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# **ENGLISH LANGUAGE PROFICIENCY, EDUCATION LEVEL, MARITAL AND CITIZENSHIP STATUS AS DETERMINANTS OF INCOM LEVEL OF SLAVIC IMMIGRANTS**

**MA Gorica Malešević<sup>1</sup>**

Lake Forest College USA

**Abstract:** The purpose of this paper is to provide some insight into the factors that determine the income level of Slavic immigrants in the US. Better understanding of those human capital factors is crucial for immigrants and the US government in the process of maximization of the social welfare. The following is hypothesized through the paper: 1. Naturalization and marital status have positive effects on annual income level 2. Slavs who speak English fluently experience greater returns on their education level in terms of annual income 3. Slavs who do not speak English fluently will experience lower returns on their education level in terms of annual income.

**Keywords:** immigrant workers, wage, skills, human capital

**JEL Classification Code:** J24, J61, E24 ECON

## **INTRODUCTION**

After World War II, the US faced a massive influx of immigrants from war-torn Europe. Those constant streams of immigrants from some European countries are still present due to different political and socio-economic factors. This paper will focus on Slavic immigrants. People from Slavic countries were escaping from communist regime and civil wars in EX-Yugoslavia and USSR hoping that they will be able to attain the “American dream”<sup>2</sup>. Slavic people have common ancestral roots that make them culturally similar. In accordance to their ancestral roots, the following ethnicities are considered to be Slavic: Ukrainians, Russians, Belarusians, Poles, Serbs, Croats, Bosniaks, Montenegrins, Slovenes, Bulgarians, and Macedonian. Beside Slavic people defined above, Hungarians and Albanians will be considerate Slavic too due to their cultural similarities within geographical proximity to Slavs.

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<sup>1</sup> Asistent na Koledžu na predmetima. Makroekonomija, mikroekonomija, ekonometrija i finansijsko računovodstvo e- mail malesecica@mx.lakeforest.edu, rođena u Republici Srpskoj

<sup>2</sup> Van Tassel and Grabowski, 1996

In this paper, it is proposed that English language proficiency, Education Level, Marital and Citizenship status are important determinants of annual income that Slavs earn in the US. Using a sample of 16,246 male Slavs Immigrants from Census PUMA data, it is shown that English, Education, Marital and Citizenship status have statistically significant impact on annual income. More specifically, it is hypothesized that: 1. Naturalization and marital status have positive effects on annual income level 2. Slavs who speak English fluently experience greater returns on their education level in terms of annual income 3. Slavs who don't speak English fluently will experience lower returns on their education level in terms of annual income.

This study is beneficial for Slavs in terms of getting deeper insight into factors that are expected to have effect on their annual income level. At least, Slavs would be aware of barriers that prevent them from being rewarded for human capital they have. US government could utilize the findings of this study when consider policies related to Slavic immigrants and their welfare programs.

The remainder of the paper is as follows: section two is a literature review, section three describes the data, section four presents the effects of regression, section five states the results, and section six is the conclusion.

### **LITERATURE REVIEW**

6 because they are more likely to attain higher annual income in the labor market in comparison to single men. They argue that wives are able to improve the household's decision making process, motivate men to put more effort into their jobs, provide emotional support as well as advice on job-related matters, and perform tasks directly related to husband's jobs.

### **DATA**

All data used are from a 1990 5% Public Use Microdata Sample (PUMS) derived from The Decennial Census of Population and Housing (US Census Bureau). The sample consists of foreign born Slavic men who are between twenty-two and sixty-five years old. The logged form of annual income from wages and salaries is the variable of interest in this paper. This sample is restricted to only males because males and females experience different returns on their human capital<sup>3</sup>. Female workers have a lower return on their capital relative to male workers because they are out of labor market for a large period of time (e.g. maternity leave and family). Furthermore, all men who reported an income lower than \$1 in 1998 are excluded from the data sample. Additionally, all participants that reported mental and/or physical disabilities are excluded from the sample. The final sample size consists of 16,246 males.

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<sup>3</sup> Sanford, 2002.

The PUMS data contains information on self-reported English ability. In this study, there are two categories of English ability: Slavs proficient in English and Slavs who do not speak English at all. As it stated above, the English ability data are self-reported and it is not possible to completely rely on it. Therefore, a more precise measurement of language proficiency would be desired but it does not exist.

The education variable is split into four mutually exclusive dummy variables, which measure the attained level of education (No High School Degree, High School Degree, Some College and College). Those four education categories allow for different levels of education to be associated with a different return in terms of annual income from wages and salaries.

The marriage variable is in the form of a yes (married)/no (single) dummy. It will be used to explain the wage difference for a married and single men.

