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Is Education an Engine for Immigrants' Employment Outcome?

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Author's contribution

This whole work was carried out by the author AZ.

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ABSTRACT

This paper assesses the role of (foreign) education in determining the adjustment profile of immigrants in employment using the Dutch Labour Force Survey and regression analysis techniques. The disadvantaged labour market position of immigrants from developing countries is often linked to their lower skill levels. Correspondingly, recent migration policies aim to counter unskilled immigration in favour of skilled migration. An (implicit) assumption is that a higher (home) country education will accelerate the adjustment of immigrants in the host country labour market. This study tests whether education acts as an integration engine in the Netherlands labour market. Analysis does not indicate such a particular effect of education for immigrants in the Netherlands. Instead, the country/region of origin is found to be a stronger predictor of one's adjustment profile.

Keywords: Foreign education; labour market; assimilation; skill transferability; unemployment.

1. INTRODUCTION

Immigration flows from developing countries to European countries have been dominated by lower skilled immigrants. These immigrants face significant difficulties in the labour market of

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developed countries. The disadvantaged labour market position of these immigrants is a source of concern. This issue has often been related to their lack of relevant qualifications and skills, the cultural and linguistic distance from the host countries and the receiving societies' resistance to accepting newcomers [1,2]. Recent migration policies have aimed to restrict the number of immigrants, in particular low skilled immigrants. Compulsory pre-migration language tests and tighter restrictions for family migrants and asylum seekers have aimed to curtail undesired unskilled immigration from developing countries. The question is whether a selection of higher skilled immigrants (either implicit or explicit) will improve the labour market position of immigrants from developing countries.

The literature on the adjustment of immigrants indicates that the speed of assimilation is closely related to a number of factors, such as country of origin, migration motive and an immigrants skills [1,2,3,4]. The country of origin largely reflects social, cultural and linguistic distance from the host country and it is a strong predictor of migration motive. Upon arrival, immigrants have limited host country specific capital, which refers to a composite of norms, values, institutions, language and other types of location-related skills that can effectively improve the socioeconomic position of immigrants [1,5]. As immigrants start to accumulate host country capital, their labour market position improves significantly. One may expect that (home country) education will accelerate the adjustment process of immigrants. This paper seeks to measure how the profile of immigrants and their access to employment is affected by education using the Dutch Labour Force Survey and regression analysis techniques. Emphasis is placed on revealing whether or not higher education reduces immigrants' initial disadvantage and speeds up their adjustment process.

Initial estimates provide no evidence that education offers an extra positive effect while the country of origin appears to be an important determinant of the access to employment of immigrants. The adjustment profile of immigrants in employment seems not to be affected by (home country) education.

The structure of the paper is as follows. The next section discusses literature on the labour market adjustment of immigrants and the role of education. Section 3 introduces the data and presents the descriptive statistics for the relevant variables per immigrant group. Section 3.1 describes the econometric models deployed. Section 3.2 decomposes the foreign education after which the estimation results are discussed in section 4. Section 5 concludes.

2. THE ROLE OF EDUCATION IN LABOUR MARKET ADJUSTMENT

In the labour markets of many receiving countries, the often necessary transition into the workforce on arrival is not a smooth process. Skills of immigrants may not be perfectly transferable across countries due to many differences in the organisation of education systems and labour markets, the quality of public services, as well as the differences in legal and social systems between origin and destination countries. On arrival in the host country, the initial set of accessible job opportunities is restricted for immigrants by their deficiency in host-country-specific capital [6,7]. Country-specific capital refers to a set of relevant formal and informal skills such as qualifications, certifications, licences, language proficiency, social networks and cultural capital, knowledge about institutions, among others. A lack of country-specific capital, together with labour market discrimination, is a source of low skill transferability. A large number of studies have documented that education undertaken in the source country is valued less than qualifications obtained in the host country. There is broad empirical evidence showing that human capital transferability is closely related to the country

of origin and an immigrant's fluency in the host country's language. Both can serve to enhance returns to pre-migration human capital [5,6,8,9].

