Fertility of immigrants and non-immigrants in the United States

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The paper deals with fertility determinants in the populations of immigrants and non-immigrants in the United States. We consider determinants as follows: age, marital status, education, religion, and race and Hispanic origin. The analyses show that a relation between fertility and place of birth was statistically significant in both populations, women and men. We prove that migration is a major source of variation in fertility between immigrants and non-immigrants, which may lead to the postponement of maternity or marriage. Finally, we find that a duration of residence is positively correlated with fertility among US immigrants.

Keywords: migration, USA, reproductive, MCA, ordinal regression

1. Introduction

An analysis of fertility among US immigrants is one of the areas of study by social scientists. Rumbaut - Weeks (1986) pointed out that fertility among refugees from the Indochina region was negatively correlated with a duration of first marriage and efficiency of English language. Moreover, they found out that fertility was positively correlated with a duration of residence in the United States. A vast gap in fertility was shown by the total fertility rate which for the Indochinese population was 5,61 whereas for the US-born women was 1,80 birth per woman. Ford (1990) showed that a length of residence was positively correlated with fertility. The analyses indicated that a maximum of fertility was observed in 5 to 10 years after immigrants settled down in the US. According to Ford (1990), a postponing of marriage and cumulation of births due to immigration determined the distribution of births among immigrants. Kahn (1994) considered live births and planning children in the fertility analysis. With respect to the first measure, the analyses showed that number of live births among immigrants was significantly higher compared to non-immmigrants. Moreover, education and income were negatively correlated to number of live births. Kahn proved that a second generation of immmigrants was characterized by lower number of planning children compared with the third and higher generations. Finally, together with an increase of length of residence in the US, a gap in the level of fertility between immigrants and US-born women has diminished. Hwang - Saenz (1997) analyzed fertility among the immigrant Chinese women. They proved that

women who were born in China had a significantly lower fertility than foreign-born Chinese women. If children born only in the United States were considered, a gap in the level of fertility was small. Besides, the Authors indicated that an average of live births among US citizens was lower in relation to non-US citizens. On the other hand, an average number of births for US citizens was higher compared with non-US citizens. The Authors explained that the Chinese immigrants were still affected by birth control in their country of origin.

The paper deals with fertility determinants in the populations of immigrant women and men and non-immigrant women and men in the United States. In this study, we pose the following hypotheses: 1) higher fertility among immigrants occurs because most of them come from the countries with higher fertility than recorded in the US, 2) higher fertility among immigrant women is caused by postponing of motherhood owing to immigration, 3) immigration is a crucial determinant of fertility among immigrant women and men 4) duration of residence is positively correlated with fertility.

2. Methods and data

In the study, we employed the ordinary regression model and multiple classification analysis (MCA). The regression models are classified within the GLZ class models which were introduced to the literature by Nadler - Wedderburn (1972). The models are based on the family of exponential distributions such as the Bernoulli, Poisson or gamma distribution. The ordinary regression models do not assume linearity between dependent and independent variables. Mostly used link functions are identity, logit, probit and logarithmic link function which depend on a distribution, restriction and type of datasets. While, the initial results showed that other link functions gave much a worse goodness of fit of model, we applied the logit link function. The ordinary regression models are estimated using the iterative methods of estimation. Mostly used method is the Newton-Raphson method (Albert - Anderson 1984, Jennrich - Sampson 1976) and the Fisher's method (McCullagh - Nelder 1989, McCullagh 1989). We used the PLUM (Polytomous Logit Universal Model) procedure (McCullagh 1980, 1989) in the SPSS statistical package. The technical details on the ordinary regression model present (see, Agresti 1984, Armstrong - Sloan 1989, Hosmer - Lemeshow 2000, Long - Freess 2006, McCullagh 1980), whereas a wide spectrum of practical applications (see Chen - Escarce 2007, McNamee 2007, Meagher 2008).