Region is used to determine the wage differences for Slaves across different parts of the US. Also, it is used to show the most attractive region for Slavs in terms of earnings.

Citizenship is a yes (citizen)/no dummy variable. After the process of naturalization, immigrants gain access to the public-sector, white-collar, and union jobs<sup>4</sup>. Also, the wage growth accelerates-consistent with removal of employment barriers.

AGE and AGE\_SQ are independent variables and show the quadratic effect on income level. Through this age-wage profile, the empirical evidence suggests that wages increase with age but at a decreasing rate. Simply, there is a maximum age after which wage is going to start declining.

## **IDENTIFICATION STRATEGY**

In this paper, a semi-log model will be used due to the expectations that the independent variables are more likely to have percentage effects on the dependent variable. 7 cleaning, construction, and food preparation jobs”<sup>5</sup>. Within these industries, the workers typically have individual tasks, which they are solely responsible for and do not need to communicate very often with others. On the contrary, College graduates usually have jobs that require English language proficiency to utilize their knowledge and skills to their fullest extent.

For English speaking Slavs (table 4), the worst off are the people who do not have a high school degree. They are expected to earn 44.70% (table 2) less than College graduates and 7.57% less than High School degree graduates (table 4). Furthermore, the difference between English speakers who have a High School degree and English speakers who have

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<sup>4</sup> Bratsberg, 2002

<sup>5</sup> Orrenius & Zavodny, 2009

Some College is only 1.84%, which is statistically insignificant (p-value=0.4256). The biggest difference is between people who have Some College and College graduates. College graduates are expected to earn 35.29% more than Some College graduates. This basically means that the best possible option for Slavs English speakers is to get a college degree in order to increase their income level.

For non-English speaking Slavs, the worst off are Some College graduates in comparison to English speaking Graduates. However, by comparing non-English speaking Some College graduates to non-English speaking Slavs with or without High School Degree there is no statistically significant difference (Table 5). Only non-Speaking Slavs who have College degrees are significantly better than individuals belonging to the following three groups: Slavs who don't have High School, Slavs who have High School, and Slavs who have Some College.

To sum up, within the English Speaking category, the individuals that do not possess a High School degree are the worst off and the individuals that are the best off have a college degree, as expected. This trend is supported by data in table 2 where it is possible to see a decrease in the Estimated Coefficient as Education Level increases (from -0.4470 to -0.3529). This supports my hypothesis, which states that Slavs who speak English experience greater returns with the increase in Education Level attained. On the other hand, for Slavs who do not speak English, the best off is the individual who has a college degree - he earns 64.82% less than individual who speaks English and has College degree. Here it is not possible to find the trend due to the fact that there is no statistically significant difference between High School Graduates and No High School Graduates (Table 6) and Some College Graduates and High School individual (Table 6). Although non English Speaker who has College degree is the best off, it is not possible to distinguish the benefit of not having a High School Degree, Having High School Degree or Some College. (Table 2: coefficients vary from -0.7602 to -0.6482). To conclude, Slavs who don't speak English experience lower return on additional level of education.

Historically, Slavic people used to move first to Midwest area in early 1880s in search of jobs in the booming heavy industry<sup>6</sup> and they have created their neighborhoods. As a result of concentration of Slaves who migrated hundred years ago and supported new Slavs, it is reasonable that Midwest area is going to be the most favorable locations in terms of earnings for Slavs.

By performing simple mathematical calculations, it is possible to conclude that wage increase (at a decreasing rate) until a Slavic married non-citizen man reaches 47.21 years old. After that age, wage for Slavic man is going to decrease (table 2 data used).

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<sup>6</sup> Chen Alter, 2005

## CONCLUSION

From the results above it is possible to conclude following:  
 1. Level of Education attained has more significant impact on the income level for Slavs who are fluent English  
 2. Level of education attained has lower impact on income level when a non-English speaker Slavic man, with all four different level of education, is compared to Slavic man who speaks English and has college degree. Although non English speakers possess knowledge and skills, they are not able to fully use their human capital without speaking English in the US.  
 3. Being married and a citizen has a positive effect on income level due to the fact that men are more motivated to work and don't have legal restrictions in the labor market.

As it is stated above, the more precise data on English proficiency does not exist. However, it would be useful to collect that data through different language standardized tests in order to conduct a future study and observe the results. Furthermore, it would be interesting to include female Slavic immigrants into the study in order to investigate their performance in the US labor market and wage-gender gap.

