

## Volume 39, Issue 2

### Who is in favor of immigration: the wealthy or the poor? the old or the young?

Gil S. Epstein  
*Bar Ilan University*

Shirit Katav Herz  
*The Academic College of Tel-Aviv-Yaffo*

#### Abstract

Population ageing affects most countries, especially developed ones. The elderly have increased in number as a result of increased longevity and a parallel decline in fertility. This phenomenon is placing an increasing burden on the young to finance intergenerational transfers to the old, which is creating a threat to the stability of the pension system and the long-run viability of society as a whole. One possible solution is to permit more immigration, which will both increase the labor force and broaden the tax base. Increasing immigration has a variety of effects on the local population, which vary according to age and wealth. One of these is the threat to local social norms and culture since immigrants tend to maintain the culture of their country of origin. This effect increases with the number of immigrants and reduces the attractiveness of immigration as a solution to population ageing. This paper examines immigration as a solution to the problem of ageing population, while considering the implication of immigration on social norms.

# 1. Introduction

The aging of the global population is one of the most significant social transformations of the twenty-first century. Improvements in living conditions and in health care mean that people are living longer and are healthier. By 2050, life expectancy at birth is expected to surpass 80 years in Europe, Latin America and the Caribbean, North America and Oceania and will approach 80 in Asia and 70 in Africa (World Population Ageing Report 2015). According to the World Population Ageing Report (United Nations 2015), the number and proportion of the elderly are growing in almost every country in the world. The ageing process is particularly advanced in high-income countries. Moreover, between 2015 and 2030, the number of people in the world aged 60 or over is expected to grow by 55 percent, from 901 million to 1.4 billion, and by 2050 it is expected to more than double, to nearly 2.1 billion. In 2050, the number of people aged 80 or over is expected to grow to 434 million, more than triple the number in 2015.

The ageing of the global population can be simply explained by lower birth rates and higher life expectancy.

According to The World Population Prospects: the 2017 Revision (United Nations 2017), "Globally, total fertility is expected to fall from 2.5 births per woman in 2010-2015 to 2.2 in 2045-2050 and to 2.0 in 2095-2100.

The model presented here will focus on the implications of population ageing for intergenerational transfers. In all Western democracies, income is redistributed from young and middle-aged workers to the elderly. The aforementioned demographic changes have increased the tax burden on the working generation in order to fund the typical pay-as-you-go pension and health care systems.

There is therefore an increased threat to the long-run viability of societies. There are a number of potential solutions: raising fertility rates by implementing policies that increase the compatibility between labor force participation and childrearing or redistributing some portion of consumption to childrearing; raising the retirement age; adjusting tax rates; and increasing the tax base (Bengtsson and Scott 2011). Another possibility is to allow immigrants to freely enter advanced economies (Arltová et al. 2016). We focus here on immigration as a solution to the effect of population ageing on intergenerational transfers.

Encouraging the entry of productive immigrants will increase the welfare of the local population not only through the participation of these immigrants in the labor force, but also by providing new taxpayers to finance social security and thus solve the problem of an ageing society. The tax burden on the younger (working) population is thereby alleviated through the contribution of immigrants to financing intergenerational transfers.

About 150 to 200 million people live in a country they are not native to, most of them in Europe, the United States and other developed countries. Probably about 95 percent of this population immigrated primarily or entirely for economic reasons (Arltová et al. 2016).

Since many immigrants are low-skilled and low-paid, they are concentrated in sectors that are more exposed to import competition or in low-wage sectors that produce non-traded goods. Low-skilled and low-paid immigrants produce benefits for the local population through complementarity with other local factors of production (capital and highly skilled local workers), by reducing production costs and by helping to meet the demand for low-wage services.<sup>1</sup> Razin and Zadka (2000) found that all income (low and high) and all age (old and

---

<sup>1</sup> See Zimmerman (2005) who concludes that immigration is usually beneficial in Western host countries. This also depends on the reaction of the migrants to the locals Epstein (2007) and if they live in networks Epstein (2008).

young) would be better off from low skilled migrants when the economy has good access to international capital markets. The immigration surplus may be even larger when the immigration flow is composed exclusively of skilled workers (Borjas 1995).

There are contrasting opinions as to whether immigration can solve the ageing problem. Some claim that immigration has a positive impact on intergenerational transfers (for instance, Razin and Sadka 1999, Storesletten 2000, Berger et al. 2016), while others claim that it has only a negligible or moderate impact on the intergenerational transfer problem (Leers et al., 2004, Coleman 2008, Serrano et al. 2011, Chojnicki and Ragot 2016).

The lack of consensus is due to the variation in the extent of immigrants' integration into the local labor force and in the fertility rate of immigrants relative to locals (Bengtsson and Scott, 2011). The effect of immigration also depends on population size, the structure of institutions and policies in the host countries, the pension system, the structure of the population, the distribution of skills and the production structure (Berger et al. 2016), as well as differences in attitude toward immigration across countries (Mayda 2006). Four acculturation strategies are defined in migration literature: the first, integration, which implies a strong sense of belonging to the ethnic group together with a strong identification to the dominant society. Second, assimilation implies a strong identification to the majority culture but weakened ties to the culture of origin, while third, separation is the opposite, a strong affiliation to the ethnic group but weak ties to the majority. Finally, marginalization implies weak ties to both the ethnic group and the majority (Nekby & Rodin 2001). In the paper we concentrate in separation since this complicated strategy causes high tension between immigrants and locals and therefore it emphasizes the substitution between the economic utility and the cultural influence of immigration.

