 years	$0.1075	$0.0520	0.0344	$0.0669	0.1018	$0.0827	0.0028	0.3060	$0.0253	0.0571	$0.0760	0.0994	$0.0929	$0.0285	0.1303	$0.1188	$0.0285	0.0614	0.0126	0.0192	$0.0665	0.0239	$0.1099	0.1923	$0.0401	$0.1056	$0.2025	$0.3475	$0.2668	$0.3879	1.0000
YSM +25 years	0.0332	$0.0621	0.0508	$0.0729	0.0815	$0.1079	0.1682	0.0453	$0.1766	$0.0249	$0.0758	0.1073	$0.0579	0.0298	$0.0735	0.0224	$0.0255	$0.0849	0.0632	0.0713	$0.1358	$0.0320	$0.0928	0.0517	$0.1247	0.3210	$0.0809	$0.1388	$0.1065	$0.1549	$0.2567	1.0000