

Return on Education for Immigrants: The Case of Highly Skilled Europeans in the United States

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Abstract:

This paper analyzes the earnings of highly-skilled European immigrants in the United States and the effect of their place of education. While most studies treat European immigrants as a single group doing fairly well in the United States, this paper suggests that there is reason to assume differences in return on education among European countries. Indeed, idiosyncratic sociopolitical structures and heterogeneous education systems among European countries lead to significantly different regional results. According micro data from the National Survey of College Graduates (National Science Foundation) immigrants who received their degree in either Eastern or Southern European countries earn less than natives along the lines of economic assimilation theory. In contrast, and controlling for relevant variables, immigrants from Western or Northern Europe earn up to 14 and 23 percent more than comparable native-born Americans. These findings highlight how European degrees are valued and the extent to which they prepare individuals to compete in international labor markets. From a broader perspective considering the growing internationalization of education and increasing competition for highly-skilled labor, the findings may provide valuable support to the Bologna Process launched by the European Union to improve and equalize higher education in its member countries.

Keywords: F22 - International Migration, C21 - Cross-Sectional Models, F15 - Economic Integration, I21 - Analysis of Education

Introduction

The growing number of people migrating from one country to another has prompted researchers to closely look at their assimilation to the new society. Especially, their integration and performance in the receiving countries labor markets have received much attention in the last decades. Based on the assumption that individual earnings highly depend on the human capital of the respective person, researchers have been studying the effects of the immigrant's educational characteristics on earnings (Mincer, 1974; Chiswick, 1978; Borjas, 1985, 1995). A common finding has been that immigrants start out at a lower wage level than natives but experience faster wage growth as they gain host country experience and thus converge with natives.

Much interest has been concentrated on immigrants from less developed countries – in particular from Asia and South America – and to minority groups and women (e.g. Trejo, 2000; Zeng, 2003). Few studies, however, focus on the characteristics of European born immigrants. In fact, their declining proportion of all foreign born in the U.S. from 75 percent in 1960 to 22.9 percent in 1990 and 15.8 percent in 2000 (Dixon, 2005), and their proportional well-doing in the labor market seem to have driven away much attention from this group. Consequently, there are many aspects of the Europeans born in the U.S. that have not been explored so far – yet being of crucial importance for understanding global labor flows between Europe and the USA.

Europeans are on average better educated than other foreign born groups and there are hardly any concerns about their integration into the labor market. But little is known of potential differences among Europeans especially with regard to their education. What is the actual return on the specific education they have? How does the attainment of education in the U.S. influence their assimilation? Is their level of European education acknowledged in the U.S. labor market and are there any particular differences among Europeans due to which European country they are from? This paper will take a close look at the group of European immigrants in the U.S. and address these questions. The aspect of *where* they received their education will explicitly be studied as findings from empirical research suggest that a degree earned in the sending country results in a wage disadvantage in the host country. Most importantly, special attention will be given to the fact that Europe is indeed very diverse in regions and single countries. It will be shown that the Europeans educated in the U.S. do not

differ from U.S. natives in terms of their earnings while earnings of those educated in their home countries diverge significantly. Surprisingly, only Eastern and Southern Europeans experience a wage disadvantage in the U.S., contrary to Western and Northern Europeans who, in fact, earn more. These findings highlight the importance to account for the heterogeneity among European immigrants and paint a new picture on the transferability of European education to the U.S..

When speaking of European born immigrants, the following analysis will strictly refer to a group of European countries namely the “old” 15 EU countries¹ and eight of the new EU countries from mostly Eastern Europe.² As education will be of special importance and the analysis focuses only on the highly skilled immigrant population, the individuals included in the study hold a bachelors degree at the least. Their education will be measured by their most recent degree.

After this introduction the next part of this paper will outline the underlying theory of assimilation in more detail and the specific hypothesis will be developed. Subsequently, the econometric model which reflects factors explaining earnings in the context of assimilation will be presented. The data to undertake the analysis is drawn from the National Survey of College Graduates in 1993 and the U.S. Census micro data of 1990. A detailed description of this data set and a discussion of the method used to estimate the model will follow and after the data assessment the results from the regressions will be presented and interpreted. The conclusion will finally summarize the findings and give an idea of implications and further analysis to the issue.

1 The relevant countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

2 Poland, Hungary, Estonia, Latvia, Lithuania, Malta, Czech Republic, Slovakia (in the data still former Czechoslovakia). For Cyprus and Slovenia there was no available data.

