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Ethnosizing Immigrants: A Theoretical Framework

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ABSTRACT

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Recently, Constant, Gataullina, and Zimmermann (2009) established a new method to measure ethnic identity which they called the "*ethnosizer*". Using information on an individual's language, culture, social interactions, history of migration, and ethnic self-identification, the method classifies that individual into one of four states: assimilation, integration, separation or marginalization. A large body of literature has emerged examining the effects of immigrants' characteristics (age, gender, education, religion, etc.) on their ethnic identity using the *ethnosizer*. This note presents a basic theoretical framework to shed light on the vast collection of empirical results obtained on this topic.

JEL Classification: F22, J15, Z10

Keywords: ethnosizer, immigrants, assimilation, integration, separation, marginalization

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1. Introduction

Immigrants experience high unemployment and earn less than natives in many countries. Since the seminal paper by Chiswick (1978), the economics literature has dealt with the immigrant–native gap in the labor market. The differences can be explained by human capital, age, language skills, religious and ethnic origin, and time spent in the host country, among other characteristics. However, the actual immigrant–native gap still remains to be explored. Recent studies have used ethnic identification, i.e. the degree of the immigrant's identification with the culture and society of the host country and the country of origin, to explain immigrant outcomes in the labor market. Ethnic identity can change after arrival, as opposed to ethnicity which remains a permanent characteristic of the source country. Over the last years, economists have begun to explore cultural and ethnic segregation using psychology and sociology of identity theories. For example, in seminal work, Akerlof and Kranton (2000), considers how identity, a person's sense of self, affects economic outcomes.

Constant, Gataullina, and Zimmermann (2009) developed the *ethnosizer*, a new measure of the intensity of the individual's ethnic identity with respect to his or her host country's and source country's society. This measurement uses information on language, culture, social interactions, history of migration, and ethnic self-identification. The *ethnosizer* classifies immigrants into one of four states of ethnic identification: integration, assimilation, separation or marginalization, based on the German Socioeconomic Panel (GSOEP) for 2001. In addition, they demonstrated characteristics that affect the immigrant's state of ethnic identification.

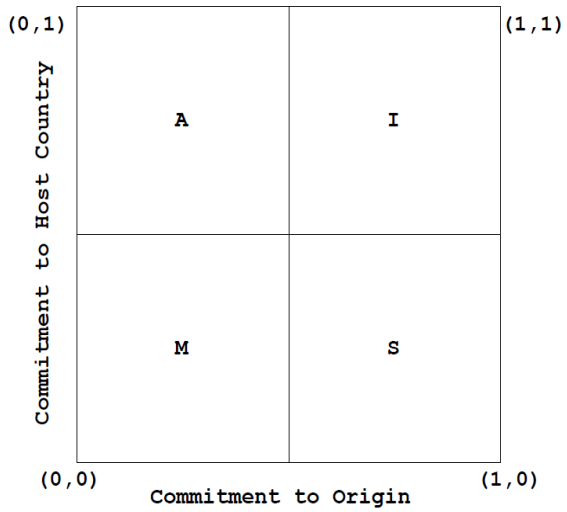
As we will present below, there is a rapidly growing literature on the effect of ethnic identification on economic behavior—such as participation in the labor market, income and household ownership—using the *ethnosizer* (see for survey, Constant and Zimmermann, 2008, 2013). This note contributes to the rising literature on ethnic identification by offering a simple theoretical model to provide possible explanations for the different empirical results obtained in the literature. We adopt the two-dimensional version of the *ethnosizer* to explain which immigrants are assimilated, integrated, segregated or marginalized.