Education, as a main component of human capital, plays a central role in facilitating the labour market adjustment of immigrants in advanced economies where formal skills are a pre-requisite for many jobs. Primarily, it makes people more productive, efficient and attractive to employers [10]. Therefore, highly educated workers are more likely to have a job and higher wages. In addition, pre-migration education was found to be positively related to post-migration educational investment [6]. Substantial literature illustrates that pre-migration education raises the likelihood of investment in additional education [7,11]. In this way, post-migration educational investment improves the returns on foreign education. In other words, acquiring more education upon arrival seems to generate additional benefits for immigrants.

However, the translation of educational qualifications into a new context is far from fluid immediately after immigration. Zorlu [2] illustrates that many skilled immigrants initially accept marginal jobs regardless of their education level. Although highly educated immigrants often start with unskilled jobs, their position improves with the duration of stay in the host country. Initial gaps can stem from international differences in the quality of education and skills. The skills of immigrants often vary with migration motives and source countries. Labour migrants, who are often from other developed countries, plan and prepare their move, and base their migration decision on the quality of job offers. They will experience the fewest issues with skill transferability and only a marginal subsequent improvement. On the other hand, the migration decisions of refugees is largely determined by non-economic factors such as safety and freedom because of their political ideology, ethnicity, religion etc. As a result, refugee populations are composed of a large share of people whose skills have little international transferability, e.g. army generals and lawyers [6]. Refugees tend to come from developing countries that are often a great cultural and linguistic distance away from their destination country. It is therefore likely that refugees will face the steepest decline in status after immigration and a steeper improvement subsequently as they make investments in country-specific capital to increase the transferability of their skills. After all, for refugees, the opportunity costs of these investments will be relatively low, and their return larger since the initial decline in status is the greatest. Similarly, migration decisions of family migrants are strongly influenced by family members or partners of these immigrants who can be either an economic migrant, refugee partner or a native partner. Economic incentives possibly play a less important role. Therefore, family migrants will also face a steeper decline and subsequently a sharper improvement in occupational status, compared to economic migrants. Yet, this may be less steep compared to refugees.

Another strand of literature argues that education as a signalling function in addition to its contribution to productivity. Signalling theory regards education as a signal of superior innate abilities toward prospective employers, assuming that more able individuals acquire more education. Recent studies provide empirical evidence that, compared with the majority, ethnic minorities have greater earning gains associated with completing educational programmes. This relatively large gain has been explained by an imperfect signalling model in which minorities receive greater returns from signals of high productivity than natives do. These greater returns would stem from the higher cost of achieving an inaccurately high signal for minorities compared with natives because minorities possess relatively fewer resources [12,13].

On the top of these advantages, education can potentially generate social and cultural capital and reduce the cultural distance between home and host countries. This may mitigate potential prejudice and ill-feeling towards immigrants. The question is whether education will function as an adjustment engine so that more educated immigrants will quickly catch up their native counterparts. Taking all arguments together, education is hypothesised to accelerate access to employment of immigrants in the labour market, given country of origin and other observed characteristics. This hypothesis is tested in this paper by estimating the impact of (foreign) education on (un)employment probabilities of immigrant groups.

3. DATA AND METHODS

This study uses Labour Force Survey (LFS) data from Statistics Netherlands. LFS 2005 covers a random sample of about 47 000 households and 95 000 individuals aged 16 years and older in the Netherlands, excluding those in care homes and institutions. Data is collected on a quarterly and annual basis. LFS is an internationally comparable, detailed study of labour market participation, retirement, labour market position, job attributes, unemployment, level of education, work circumstances and attained education level¹. To retain more observations on immigrants, LFS's from 2004 and 2005 have been pooled; the sample has been restricted to people aged 25 to 64 years who are not in full-time education. LFS contains information about education in addition to a large number of other variables. Education is measured in seven levels (basic, lower secondary, upper secondary, university, and lower, intermediate and higher vocational). However, no distinction is made between education acquired in the home country or in the Netherlands. This raises some concern about measurement error: the interviewers can ask additional questions to get a clearer picture of source country schooling, but they will have to make the translation to the standard education classification in the Netherlands and thus their perceptions and limited information may play a role. More specific attention will be paid to this problem in the next section.