Theory and Hypothesis

The theory of economic assimilation describes the phenomenon that immigrants initially earn less in the host country, but subsequently experience faster wage growth than comparable native workers. Empirically, the assimilation path is thus measured in terms of the earnings disadvantage and the subsequent wage growth. The first study capturing this theory was undertaken by Chiswick (1978) who estimated – based on the 1970 U.S. Census – a time of 10 to 15 years for closing the wage gap. Chiswick went even further by saying that immigrant’s earnings would eventually exceed those of natives due to positive selectivity of immigrants in terms of capability and motivation.

The most famous challenge of this analysis was brought up by Borjas (1985) who pointed out that a single set of cross-section data could barely account for changes in time and, hence, conditions in the host country for immigrants. Additionally, it is widely perceived that the average education level of newcomers relative to U.S. natives declined in recent years (Lowell, 2004). Borjas (1985, 1995) studies several decennial Census years similarly and establishes the so-called synthetic cohort approach which confirms earning disadvantages for immigrants – and larger ones especially for recently arrived cohorts. He also points out that immigrants do not necessarily experience faster wage growth and he remains more pessimistic about the assimilation path in terms of wages.

In general, most subsequent studies agreed with the idea of assimilation theory, but were less enthusiastic about the pattern of wage growth. Studies on longitudinal or panel data have further addressed the difficulties with changes in time and cohort characteristics and proved to be very useful. However, they have often suffered from data lack and small samples.³

In order to understand the potential wage disadvantage of immigrants its main influencing factors need to be analyzed. Human capital theory indicates that the skills of the respective person are crucial in this context (Mincer, 1974). Thus, wage primarily depends on the education and professional experience. With regard to particularly schooling, research has emphasized education to be a country specific skill. As a result, the initial earnings disadvantage of immigrants can mostly be explained by the lower value that the host country attributes to human capital obtained in a foreign county. The host labor market discounts the

³ See Lowell 2004 and Chiswick et al. 2005 for an elaborate discussion.

human capital achieved prior to migration, as it is supposedly less suitable to the local market (Bratsberg and Terrell, 2002; Friedberg, 2000; Zeng and Xie, 2004).

Turning to the population of this paper's interest – the highly skilled European immigrants in the U.S. – education becomes the crucial variable to differentiate between groups of European immigrants. It will be seen that the fact *where* Europeans received their degree will be of central importance for their earnings. European immigrants are usually considered as a group who is doing fairly well in the U.S. labor market and it could even be said that assimilation theory does not apply to this group in the first place (Dixon 2005, Saint-Paul 2004; Bratsberg and Terrell, 2002). However, as Europe is a region of very diverse countries, results may be different when distinguishing further between different regions or even countries within Europe. In fact, the idea of education as a country specific skill will turn out to be a remarkably important indicator for explaining earnings of Europeans from different regions.

The particular question about the importance of the place of education (PoE) for immigrant labor market outcomes in the U.S. has recently been addressed by Zeng (2004) for highly skilled immigrants from Asia. Among other aspects, he finds that assimilation theory primarily applies to Asian immigrants with foreign education and that Asians with U.S. education have wages similar to natives and therefore do not need to assimilate in the sense of wage assimilation.

Bratsberg and Ragan (2002) analyze the National Longitudinal Survey of Youth (NLSY) to address the return of U.S. schooling for immigrants. They also find that education abroad is not remunerated as well as U.S. education. Further, they find that among higher levels of schooling (11+ years) the development status of the sending country turns out to be very important. The difference in return on schooling between schooling received in the U.S. or prior to migration is very large for developing countries and becomes smaller for more developed countries. With regard to Europe they point out that for Northern and some Western European countries this difference is offset by other characteristics and they actually earn more than natives.

Friedberg (2000) analyzes the return on foreign versus host country education for immigrants to Israel. She concludes that education abroad is in general discriminated in the

host labor market. However, she also indicates that this is not the case for Western European immigrants with post-secondary education.

Furthermore, Regets (2001) analyzes the impact of a foreign degree for highly skilled immigrants in the U.S. who either work in Science and Engineering (S&E) or hold an S&E degree. He confirms wage discrimination for those immigrants educated abroad. For Europeans he shows that those from English speaking countries actually have higher earnings than natives while the rest of the Europeans earn less.