2. Background and literature review

The method to measure ethnic identity, the *ethnosizer*, can range from zero (full commitment to the host country) to one (full commitment to the country of origin). There are two versions of *ethnosizer*: the one dimensional and the two-dimensional. In the former, a stronger commitment to the host country necessarily implies a weaker connection to the country of origin and vice versa. However, when considering the second version, the *ethnosizer* measurement allows simultaneous intensification of connections to the host and source countries. Similar to Berry (1980), the two-dimensional version of the *ethnosizer* classifies immigrants into one of four states: integration, assimilation, separation or marginalization (see Figure 1). *Assimilation* (A) is a strong identification with the host culture and society, coupled with a firm conformity to its norms, values, and codes of conduct, and a weak identification with ancestry; *integration* (I) is achieved when an individual combines, incorporates, and exhibits both strong dedication to the country of origin and commitment and conformity to the host society; *marginalization* (M) is weak dedication to or strong detachment from either the dominant culture or the culture of origin, and *separation* (S) is an exclusive commitment to the culture of origin, even years after emigration, paired with weak involvement in the host culture and country realities.

Figure 1.

3.



Source: Constant et al. (2009)

In their pioneering article, Constant et al. (2009) demonstrated characteristics that affect the immigrant's state of ethnic identification, i.e., integration, assimilation, separation and marginalization, using data from the GSOEP. They found that young migrants are integrated or assimilated upon arrival, with women being less assimilated than men. Immigrants with a college degree or higher education from their home country separated less than those with no education. School education, whether complete or incomplete, was more harmful to the process of integration or assimilation than no education in the home country; it also led to more separation. Ex-Yugoslavs assimilated more and separated less than Turks in Germany, but they also marginalized more. Whereas Greeks, Spaniards and Italians were no different than Turks, people from other ethnicities integrated and assimilated more. Constant, Gataullina, Zimmermann and Zimmermann (2006) showed that Christians adapt more easily to German society than Muslims. Female Muslims integrated and assimilated less, and separated more, than Muslim men. Christian immigrants with a college or higher education from their home country integrated well, whereas Muslims did not. Zimmermann (2007) showed that the results of the *ethnosizer* largely depend on pre-migration characteristics and that this measurement is exogenous to the economic and social processes experienced in the host country. The ethnic identification depends, not only in the immigrants' characteristics, but also on the characteristics of the immigrant's resident. For example, Constant, Schüller and Zimmermann (2013) found that residential ethnic clustering strengthens immigrants' identification with the origin and weakens identification with the host society.

Information for a large range of countries is accumulating in the literature on the effect of ethnic identification on economic behavior—such as participation in the labor market, income and household ownership—using the *ethnosizer*. With respect to the decision to work, Constant and Zimmermann (2009), using data from Germany, showed that immigrants (both men and women) who are separated and marginalized are less likely to work than those who are assimilated. In addition, women who were integrated tended to work more than those who were assimilated, but there was no significant difference between integrated men and assimilated women. Constant, Kahanec, Rinne, and Zimmermann (2011) found that separated migrants (i.e., those not attached to the host country but rather strongly attached to their country of origin) have a relatively slow reintegration into the labor market. Constant, Gataullina, and Zimmermann (2006) examined gender differences in the effect of ethnic identification

on the probability of working. They found that for immigrant men, preserving their attachment to the country of origin does not affect their probability of working, as long as they have a strong attachment to the host culture and society. For immigrant women, however, maintaining their commitment to their country of origin along with a strong adjustment to the host society had a very strong and positive effect on their probability of working.

With respect to the effect of ethnic identification on income, Zimmermann (2007) showed that if male and female migrants are fully integrated, their earnings grow dramatically, but the increase in the females' earnings is higher. Full separation and full marginalization led to a decrease in labor earnings for both male and female migrants. Constant and Zimmermann (2009) did not find any significant effects of ethnic identity on immigrant workers' earnings (while controlling for selection in the labor market). On the other hand, Danzer and Ulku (2011), using data on Turks in Berlin, found that a high degree of integration (which was a combination of political, social and economic integration) positively and significantly affects the immigrants' income. Constant, Krause, Rinne and Zimmermann (2010) analyzed the reservation wages of the first and second generations of migrants to Germany. They found that the reservation wages increase from first to second-generation migrants, but the ethnic identification and the ethnosizer does not explain much of this reservation wage gap.

