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Aloys Prinz¹

Migration, Cultural Identity and Diasporas An Identity Economics Approach

Abstract

Besides effects on economic well-being, migration of people with distant cultural backgrounds may also have large effects on people's cultural identity. In this paper, the identity economics of Akerlof and Kranton (2000) is applied to migration. Accordingly, it is assumed that the utility of both the immigrants and the native population encompasses economic well-being and cultural identity. The migration effect on cultural identity depends, among others, on the distance between cultures. In a simple immigration game it is shown that immigrants may prefer to live rather in diaspora communities than to integrate into the host countries' culture. This subgame-perfect equilibrium choice of immigrants seems the more likely the greater the cultural distance between their country of origin and the destination country is. Among the available policy instruments, restrictions on the freedom of movement and settlement of immigrants may be the most effective way to prevent the setup of large diaspora communities. For young immigrants and later generations of immigrants, integration via compulsory schooling is the most important policy. In general, cultural, religious and social institutions may support integration.

Keywords: Akerlof-Kranton game; cultural identity; diaspora; economic well-being; identity economics; immigration

JEL-classification: D91, I31, J15, J61

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1 Introduction

Living in a new era of mass migration, economic reasons for migration decisions are strongly emphasized. However, as the social problems in the U.S., as well as in Europe, demonstrate, migration is not only an economic issue, but also a social and a cultural one. There is a very large body of research concerning economic and social migration problems in economics and sociology, but there exists hardly any literature concerning the economic relevance of immigration and cultural identity.

Since the seminal paper of Akerlof and Kranton (2000), identity as a personal and social characteristic entered the realm of economics research. Moreover, Bénabou and Tirole (2011) developed in another seminal paper the concept of identity as a core of individual and social moral behavior. These papers build a bridge to individual and social psychology where identity plays a major role as an analytical concept. The relation to and importance of identity and the self in the context of cultural change is analyzed in social psychology by Baumeister (1986), who also portrays humans as “cultural animals” (Baumeister, 2005). Moreover, Huettel and Kranton (2012) proposed a new research area by combining identity economics with neuroscience to study more thoroughly social group-based conflicts.

In this paper, the concept of cultural identity is applied to migration. Most immigrants to Europe have a different cultural identity in comparison to the native population. In addition to that, communities with particular foreign cultural identities do already exist in Europe and other locations, called diasporas (Brinkerhoff, 2009; Collier, 2013; Collier and Hoeffler, 2014), also dubbed “parallel societies”. As it seems, this is a crucial issue, particularly with mass migration. As pointed out by Beine, Docquier and Özden (2011), diasporas further migration and even seem to lead to lower average education levels of migrants. Cultural homogeneity plays a major role for the clustering of immigrant groups (Gross and Schmitt, 2003), and is a strong factor, in combination with linguistic distance, for the regional location of migrants (Bredtmann, Nowotny and Otten, 2017).

The paper’s contribution to the literature consists of the analysis how the incorporation of cultural identity influences the decision to migrate and to adapt to the host country’s culture. The result is that the strong motive of improving one’s economic well-being is in conflict with the own cultural identity. Since the native population has a dominant strategy to pressure for integration into the host country’s culture, immigrants may often choose to live in a diaspora instead.

The remaining of the paper is structured as follows. In Section 1, the notions of culture and cultural identity are defined. Moreover, the relevance of culture for economic cooperation is discussed. The costs and benefits of adapting to a country’s culture are studied in Section 3. The analytical core of the paper is Section 4. In this section, the Akerlof-Kranton (2000) identity game is applied to immigration. Starting with the decision to migrate, a sequential game between a representative migrant and a representative citizen in the destination country is modeled and solved. The policy implications of the cultural identity game are studied in Section 5. Section 6 concludes.

2 The economic relevance of culture and cultural identity

According to Frantz Fanon (1963), a national culture can be defined as follows: “A national culture is the whole body of efforts made by a people in the sphere of thought to describe,

justify and praise the action through which that people has created itself and keeps itself in existence” (Fanon, 1963, p. 188). Shared beliefs, values, rituals and skills, as well as group membership determined by ethnicity, language, ideology, et al. determine the so-called cultural, collective self, that creates – in combination with ‘the ongoing self’ (personal memories, traits) and ‘the sensorimotor self’ (sense of agency, sense of embodiment) – the ‘self’ (Ward, 2012, p. 204). Put differently, personal identity is the result of gradual individual adaptation to political, social and economic changes (Baumeister, 1986; Baumeister and Muraven, 1996). Moreover, as stated by O’Brien et al. (2010), cultural traits may be interpreted as transmission units of group-specific behavioral characteristics and, therefore, useful analytical units.

Furthermore, cultural identity can be defined as follows: “Cultural identity is an individual’s sense of self derived from formal or informal membership in groups that transmit and inculcate knowledge, beliefs, values, attitudes, traditions, and ways of life” (Jameson, 2007, p. 199). Therefore, it may be suspected that social bonds depend on cultural identity (Gellner, 1983). The question is, then, what a role a homogeneous culture could play nowadays. Put differently, are there limits to multiculturalism? According to Taylor (2011), there are good reasons for a homogeneous culture: “Society needs in a sense a homogeneous culture, one into which people have to be able to do business with each other across all the particularities of content and background” (Taylor, 2011, p. 83). He argues that a homogeneous culture seems to be “... an undeniable feature of modern-market, growth-oriented, industrial economies, embedded as they are in bureaucratic polities ...” (Taylor, 2011, p. 83). Even more, “... the modern state economy can’t help fostering in his homogenization of identity and allegiance that it must nourish for its survival” (Taylor, 2011, p. 90). “That is why those states try to inculcate patriotism and to create a strong sense of common identity even where it did not previously exist” (Taylor, 2011, p. 90).