Appendix: Table1 : Descriptive statistics of overall sample

Variable	Mean	Standard Deviation	Min	Max
Income	0.4144	0.4923	0	1
Married	0.7611	0.4264	0	1
Single	0.2389	0.4264	0	1
Citizen	0.4633	0.4987	0	1
Not Citizen	0.5367	0.4987	0	1
No High School Degree	0.1240	0.3296	0	1
High School Degree	0.2458	0.4306	0	1
Some College	0.2157	0.4113	0	1
College	0.4144	0.4926	0	1
Speak English	0.8032	0.3977	0	1
Don't speak English	0.1968	0.3977	0	1
Northeast	0.4341	0.4957	0	1
Midwest	0.2513	0.4338	0	1
South	0.1267	0.3328	0	1
West	0.1877	0.3905	0	1
Age	41.4037	11.2602	22	65
Age Squared	1841.0480	958.6664	484	4225
No English * No High School Degree	0.0739	0.2618	0	1
English * High School Degree	0.1707	0.3762	0	1
English * Some College English * College	0.1817	0.3856	0	1
No English * No High School Degree	0.3768	0.4846	0	1
No English * High School Degree	0.0500	0.2180	0	1
No English * Some College	0.0752	0.2637	0	1
No English * College	0.3398	0.1811	0	1
	0.0377	0.1904	0	1

Sources: Decennial Census Population and Housing (US Census Bureau)

**Table 2: OLS Log Total Income from Wages and Salaries Results**

VARIABLE	ESTIMATED COEFFICIENT	STANDARD ERROR
Married	0.1815	0.0177
Not Citizen	-0.2614	0.0146
Speak English * Some College	-0.3529	0.0193
Speak English * High School	-0.3713	0.0187
Speak English * No High School	-0.4470	0.0275
Don't Speak * College	-0.6482	0.0412
Don't Speak * Some College	-0.7602	0.0435
Don't Speak * High School	-0.6927	0.0287
Don't Speak * No High School	-0.7036	0.0336
Northeast	-0.0784	0.0164
South	-0.1541	0.0238
West	-0.1284	0.0217
Age	0.0992	0.0049
Age Squared	-0.0010	0.0001
Constant	8.4874	
R-squared	0.1734	
Adjusted R-squared	0.1727	

*Source: Decennial Census Population and Housing (US Census Bureau). The sample size is 16,246. All coefficients are statistically significant at the 5% level.*

**Table 3: Estimated Difference Between English Abilities**

Education Level	English - No English	p-value
College	0.6482	0.0336*
Some College	0.4073	0.0000*
High School Degree	0.3214	0.0000*
No High School Degree	0.2566	0.0000*

*Source: Used coefficients from table 2 in order to perform calculations. Superscript \* indicates statistically significant at 5% level*

**Table 4: Estimated Difference between Education Level for Non-English Speakers\_\_**

<i>High School - No High School</i>	<i>Some College - High School</i>	<i>College-Some College</i>
0.0109	- 0.0675	0.1120
<i>p-value = 0.7809</i>	<i>p-value = 0.1289</i>	<i>p-value = 0.0280*</i>

*Source: Used coefficients from table 2 in order to perform calculations. Superscript \* indicates statistically significant at 5% level*

**ЗНАЊЕ ЕНГЛЕСКОГ ЈЕЗИКА, НИВО ОБРАЗОВАЊА, БРАЧНИ  
СТАТУС И ДЕТЕРМИНАНТЕ СТАТУСА ДРЖАВЉАНСТАВА  
ИМИГРАНАТА СА СЛОВЕНСКОГ ПОДРУЧЈА**

**Мр Горица Малешевих**

**Апстракт:** Овај рад има за циљ да понуди дубљи увид у факторе који одређују ниво прихода Словена који су имигрирали у Сједињене Америчке Државе. Дубље разумијевање фактора људског капитала је круцијално за Словене као и владу Сједињених Америчких Држава при процесу максимизације социјалног нивоа. Кроз овај рад, претпостављено је следеће:

1. Натурализација и брачни статус имају позитиван ефекат на годишњи ниво прихода

2. Словени који говоре енглески језик течно биљеже пораст на годишњем нивоу прихода у складу са њиховим степеном образовања

3. Словени који не говоре енглески језик течно биљеже слабији пораст на нивоу годишњих прихода без обзира на њихов степен образовања.

Ова студија обухвата 16,246 мушкараца (старосне доби 16-65) из наведених држава: Украјина, Русија, Бјелорусија, Пољска, Хрватска, Србија, Босна и Херцеговина, Словенија, Бугарска и Македонија. У студију су укључени и појединци који долазе из Мађарске и Албаније због њихових „географских тенденција“ ка Словенима.

**Кључне ријечи:** САД, имигранти, људски капитал

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