## Education and Interethnic Marriage Decisions Extended Abstract

Delia Furtado\*

September 29, 2003

Starting in the 1960s, the melting pot analogy has slowly given way to the belief that it takes quite a few generations before the progeny of immigrants become indistinguishable from the native population. Although there has been a new appreciation for multiculturalism in recent years, the preservation of certain distinct ethnic traits can be seen as a hindrance to the economic improvement of disadvantaged groups. Because of so-called "ethnic spillover effects," education and earnings levels of children and grandchildren of immigrants tend to regress toward mean levels in their ethnicity considerably faster than to mean levels in the host country (Borjas 1992). This is of central concern to policy-makers because most immigrants belong to groups with very low average levels of education and earnings. Endogamous couples are more likely than exogamous couples to expose their children to ethnic contacts and role models. Thus, human capital levels of children of endogamous marriages very much depend on the child's ethnic environment above and beyond direct parental inputs. For this reason, it is important to study the determinants of interethnic marriages. In this paper, I will specifically analyze the positive relationship between education and the probability of intramarriage for second-generation male immigrants.

It is particularly interesting to study the marriage decisions of second-generation immigrants because although they are born and raised in the host country (henceforth the U.S. for concreteness), they continue to exhibit preferences toward spouses sharing their ethnicity. The magnitude of this preference is inversely related to their education. Using 1970 Form 2 IPUMS data, I find that while second-generation males who marry women of their ethnicity, either first or second-generation, have an average of 10.5 years of education while second-generation males who marry Americans (3+ generation) have an average of 11.6 years of education. The simple correlation coefficient between years of education of second-generation males and their probability of marrying within ethnicity is .13. Previous studies on immigrants have qualitatively similar results, but no paper that I am aware of considers the marriage patterns of native-born children

<sup>\*</sup>Delia Furtado, Department of Economics, Brown University, Providence, RI 02912; E-mail: Delia@brown.edu. I would like to thank Andrew Foster and Rachel Friedberg for their guidance and insightful comments. I am also grateful to all the participants of Micro Lunch at Brown University for all of the helpful discussions. All remaining errors are my own.

of immigrants.<sup>1</sup>

Most explanations of the negative relationship between education and the probability of intramarriage fall into three categories: enclave effect, assortative mating effect, and technology adoption effect. The enclave effect is at work if people with more education participate in larger labor markets geographically, and so are more likely to leave ethnic enclaves. Thus, even if they were to choose their spouses simply by random matching within their neighborhood, more educated second-generation immigrants would be less likely to marry within their ethnic group. The assortative matching effect comes into play if marriage surplus increases when husband and wife have similar levels of education. Since most ethnicities have average education levels less than American average levels, even if second-generation immigrants do not care at all for marrying within their ethnicity, they would most likely end up with spouses of their ethnicity. The technology adoption effect is at work if highly educated individuals are better able to learn new customs and traditions associated with the native culture. Since they have a lower "cost" of marrying Americans, they are more likely to marry them. In this paper, I will first derive an identification strategy for differentiating the three effects and then I will empirically obtain estimates of their relative sizes.

There are two aspects to any marriage decision: In order for two people to marry, first, they must be exposed to each other (opportunity), and second, they must choose to marry each other (preference). In this paper, I develop a model where spouse-searchers consider both the probability of finding their ideal mate and the characteristics of their ideal mate in choosing the intensity at which they search for a spouse within their ethnicity. Because the enclave effect described above is related to opportunity as opposed to preference, it is independent of personal characteristics; its effect works only through the proportion of people sharing one's ethnicity in one's geographical area at the time of spouse search.<sup>2</sup>

In order to assess the "preference" aspect of the marriage decision, I develop a model of spouse choice where gains from marriage result from the joint consumption of household public goods, goods consumed simultaneously by husband and wife. Since children are considered to be the most important household public goods over which husband and wife make decisions, I will motivate my analysis using qualities of children, but similar implications can be derived for other goods consumed jointly by husband and wife.

I assume that parents get enjoyment out of both ethnic traits and intellectual traits in their children. Each parent has his or her own ideal level of scholarliness and ethnic identity for his or her children. The optimal amount of scholarliness is increasing in one's education while the optimal amount of ethnic affiliation

<sup>&</sup>lt;sup>1</sup>An exception is Card, DiNardo, Estes (1998) which uses the marriage decisions of this population as a measure of assimilation. The paper, however, does not provide a theory behind the determinants of intermarriage.