In social philosophy, two different approaches to the characteristic of culture as a good can be distinguished (Appiah, 2005, pp. 120 ff.):

- (1) culture as a primary good (Kymlicka, 1991, in the sense of Rawls, 1971) and
- (2) culture as a social good (Taylor, 1995).

According to (1), culture as a primary good implies that there are cultural rights that a state should protect in the same way as it protects property rights (see also Tomasi, 1995, for a critical review of Kymlicka’s arguments). In the context of immigration in large numbers, however, the state should take measures against discrimination and provide public funding to further their cultural practices, although the dominant state objective remains the integration of the immigrants (Kymlicka, 1998a, b; Appiah, 2005, p. 122).

Culture seen as a primary good excludes economic perspectives as culture is simply excluded from economic considerations in terms of costs and benefits. This is different in the second approach (2), in which culture is seen as a social good. The difference to a public good in economics is that culture is “irreducibly social” which means that culture cannot be reduced to the individual level: “But culture as a good, or more cautiously as a locus of goods (for there might be much that is reprehensible as well) is not an individual good” (Taylor, 1995, p. 136). According to Gore (1997, pp. 244 ff.), this can be interpreted in such a way that culture may be a good with *intrinsic value* or with *instrumental value*. In economic terminology, one might say

that culture may be a public consumption good or a public input factor into the production of other public and private goods.

The latter point leads to an economic interpretation of culture as an intangible public good and input factor into the production of public and private goods. In this view, culture as an intangible input factor is the complement to tangible public goods that render the production of goods and services feasible. Tangible public input factors are, beside others, streets, schools, hospitals, the internet backbone and so on. The most general intangible public input factor is a country's laws. As such, laws are part of a country's culture. On the individual level, language, skills and religion (as such or as a proxy variable for mentality) seem to be the decisive intangible public input factors. These inputs are to a large extent culturally defined. In effect, culture has a supra-individual relevance (DiMaggio, 1997). Moreover, cultural distance impacts economic variables like trade and investments between countries via trust between them, as demonstrated with data on European countries by Guiso, Sapienza and Zingales (2009): the smaller cultural distances, the higher the levels of trade and investment. In addition, culture is also empirically relevant concerning the rule of law, democracy and corruption (Licht, Goldschmidt and Schwartz, 2007).

Moreover, as pointed out by academic communitarian philosophers, good societies own a common moral culture (Wikipedia, 2017) that is part of a society's social capital (Putnam, 2007). A common moral culture is the precondition for solidarity and trust among the members of society. Additionally, there is also a connection between biology and culture as conflicts between different cultural groups trigger brain reactions as the brain provides lower-level, as well as higher-level reactions on conflicts (Berns and Atran, 2012).

Cultural distances can be measured. At least two different comprehensive methods have been developed, by Geert Hofstede (2001) and Shalom Schwartz (Hofstede, 2001; Schwartz, 2006). However, the importance of language differences, religion and ethnicity is also applied to measure cultural diversity (Kashima and Kashima, 1998; Fearon, 2003; Patsiurko, Campbell and Hall, 2012).

Economically, the effects of cultural diversity on income, wealth, and growth, as well as the effects on the provision of public goods, are highly relevant. The first group of variables shows cultural diversity's influence on economic productivity, whereas the second variable indicates how much of an economy's wealth is distributed to the entire population instead of private consumption.

The effect of cultural diversity on public good provision seems to be empirically unambiguous: cultural diversity, also called fractionalization, decreases public good provision (Alesina and La Ferrara, 2005). Higher ethnic fractionalization in U. S. cities was found to be negatively correlated with expenditures for productive public goods (Alesina, Baqir and Easterly, 1999). Even in public goods game experiments the contributions to a public good were smaller in culturally heterogeneous than in homogenous groups (Castro, 2008). In simulations with spatial public goods games, high noise rates (i.e., not accurately transmitted cultural information between agents) led to the collapse of cooperation while it prospered with low noise (Stivala, Kashima and Kirley, 2016). However, in an empirical study of 46 countries, only between-group inequality had a large, as well as significantly negative correlation with the provision of public goods, whereas ethnolinguistic and culture fractionalization had not (Baldwin and Huber, 2010). Finally, Gächter and Herrmann (2009) review and demonstrate

experimental cross-cultural differences in positive and negative reciprocity that are highly relevant for cooperation.

Concerning the effects of culture on growth and economic prosperity (see Kapás, 2017, for a recent literature review), the empirical results are in general rather inconclusive (Alesina and La Ferrara, 2005). Algan and Cahuc (2010) find a positive influence of inherited trust on global growth in the twentieth century. Since trust is culturally co-determined, there is a cultural effect on growth. Such an effect is also reported by Alesina et al. (2003) for ethnolinguistic fractionalization; nonetheless, they also emphasize the correlation between ethnolinguistic and geographic factors. In a paper on ethnic geography, Hodler, Valsecchi and Vesperoni (2017) find empirically with data from about 150 countries that countries in which ethnically different people live far away in different areas realized higher levels of income, as well as trust.