Similar to the *ethnosizer*, Drydakis (2012), using data from Greece, suggested ethnic identification to be a combination of language, cultural habits (food, media, music and reading), self-identification, social interaction, and future citizenship plans. He found that assimilation and integration dramatically increase the immigrant's wage, whereas separation and marginalization decrease it. Gorinas (2014), using a Danish survey, extended the *ethnosizer* by developing *the modernization index* to measure openness to majority norms. He showed that immigrants, particularly first-generation immigrant women, who share social norms with the majority experience significantly better employment outcomes, but that immigrant employment is almost unaffected by ethnic identity. Another field is household ownership: Constant, Roberts, and Zimmermann (2009) found that assimilated or integrated households are more likely to own a house than those that are separated or marginalized for a given set of socioeconomic and demographic characteristics.

4. The model

Consider an immigrant who settles in a new country. To find a job, he or she needs assistance in his/her job search. A large number of studies have shown that social networks, i.e. friends and family, play a major role in job searches. The empirical evidence reveals that also in the advanced economies such as the U.S., the informal search methods are a key determinant of labor prospects (for a survey, see Ioannides and Loury, 2004). Moreover, Kahanec and Mendola (2007) examined the effect of social networks on labor market status, and show that the role of the social networks may be especially pronounced for immigrant minority group. Thus, it is assumed that the immigrant can find a job using two different means: by investing effort in creating networks with migrants that arrived before he or she did, c, and by investing effort in creating networks with the natives, e.

The strength of the immigrant's social networks is a function of both the immigrant's personal contacts and his or her identification with the culture, norms and values of the group. The level of the group's commitment to the individual increases with the individual's similarity to that group's members. Thus, the level of efficiency of the immigrant's investments, c and e, depends on the extent of the relationship between the immigrant and the members of the group. This relationship is affected by the migrant's language acquisition, and adaption to the culture and values of the group, among others. Therefore, the immigrant's investments, c and e, represent his or her ethnic identification with the source society and the new society, respectively. It is assumed for simplicity that the immigrant's leisure time, T, is fixed. The immigrant therefore allocates part (or all) of his/her leisure time to creating social networks with immigrants as well as natives. The time required to create social networks with immigrants can differ from that required to create social networks with natives. Let β $(\beta > 0)$ denote this difference. Clearly, creating social networks with migrants requires less investment than creating them with the local population (β <1).

The probability of finding a job, p, depends on the immigrant's level of social networking and satisfies: $\frac{\partial p(e,c)}{\partial e} > 0, \frac{\partial p(e,c)}{\partial c} > 0, \frac{\partial^2 p(e,c)}{\partial e^2} < 0, \frac{\partial^2 p(e,c)}{\partial c^2} < 0$.

Let w denote the potential wage that the immigrants can receive in the host country. This wage depends on pre-immigration characteristics such as gender, education, religion, economic status, etc.

We normalize the cost of investing in the migrants' self-network to unity and the cost of investing in the natives' network by $\alpha(\alpha>1)$. α depends on the cultural distance between the host country's and source country's societies. Denote this distance by d. α also depends on the immigrant's different characteristics, such as age and gender. We denote these characteristics by $\boldsymbol{a}$.

The expected utility of the immigrant is given by:

$$E(u)=p(e,c)\cdot w-c-\alpha(d,a)\cdot e \tag{1.1}$$

s.t.

$$c+\beta e\le T \tag{1.2}$$

Below, we assume that the time constraint is not bounding, i.e. $c+\beta e<T$. We develop the results for a bounding time constraint in the appendix, and show that the main results do not change.