These studies stress that there are differences in return on education received in the country of origin versus the host country but do not give a full picture on immigrants from Europe. Still, they raise further interest to look at European countries explicitly and it is likely that the issue of the country of education is more complex in the case of Europe.

Indeed, Europe embraces a wide range of very diverse countries with very different sociopolitical systems – including the education system. The importance of *where* a degree is received for outcomes in the U.S. labor market can therefore only be captured if potential quality differences of education among the European countries in terms of transferability to the U.S. labor market are encompassed. In fact, there is evidence for differences in the quality of education which could cause education from the respective countries to be favored or discriminated in the U.S. labor market. It is important to note that quality of education in this context primarily means the capacity of the education to be transferred to the U.S. labor market and compared to the U.S. education.

The structure of higher education systems varies to quite some degree among the European countries.⁴ Northern European countries – where many immigrants come from – tend to have a system which is more similar to the system in the U.S.. Additionally, they do have a significant language advantage as English is either the language spoken or very much used in media, schools or at work. Their prospects in the U.S. labor market are therefore expected to be rather well.⁵

For countries in Western and Central Europe the picture is more diverse. The higher education systems are generally considered of high quality but they differ from each other and the U.S. considerably in terms of the length and the levels of achievable degrees as well as in

4 See EURYDICE.org for a detailed description of each system.

5 Also see Regets (2001).

funding. The system is less similar to the U.S. system than the one in Northern European countries. Still, numerous universities are interested to focus on an international perspective; and opportunities to gain international experience are included in the curricula of many disciplines. This may familiarize U.S. employers more with the education of Western Europe and consequently may be positively reflected in the immigrant earnings.

Immigrants from Eastern European countries most likely received their education in a communist system. The education in European communist countries was highly centralized, decisions concerning number of students, staff and curriculum were made in a long bureaucratic process by the government and the structure of basic and, generally, specific research did not match the needs of the labor market. It is very different from the system in other European countries and differs most notably from the U.S. system. As a consequence it is expected that Eastern European immigrants follow the pattern of the traditional findings on returns of foreign schooling, meaning the experience of an earnings disadvantage in the U.S. (Mateju and Simonova, 2005).

Countries of Southern Europe may also have an education system which is less comparable to the U.S.. There is a lot of literature about the existence of a brain drain from Southern Europe and especially Italy – by far the main Southern sending country. This indicates that the education systems may provide a less favorable environment for research and confer less value to advanced degrees (Morano-Foardi 2004; Becker et al., 2003). Moreover, statistics on higher education show that Southern European countries tend to have a lower percentage of tertiary educated people in the population and also spend less percent of their GDP on higher education than other European countries (European Commission, 2005b, 2004). Both may be indicators that higher education in these countries differs from other European countries. Transferability to the U.S. is consequently arguable and the labor market outcome for Southern European immigrants in the U.S. is expected to be less successful.

On broader level joint policy efforts undertaken by the EU may also shed light on differences in educational systems of the member states. In the end of the 1990s the EU has launched a reform process in view of the Lisbon strategy – the Bologna Process – which aims to improve and especially equalize the European higher education system. The implementation of this initiative confirms that the education systems reveal major differences and that some countries need to put more effort into achieving equalization and improvement than others

(European Commission, 2005a, 2000). This in turn supports the intent of this paper not to treat European immigrants as a single group when it comes to their education.

In order to test the hypothesis of these existing differences and the importance of PoE several steps will be developed. First, it will be tested whether there is a significant effect on earnings for immigrants due to the fact of being born in Europe. Second, the European immigrants will be divided according to their PoE and it will be investigated whether findings from previous studies on the effect of foreign versus U.S. education also hold for European highly skilled immigrants. Finally, the diversity of European countries will be included by splitting the European educated immigrants further into four European regions.⁶ This way, statements about the transferability of European education and the applicability of the assimilation theory for European immigrants will be made possible. It is important to note that the investigation primarily aims at revealing initial differences in earnings originated from the specific PoE rather than looking at subsequent wage growth patterns. The latter would surely be interesting but exceeds the extent of this paper.