For skilled immigrants with moderate levels of cultural diversity, birthplace diversity had a positive impact on economic prosperity in richer countries in a study of Alesina, Harnoss and Rapoport (2016). In OECD countries, Patsiurko, Campbell and Hall (2012) found that ethnic fractionalization predicted a negative effect on economic performance. Culture, as determined by a region's history, seems to be one of the dominant variables for the explanation of regional development in Europe (Tabellini, 2010).

Among the Hofstede-variables on cultural distance, the individualism-collectivism dimension seems to be the most relevant for the wealth of nations, whereby a nation's wealth is the higher, the more salient individualism is (Gorodnichenko and Roland, 2011a, b; Gorodnichenko and Roland, 2017); high rewards for social status may be the key effect for this result. This result is in accordance with the positive effect of individualism on labor productivity found in data from 78 regions in 22 European countries (Kaasa, 2016).

Furthermore, religion as a cultural variable seems to have economic effects. Barro and McCleary (2003) report that beliefs in heaven and hell are positively and church attendance negatively correlated with economic growth. Religious belief was also found to be positively correlated with contributions to public goods, independent of church attendance (Owen and Videras, 2007).

To sum up, the main results of the empirical literature on the economic effects of ethnic and cultural diversity are as follows. Firstly, contributions to public goods, and in particular to public goods as input factors, are negatively influenced by cultural fractionalization. It is to be expected that the greater the cultural distance the more serious is this effect. Secondly, economic productivity and growth may also depend on cultural homogeneity, at least to a certain extent. Only if immigrants are highly skilled and the cultural distance is rather moderate, positive effects of cultural diversity seem likely. This implies that a large cultural distance, as well as a great difference in skills, may have negative consequences for productivity and growth. Thirdly, religious beliefs may play a great role with respect to cultural distance. In particular, church attendance seems to be negatively correlated with economic productivity and growth.

The main channel of cultural influence on economic activity is trust. The greater the cultural distance the larger the effects of cultural diversity on trust. Mutual trust is a precondition for economic exchange; a lack of trust reduces economic activity and, hence, economic performance. Additionally, a lack of trust may be accompanied with higher transaction costs to secure transactions. Another implication may be that economic transactions will take place

mainly among cultural homogeneous firms and people. As a consequence, economic productivity may be lower in culturally diverse than in homogeneous populations.

3 Cultural identity and migration

Besides economic effects, the immigration of a large number of people from another culture may trigger identity problems for both the immigrants and the native population. Taking account of the empirical results concerning cultural distance of the previous section, the problems for cultural identity of both groups may be larger the greater the distance between the cultures is. For the persons involved, the change or even loss of cultural identity may be individually much more important than economic effects.

Immigrants in general have two options in the destination country, an 'inward turn' to group solidarity and an 'outward turn' to assimilation (Karst, 1986). Which turn they use may depend on several factors; the most obvious are the following:

- The cultural identity of immigrants in comparison to the cultural identity in the destination country. The greater the cultural distance the higher will be the probability for an inward turn.
- The size of the homeland community of the immigrants in the destination country. The larger it is the more likely an inward turn occurs (Collier, 2013; Collier and Hoeffer, 2014). This community is called diaspora (Brubaker, 2005).
- The conditions and possibilities to integration into the destination country's culture. The lower the barriers and the better the economic opportunities the higher the chances for an outward turn of the immigrants.

From a psychiatric point of view, acculturation may be rather difficult if sociocentric persons from sociocentric cultures come to egocentric, individualistic cultures (Bhugra, 2004; see also Bourque et al., 2011). Besides individual mental problems, sociocentrism may also frustrate an outward turn to assimilation and adaptation to the local culture. As it seems, those cultural characteristics that provide the opportunities for economic prosperity are those traits that are in stark contrast to many migrants from sociocentric cultures and countries. Liberalism, individual initiative, self-sufficiency, emotional independence (Bhugra and Becker, 2005, p. 22) that are the causes of mental distress of some migrants are the socially and individually required traits for economic and social success.

Instead, living in the diaspora may not only relieve mental stress, but also increase the awareness of the own cultural identity (see Hall, 1990, for a discussion of the relation between cultural identity and diaspora). Although the outward turn to assimilation, acculturation and adaptation in the direction of the host country's culture might be desired by the native population, it may not be necessarily the most wanted option of migrants. To protect their own cultural identity, the diaspora offers an alternative option (for a discussion from a psychological viewpoint see Bhatia and Ram, 2009). As pointed out by Gelfand et al. (2012), parochial altruism and outgroup hostility are strong in collectivistic cultural environments.

Large numbers of immigrants may also threaten the native population's cultural identity and a society's social capital, at least in the short run (Putnam, 2007). In particular, diasporas

may undermine the perception of a society as a whole. In this respect, the cultural distance may also be a determining factor. As indicated above, mutual trust seems to be the most important variable for economic success. It is to be expected that this also holds true for cultural identity. According to Stanley et al. (2012), trust depends on reputation that seems to be race-based represented in the human brain's striatum, whereas the amygdala may represent social group related emotional features for trust. Nonetheless, distrust is a serious danger for well-being and cooperation. Insofar, it can be suspected that cultural assimilation and integration is desired by the native population. Multiculturalism, as it seems, is hardly the best situation in a country with a large immigrant population.