The optimal investment in the migrants' network, c^*, and the optimal investment in the natives' network, e^*, satisfy:

$$\begin{aligned}\frac{\partial E(u)}{\partial e}&=\frac{\partial p(e,c)}{\partial e}\cdot w-\alpha(d,a)=0\\ \frac{\partial E(u)}{\partial c}&=\frac{\partial p(e,c)}{\partial c}\cdot w-1=0\end{aligned} \tag{1.3}$$

From (1.3), in equilibrium, it must hold that:

$$\frac{\partial p(e,c)}{\partial e} = \frac{\alpha}{w}$$
$$\frac{\partial p(e,c)}{\partial c} = \frac{1}{w} \qquad (1.4)$$

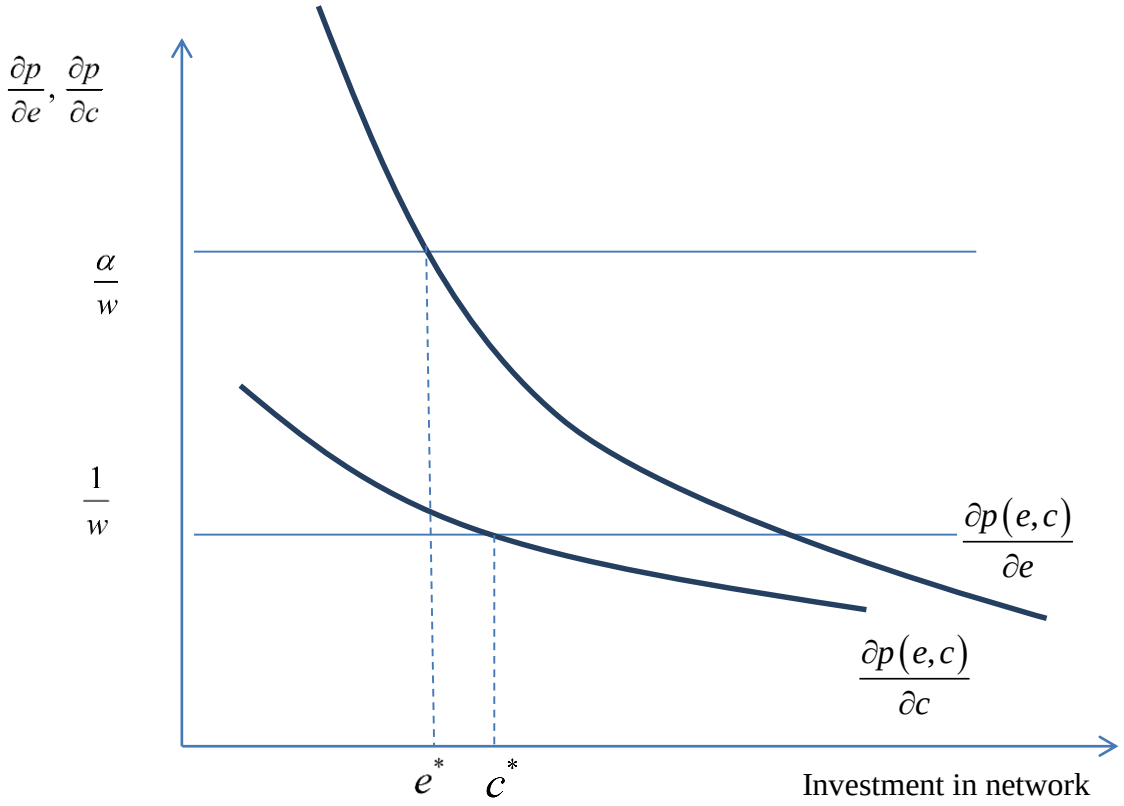
We assume that the migrants have a relatively smaller population than the local population, and there is therefore a higher return for being part of the natives' network than for being part of the migrants' network. In addition, the type and the quality of the jobs provided by immigrant networks is different than the jobs provided by the native networks (see Kahanec and Mendola, 2007). Let $\lambda(\lambda < 1)$ denote the efficiency of investing in the migrant network vs. the native network. Thus:

$$\left.\frac{\partial p(e,c)}{\partial c}\right|_{e=c} = \lambda \left.\frac{\partial p(e,c)}{\partial e}\right|_{e=c} \qquad (1.5)$$

Moreover, as the stock of immigrants in the host country, N, increases, the effectiveness (efficiency) of investing in the migrants' network increases: $\frac{\partial \lambda}{\partial N} > 0$.