The Model

The model for testing the above hypothesis builds on the basic structure of the wage equation established by Mincer (1974). Accordingly, the main factors explaining the earnings are education and experience. Additionally, other factors have proved to be important in the context of immigration. The underlying econometric model of this study is therefore constructed by

$$\ln(y) = \beta_0 + \beta_1 \text{exp} + \beta_2 \text{exp}^2 + \beta_3 \text{ysm} + \beta_4 X + \beta_5 E + \beta_6 \text{PoE} + u$$

where y is the wage, exp are the years of professional experience and ysm are the years since migration to the U.S., thus representing the U.S. experience. Due to the quadratic relationship between experience and earnings, exp is also included with its square. X includes a vector of dummies like marital status and sex and E represents a set of dummies for tertiary education

⁶ The regions are divided as follows: Western: France, Germany, Luxembourg, Netherlands, Austria and Belgium. Northern: Denmark, Finland, Ireland, Sweden and United Kingdom. Southern: Greece, Italy, Malta, Portugal and Spain. Eastern: Poland, Czech Republic, Slovakia, Hungary, Estonia, Latvia and Lithuania.

and English language skills. Finally, PoE is the dummy accounting for where a person is educated.

The latter variable is of special interest for testing the hypothesis on the importance of the country of education. The dummy PoE initially includes all European born – U.S. and European educated – and is subsequently further divided into subgroups. First, it is split into two categories, one for those Europeans with U.S. education and one for those educated in Europe. Secondly, this dummy is further grouped to account for regional differences. Each European is categorized by her region of education – Western -, Southern -, Northern -, Eastern Europe or the U.S.. Native Americans educated in the U.S. always form the base category. This way the model allows comparing these groups to native born Americans while holding other factors constant.

Data and Method

The data to estimate the above model is taken from the National Survey of College Graduates (NSCG) in 1993 and the U.S. Census of 1990. The NSCG is a follow up survey of the U.S. Census stemming from the initiative of the National Science Foundation (NSF). It has the unique feature that it reports very detailed information on education and only includes those individuals who at least hold a college degree; consequently, the sample is strictly drawn from the highly educated population. As the object is to compare European immigrants to natives – men and women – the sample is restricted to white Americans with a degree received in the U.S., and to Europeans with their higher education received either in Europe or in the U.S..⁷ The sample is further constrained to individuals being employed full-time and earning a positive income.

The method used to estimate the model will be ordinary least squares (OLS). From the discussion on assimilation theory it is evident that there may be certain issues involved with using this method that should be kept in mind. The analysis of immigration and labor market outcomes brings up the issue of selectivity in the immigrant population which remains an ongoing debate among researchers. Immigrants may primarily come from a better educated and wealthier section of their home country population. Moreover, there is disagreement on

⁷ Those with a degree from other than the countries of interest are dropped from the sample.

the nature of unobservable characteristics of the individuals. Chiswick (1978) initially states that immigrants are more motivated, capable and adventurous compared to their compatriots. This is contradicted by a study of Borjas (1987) who points out that the characteristics of unobservable attributes are more complex and depend on the properties of income variances and correlation between the income distribution of sending and receiving country. Borjas stresses that for most countries their emigrants could also be negatively selected from the population.

Even though this discussion has not yet been solved, it may be of secondary importance for the sample of highly skilled Europeans. The fact that only very educated individuals are included in the analysis secures that potential differences between the educational distribution in the emigrant and the remaining population are likely to be small. A certain degree of positive selection is probably present due to the constitution of the U.S. immigration policies. These policies tend to favor more promising applicants to enter the United States.⁸

The argument that selectivity in unobservable characteristics, such as ability, motivation and disposition to take risk, could differently influence labor market outcomes and cause a bias in the estimators, may be feasible. However, immigrants may or may not be self-selected; such selectivity is hard to measure. There are many ways to argue for different - positive or negative - selectivity in the various regions but there is no evidence that can clearly outline a certain selection pattern. Thus, there is no reason to assume that immigrants from the different regions differ from each other in the way they are selected. The essential argument that there are differences in transferability of education among the European regions will therefore not be affected. Moreover, this study primarily focuses on the initial wage divergence while the subsequent wage growth path which would depend on such selectivity, is only of marginal importance. A detailed analysis of the selectivity problem may certainly be interesting, but is beyond the scope of this paper.

There are other factors associated with the NSCG 1993 data which should be discussed before presenting results and drawing conclusions. First of all, there is some difficulty involved with way the dependent variable – the wage – is constructed which could cause some impreciseness in the estimated coefficients. It is usually preferable to take the hourly wage for a model like the one specified above, however, the NSCG 1993 does not report the hours and

⁸ Also see Aydemir (2003).

weeks that each individual worked. This means that the coefficients of the model will be estimated for the yearly wage and not for the commonly used hourly wage. By itself, this would not be as bad since it primarily changes the magnitude of the coefficients; however, the yearly salary is also imputed. To make the imputation as precise as possible the variable is constructed based on the average hours and weeks worked reported in the 1990 Census for the respective sample. This construction is surely not immune to criticism, but it clearly seems the best solution for the 1993 NSCG data.