Considering the similarities in labour market starting conditions, immigrants are clustered into six groups. The first group (*Turk Moroc*) contains Turkish and Moroccan immigrants whose labour market positions are very similar. Immigrants from Dutch Antilles and the former colony Suriname are pooled into the second category (*Caribbean*). The third group covers Eastern European immigrants (*East Eur*). The fourth group (*Refugees*) contains Iranian, Iraqi and Afghani immigrants who have often significantly contributed to refugee flows into the Netherlands (note that this classification is based on source country, not on individual refugee status). Other non-western migrants are aggregated into the fifth group (*NW*) that also includes immigrants from some other, less prominent refugee countries. Immigrants from Western countries (OECD excluding Turkey) are clustered into the category *Western*.

Table 1 shows the mean values of the important variables under study. Men are more likely to be employed than women and (non-western) immigrants are less likely to be employed than the Dutch. In particular, the low employment and high unemployment rates among Turkish/Moroccan immigrants and refugees are striking. This disadvantaged position of immigrants is partly related to their migration history, demographic characteristics and education level. These appear to be the most disadvantaged groups. Refugees tend to have a short duration of stay in the Netherlands while the other group, Turkish/Moroccan, are indicated as being poorly educated. Correspondingly, Western migrants are educated as well as the Dutch.

¹ See for more information (<http://www.jpi-dataproject.eu/Home/Database/290?topicId=4>)

3.1 Estimating (un) Employment Probability

It is likely that labour market position is related to the background variables that are presented in Table 1. In order to explain (un)employment differences between the groups distinguished, a regression analysis is conducted. Emphasis is placed on the effect education can have on the likelihood of (un)employment.

In the dataset, the employment status of individuals (EMP) is observed and defined as follows:

$$\begin{aligned} EMP_i &= 1 \text{ if individual } i \text{ is employed} \\ EMP_i &= 0 \text{ if otherwise} \end{aligned}$$

Relying on the observation that unemployment is drastically high among migrants, I also consider the likelihood of unemployment for those who are participant to capture the main labour market states.

Similarly, unemployment (UNEMP) is coded as follows

$$\begin{aligned} UNEMP_i &= 1 \text{ if labour market participant } i \text{ is unemployed} \\ UNEMP_i &= 0 \text{ if individual } i \text{ is employed} \end{aligned}$$

The probabilities of employment (EMP) and unemployment (UNEMP) are determined by the Years Since Migration YSM_i , Country of origin M_i , Education level Edu_i and a vector of other explanatory variables x_i . As explanatory variables, I use age, marital status, the presence of children, the degree of urbanization and naturalization of immigrants. These variables are commonly used in the immigrant labour market participation literature since access to employment is potentially influenced by age, household structure, residential location and nationality.

$$\Pr(EMP = 1) = YSM_i \alpha + M_i \lambda + YSM_i * M_i \delta + Edu_i \beta + x_i \gamma + \varepsilon_i \quad (1)$$

$$\Pr(UNEMP = 1) = YSM_i \alpha + M_i \lambda + YSM_i * M_i \delta + Edu_i \beta + x_i \gamma + \varepsilon_{ii} \quad (2)$$

Where α , λ , δ , β and γ are vectors of unknown parameters to estimate by the standard probit estimator and ε_i is the error term that is symmetrically distributed about zero, $\varepsilon_{ii} \sim N(0,1)$. With an interaction of YSM_i and M_i , the effect of YSM_i is allowed to vary across country of origin groups.