Despite immigration's contribution to the local economy, it often meets with opposition. There appear to be several reasons for the negative attitudes toward immigration. Low-skilled immigrants sometimes displace local low-skilled workers, who thus feel threatened by immigration and as a result, immigration is often blamed for contributing to unemployment (see Alber 1994). However, Krueger and Pischke (1997) found that the threat to personal income explains little of the tendency to participate in violent acts against foreigners in Germany. Other possible reasons are ethno-racial antipathy and the perception that immigrants abuse the welfare state and contribute little or nothing in return (Ceobanu and Koropeczy-Cox 2013).

Opposition to immigration can be driven by noneconomic concerns associated with cultural and ethnic tensions between the local and immigrant populations (O'rourke and Sinnott 2006, Dustmann and Preston 2007, Malchow-Møller et al. 2008, Hainmueller et al. 2010). The threat to social norms is a possible explanation for such non-economic opposition to immigration. It has been found that individuals who feel closer to their country's identity are more likely to be anti-immigration (Mayda 2006). Immigrants bring with them customs and values that are foreign to the host society, which locals fear will influence local social norms and undermine the collective identity of the community.

The question arises as to why a change in social norms would be a source of disutility among certain segments of the local population. A form of behavior becomes a social norm when it is adopted by a majority of the population. Deviating from a social norm results in disutility for the individual since he is censured by other members of society and becomes an outsider.<sup>2</sup> Similarly, it is often the case that immigrants continue to behave according to the social norms of their country of origin and thus remain outsiders. As long as they are few in number relative to the local population, there is no perception of a threat to local social norms

---

<sup>2</sup> See, for example, Akerlof (1980) and Bernheim (1994). The identity of the migrants is also important, see Epstein and Heizler (2015).

and it is presumed that they will be assimilated within a short period of time (Lazear 1999) or at least will not have any major influence on local social norms.

From the point of view of the locals, there is a trade-off between the economic benefits they derive from immigration and the disutility from the change in social norms. There is also a potential conflict between locals who differ in the degree they benefit from immigration or in the importance they attribute to preserving social norms.

We focus on immigration as a potential solution to population ageing, while taking into account the influence of immigration on local social norms. We show that richer countries will encourage the entry of a greater number of immigrants and that social norms in these countries will change more rapidly than in poorer countries. This cultural influence should be taken into account when designing immigration policies.

## 2. The Model

We use an overlapping generations model. Each individual lives for two periods: in the first, the individual is young and he works, consumes and pay taxes, while in the second, he is old and only consumes.

While young, the individual's consumption is based on his income and when old it is financed by intergenerational transfers. In each period, there is an old generation and a young generation. The young generation pays taxes to finance the transfers to the overlapping old generation, which reduces its consumption opportunities.

The per capita tax on the young and immigrants depends on the ratio of young to old in the population and is used to finance intergenerational transfers. Immigration policy restricts entry to young immigrants only, and we assume that all immigrants work. In the first period, intergenerational transfers are therefore made only to local old people. In the second period, transfers are made to the old, including immigrants who arrived while they were young in the first period. In each period, the budget for intergenerational transfers is balanced and tax revenue equals total transfers. The budget constraint in each period is therefore:

$$t = T \frac{N^o}{N^y} \quad (1)$$

where  $N^y$  is the number of young people (locals and immigrants),  $N^o$  is the number of old people,  $t$  is the per capita tax, and  $T$  is the transfer received by old people. The tax  $t$  is constrained by a maximal value  $\bar{t}$ . When the proportion of old to young exceeds some threshold value, the tax reaches the maximum  $\bar{t}$ , and from that point on the transfer per old person decreases<sup>3</sup> according to:  $\tilde{T} = \bar{t} \frac{N^y}{N^o}$ .

For now, we assume that  $t \leq \bar{t}$ . We also assume that the local population and immigrants have identical fertility rates<sup>4</sup> (as in Razin and Zadka 2000).

The lifetime indirect utility function of individual  $i$  who was born in period 1 is:

$$u_i = u_i^y(F_1, t(F_1), D_{i1}(F_1)) + \sigma u_i^o(F_2, T, D_{i2}(\alpha F_1 + F_2)) \quad (2)$$

where  $u_i^y$  is the utility while young and  $u_i^o$  is the utility while old and  $\sigma$  is the individual's time preference.  $F_1$  is the number of immigrants entering in period 1 and  $F_2$  is the number of immigrants entering in period 2. Immigrants contribute to the economy through their complementary relations with capital and other factors of production. Therefore, on the one hand, immigration lowers prices, raises real income and therefore increases consumer surplus; however, on the other hand, it may lower wages or even lead to unemployment in certain industries, depending on whether the immigrants are low- or high-skilled. The indirect utility

---

<sup>3</sup> Unless the ratio of old to young decreases due to, for example, the entry of young immigrants.