The MCA is an additive model which is much less restrictive in comparison with the multiple regression or discriminant analysis. Firstly, dependent and independent variables do not have to be from an interval scale. Secondly, a researcher can control an influence of independent variable on depedent variable, before and after other variables are inluded into a model. The MCA model is

estimated using the mean square error minimization technique. The coefficients can also be estimated by solving a set of normal equations. More details on the MCA show papers (see Adrews *et al.* 1973, Retherford - Choe 1993) whereas applications (see Goldschneider - Mosher 1991, Mosher *et al.* 1992, Thornton 1979, van Ginneken - Razzaque 2003).

The source of a data was the National Survey of Family Growth, Cycle 6, which was conducted in 2002. A total number of respondents was 11671, 7643 of women and 4028 men. The data on 1079 immigrant women and 6155 non-immigrant women, and 709 immigrant men and 3901 non-immigrant men were retrieved from that database. We retrieved the data on age, marital status, religion, race and Hispanic origin for each respondent. In addition, the information about duration of residence in the United States was collected. We defined the level of fertility by means of two measures; there were live births for women population and biological children for men population. More details on that survey, and sample design, weighting, imputation, and variance estimation are presented in (Lepkowski *et al.* 2006).

3. Recent immigration in the United States

Recent legal immigration data shows that a total of 8 061 486 immigrants were registered in the United States between 2000 and 2007. The top five countries from which come the highest number of legal immigrants in the United States are presented in table 1. As we notice, the largest number of immigrants, about 1 352 084 (16,77%) came from Mexico. The top five origins of illegal immigrants in the United States are shown in table 2. A total of 11 780 000 illegal immigrants entered the United States in 2007. Again, the largest number of illegal immigrants, 6 980 000 (59,25%) were the Mexican citizens.

Table 1. Legal immigration in the United States by country of origin between 2000 and 2007

Country of origin (women and men)	N	%
Mexico	1 352 084	16,77
India	476 376	5,91
China	455 405	5,65
Philippines	434 965	5,40
Russia	390 493	4,84
Total	8 061 486	100,00

Source: the US Department of Homeland Security

A legal and illegal immigration data indicates that immigrant fertility depends mostly on the level of fertility of immigrants of Hispanic origin. Moreover, the countries of origin of immigrants are characterized by a significantly higher fertility compared to the level of fertility recorded in the United States (see table 1 and table 2).

Table 2. Illegal immigration in the United States by country of origin in 2007

Country of origin (women and men)	N	%
Mexico	6 980 000	59,25%
Salvador	540 000	4,58%
Guatemala	500 000	4,24%
Philippines	290 000	2,46%
China	290 000	2,46%
Total	11 780 000	100,00

Source: the US Department of Homeland Security

Table 3 shows the total fertility rates for selected countries of origin of legal and illegal immigrants in the United States.

Table 3. Total fertility rates in the countries of immigrants in 2007

Country of origin	Total fertility rate
Guatemala	3,59
Philippines	3,32
Salvador	3,04
India	2,76
Mexico	2,37
China	1,77
Russia	1,40

Source: the US Department of Homeland Security

The data provided by the NCHS shows that the TFR was 2,10 births per woman in the United States in 2007. The level rate for the US population was below the levels registered in the countries of immigrants (except China and Russia) (table 3). Based on the above presented analyses, the first hypothesis can be verified, that is, higher fertility among immigrants occurs because largely part of them come from the countries with higher fertility than recorded in the US.

4. Socioeconomic background and characteristics of fertility

In general, the demographic processes, including fertility analyses are determined by a social and economic background of those populations. We describe the socioeconomic background for the populations of immigrant women and men and non-immigrant women and men to understand these processes much better. In addition, our aim was to compare those populations in the light of socioeconomic factors. To enhance the analyses, race and Hispanic origin of respondents were considered. The fertility characteristics were used to estimate the fertility level before and after immigration to the United States. We employed three measures of fertility such as number of live births, number of planning children and total number of children (see Thornton 1979, Mosher *et al.* 1992). What is more, we collected and compared data on number of pregnancies before and after immigration.