Table 1. (Un-weighted) mean values of variables by gender and origin, 25-64

	Men							Women						
	Native	TurkM	Car	East	Ref	NW	west	Native	TurkM	Car	East	Ref	NW	west
Employed	0.85	0.68	0.78	0.73	0.49	0.72	0.80	0.67	0.35	0.65	0.55	0.22	0.50	0.65
Unemployed	0.04	0.18	0.16	0.14	0.29	0.18	0.06	0.05	0.10	0.13	0.14	0.14	0.12	0.06
Age	44.79	38.86	41.37	42.77	40.48	40.71	46.00	44.64	37.08	41.23	41.04	38.76	39.58	45.36
Yrs Since Migration		16.05	15.23	10.06	8.88	12.87	6.06		14.62	15.76	10.31	8.20	11.95	6.46
Education (in yrs)	13.43	10.77	12.52	13.62	13.37	12.63	13.63	12.85	9.56	12.26	13.43	11.92	12.06	13.10
N	61333	1728	1160	522	410	971	5333	62136	1716	1549	851	285	1278	5829

3.2 Effect of Foreign Education

In Labour Force Surveys, education level is observed but the source of education is not specified. We do not know where immigrants have acquired their relevant education. This problem is overcome using other available information in the data. I have inferred foreign education from age at immigration. If a respondent has arrived at an older age than the normal graduation age for his reported highest schooling level attained, I assume this level was completed in the source country; otherwise I assume that the highest diploma was obtained in the Netherlands (which does not rule out that part of the schooling career was completed in the source country)². I then multiply dummy coefficients to be estimated for schooling and years since migration by φ Foreign Edu, where Foreign Edu is a dummy for foreign education (highest diploma not obtained in the Netherlands) and hence, φ measures the penalty for foreign education that is to be estimated. The coefficient is allowed to differ by education level (in four levels rather than the seven that are distinguished in the earlier regressions).

This measure leans heavily on age at arrival and as such will pick up many effects that are associated with it, such as greater familiarity with Dutch habits and customs for immigrants arriving at a younger age. In particular, it will also pick up effects related to proficiency in the Dutch language. For education completed in the Netherlands, language proficiency no doubt correlates with schooling level: you don't complete Dutch tertiary education without fluency in Dutch. For those who completed their education in the source country, it would be useful to control for language skills, but unfortunately such information is not contained in the dataset. As Dutch language skills may correlate with education attained in the source country, this will add upward bias to the estimated schooling effects³. It is also an imprecise measure to the extent that graduation ages are not fixed. But, as years since migration are also included, and since the foreign education measure is linked to education attainment, the belief is that this approximation will pick up the potentially important effects regarding the difference between having a Dutch or a foreign diploma.

After distinguishing foreign education, the models 1 and 2 become:

$$\Pr(EMP=1) = YSM\alpha + M_i\lambda + YSM_i^* M_i\delta + Edu_i^D \beta + Edu_i^F \varphi + Edu_i^F * M_i\eta + YSM * Edu_i^F \psi + x_i\gamma + \varepsilon_i$$

$$\Pr(UNEMP=1) = YSM\alpha + M_i\lambda + YSM_i^* M_i\delta + Edu_i^D \beta + Edu_i^F \varphi + Edu_i^F * M_i\eta + YSM * Edu_i^F \psi + x_i\gamma + \varepsilon_i$$

where super scripts over education variables, Edu^D and Edu^F , reflect Dutch and Foreign education, and φ , and η are vectors of unknown parameters to estimate. In these augmented models, foreign education is interacted with country of origin to allow variations in the effect of foreign education across countries of origin, i.e. $Edu_i^F * M_i\eta$. Foreign education is also interacted with YSM to measure an additional effect of foreign education on the speed of adjustment, i.e. $YSM * Edu_i^F \psi$.

² The dummy for education obtained in the source country is defined as 1 if age at arrival above 11 when education is basic, if above 15 for extended basic (VBO, MAVO in Dutch), if above 17 for secondary (HAVO, VWO, MBO) and if above 21 for tertiary (HBO, WO).

³ Simple single survey data may not be adequate, because of large measurement errors and correlations with unobserved abilities and skills.