Figure 2 demonstrates the optimal investment in the migrants' network, c^*, and in the natives' network, e^*, as described in (1.4). It is not clear where the investment will be higher, i.e., with the native or migrant populations

Figure 2.



Whether the investment in the migrant network is higher or lower than in the native network depends on the relation between $\frac{\alpha}{w}$ and $\frac{1}{w}$, and the relationship between $\frac{\partial p(e,c)}{\partial e}$ and $\frac{\partial p(e,c)}{\partial c}$. Thus, whether an immigrant will invest more in one network than the other depends on the relative cost and benefit from these investments such that:

$$if \quad \alpha > \frac{1}{\lambda} \quad than \quad c^* > e^*$$

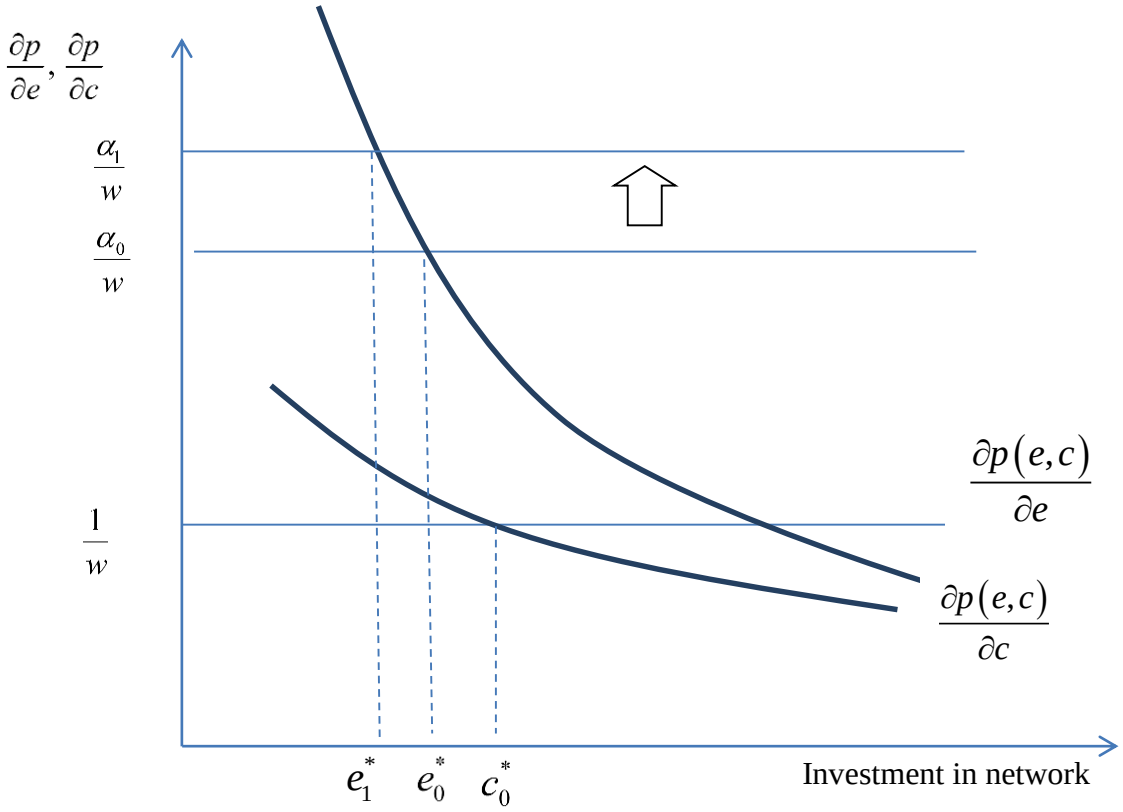
$$if \quad \alpha = \frac{1}{\lambda} \quad than \quad e^* = c^*$$