We examined in our study a total of 1079 immigrant women and 6155 US-born women. The population of immigrants consists of 729(67,6%) women of Hispanic origin, 192(17,8%) of non-Hispanic white and 158(14,6%) of non-Hispanic black women. The group of Hispanic origin women was the oldest one at the time of immigration to the United States. While, the average age was 18,57 years, it could suggest that a common woman completed some secondary school before immigration. Meanwhile, the average length of education was 11,24 years which indicates that Hispanic women were educated below secondary school. What is more, this group was likewise the worse educated amongst other group. The highest education level was registered for non-Hispanic white women with the average years of education equaled 14,48. We see that religion was important for 81,5% of non-Hispanic black woman, and 67,9% of Hispanic origin women. The highest percentage (69,2%) of ever married women was observed among non-Hispanic white women, whereas the longest duration of first marriage (10,86 years) was recorded for US-born women. The lowest education level of Hispanic immigrants may be a key factor leading to the lowest income and the highest unemployment level. The wealth statistics show that the average total gross income was 24 230 USD, whereas the average IAE was 13 349 USD for Hispanic origin immigrants. In case of US-born women, the averages were 39 004 USD and 25 458 USD, respectively. The employment characteristics indicate that only 52,7% of Hispanic women had a full-time or part-time job and 43,1% of them was forced to ask for a public assistance. In the end, only 32,1% of Hispanic origin immigrants had own house or apartment. The figures for non-Hispanic white immigrant and non-Hispanic black immigrant were 47,9% and 38,0%, respectively. The highest ratio was noted for US-born women; 52,4% of them had house or apartment. More details present table 4.

Table 4. Socioeconomic characteristics of immigrant and non-immigrant women in the United States

Characteristics (averages or percentages)	Race and Hispanic origin of immigrants †			US-born women (N=6155) †
	Hispanic (N=729)	Non-Hispanic white (N=192)	Non-Hispanic black (N=158)	
Time and age				
# of years on immigration till 2002	12,04	15,21	12,79	-
Age at time of immigration to the US	18,57	15,84	17,44	-
Social background				
# of years of education	11,24	14,48	13,40	13,07
Duration of first marriage	10,56	9,08	9,27	10,86
% of ever married	64,30	69,20	49,30	52,28
% of declaring an importance of religion	67,90	45,50	81,50	57,85
Employment				
% of having full time of part time job	52,70	60,40	65,80	62,11
% of receiving public assistance	43,10	8,90	32,30	26,50
Wealth				
Total gross income (USD)	24 230	42 142	36 859	39 004
Income per adult equivalent (IAE)	13 349	27 133	24 585	25 458
% of having own house or apartment	32,10	47,90	38,00	52,40

Note: †194 immigrant women and 189 US-born women other races and Hispanic origins were excluded from the analyses

Source: own creation

We repeated the analyses in relation to the population of immigrant and non-immigrants. We examined a total of 711 immigrants, 501(70,5%) of Hispanic origin, 115(16,2%) of non-Hispanic white and 95(13,4%) of non-Hispanic black men. A number of US-born men was 3901 individuals. Considering the social background, we see that the highest education level was registered for non-Hispanic white men,

whereas Hispanic origin immigrants were the worse educated group of men. The averages years of education were 14,33 and 11,30, respectively. Moreover, a religion was important for 64,1% of non-Hispanic black and 59,2% of Hispanic origin immigrants. The lowest ratio of ever married men, 33,09%, was registered among US-born men, whereas the highest one, 55,1%, among immigrants of Hispanic origin. Similarly to the population of immigrant women, the group of Hispanic origin men was the oldest one at the time of immigration to the United States. The average age was 18,10 years. The employment and wealth characteristics point out that immigrants of Hispanic origin were the poorest immigrant groups. The mean of total gross income was 28 815 USD and 27,7% of them received a public assistance. For non-Hispanic white and non-Hispanic black the mean of total gross income was 44 533 USD and 38 548 USD, respectively. Finally, 26,1% of Hispanic immigrants had own house or apartment. In case of US-born men, 54,30% of them had any property. See details in table 5.