Regarding the effect of foreign education, my expectations are as follows. If foreign education contributes to increased access to employment, the coefficients for foreign education ϕ will be significantly positive. In the case of a differential effect of foreign education for immigrant groups, I expect varying coefficients for the interaction term, η . If foreign education has an additional effect on the speed of adjustment, a significant positive coefficient is expected for the interaction of foreign education with YSM , ψ .

4. RESULTS

Since labour market participation behaviour of women fundamentally differs from men, we estimate employment probabilities of men and women separately.

Table 2 reports the probit estimates of employment and unemployment probabilities⁴. The first panel (columns 1-4) shows the results for men and the second panel for women (columns 5-8). Distinguishing between home country and Dutch education (Model I versus Model II) has a clear effect on employment probabilities for men. As usual, for the estimation of categorical variables a reference group is used: for the migrant groups, native Dutch is the reference group. For the interaction term of the ethnic groups and YSM , Turk Moroc is the reference group. For education levels, the lowest level is the reference. For the interaction of migrant group and foreign education, Western is the reference category. In Table 2 I present both probit coefficients and marginal effects. The coefficients denotes the change in probit index as a result of a one unit change in explanatory variables. The associated marginal effects represents the change in the relevant probability as a result of a one unit change in explanatory variables. For the categorical variables, marginal effects indicate differences in probabilities with respect to the reference category. Marginal effects are particularly easy to interpret for categorical variables. For continuous variables, we calculated marginal effects for the mean value of the relevant variable. Marginal effects are dependent on where we start and change over values of continuous variables because of the non-linear nature of probit regression.

Since YSM captures the adjustment effect over time, the indicator variables for immigrant groups (M) reflects the initial employment gap of immigrants in the year of arrival relative to comparable natives. The coefficients of YSM and $YSM2$ measure how the native-immigrant employment gap diminishes as immigrants gain country specific experience. The employment probability for men and women goes up with YSM , but at a decreasing rate. The marginal effects for the country of origin dummies give the initial employment gap of immigrants upon arrival with respect to Dutch natives. The entry gaps have the same ranking for men and for women. The gap is largest for refugees, the next group is non-western, Turks/Moroccans, East Europeans, and Caribbeans, with modest differences between them and the smallest gap, not surprisingly, is for (W) western immigrants. It is also apparent that the unemployment gap diminishes with YSM .

The coefficients for education levels now refer to Dutch diplomas and they barely change between the two models. Foreign education has substantial penalties. In fact, the magnitudes of the penalties are comparable to the effect of education levels, and thus, the effect of education is limited when obtained abroad. The penalties for foreign education differ by source country, with relatively large penalties for Eastern Europe and refugee countries.

⁴ *The regressions also include age, age squared, marital status and family composition, urban residence and naturalisation, as in the earlier regressions.*

For the other cases (male unemployment, female employment and unemployment), the general picture is different: The effects of education are mostly unchanged, foreign education is not penalised and source country differences in the penalties are mostly absent. This leads to the general conclusion that for male employment, education acquired in the home country wipes out the potential beneficial effect of education, while for male unemployment, female employment and unemployment, the effect of education acquired abroad is not different from that acquired in the Netherlands. Additionally we may note that for Caribbeans we never find a detrimental effect of having been educated in their home country; this reflects that Caribbean schooling is in Dutch and the school system has the Dutch structure.

For women, there is a remarkable result on unemployment: an increase in the country specific entry gaps, and a steepening of the education profile if education is distinguished by source country. Being an immigrant alone raises unemployment, but higher education reduces unemployment, no matter where it was obtained. The remarkable exception is primary education obtained abroad: It strongly reduces unemployment, presumably because women with such education are mostly non-participants. Thus, for female unemployment, the distinction increases the role of schooling relative to the role of source country.