$$if \quad \alpha < \frac{1}{\lambda} \quad than \quad e^* > c^*$$

2.1. Comparative Statics

Let us try to understand the implications of the above results. As noted, the relative cost, α, is affected by the cultural distance, d, and personal characteristics, a. The first component, cultural distance, is created by different languages, ethnicities, religions and social norms (see Ghemawat, 2001). Clearly, as the cultural distance between the source society and host society increases, the immigrant's need to invest more effort to integrate into the host society, thus the relative cost, α, increases. The second component, personal characteristics, includes the immigrant's age at entry and his or her ability to create social networks. As the immigrant's age increases, his or her ability to acquire the new language and the new social norms decreases, and thus the relative cost, α, increases (see, for example, Chiswich and Miller, 2005).

Figure 3.

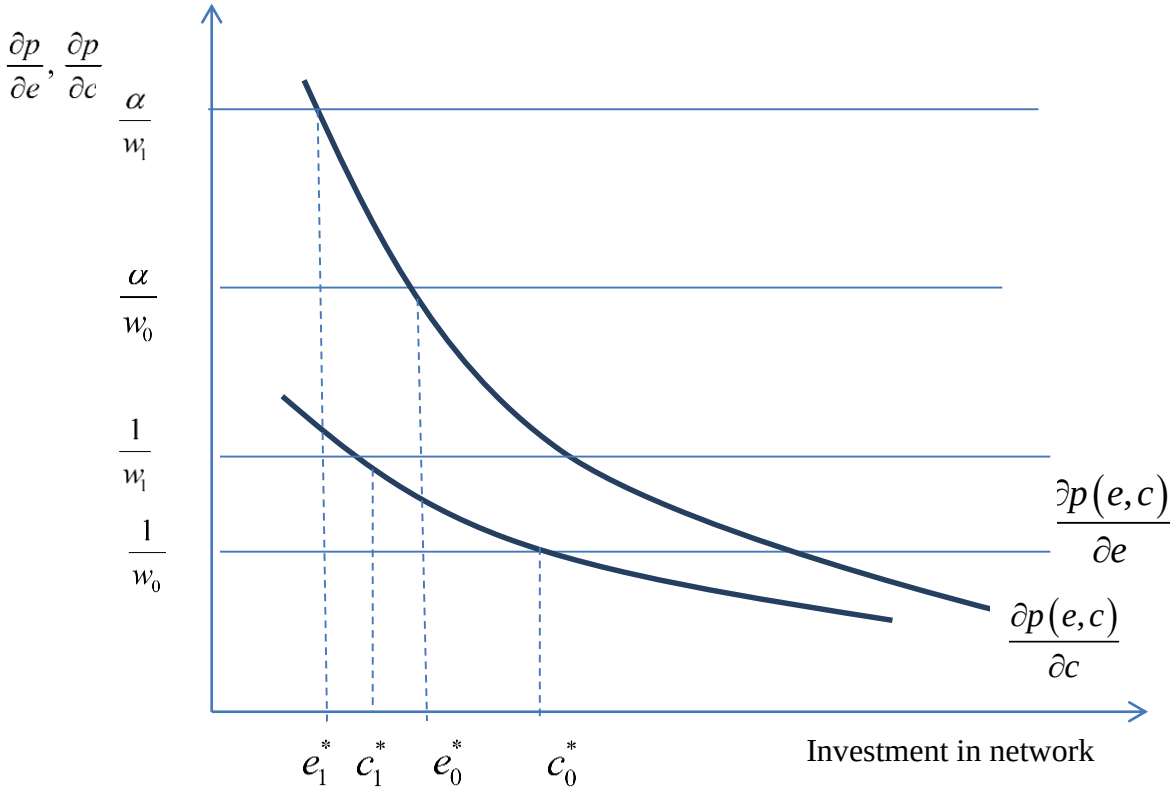


Now suppose that the cultural distance between the host society and the source society, d, increases, or alternatively, that the immigrant's age at arrival increases, such that the relative cost of investment in the native compared to migrant network, α