Table 5. Socioeconomic characteristics of immigrant and non-immigrant men in the United States

Characteristics (averages or percentages)	Race and Hispanic origin of immigrants † Hispanic (N=501)	Non-Hispanic white (N=115)	Non-Hispanic black (N=95)	US-born men (N=3901) †
Time and age				
# of years on immigration till 2002	12,26	14,55	12,77	-
Age at time of immigration to the US	18,10	15,23	17,92	-
Social background				
# of years of education	11,30	14,33	13,46	12,69
Duration of first marriage	3,71	2,75	3,62	3,27
% of ever married	55,1	35,7	46,2	33,09
% of declaring an importance of religion	59,20	35,0	64,1	44,72
Employment				
% of having full time of part time job	80,0	73,9	87,1	70,22
% of receiving public assistance	27,7	7,8	12,9	18,10
Wealth				
Total gross income (USD)	28 815	44 533	38 548	41 029
% of having own house or apartment	26,1	40,0	35,5	54,30

Note: †126 immigrant men and 147 the US-born men other races and Hispanic origins were excluded from the analyses

Source: own creation

The above analyses show that Hispanic origin immigrants, both women and men, were the most numerous group of immigrants in the United States. They were the worse educated group with the lowest salary. They needed a public assistance and only some of them had house or apartment, regardless of having a full time or part time job.

The second part of this chapter deals with the fertility characteristics. The characteristics were presented for a time before immigration and from immigration until year of 2002 (table 6). We present the fertility characteristics for US-born women for comparative purposes.

Table 6. Fertility characteristics

Characteristics (averages or percentages)	Place of birth		
	Outside the US (N=1079) †		In the US (N=6155) †
	Before immigration	After immigration	
% of fecund*	68,00		60,13
% of contraception users**	66,40		58,75
% of pill users***	27,37		18,34
% of condom users***	29,09		15,58
# of live births	0,45	1,13	1,18
# of pregnancies	0,56	1,52	1,73
# of planning children	0,96		0,98
# of total children****	2,54		2,16

Notes: †194 immigrant women and 189 the US-born women other races and Hispanic origins were excluded from the analyses. *Applicable if a respondent was married or cohabiting. Figures base on the populations of 675 immigrant women and 2927 the US-born women. **In the last 12 months before the survey. Applicable if a respondent had a sexual intercourse with a male in the last 12 months before the survey. Figures base on the populations of 875 immigrant women and 3616 the US-born women. *** The most used contraceptive methods. **** For immigrants, figure bases on the average number of live births equals 1,58

Source: own creation

Based on table 6, we can formulate two important conclusions. Firstly, the average number of live births and number of pregnancies before immigration was 0,45 and 0,56, whereas after immigration was 1,13 and 1,52. Secondly, the average number of live births for a whole population of immigrants was 1,58, whereas the average number of pregnancies was 2,08 (not shown in table 6). The averages for US-born women equaled 1,18 and 1,73, respectively. These figures suggest that the motherhood decisions were taken in the population of immigrants frequently. It could be explained by a fact that immigrants come from the countries where fertility is higher than in the US.

Table 7. Average number of live births before and after immigration by age of mother

Age groups	Live births	
	Before immigration	After immigration
15-19	0,01	0,14
20-24	0,18	0,66
25-29	0,29	1,22
30-34	0,48	1,28
35-39	0,70	1,44
40-44	0,83	1,46

Source: own creation

The above conclusions allow us to verify the second hypothesis. That is, immigrant women tend to postpone of motherhood when they plan to immigrate to the US. Furthermore, the average number of live births was higher before immigration in each of 5-year age group (table 7). This could indicate that there is a pattern of motherhood behavior among immigrants entering the United States.