At this point, a clearer differentiation between 'multiculturalism' and 'diaspora' is required. A diaspora community can be understood with Thomas Schelling's segregation model (Schelling, 1971). When individuals choose freely where to live, without any prejudice or discrimination of people with different ethnic backgrounds, they may nevertheless segregate themselves into large agglomerations of similar people (for the measurement of spatial segregation see Reardon and O'Sullivan, 2004). In contrast, diasporas are large agglomerations of people with very similar cultural and ethnic backgrounds who segregate themselves *on purpose*. The notion of multiculturalism is more general than the notion of diaspora; it encompasses, too, cultural diversity within a state, region or city. Diversity can be distinguished from diasporas in two respects: (a) diversity means rather widely spread cultures in a state, region or city (i.e. there is no agglomeration of very similar people) and (b) diversity implies that the cultural distances between people are rather small. For instance, people with different German dialects from the respective German regions are widely spread over Germany, as are people from western European countries in Germany.

To clarify furthermore the meaning of "culture" in the following analysis, a very narrow and measurable definition is chosen. Culture encompasses a person's religion, r , (in particular as a proxy variable for mentality), language, l , and education or skills, e . The reason for applying these dimensions of culture is that they seem crucial for acculturation and integration into the host country's society. The more different the mentality (religion) and language are, the more difficult will it be to adapt emotionally and socially to the host country. Moreover, the larger the differences in education and skills, the more difficult and time consuming the economic integration into the host country's labor market will become.

The three main cultural variables considered here are measurable, as well as their distance. The measurement of education and skills is common such that it is not difficult to measure the distance between different levels of education or skills (OECD, 2016; OECD, 2017; see Muller, 2015, for a review of new developments). The relevance of linguistic differences for culture is emphasized by Lazear (1999). The distance between languages is measurable, too (see, for instance, Perroni and Serva, 2010; Wichmann, Holman, Bakker and Brown, 2010, and the literature quoted therein). Even the distance between religions can be measured, e.g., via an intermarriage index (see, e.g., van Poppel and Schoonheim, 2005; Carol, 2013) or via a historical polarization index (Bar, Cosgel, Miceli and Yildirim, 2015).²

2 Note that it is possible to combine different distance measures into one by vector similarity, for instance. Vector similarity is defined as the cosine of an angle which is calculated as follows (see, for instance, Jones and Furnas, 1987): $\cos \varphi = \frac{\mathbf{A} \cdot \mathbf{B}}{\|\mathbf{A}\| \|\mathbf{B}\|}$, where \mathbf{A} and \mathbf{B} are vectors of a culture A and culture B , with $n > 1$ culturally relevant elements. In this formula, $\mathbf{A} \cdot \mathbf{B} = \sum_{i=1}^n a_i b_i$ is the scalar product of the vectors \mathbf{A} and \mathbf{B} ; in addition, $\|\mathbf{A}\|$, $\|\mathbf{B}\|$ are the norms (or length) of the respective vectors: $\|\mathbf{A}\| = \sqrt{a_1^2 + a_2^2 + \dots + a_n^2}$; $\|\mathbf{B}\| = \sqrt{b_1^2 + b_2^2 + \dots + b_n^2}$.

In the next section, on the background of the results of Sections 2 and 3, an Akerlof-Kranton identity game (Akerlof and Kranton, 2000) is applied to migration.

4 Akerlof-Kranton game of identity and migration

The theoretical core of the Akerlof and Kranton (2000) approach of integrating identity into economics consists of an extension of the utility function by (individual) identity that is socially determined. The utility function of an individual j reads (Akerlof and Kranton, 2000, equation (1), p. 719):

$$U_j = U_j(a_j, a_{-j}, I_j), \quad (1)$$

with:

a_j : a vector of j 's actions,

a_{-j} : a vector of actions of others and

I_j : j 's self-image, i.e., j 's identity.

The identity of j , however, is defined as follows:

$$I_j = I_j(a_j, a_{-j}, c_j, \varepsilon_j, P), \quad (2)$$

with:

c_j : the vector of social characterizations of j ,

ε_j : the degree of j 's equality with the assigned social characteristics and

P : the vector of socially prescribed behaviors for characteristics c_j .

Hence, a person's utility depends on the own actions, the actions of others and on the own identity. The identity is socially determined, as the social status of a person implies behavioral norms, prescribed by society, that the person must take into consideration in her or his actions. Increases or decreases of utility via the variable I_j are called in Akerlof and Kranton (2000) identity gains or losses, respectively.

To apply the Akerlof-Kranton approach to immigration, suppose that a person with a cultural background A is deciding on migrating to another country with a different culture, B . Note that A and B are vectors of culturally relevant variables as, in particular, religion (mentality), language and education or skills. The utility of the migration-minded person, U_M , consists of two elements: economic well-being, Y_M , and the person's identity, I_M :

$$U_M(Y_M, I_M), \quad (3)$$

with:

$$Y_M = W_M + S(W_M), \quad (4)$$

W_M : labor income and $S(W_M)$: social benefits that may depend on labor income as follows: $S'(W_M) < 0$ and

$$I_M(A, B). \quad (5)$$

The latter means that the identity value depends on both, her or his own culture, A , and the culture of the destination country, B . It is assumed that the own culture has a positive impact on identity, whereas the alien culture has a negative influence. In addition, the

negative alien influence is supposed to increase with the cultural distance between A and B :
 $I_M(A, \dots) > 0, I_M(\dots, B) < 0, \frac{\Delta I_M}{\Delta B} < 0$.³