The most striking conclusion so far has been that education is not a factor that facilitates access to employment. Generally, education does not significantly interact with the source country dummies or with years since migration, neither for predicting employment probability, nor for unemployment probability. This is similar to Bertrand and Mullainathan's [14] analysis which offers that better credentials have little effect on discrimination against African-Americans. However, as noted before, the effect may be related to the fact that immigrants may have obtained their education in their source country rather than in the Netherlands. Friedberg [15] has demonstrated that this can fully explain the differences in market outcomes between native Israeli's and immigrants. In fact, if education is obtained abroad we face two possible problems: measurement errors and true differences in returns. If measurement errors in reported schooling are larger for immigrants than for natives, then the resulting downward bias may erroneously suggest that the benefits from education are smaller for immigrants than for natives. Differences in measurement errors may emerge because immigrants education levels are reported less accurately (eg report higher schooling levels than actually obtained to prevent social disapproval or to improve their labour market opportunities) or because their actual obtained qualifications are not accurately translated into its Dutch equivalent. Interviewers have to ascertain the Dutch equivalent by asking for sufficient details on the stated foreign education, but we simply have no information on the quality of this process. The problem is that we can only disentangle the effect of measurement errors and real effects if we have reliable indicators of measurement errors. In Hartog and Zorlu [16] two measures of educational attainment for refugees in the Netherlands were included, one recorded by immigration officers and one by employment agencies. These were used to put bounds on the contribution of measurement errors. We concluded there that our key finding that refugees do not benefit from higher education, was not a false conclusion based on measurement error bias.

Models also include a quadratic age variable, three dummy variables for the presence of children below 11 years and controls for marital status, the degree of urbanization and naturalisation of immigrants.

Table 2. Probit estimates of employment and unemployment; coefficients (standard errors) and [marginal effects]

	MEN				WOMEN			
	Employ		Unempl		Employ		Unempl	
	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II
YSM	0.027*** (0.007) [0.005]	-0.012 (0.010) [-0.002]	-0.032** (0.011) [-0.003]	-0.016 (0.017) [-0.001]	0.054*** (0.006) [0.019]	0.057*** (0.009) [0.020]	-0.035** (0.012) [-0.003]	-0.041* (0.017) [-0.004]
YSM ²	-0.001*** (0.000) [0.000]	-0.000 (0.000) [0.000]	0.000 (0.000) [0.000]	0.000 (0.000) [0.000]	-0.001*** (0.000) [0.000]	-0.001*** (0.000) [0.000]	0.000 (0.000) [0.000]	0.000 (0.000) [0.000]
Dutch (reference)								
TurkMoroc	-1.074*** (0.081) [-0.325]	-0.280 (0.159) [-0.062]	1.327*** (0.118) [0.301]	1.244*** (0.268) [0.271]	-1.471*** (0.077) [-0.527]	-1.225*** (0.151) [-0.457]	0.762*** (0.129) [0.132]	1.073*** (0.259) [0.221]
Caribbean	-0.969*** (0.095) [-0.286]	-0.198 (0.172) [-0.042]	1.150*** (0.135) [0.242]	1.030*** (0.280) [0.203]	-0.996*** (0.078) [-0.382]	-0.998*** (0.153) [-0.382]	0.609*** (0.127) [0.095]	0.769** (0.264) [0.133]
East-Europ	-1.063*** (0.105) [-0.325]	0.133 (0.196) [0.023]	0.658*** (0.162) [0.104]	0.034 (0.357) [0.003]	-1.256*** (0.077) [-0.466]	-0.950*** (0.168) [-0.365]	0.749*** (0.125) [0.130]	0.976*** (0.276) [0.193]
Refugee	-2.244*** (0.140) [-0.735]	-0.661* (0.318) [-0.176]	1.374*** (0.204) [0.326]	1.178* (0.544) [0.254]	-2.770*** (0.214) [-0.675]	-2.122*** (0.362) [-0.635]	0.140 (0.297) [0.015]	0.028 (0.614) [0.003]
Non-western	-1.364*** (0.087) [-0.442]	-0.330 (0.173) [-0.075]	0.949*** (0.128) [0.179]	0.663* (0.293) [0.104]	-1.376*** (0.072) [-0.501]	-1.107*** (0.156) [-0.419]	0.496*** (0.121) [0.072]	0.676* (0.267) [0.111]
Western	-0.654*** (0.078) [-0.167]	0.161 (0.160) [0.028]	0.536*** (0.115) [0.073]	0.406 (0.270) [0.051]	-1.042*** (0.063) [-0.397]	-0.889*** (0.144) [-0.342]	0.333** (0.108) [0.041]	0.573* (0.249) [0.083]
TurkMor*YSM (ref.)								
Caribbean*YSM	0.014** (0.005) [0.003]	0.013** (0.005) [0.002]	0.006 (0.007) [0.001]	0.004 (0.007) [0.000]	0.009* (0.004) [0.003]	0.006 (0.005) [0.002]	0.012 (0.008) [0.001]	0.006 (0.008) [0.001]
EastEurop*YSM	0.009 (0.007) [0.002]	0.025** (0.008) [0.005]	0.035** (0.011) [0.003]	0.026* (0.012) [0.002]	0.011 (0.006) [0.004]	0.016* (0.006) [0.006]	0.012 (0.011) [0.001]	0.009 (0.011) [0.001]