Knowing this potential source of impreciseness, there will be an additional regression using the wage variable from the Census to support the conclusions of the results. The advantage from this regression is to see whether results are different with the not imputed wage variable, a disadvantage can be seen in the reduced sample size since those finishing their degree between 1990 (or actually 1989) and 1993 are dropped from the sample.

Another problematic variable in the estimation model seems to be 'years since migration' (ysm). When included in the equation it is highly insignificant and most importantly associated with a problem of multicollinearity by being positively correlated with the dummies of 'PoE' – especially with the dummy of Europeans with a U.S. degree (correlation coefficient of 0.87). If dropped from the equation, the coefficients change significantly and an upward bias becomes evident. For that reason and for its theoretical importance in models explaining labor market outcomes for immigrants, it will still be kept in the equation. The fact that this variable turns out to be insignificant is acceptable with regard to the sample of Europeans. There are only few recently arrived people and the mean of ysm is about 25 years, this implies that U.S. experience is less important for the Europeans⁹.

Further the controls for English language skills are dropped from the equation, although important in the assimilation context.¹⁰ The reason is that among the European born immigrants who reported their English skills (45 percent) more than 98 percent reported either very good or good English language proficiency. Additionally, the number of responses for this particular question altogether is rather small in this sample (only about 6 percent of the sample), the results may therefore be barely representative.

9 It should be noted, however, that the variable 'years since migration' is taken from the Census, therefore it is not possible to account for the arrivals between 1990 and 1993. This could be critical to some degree as especially many people from Eastern Europe migrated to the U.S. after the break down of the Soviet Union (Rhode 1993). Nevertheless, it is unlikely that this number will drastically change the mean.

10 (See e.g. Chiswick and Miller 1998; Jasso and Rosenzweig, 1990).

The descriptive features of the remaining variables to estimate the model are summarized in table 1. The results of the estimation will be presented in the following part. When interpreting these outcomes the mentioned underlying difficulties should be kept in mind in order to make appropriate conclusions regarding the tested hypothesis.

Results

There were several steps taken to test the above hypothesis. These steps are developed by estimates for three types of regressions presented in table 2.¹¹ The underlying pattern is that the group of Europeans becomes more and more split up into different subgroups according to the place where the immigrants received their education. This way the simple conclusion that Europeans do comparatively well in the U.S. labor market can be scrutinized more specifically, leading to surprising results.

The first column shows a coefficient of 0.0654 for the European born which means that, *ceteris paribus*, the Europeans earn 6.76 percent¹² more than natives. This is significant at the margin of a 1 percent significance level.¹³ Further, all other factors except for *ysm* are highly significant and show the expected signs. The problem of collinearity associated with *ysm* has been discussed in the previous section. In addition, the assumption that *ysm* may be less important for highly skilled Europeans with an average of 25 years of U.S. experience can also be supported by controlling for U.S. high school education. As expected, this variable did neither effect earnings nor did it change the outcome for *ysm*.¹⁴ It should be noted, however, that this most likely does not apply to European immigrants with different skill levels.

The second column splits the Europeans according to their place or continent of education. While most other coefficients stay the same in significance and magnitude, the education dummies reveal interesting outcomes. In fact, those educated in Europe earn 7.83

11 Due to heteroskedasticity in the data the estimated coefficients are computed as heteroskedasticity robust estimators.

12 Formula: $100 * [\exp(\beta_j) - 1]$

13 For the t-statistics it is always referred to the asymptotically normal distributed t-statistic. The significance level will always refer to the two-tailed alternative.

14 U.S. high school education controls for those individuals who are in the U.S. since being a child and thus for a long time. They are much more assimilated than others and *ysm* is less relevant.

percent more than natives – on a significant level and other factors hold constant. The coefficient of the individuals educated in the U.S. on the other hand is positive but highly insignificant with a t-statistic of 0.31. As expected, the U.S. educated do just as well as natives in the labor market. The results for the European educated, however, are unexpected. Previous studies have illustrated that immigrants with foreign education are disadvantaged in the host country's labor market. This seems to be untrue for highly skilled European immigrants; they actually do much better than natives.