5. Basic level analysis

We employed the ordinary regression to determine an impact of immigration on fertility. The analyses were performed among immigrants and US-born respondents regardless of race and Hispanic origin. The level of fertility was measured by number of live births and number of biological children in the populations of women and men, respectively.

We present the parameter estimates and standard error for number of live births and number of biological children in the regression models in tables 8 and 9. There is evidence that a relation between fertility and place of birth was statistically significant in both models. Respondents who were born outside the US had higher fertility than born in the US. The odd ratio in the model with number of live births was 1,54, whereas in the model with number of biological children was 1,86. These figures suggest that a parenthood was more likely among immigrants.

Table 8. Parameter estimates and standard errors for live births in the ordinary regression model

Variable	Category	Parameter estimates	s.e.	p-value
Number of live births	No children	-0,24	0,02	<0,01
	One child	0,57	0,03	<0,01
	Two children	1,68	0,03	<0,01
	Three children	2,83	0,05	<0,01
	Four children	3,98	0,08	<0,01
Birth place	Outside the US	0,43	0,06	<0,01
	Inside the US	0	-	-

Source: own creation

Table 9. Parameter estimates and standard errors for biological children in the ordinary regression model

Variable	Category	Parameter estimates	s.e.	p-value
Number of biological children	No children	0,73	0,03	<0,01
	One child	1,44	0,04	<0,01
	Two children	2,42	0,05	<0,01
	Three children	3,47	0,08	<0,01
Birth place	Outside the US	0,62	0,07	<0,01
	Inside the US	0	-	-

Source: own creation

Furthermore, the probabilities of having a child with respect to birth order and birth place of mother or father were calculated (table 10 and table 11).

Table 10. Probability of having a child by birth order and birth place of mother

Birth place	Number of live births					
	No children	One child	Two children	Three children	Four children	Five or more children
Outside the US	0,34	0,21	0,23	0,14	0,06	0,03
Inside the US	0,44	0,20	0,20	0,10	0,04	0,02

Source: own creation

Table 11. Probability of having a child by birth order and birth place of father

Birth place	Number of biological children				
	No children	One child	Two children	Three children	Four or more children
Outside the US	0,53	0,17	0,16	0,09	0,06
Inside the US	0,67	0,13	0,11	0,05	0,03

Source: own creation

The probabilities of having a child of any order were higher in the population of immigrants. This pattern was observed regardless of sex of respondent. It is evidence that parenthood will be more likely in the population of immigrants.

6. Control variables analysis level

There are many additional factors which need to be considered in the analyses of fertility. We studied the variables as follows: a period of time being on immigration, marital status, importance of religion, age, Hispanic origin and education. A marital status for the population of women was considered as duration of first marriage. If a respondent was not married before the survey then a zero value was assigned (see Thornton 1979, Mosher *et al.* 1992). We decided to use number of marriages instead of duration of first marriage for the population of men because the initial analyses indicated, that the number of marriages did not determine the fertility significantly. Multiple classification analysis was used and fertility was measured using number of live births (population of women) and number of biological children (population of men).

Table 12. MCA analyses for live births

Birth place	Live births						
	N	Observed means	Adjusted means				
			MS	A	EDU	R	HO
Outside the US	1116	1,51	1,44	1,41	1,48	1,49	1,40
Inside the US	5381	1,21**	1,26	1,23	1,22	1,22	1,23

Notes: A - age, MS - marital status, EDU - education, R - religion, HO - Hispanic origin. ** ≤ o.o5
Source: own creation

Table 12 presents the MCA analyses for the population of immigrant and non-immigrant women. The observed means of number of live births were 1,51 and 1,21 child in the population of immigrant and non-immigrant women, respectively. The difference between means was statistically significant, what suggests that fertility depends on birth place of a woman. Moreover, it indicates that fertility among immigrants were significantly higher than among US-born women. The observed means were adjusted by marital status, age, Hispanic origin, education and religion. The first three control variables explained the difference between the observed means, but to some degree only. When we controlled marital status and age, the difference decreased from 0,30 to 0,18 child for each variable separately, but when Hispanic origin of women was controlled the difference dropped to 0,13 child. As we see, none of the controlled variables explained fully the difference in fertility between two analyzed subgroups of women. It suggests that an immigration process determines the level of fertility.