The utility of citizens in the migrant's destination country, U_C , is similarly determined by their economic well-being, Y_C , as well as their culturally-determined identity, I_C :

$$U_C(Y_C, I_C), \quad (6)$$

with:

$$Y_C = W_C + S(W_C), \quad (7)$$

W_C : labor income of a representative citizen, $S(W_C)$ social benefits with $S'(W_C) < 0$ and

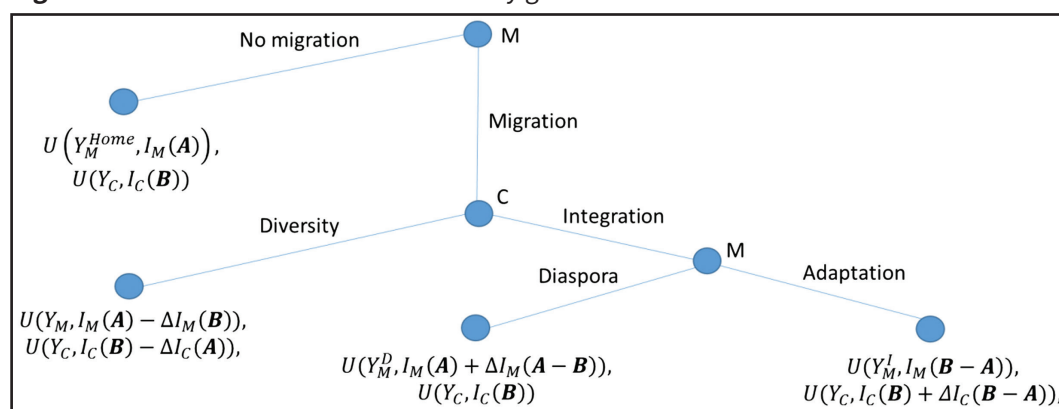
$$I_C(B, A). \quad (8)$$

The latter implies that the identity value depends also on her or his own culture, B , and the culture of migrants, A . As in the immigrant case, it is assumed that the citizens value their own culture, but not the alien culture: $I_C(B, \dots) > 0, I_C(\dots, A) < 0, \frac{\Delta I_C}{\Delta A} < 0$.

The identity part of both utility functions incorporates a cultural externality. Migrating into a (very) different culture may generate a culture shock for the migrant due to the host country's customs and habits. In contrast, people with (very) different customs and conventions may also generate a cultural externality for home country citizens, particularly if the number of immigrants with the same different culture, as well as cultural distance, is large. As pointed out by Safi (2010), the relative dissatisfaction of immigrants persists over time and does not disappear in later generations. This may be explained by a lack of assimilation or by discrimination (Safi, 2010). However, assimilation is different according to the countries of origin and these differences are also found in the next generation (Abramitzky et al., 2014). Nevertheless, as documented by Abramitzky et al. (2017), cultural assimilation (e.g., learning English, intermarriages, giving children native names) took place to a substantial degree during the U.S. Age of Mass Migration.

In Figure 1, the structure of an Akerlof-Kranton (2000) game between (potential) migrants and destination country citizens, both represented by an average or representative migrant and

Figure 1 Akerlof-Kranton cultural identity game



Source: Own depiction.

³ It is noteworthy to emphasize that this influence exists at the time of arrival in the destination country. Therefore it is a first-generation effect. Whether or not this effect persists in the following generations that are borne in the country of immigration is a very different question. The latter depends on the attitudes of the second and later generations, their assimilation, as well as on the effectiveness of the integration policy.

citizen, is shown. The game starts at the node where a potential migrant decides between staying in the home country (“No migration”) and leaving it (“Migration”). Staying in the home country yields economic well-being of Y_M^{Home} and a value of cultural identity of $I_M(A)$. The utility of this option is given by $U(Y_M^{Home}, I_M(A))$. Without immigration, the utility of the representative citizen of the destination country is $U(Y_C, I_C(B))$.

Before presenting the strategies and payoffs of the cultural identity game in Figure 1, the levels of economic well-being are determined first:

$$Y_M^I > Y_M \geq Y_M^D > Y_M^{Home}. \quad (9)$$

In the relationships (9), the levels of economic well-being in the respective destination country are assumed to be always higher than in the home country, Y_M^{Home} . The highest level is attained when the immigrant is integrated into the host country’s society; this level is denoted by Y_M^I . If an immigrant lives in a diversified host country where she or he can retain the own culture, the economic well-being is denoted by Y_M . Because there is no integration into the host country, the economic well-being will be smaller than that of an integrated person, $Y_M < Y_M^I$. The economic well-being of living in a diaspora, Y_M^D , is assumed to be lower than the well-being in the cases of integration or diversity, but higher than in the home country, $Y_M^I > Y_M \geq Y_M^D > Y_M^{Home}$. Living in the diaspora without any cultural adaptation may imply to be long-term unemployed and to live exclusively on social welfare assistance. According the assumption, even then the economic well-being is higher than living in the home country and earning a living there.

The relations of migrant economic well-being given by the inequalities (9) are applied in the remaining of this paper.

If in Figure 1 person M chooses the “Migration” strategy and leaves the home country, the next node of the game is reached where a representative citizen of the destination country, C, decides on how to react to immigration, taking account of her or his own cultural identity. There are two strategic options: (1) “cultural diversity”, i.e., accepting externalities from a foreign culture on the own culture, and (2) “integration”, i.e., insisting on cultural adaptation of immigrants to the host country culture. The game ends if C selects the diversity option. If C chooses the integration option, the next node of the game is attained at which M has two further options: to adapt to the host country culture, or to join an already existing community of other immigrants of her or his own culture, the diaspora.