Even more surprising details are disclosed when accounting for potential differences in the European education systems. Column 3 presents the estimates when the group of European educated immigrants is subdivided into four regions. The coefficient of the U.S. educated is again insignificant and the result that these Europeans do not differ from native born Americans confirms findings from previous studies. Therefore, they are added to the base category and the dummy is dropped from the equation. The latter also alleviates the mentioned problem of collinearity associated with this group and *ysm*. The coefficient of *ysm* becomes significant – but is still very small confirming that it is of negligible importance for European immigrants.

The differentiation among the European educated extensively changes the magnitudes of the respective coefficients. The estimates for Western and Northern Europeans are positive and large with a significance level of less than 1 percent. According to these estimates Western Europeans earn 13.79 percent more than natives and Northern Europeans even 22.76 percent more. Consequently, this group experiences a much higher return on education than natives in this context.

On the other hand, the subdivision reveals a different case for Southern and Eastern Europeans. It was argued above that there is evidence to suggest that one could expect disadvantages in the return on education due to their differing education systems and potential lower transferability of education to the U.S..Indeed, especially Eastern Europeans experience a large wage disadvantage in the U.S. labor market. They earn 20.84 percent less than Natives. It is obvious to consider this as a consequence of education under a communist system which is likely to have the least similarities among the European regions to the U.S. education system. For Southern Europeans the regression also reveals lower returns to education. The result shows that they earn 14.50 percent less than their American counterparts at a 5%

significance level. The significance level is not as high as for the other PoE dummies but the respective standard error is also largest among them.

The regression with the 1990 data from the Census is presented in column 4 replicating column 3 of table 2. The reason for this regression is to find out whether the results for PoE are the same when a not imputed depended variable is used. The coefficients of the different regions are similar in signs to the previous analysis. The magnitudes are somehow different but do reflect the same pattern. Thus, the results indeed confirm the overall hypothesis that it makes a significant difference where in European immigrants are educated.

From the results above it can thus be concluded that the return on education for highly skilled Europeans depends very much on their region of education. While for Southern and Eastern Europeans their foreign education is discredited in the U.S. labor market, the Western and especially the Northern Europeans gain a wage premium from their foreign education. U.S. educated European immigrants have similar wages to natives. For Eastern and Southern European countries these outcomes were expected and may, to a great extend, result from the communist education system in the case of Eastern Europeans and the unfavorable environment for higher education in Southern European countries. The earnings premiums of Western and Northern Europeans, however, are more surprising. While it can indeed be argued that the education is more transferable to the U.S. system, the magnitude of the positive effects is also astounding. This indicates that the education in these countries is highly valued in the American labor market. Additionally there may be more subtle features of qualitative nature associated with these groups.

Conclusion

This empirical study has analyzed the effect of education obtained abroad versus in the U.S. for European highly skilled immigrants. From the theory of economic assimilation and previous empirical research on the transferability of education received in the sending country, it was proposed that foreign education is awarded less than U.S. education in the U.S. labor market. This was tested for European immigrants with the data of the NSCG from 1993. The analysis particularly tested for potential differences in the return on education due to diversity of European countries and education systems. The results indeed confirm that these differences exist, and education obtained in Europe changes the earnings significantly, though not uniquely in the expected way. Southern and especially Eastern European immigrants do experience a significant earnings disadvantage. Their education seems to be less transferable to the U.S. labor market. In contrast, immigrants educated in Northern and Western Europe surprisingly earn more than native Americans. Finally, Europeans with U.S. education do not differ from natives in their wages. These results reveal that the earning disadvantage stated in the theory of assimilation may only be applicable to Eastern and Southern Europeans. Thus, especially Northern and Western European immigrants differ from other highly skilled immigrants in the U.S. when it comes to their education. In fact, the results suggest that education in these countries is valued even more than U.S. education. From this it would be very interesting to search for more qualitative features that distinguish the respective groups from each other to further explain the outcome.

Overall, the result that European immigrants educated in Europe have a differing return on education and especially that some earn more than natives Americans and U.S. educated Europeans is new to the literature of immigrant labor market integration. From the U.S. perspective it explains parts of the labor market integration of European immigrants and how their skills are evaluated. On the European side these findings tackle features of the European brain drain to the U.S. and may have policy implications for addressing the higher education system in the EU.