, increases. Looking at Figure 3, $\frac{\alpha_0}{w}$ increases to level $\frac{\alpha_1}{w}$, and thus the immigrant's optimal investment in the native network decreases from e_0^* to e_1^*, whereas his or her optimal investment in the migrant network does not change. In other words, cultural distance between the host country and the home country or older age at arrival causes *marginalization* (if c_0^* is low) or *separation* (if c_0^* is high). We can use this outcome to explain the results obtained by Constant et al. (2009)—that as the age at arrival increases, separation and marginalization increase, while integration and assimilation decrease. It also explains the results of Constant, Gataullina, Zimmermann, and Zimmermann (2006) showing that Muslims, who have a strong cultural distance from the local population, are less integrated and more separate than the Christians. Moreover, it explains why Constant et al. (2009) found that ex-Yugoslavs, who had a small cultural distance from the local population, assimilated better than Turks, Greeks, Italians or Spaniards.

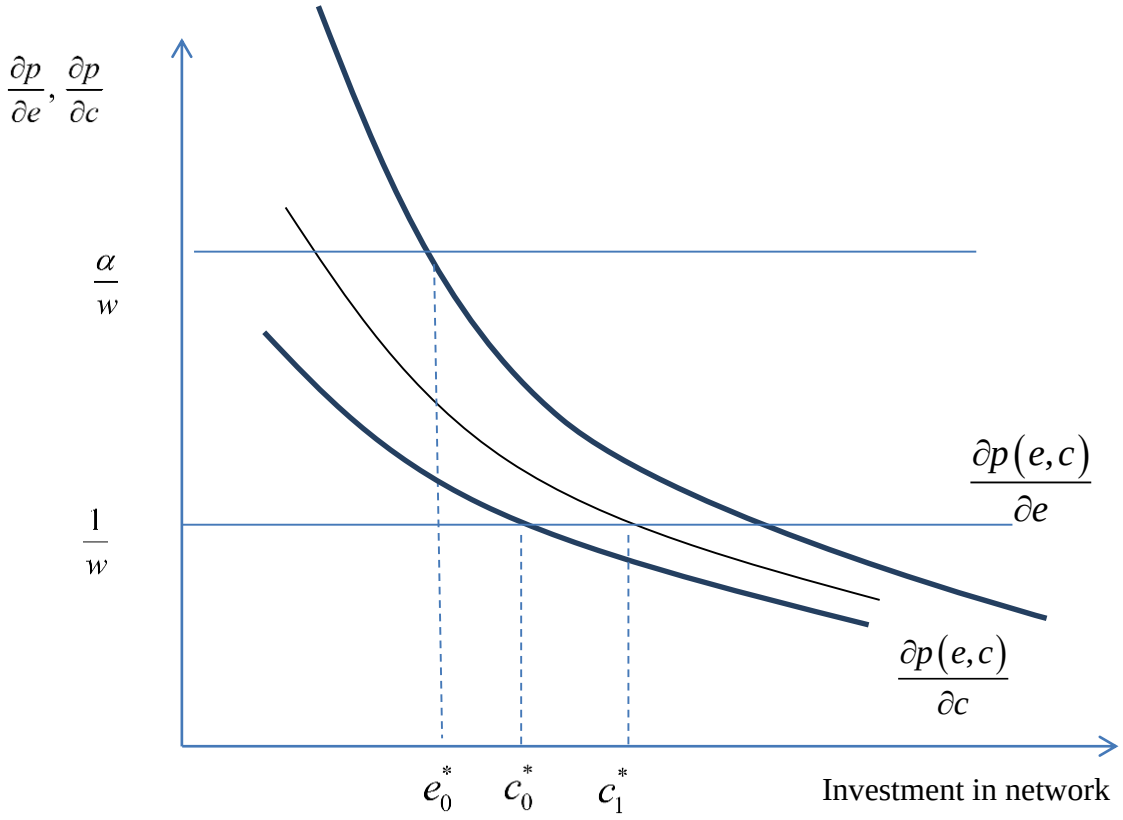
As mentioned above, the potential wage that immigrants can receive in their host country depends on pre-immigration characteristics such as gender, level of education, experience, etc. Suppose two individuals, who differ in their gender or education: the first can earn w_0, whereas the second can earn w_1 ($w_0 > w_1$). Figure 4 shows that the individual with the low wage invests less in social networks—migrants' as well as natives'. This explains the result presented by Constant et al. (2009) on the effect of education and experience upon entry into the host country on the immigrant's ethnic identification: a high potential wage at entry (with derives from college and higher education or vocational training in the source country) decreases *separation* and *marginalization*. Females, who can be discriminated against in the labor market, assimilate less than males.