The payoffs of these strategies are presented next. Note that the payoffs of “No migration” are already determined above.

The payoff of the “Diversity” option for migrant M is assumed as:

$$U(Y_M, I_M(A) - \Delta I_M(B)). \quad (10)$$

According to the payoff (10), the “Diversity” option entails a loss of cultural identity for M of $\Delta I_M(B)$ due to the different culture B . This assumption is based on Section 3 above. Although the migrant retains her or his own culture, she or he lives now surrounded by an alien culture. Moreover, since diversity implies that M does not live in an agglomeration of people with the same culture, A , the alien culture, B , generates a negative externality for the immigrant.

In addition, there is also a loss of cultural identity assumed for citizen C in the host country; the payoff is given by:

$$U(Y_C, I_C(B) - \Delta I_C(A)), \quad (11)$$

with $\Delta I_C(A)$ as the value of identity loss. The reason for this assumption is that the homogeneity of the own cultural identity is partially endangered by an alien culture, although there is no agglomeration of people with a specific culture, B . The citizen's loss of identity value might be quite small or even zero: $-\Delta I_C(A) \leq 0$.

The second strategy of citizen C is "Integration". The payoffs from the "Integration" strategy depend on the migrant's choice at the next node of the game where M chooses between "Adaptation" and "Diaspora".

The "Adaptation" strategy is assumed to provide the following payoffs:

For migrant M:

$$U(Y_M^I, I_M(B-A)), \quad (12)$$

where a loss of cultural identity occurs that reduces the person's value of identity to $I_M(B-A)$. In contrast to the assumption in equation (10), it is supposed in equation (12) that the value of cultural identity depends on the vector-valued distance between the cultures. This means that the value of the adapted identity is the smaller, the greater the distance between the cultures is. Moreover, in the case of diversity the own identity of M remains unchanged; the foreign cultural environment creates a negative externality without changing M's culture. This is different with integration. In this case, it is no longer possible to retain the own culture completely, certain aspects of the own culture have to be abandoned. In a recent empirical study, Helliwell, Wang and Xu (2014) conclude that although social norms of their own culture are deeply imprinted in people, individuals can adapt to a new culture in a changed environment. Moreover, individuals may even ascribe themselves various identities in different social situations and contexts; hence self-representation and the categorization by others can differ to a large degree.⁴

The payoff of the "Adaptation" choice of M for citizen C is defined as:

$$U(Y_C, I_C(B) + \Delta I_C(B-A)), \quad (13)$$

where a positive cultural identity externality for C is assumed by the term $\Delta I_C(B-A) \geq 0$. The latter is the value that C attributes to the own identity due to the cultural adaptation of M (see, for instance, Arends-Tóth and Van De Vijver, 2003, for empirical results concerning the views of Dutch people on acculturation and integration of Turkish people in the Netherlands). Put differently, the value of C's own identity increases with the distance of the own culture to the alien one. The value of this term may be zero, if there is almost no negative externality due to an alien culture. This might be the case if the cultural distance is very small. However, the larger the cultural distance the stronger the negative externality on the endemic culture. If cultural adaptation occurs, integration via adaptation may be experienced as a positive externality from the viewpoint of the country's citizens.

The payoff for migrant M of the "Diaspora" choice is determined by:

$$U(Y_M^D, I_M(A) + \Delta I_M(A-B)), \quad (14)$$

where economic well-being, as well as the value of cultural identity, in (14) differ from (11). Economic well-being is supposed to be smaller in the diaspora than in the host country society, because language, mentality and skills will diverge from the country's standards. This restricts

⁴ I thank an anonymous referee for this argument.

economic transactions, as well as the cooperation on the labor market. Lower earnings and incomes are the most probable results.

In contrast, the value of cultural identity may increase by $\Delta I_M(A-B) > 0$. The reason is that the value of the own identity, when enjoyed with other people from the same culture, may increase in contrast to the disliked alien culture. The alien culture is then a negative externality, whereas the community with the own culture seemingly creates an enforcement effect for the own cultural identity. Economically, the diaspora provides a positive externality for its members. This effect may be the stronger, the greater the distance of the cultures.

The payoff for citizen C in the “Diaspora” strategy is assumed to be the same as in the “No migration” case: $U(Y_C, I_C(B))$. The reason is that a diaspora is a closed community from the viewpoint of the native population that does not intrude into the own culture. However, this may change if the local diaspora increases to a parallel society. In this case, the impact on C’s identity would be negative, perhaps with an even stronger negative externality as in the diversity case.

With these assumptions, the Akerlof-Kranton game (Figure 1) can be analyzed with the concept of subgame perfectness. The smallest subgame starts at the node where M has a choice between adapting to the host country culture, i.e., by changing the cultural identity, and by living in the diaspora.

Lemma 1. Migrant M chooses “Diaspora” (“Adaptation”) if:

$$U(Y_M^D, I_M(A) + \Delta I_M(A-B)) > (<) U(Y_M^I, I_M(B-A)). \quad (15)$$

Proof: Follows immediately from equations (12) and (14) and the relations of economic well-being in (9). //

From the relation (15) it can be immediately derived that “Adaptation” may become a viable option

- if $Y_M^I \gg Y_M^D$ and the cultural distance between A and B is small,
- if the utility of economic well-being is much higher than the utility of cultural identity,
- if the weight of economic well-being in the utility function is much higher than the weight of cultural identity and finally
- if – economic well-being in the diaspora is (much) lower than in the host country society.