Table 2. Continued....

Refugee*YSM	0.058*** (0.014) [0.011]	0.062*** (0.015) [0.012]	0.007 (0.023) [0.001]	0.005 (0.023) [0.000]	0.094*** (0.021) [0.033]	0.099*** (0.021) [0.035]	0.083* (0.033) [0.008]	0.073* (0.033) [0.007]
Non-west*YSM	0.026*** (0.006) [0.005]	0.031*** (0.006) [0.006]	0.022* (0.009) [0.002]	0.021* (0.009) [0.002]	0.016** (0.006) [0.006]	0.017** (0.006) [0.006]	0.021* (0.010) [0.002]	0.018 (0.010) [0.002]
West*YSM	0.013** (0.004) [0.002]	0.012** (0.004) [0.002]	0.012 (0.006) [0.001]	0.010 (0.007) [0.001]	0.013*** (0.004) [0.005]	0.013** (0.004) [0.005]	0.014 (0.008) [0.001]	0.011 (0.008) [0.001]
Edu_low (reference)								
Edu_ExtendGen	0.381*** (0.034) [0.058]	0.392*** (0.035) [0.059]	-0.210*** (0.063) [-0.017]	-0.255*** (0.066) [-0.020]	0.425*** (0.024) [0.137]	0.433*** (0.025) [0.139]	0.009 (0.051) [0.001]	-0.091 (0.053) [-0.008]
Edu_ExtendVoc	0.399*** (0.026) [0.063]	0.411*** (0.027) [0.064]	-0.086 (0.046) [-0.008]	-0.132** (0.050) [-0.011]	0.250*** (0.021) [0.085]	0.258*** (0.023) [0.088]	0.073 (0.046) [0.007]	-0.028 (0.049) [-0.003]
Edu_SecondGen	0.459*** (0.032) [0.067]	0.472*** (0.034) [0.068]	-0.178** (0.054) [-0.015]	-0.231*** (0.059) [-0.018]	0.680*** (0.025) [0.202]	0.698*** (0.026) [0.206]	-0.005 (0.050) [0.000]	-0.117* (0.054) [-0.011]
Edu_SecondVoc	0.531*** (0.023) [0.092]	0.537*** (0.024) [0.093]	-0.151*** (0.041) [-0.014]	-0.198*** (0.045) [-0.018]	0.722*** (0.020) [0.237]	0.733*** (0.021) [0.240]	-0.022 (0.042) [-0.002]	-0.125** (0.045) [-0.012]
Edu_HighVocat	0.711*** (0.026) [0.103]	0.719*** (0.027) [0.103]	-0.225*** (0.046) [-0.019]	-0.270*** (0.049) [-0.022]	1.055*** (0.022) [0.297]	1.066*** (0.023) [0.299]	-0.263*** (0.047) [-0.023]	-0.365*** (0.050) [-0.030]
Edu_University	0.819*** (0.029) [0.104]	0.841*** (0.031) [0.106]	-0.265*** (0.050) [-0.021]	-0.315*** (0.055) [-0.024]	1.180*** (0.028) [0.292]	1.211*** (0.030) [0.296]	-0.133* (0.054) [-0.012]	-0.258*** (0.059) [-0.021]
ForeignEdu_low (ref.)								
ForeignEdu_primary		-0.548** (0.178) [-0.138]		-0.088 (0.295) [-0.008]		0.055 (0.151) [0.019]		-0.787** (0.271) [-0.041]
ForeignEdu_extend		-0.722*** (0.179) [-0.197]		0.058 (0.295) [0.006]		-0.036 (0.153) [-0.013]		-0.299 (0.272) [-0.023]
ForeignEdu_second		-0.613*** (0.169) [-0.158]		0.095 (0.280) [0.010]		-0.096 (0.142) [-0.035]		-0.281 (0.253) [-0.022]