Table 13. MCA analyses for biological children

Birth place	Biological children						
	N	Observed means	Adjusted means				
			MS	A	EDU	R	L
Outside the US	833	1,06	0,89	0,95	1,06	1,03	0,94
Inside the US	4038	0,64**	0,67	0,67	0,64	0,64	0,66

Notes: A - age, MS - marital status, EDU - education, R - religion, L - Hispanic origin. ** ≤ o.o5
Source: own creation

We repeated these calculations for the populations of immigrant men and non-immigrant men (table 13). Again, marital status, age and Hispanic origin, which played a role in explaining a statistically significant difference between the observed means (1,06 and 0,64). When we controlled marital status, the difference in fertility decreased from 0,42 to 0,22 child, whereas for variables age and Hispanic origin it dropped to 0,28 child. There is evidence that none of variables eliminated the difference between the observed means. It could indicate that a source of differences in fertility is an immigration process.

We would like to point out that changes in the adjusted means compared to the observed mean were larger for immigrants (table 12 and table 13). When we consider marital status, it could be evidence that marriages for immigrant women last longer, whereas for immigrant men, it could prove that they get married frequently. The survey's data shows that the average of all marriages was 6,25 years for immigrant women and 5,63 years for non-immigrant women, whereas number of marriages for immigrant men was about one-third higher in relation to US-born men. When we take into account age, it could suggest that the age distribution differs between the populations of immigrants and non-immigrants. It also could suggest that a maximum of fertility is recorded in the most numerous age group. The data shows that a maximum was observed for women aged 30-34 and 35-39 years for both, immigrants and non-immigrants. On the other side, there were around 21% and 20% of immigrants and around 17% and 16% of US-born women who belonged to these age groups. In case of immigrant men, a maximum of fertility was recorded for men aged 35-39 and 40-44 years. There were 16% and 15%, and 15% and 14% of immigrant men and non-immigrant men who belonged to these age groups, respectively. These figures do not support the initial assumptions about the age distribution and groups with maximum fertility. Finally, when we analyze Hispanic origin, it could indicate that a proportion of Hispanic origin women and men was higher in the population of immigrants. The data shows that there were 57% and 13% of Hispanic origin women among immigrants and non-immigrants, and 60% and 15% of Hispanic origin men among immigrants and non-immigrants, respectively.

The data presented above shows a source of differences in fertility is immigration. This fact confirms our third hypothesis which says that immigration is a crucial determinant of fertility among immigrants.

Duration of residence of immigrants in the United States

A length of time on immigration was the last variable considered in our study. Due to lack of data on biological children for men, we examined this factor solely for the population of immigrant women. We applied the multiple classification analysis to find out how a length of duration of residence determines fertility. The dependent variable was number of live births in the US. We used the control variables such as age, marital status, education and number of children before immigration.

Table 14. MCA analyses for live births among immigrant women

Duration of immigration	Live births in the US						
	N	Observed means	Adjusted means				
			A	MS	EDU	ChBI	A, MS, EDU,ChBI
Up to 10 years	510	0,65	0,67	0,68	0,61	0,64	0,79
11-20 years	340	1,41**	1,36	1,32	1,32	1,35	1,24
21-30 years	162	1,73**	1,48	1,53	1,65	1,56	1,37
31 years and more	67	1,84**	1,67	1,67	1,92	1,80	1,58

Notes: A - age, MS - marital status, EDU - education, ChBI - number of children before immigration. ** ≤ o,o5

Source: own creation

Table 13 shows that none of the control variables determined the fertility distribution among immigrant women in the United States. When all variables were controlled the difference between observed means decreased from 1,18 to 0,79 child. This is evidence that number of live births was determined by the length of time on immigration. Moreover, the level of fertility was directly proportional to duration on immigration. We detailed the MCA analyses by considering live births by age and years of immigration (table 15) (Ford, 1990).