The next subgame starts at the decision node of C.

Lemma 2. Given the payoffs defined above, Citizen C will never choose “Diversity”, but always “Integration”.

Proof. Since $U(Y_C, I_C(B) - \Delta I_C(A)) < U(Y_C, I_C(B)) < U(Y_C, I_C(B) + \Delta I_C(B-A))$, Lemma 2 follows immediately. //

The last subgame is the entire game that starts with the migration decision of M.

Proposition 1. M will always “Migrate” and afterwards choose either the “Diaspora” or “Adaptation”. C will always choose “Integration”.

Proof. According to equation (9), economic well-being will always be higher in the destination country than in the home country. Because of the positive additional identity effect due to the diaspora option, this option is better than staying in the home country. If additionally

the higher economic well-being compensates for the loss of cultural identity by adapting to the host country culture, M will choose “Migration” and “Adaptation”, see Lemma 1. By Lemma 2, C will always choose “Integration”.

Obviously, the most serious problem is the attractiveness of the diaspora option of migrants. Even if citizens would choose “Diversity” instead of “Integration” in the Akerlof-Kranton game in Figure 1, there would always be a risk that “Diversity” leads to a concentration of immigrants in certain community-preferred local areas of residence. These areas would then turn themselves tacitly into separated culturally homogeneous sectors.

5 Policy implications

As pointed out by Akerlof and Kranton (2000), the cultural identity variable in the utility function renders alien cultural impacts on the own cultural identity feasible. Economically, these impacts are externalities. Although some aspects of these cultural externalities might be positive, in an era of mass immigration they may be in total rather negative, as assumed in the payoffs of the above game. Note that in this game the effects are mainly negative for both the migrants and the native population. The policy question is how to internalize these cultural externalities.

The following policies seem to be the mainly available options:

- Policy I: increasing the labor market opportunities of immigrants,
- Policy II: increasing the cultural value of host country culture adaptation,
- Policy III: deterring the diaspora development by restricted residence choice of immigrants,
- Policy IV: increasing the acceptance of diversity by the native population and
- Policy V: integration by schooling.

Policy I

Policy I, increasing the labor market opportunities of immigrants, would probably increase Y_M^I in the first instance. In this way, the difference of economic well-being between integration and living in the diaspora, $(Y_M^I - Y_M^D)$, is increased. However, the crucial question is whether immigrants perceive higher economic well-being as a compensation for the cultural identity loss. The success of policy I depends on this question.

One of the most important issues in the context of identity is whether identity losses might be compensated (totally or partially) by money. If this was the case, the choice of “Integration” by C might make the choice of “Adaptation” by M attractive, since by assumption the economic well-being as an integrated person would be substantially higher than as a member of the diaspora.

Taking account of the migrants’ actual choice of the “Diaspora” option in European countries it may be doubted that the loss of cultural identity can be compensated by money. Moreover, there is evidence from functional magnetic resonance imaging (fMRI) that so-called ‘sacred values’ as, for instance, religious belief and ethnic identity, may not be ‘sold’ for money since the decision-making takes place in that part of the human brain in which it occurs

according to deontic rules (Berns et al., 2012). Nonetheless, even if cultural identity externalities could be compensated by money in principle, it cannot be guaranteed that the amount of money requested can be paid. Imagine that the cultural identity loss of a migrant could be compensated with the income of an IT-engineer. Being a craftsman with ordinary skills, such an income cannot be paid. Even if it would be possible to develop adequate engineering skills with the respective time and effort, the net return on these additional investment might not be sufficient to compensate the loss of cultural identity. Again, the cultural distance will be decisive. The smaller this distance, the smaller the identity loss and the smaller the monetary equivalent to compensate for this loss. This can be summarized in a non-compensatability theorem.

Policy conclusion 1. Non-compensatability theorem: Even if the loss of cultural identity could be compensated with money in principle, the required compensation may be so large that it is de facto impossible. Moreover, even if all social benefits are lost or denied, the remaining level of well-being in a diaspora community might be higher than the level of well-being in the country of origin.

Policy II

The issues of policy II, increasing the identity-value of immigrants' cultural adaption, is seemingly even more difficult than the economic compensation for cultural identity loss. A case in point is the immigration of so-called guest workers in Germany. The active recruitment of guest workers started in the mid-1950s and ended in 1973, but not their immigration (Seifert, 2012). Although it was not intended that these workers stayed after the expiration of their work contracts, most of them stayed and brought their families to Germany and the employment rate of immigrants fell back accordingly (Seifert, 2012). However, there are differences concerning the cultural adaptation between those immigrants according their countries of origin (see Chin, 2007, for an account of the guest worker discourse dynamics in Germany). For Italians, e.g., cultural adaptation did not play a significant role, in contrast to immigrants from Turkey. Although the difficulties were similar for first-generation immigrants, for the next generations it was quite different. Until nowadays, the integration of people from Turkey is not completed, in particular concerning dogmatic and fundamentalist attitudes even among immigrants from Turkey in the second and third generation in Germany (Pollack, Müller, Rosta and Dieler, 2016). This means that the mentality of these people seems to be quite different from that of their German fellow citizen.

Hence, there are indications that the distance of mentality – with religion as a proxy variable – is the decisive variable. After three generations, the integration should be completed. However, as recent events in Germany after the failed military coup in Turkey demonstrate, one cannot assume that the assimilation of people with a Turkish background was successfully completed.