European governments try to improve and equalize their education system to make it more competitive and capable to follow the growing internationalization in the highly skilled labor market. The Bologna Process is one example of this effort. Measuring the transferability

of education to other labor markets – and especially to labor markets of highly developed countries – may be one approach to address and support this effort.

It would therefore be very useful to further explore the issue and repeat the analysis with more recent data and capture potential changes. Furthermore, the final split of the regions into the single countries may reveal even more surprising results. For example, Saint-Paul (2004) recently analyzed the brain drain from Europe to the U.S. by looking at five specific countries. With regard to tertiary education and its return in the U.S. labor market he finds much lower return for immigrants from Germany compared to other Western and Northern European countries like France and the UK. This indicates that averaging over the European regions may still hide essential results which could be revealed by country level analyses.

Finally, the immigrant population may be subject to selectivity issues. As this study looked exclusively at the highly skilled European population and revealed that some of them perform even better than natives in the U.S. labor market, the issue of selectivity gains crucial relevance. If those people – as it was suggested – were in fact positively selected, then the highly skilled European diaspora would be a fraction of the best and brightest. Thus, further analysis of selectivity in this context might deliver interesting results

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Appendix – Tables

Table 1: Descriptive Statistics: N= 54449

<i>Variable</i>	<i>Mean</i>	<i>Standard deviation</i>
Yearly salary	50,701.089	25,937.2238
Years of Experience	18.4228	9.6066
Years since migration	0.8944	5.2742
Bachelor degree	0.6797	0.6659
Master degree	0.2441	0.42958
Doctorate or other professional degree	0.0761	0.2652
male	0.7221	0.4480
married	0.7249	0.4466
European born	0.0347	0.1831
▪ educated in the U.S.	0.0235	0.1513
▪ educated Europe	0.0113	0.1057
– educated in Western Europe	0.0022	0.0467
– educated in Southern Europe	0.0007	0.0261
– educated in Northern Europe	0.0059	0.0768
– educated in Eastern Europe	0.0025	0.0499

Source: NSCG 1993

Table 2: Estimated coefficients from the 1993 data

	(1)	(2)	(3)	(4)
Work experience	0.0258** <i>0.0008</i>	0.0258** <i>0.0008</i>	0.0258** <i>0.0008</i>	0.0418** <i>0.0008</i>
Work experience squared	-0.0004** <i>0.0000</i>	-0.0004** <i>0.0000</i>	-0.0004** <i>0.0000</i>	-0.0007** <i>0.0000</i>
Years since migration	0.0000 <i>0.0009</i>	0.0013 <i>0.0010</i>	0.0016** <i>0.0004</i>	0.0011* <i>0.0005</i>
Male	0.2225** <i>0.0043</i>	0.2225** <i>0.0043</i>	0.2210** <i>0.0043</i>	0.2761** <i>0.0049</i>
Married	0.1016** <i>0.0044</i>	0.1016** <i>0.0044</i>	0.1021** <i>0.0044</i>	0.1171** <i>0.0051</i>
Masters degree	0.1600** <i>0.0043</i>	0.1602** <i>0.0043</i>	0.1616** <i>0.0043</i>	0.1493** <i>0.0053</i>
Doctorate or other professional degree	0.4222** <i>0.0084</i>	0.4219** <i>0.0084</i>	0.4231** <i>0.0084</i>	0.4181** <i>0.0112</i>
European born	0.0654* <i>0.0256</i>			
Educated in Europe		0.0754** <i>0.0262</i>		
Educated in Western Europe			0.1292** <i>0.0413</i>	0.0995* <i>0.0511</i>
Educated in Southern Europe			-0.1567* <i>0.0827</i>	-0.2861* <i>0.1154</i>
Educated in Northern Europe			0.2047** <i>0.0251</i>	0.2012** <i>0.0305</i>
Educated in Eastern Europe			-0.2337** <i>0.0409</i>	-0.2388** <i>0.0412</i>
Educated in the U.S.		0.0102 <i>0.0328</i>		
Intercept	10.122** <i>0.0077</i>	10.122** <i>0.0077</i>	10.122** <i>0.0077</i>	9.7862** <i>0.0071</i>
R-Squared	0.1772	0.1773	0.1791	0.2540
N	54449	54449	54449	46969

Note: Dependent variable: Natural Logarithm of yearly earnings. Standard errors below coefficients in italic.

*Significance level < 5%. **Significance < 1%.