Table 2. Continued....

ForeignEdu_higher		-0.720*** (0.172) [-0.195]		0.109 (0.283) [0.011]		-0.189 (0.146) [-0.070]		-0.170 (0.259) [-0.015]
West*ForeiEdu (Ref)								
TM* ForeignEdu		-0.096 (0.108) [0.019]		-0.038 (0.163) [-0.003]		-0.305** (0.095) [-0.115]		-0.000 (0.172) [0.000]
Car* ForeignEdu		0.052 (0.120) [0.009]		0.018 (0.178) [0.002]		0.314*** (0.092) [0.102]		0.292 (0.166) [0.036]
East* ForeignEdu		-0.826*** (0.181) [-0.234]		0.750* (0.323) [0.126]		-0.275* (0.130) [-0.103]		0.027 (0.210) [0.003]
Ref* ForeignEdu		-0.923** (0.304) [-0.270]		0.119 (0.507) [0.012]		-0.650* (0.329) [-0.252]		0.515 (0.570) [0.076]
Nw* ForeignEdu		-0.438** (0.142) [-0.105]		0.240 (0.206) [0.027]		-0.215 (0.112) [-0.080]		0.174 (0.193) [0.020]
ForeignEdu*YSM		0.022*** (0.005) [0.004]		-0.011 (0.009) [-0.001]		-0.004 (0.005) [-0.002]		0.010 (0.009) [0.001]
Constant	-3.697*** (0.122)	-3.798*** (0.123)	-2.311*** (0.207)	-2.240*** (0.209)	-2.064*** (0.108)	-2.111*** (0.108)	-2.835*** (0.206)	-2.754*** (0.209)
N	71445	71445	37165	37165	73644	73644	38411	38411
Pseudo R ²	0.26	0.27	0.07	0.07	0.21	0.21	0.06	0.06

p<.05; ** *p*<.01; *** *p*<.001

5. CONCLUSION

Using the Dutch Labour Force Survey and probit estimations, this paper has assessed the impact of education on the (un)employment probability of immigrants. The analysis shows that the immigrant employment gap for disadvantaged groups is allied to differences in education levels. Controlling for education has no effect on immigrants' entry gap in employment and unemployment probability and on the speed of catching up. The effect of the duration of stay in the Netherlands on employment and unemployment is not sensitive to years of education.

Imperfectly, education acquired in the home country and in the Netherlands has been separated, by comparing the length of education and age at arrival. The analysis suggests that male immigrants do not benefit from education in their home country: The beneficial effect of education on probability of employment is negated if the education was acquired abroad. Overall, these findings do not support the presence of an engine effect of education. In other words, education is generally perceived as an important component of human capital but its contribution to the profile of access to employment is found to be negligible in this study. The country and region of origin, which captures a large part of social, cultural and linguistic distance from the host country, remains a powerful predictor of employment probability.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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