Policy conclusion 2. Mentality differences are seemingly the biggest obstacles to cultural assimilation and social integration. These differences can hardly be reduced with policy measures.

Policy III

In the short-run, policy III of deterring the setup of large diaspora communities may be considered the most appropriate policy to stop immigrants from choosing the diaspora strategy. In addition, the generosity of social benefits when living in a non-working diaspora community might also be a relevant policy variable, in particular when combined with policy I, i.e., increasing actively immigrants' labor market opportunities.

Nevertheless, also this policy might not be very successful. The reason is that even with reduced social benefits or with no social benefits at all, living in a diaspora might be better than living employed in the country of origin. As already said above, without a loss of cultural identity (or with an additional utility gain from the diaspora community) the economic conditions of living in a developed economy might be better than living under miserable conditions in the country of origin.

Policy conclusion 3. Avoiding the setup of large-scale diaspora communities might prevent immigrants from joining such communities. However, it is not clear how such a strategy can be sustained in a country that otherwise guarantees the free movement of persons.

Policy IV

As it seems, policy IV requires that the native population in the host country learns that with cultural diversity the own cultural identity changes in a way that may enhance the population's utility. Such changes may take the longer, the more distant the immigrants' culture is. Therefore, this policy is rather poorly suited in the presence of mass immigration from distant cultures. The latter was said in plain words by the German Chancellor Angela Merkel in October 2010 at a party conference: "The multicultural concept is a failure, an absolute failure" ("Der Ansatz für Multikulti ist gescheitert, absolut gescheitert!" Spiegel Online, 2010; the quoted English version is from Chin, 2017, p. 237, who also presents the history of Europe's multiculturalism crisis).

However, religious institutions could take over some responsibility for cultural integration. For instance, a European version of Islam could provide a bridge to European values. In a similar way, a permanent dialogue between church leaders of the different religious confessions may also be an approach to support integration institutionally.

Policy conclusion 4. Multiculturalism seems not to be compatible with cultural identity in the case of mass migration from distant cultures. Cultural integration by adaptation and assimilation might be the better alternative. In this process, religious leaders can play an integrative role.

Policy V

It might be not possible to integrate the adult first generation of immigrants because they are culturally socialized in their home country. The bigger the cultural distance the less likely the adaptation of or to the new culture may be feasible. However, this is different for young immigrants and the later generations of immigrants. Mandatory schooling seems the most promising strategy of integration, given that the children are educated according to the rules

of the new home country (Kalter and Granato, 2002; Worbs, 2003; Dustman, Frattini and Lanzara, 2012). According to Bandiera et al. (2018), the introduction of compulsory schooling in mid-19th century USA occurred with the intention to educate and integrate immigrants from Europe; in effect, a new nation was build. In contrast, the higher the persisting influence of the foreign country's culture (by parents or religious institutions, for instance) the lower the chances of successful integration of young immigrants and the later generations into the new culture via adaptation and assimilation. Moreover, the higher the educational attainment the better the opportunities on the labor market. Briefly, schooling and success at school may become a self-reinforcing process of integration.

The empirical literature on integration via schooling looks promising insofar as it seems possible to integrate second and later generations. The not-so-good result is that the process of integration is neither linear nor quick (Riphahn, 2003; van Ours and Veenman, 2003; Dustmann, Frattini and Lanzara, 2012). Non-linearity means that integration success in generation two may be combined with further progression in generation three, but probably with a certain regression. Slowness of integration means that not all members of the second (and later) generations are equally well integrated. In addition, the size of the immigrant groups from a country may play a role. According to Borjas (2015), economic assimilation in the U.S. was lower for bigger immigrant groups from one country.

Policy conclusion 5. Schooling may be the single most effective policy of integration for young immigrants, as well as second and later generations of immigrants. However, there is no guarantee for quick successes as the process is seemingly non-linear and long-lasting.

6 Conclusion

In this paper, the identity economics of Akerlof and Kranton (2000) is applied to the cultural aspect of mass immigration. Cultural identity, as it seems, is a social characteristic of people that has immediate utility implications. Therefore, the Akerlof-Kranton utility function is employed to combine cultural identity and economic well-being. Furthermore, the distance between cultures may play a great role concerning the integration decisions of both the immigrants and the native population of a country.

In a simple game between immigrants and the citizens of the destination country it is shown that diversity is neither the preferred strategic choice of immigrants nor of the native population. Instead, given the assumed payoffs, the subgame-perfect equilibrium implies that immigrants prefer living in a diaspora. This diaspora equilibrium is a big obstacle to economic integration, as well as cultural assimilation and adaptation.

The policy options to accelerate economic and social integration are restricted since it seems not possible to compensate the loss of cultural identity by economic means. The only policy instrument that may be effective in avoiding larger diaspora communities is the restriction of the immigrants' freedom of movement and settlement. Moreover, integration by (compulsory) schooling may also be quite effective with young immigrants, as well as later generations with a migration background. Nevertheless, integration by schooling will be a long-lasting and uncertain process.

Generally speaking, religious, cultural and social institutions can support the process of integration. To demand quick and universal success of this process would be counterproductive since the process will be slow.

Last but not least the integration of immigrants of distant cultures will be one of the most demanding policy issues for the next decades. Each society will have to find its own way to solve the very difficult task to reconcile unity and diversity (Parekh, 1998, p. 81).

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Consent for publication

I agree to publish this paper.

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