Figure 4.



Finally, suppose that the efficiency level of the relative investment in the immigrant's network, $\lambda(N)$, increases. This can happen, for example, when the stock of migrants in the host country increases, thus enabling immigrants to obtain more information on the job market. It also can happen when the political strength of the minority group increases. It is easy to see from Figure 5 that the immigrant will increase his/her investment in the migrant network from c_0^* to c_1^*, whereas the investment in the native network will not change. It is thus expected that when the stock of immigrants in the host country increases, *separation* or *integration* will be obtained. This is consistent with the findings of Constant et al. (2009) and Constant, Gataullina, Zimmermann and Zimmermann (2006) of differences in the ethnic identity of different groups that can be followed by the size and political strength of the groups in the host country.

Figure 5.



5. Discussion

In this note, the effects of gender, source country, religion, age at arrival, education level and experience in the source country on the immigrant's ethnic identification in the host country are explained. Specifically, we provide some theoretical explanations for the different empirical results presented in the literature on ethnic identification (Constant and Zimmermann, 2013; Constant et al., 2009; Constant, Gataullina Zimmermann, and Zimmermann, 2006).

We illustrate the results in the two-dimensional model of the *ethnosizer*, which allows simultaneous commitment to the host and source country societies. The total time invested in social networks of the host country and country of origin is optimally chosen. While Constant et al. (2009) and Constant, Gataullina Zimmermann, and Zimmermann (2006) do not examine changes in ethnic identification over time, i.e. two identical migrants arriving at two different periods are classified with the same status, our theoretical model shows that the ethnic identification of a migrant will increase over time.

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Appendix

The case of a bounding time constraint, i.e., $c + \beta e = T$

The optimal investment in the native network, e^*, satisfies:

$$\frac{du}{de} = \frac{\partial u}{\partial e} + \frac{\partial u}{\partial c}\frac{\partial c}{\partial e} = \frac{\partial p}{\partial e}w - \beta\frac{\partial p}{\partial c}w - \alpha + \beta = 0 \qquad (1.6)$$

From(1.6), it follows that:

$$\frac{\partial p}{\partial e} = \frac{\alpha}{w} - \frac{\beta}{w} + \beta\frac{\partial p}{\partial c} \qquad (1.7)$$

Using the optimal investment of immigrants in the local population, $\frac{\partial p}{\partial c} = \frac{1}{w}$, we get:

$$\frac{\partial p}{\partial e} = \frac{\alpha}{w} \qquad (1.8)$$

It is clear that the optimal investment in the native network with the effective time constraint (as presented in (1.8)) is equal to that without this time constraint (as presented in (1.4)).