<sup>&</sup>lt;sup>2</sup>It is obvious that going away to college decreases the opportunity of meeting someone of the same ethnicity. However, even for second-generation immigrants who do not go to college, more education increases the geographic scope of job search and thereby increases the probability of leaving the ethnic enclave. Living away from the enclave drastically decreases the opportunity to meet possible spouses of the same ethnicity.

is increasing in parents' ethnic identity.<sup>3</sup> Since they have the same children, parents must consume the same amounts of these traits, and so it is efficient for couples to sort in the marriage market according to their ideal types of children. For simplicity of exposition, I assume that all second-generation immigrants prefer a spouse of their ethnicity. However, spouse-searchers with more education will search more intensely for Americans if their preferences for scholarly traits are more in line with the average American than with the average person of his or her ethnicity. Thus, the assortative matching effect implies that an increase in education leads to an increase in the probability of outmarriage for low education ethnic groups while the opposite is true for ethnic groups with high average levels of education compared to the rest of the population.

Beyond concerns for children, couples of different ethnicities face additional costs of becoming familiar with their spouse's culture. Because educated individuals are better able to learn the customs and traditions associated with the native culture, in other words, they are better able to adapt to those new technologies, they have a lower "cost" of marrying an American. This "technology adoption" effect of education works for all second-generation immigrants regardless of their ethnicity or place of residence and so it can be differentiated from both the enclave and assortative matching effects.

This study uses the 1970 15-percent IPUMS metro sample coupled with the corresponding Fourth Count Population Summary Tape Files. This specific sample is used because the 15-percent sample in census year 1970 is the most recent one in which census respondents were asked their parents' country of birth.<sup>4</sup> In order to get accurate measures of contextual variables at small geographic partitions, I match the IPUMS with the Summary Files by country, region, division, state, and county group. For simplicity, only the marriage decisions of second-generation males have been considered thus far, but I expect to get similar results for second-generation females.

To test the theoretical model's implications, I use a probit model with a dependent dummy variable equal to one if the male is married within his ethnicity (either first or second-generation immigrant) and zero otherwise. Right hand side variables of primary interest are years of education, an interaction of years of education and the difference between average education in ethnicity and outside of ethnicity in one's geographical area, and the proportion of people in one's geographical area sharing one's ethnicity. The coefficient on years of education captures the technology effect, the coefficient on the interaction term measures the assortative mating effect, while the coefficient on the proportion controls for the enclave effect. Relative levels of male and female education levels in

<sup>&</sup>lt;sup>3</sup>Another example of a public good whose demand is increasing in education is the level of intellectual conversation within the household. Language spoken in the home, vacations to homeland country, and family celebrations are examples of public goods other than children that are related to ethnic identity.

<sup>&</sup>lt;sup>4</sup>Since 1970, a question on ancestry has been asked, but there is no way to know how many generations families have been in this country. It is also unclear what causes people to differentially associate with various ethnic backgrounds.

ethnicity, age, age at marriage, degree of ethnic identity, measured by whether or not English is his native tongue, and attachment to place of birth, measured by whether or not he has moved in the past five years, are also controlled for in the regression.

Preliminary regression results suggest that assortative matching is the most important avenue through which education affects the probability of intramarriage. As predicted in the theoretical section of the paper, the direction and magnitude of the effect of an increase in education depends on the difference between average levels of education in own ethnicity and all other ethnicities. For example, a Mexican second-generation male with an eighth grade education, the average level for Mexicans, will decrease his probability of marrying a Mexican by 2.3 percentage points by acquiring one additional year of education. Conversely, for a Chinese second-generation immigrant, an additional year of education increases the probability of intramarriage by 1.56 percentage points. Empirically, the technology effect is nonexistent, but there is some support for the enclave effect.

The conclusions from this paper have many important implications for immigration and education policy. The role of education in intermarriage decisions provides an indirect avenue through which education policies could catalyze the intergenerational assimilation process of immigrants. The fact that education works mainly through assortative matching suggests that education policies should be aimed only at low education ethnicities since it does not increase intermarriage for immigrants in high education ethnicities. In the end, more research is required before really understanding the marriage decisions of a group as diverse as second-generation immigrants.

## References

- [1] Borjas, George J. "Ethnic Capital and Intergenerational Mobility." The Quarterly Journal of Economics, (February 1992), 123-150.
- [2] Card, David, John DiNardo, and Eugena Estes. "The More Things Change: Immmigrants and the Children of Immigrants in the 1940s, the 1970s, and the 1990s." NBER Working Paper No. 6519. (April 1998).