Table 15. Average number of live births by age and time on immigration

Age groups	Years of immigration				N
	Up to 5 years	6-12 years	13-20 years	21 years and more	
15-24	0,35	0,54	0,41	0,71	258
25-34	0,51	1,44	1,54	1,35	442
35-44	0,16	0,88	1,72	1,93	379
15-44	0,38	1,1	1,33	1,65	1079

Source: own creation

We would like to pay special attention to the group of women aged 35-44 years. This group had the lowest fertility level during the first five years after immigration. The average number of live births was 0,16 child. This may indicate that fertility was completed mostly before immigration. Moreover, this could be evidence that mothers e.g. needed some time to raise children who were born before immigration. The data seems to support these assumptions because the average number of live births for women aged 35-44 years before immigration was 0,76 child (not shown in table 15). Despite of these facts, the average number of live births increased 5,5 times for women aged 35-44 years in time of 6-12 years after settled down in the US. This figures support that duration of residence is positively correlated with fertility. Analyzing other age groups we found a similar pattern. The only difference is that fertility among women aged 15-24 and 25-34 years was mostly realized in the United States. It seems to be obvious taking into account age of these women. Finally, we would like to point out the average number of live births throughout the first five years after immigration was 0,51 child for women aged 25-34 years and 0,35 child for women aged 15,24 years, whereas before immigration, 0,34 and 0,10 child, respectively (not shown in table 15). More details present table 15. In general, the presented analyses can be treated as evidence that immigration determines the level of fertility. And, it confirms the last hypothesis saying, that duration of residence is positively correlated with fertility among US immigrants.

7. Conclusions

The paper focused on the fertility analyses between subgroups of US immigrants and US-born individuals, both women and men. The authors verified four hypotheses. The first hypothesis says that higher fertility among immigrants occurs because most of them come from the countries with higher fertility than recorded in the US. Most legal and illegal US immigrants come from Mexico, Salvador, Guatemala and Philippines. The TFR observed in these countries is significantly higher that recorded among the American born citizens. The second hypothesis says

that higher fertility among immigrant women is caused by postponing of motherhood owing to immigration. We showed that immigrant women tend to postpone of motherhood when they plan to immigrate to the US because the average number of live births and number of pregnancies before immigration was significantly lower before immigration compared to after immigration to the US (see Ford 1990). We found that pattern across all 5-year group ages. The third hypothesis was that immigration is a crucial determinant of fertility among immigrants compared to non-immigrants, both women and men. We tested that relation between fertility and place of birth by means of ordinary logistic regression. That relation was statistically significant in model for women subgroup and men subgroup. Respondents who were born outside the US had higher fertility than born in the US (see Kahn, 1994). The final hypothesis says that duration of residence is positively correlated with fertility. The multiple classification analysis was applied to find out how a length of duration of residence determines fertility. We employed the control variables like age, marital status, education and number of children before immigration. When the model controlled all variables the difference between observed average number of live births in the subgroup of immigrant women and US-born women decreased significantly. This stated that fertility was determined by the length of time on immigration (see Rumbaut - Weeks 1986, Ford 1990). Furthermore, we showed that the level of fertility was directly proportional to duration on immigration.

To sum up the research, the following conclusions can be drawn. Firstly, we showed that a relation between fertility and place of birth was statistically significant in both populations, women and men. We proved that, both motherhood and fatherhood is more likely in the populations of immigrants. Secondly, none of the selected controlled variables explained the difference in fertility between immigrants and non-immigrants to the entire extent. It suggests that an immigration process is a major source of variation in fertility between examined populations. What is more, immigration may lead to postponing a maternity or marriage. Finally, we found a positive association between the duration of residence and fertility of the US immigrants. We suggest further detailed research focused on the impact of migration on reproductive behavior including race and Hispanic origin of immigrants to understand and recognize the additional socioeconomic mechanisms which underline this relationship.

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