<sup>4</sup> See Bengtsson & Scott 2011 analyzing the case of population ageing in Sweden, based on evidence that suggests that immigrants adjusted their fertility toward Swedish level of fertility

of the individual while young also depends on the influence of immigration on the taxes paid by working individuals to finance transfers to the old. The more immigrants that enter the country, the lower will be the tax imposed on the young local workers.  $D_{i1}$  is the individual's subjective social benefit from the local norms while young. Local norms change when immigrants from a different culture enter the country. To capture this, we specify the social benefit  $D_i$  to be dependent on the number of immigrants. The larger the number of immigrants entering the country, the slower will be the assimilation of immigrants in the local society (Lazear, 1999), and the greater will be the dissatisfaction of local residents. Moreover, local individuals differ from each other in the weight they assign to preserving local norms. The individual's utility when old also increases with the number of "new" young immigrants who arrived in period  $F_2$ . This is because a larger number of immigrants increases the welfare of society as a whole, as mentioned above. An old person receives a transfer  $T$  and also has a subjective social benefit from the local norms  $D_{i2}$  which depends on the number of immigrants who arrived during the previous period  $F_1$  and the number of "new" immigrants  $F_2$  who arrived during the current period.  $\alpha \geq 0$  is the influence of the immigrants who are now old, on social norms in the second period.

### 3. Discussion

#### 3.1 Immigration policy in the first period

Since individuals differ from each other in their degree of disutility from changes in social norms, each individual (whether young or old) will prefer a different level of immigration in order to maximize his own utility.

We now introduce majority voting as the method for deciding on immigration policy. Members of the local population have single-peaked preferences regarding the number of immigrants to be allowed entering into the country. A majority vote will therefore result in a stable equilibrium immigration policy according to the preference of the median voter.

The median voter can be either young or old. When he is young, from (2), the number of immigrants  $F_1^*$  in period 1 satisfies:<sup>5</sup>

$$\frac{\partial u_m^y}{\partial F_1} + \frac{\partial u_m^y}{\partial t} \frac{\partial t}{\partial F_1} + \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} = -\sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] \quad (3)$$

where the direct effect of increasing the number of immigrants on utility ( $\frac{\partial u_m^y}{\partial F_1}$ ) is ambiguous, as explained above:

$$\frac{\partial u_m^y}{\partial F_1} \gtrless 0 \quad (4)$$

However, it is likely that the net benefit of the rich from increasing immigration is positive since they are not threatened by displacement in the labor market, while the poor who work in low-paid jobs and may be displaced by immigrants will likely have net negative utility from an increase in the number of immigrants. Thus,

$$\frac{\partial u_m^y}{\partial t} < 0, \frac{\partial t}{\partial F_1} < 0, \frac{\partial u_m^y}{\partial D_{m1}} > 0, \frac{\partial D_{m1}}{\partial F_1} < 0, \frac{\partial u_m^o}{\partial D_{m2}} > 0, \frac{\partial D_{m2}}{\partial F_1} < 0$$

An increase in the ratio  $\frac{N^y}{N^o}$  decreases the tax burden on the young to finance the transfer to the old. However, it is not necessarily the case that a young median voter will choose more immigration to share this burden today due to the negative effect on social norms, as expressed in the following proposition:

---

<sup>5</sup> Assuming the second-order condition holds.

*Proposition 1: A young median voter would prefer a limited number of immigrants even though he benefits from the participation of more immigrants in the labor market. This is due to his disutility from a change in local social norms over the course of his lifetime (periods 1 and 2). In an ageing population, the median voter in period 1 might be old. Since old people have only one period left, their utility function in the first period is:*

$$u_m = u_m^o[(F_1, T, D_{m1}(F_1))] \quad (5)$$

where the number of immigrants in period 1 that maximizes (5) satisfies:

$$\frac{\partial u_m^o}{\partial F_1} = -\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} \quad (6)$$

The number of immigrants in period 1, i.e.  $F_1$ , is positively related to the utility from the contribution of immigrants to welfare ( $\frac{\partial u_m^o}{\partial F_1} > 0$  since old people, who are already retired, are not threatened with displacement by immigrants) and negatively related to the subjective social utility from the preservation of local norms ( $\frac{\partial D_{m1}}{\partial F_1} < 0$ ). We can therefore state the following proposition:

*Proposition 2: An old median voter would prefer a limited number of immigrants, even though his utility is increased by the participation of immigrants in the labor market. This is due to his disutility from a change in local social norms.*

Furthermore, if we assume that the net marginal direct utility from immigration is positive (i.e.  $\frac{\partial u_m^o}{\partial F_1} > 0$ ) and that the old are more anti-immigration than the young (as suggested by Card et al. 2005)<sup>6</sup> since they care more about traditional social norms (as offered by O'rouke and Sinnott 2006), then the following proposition holds:

*Proposition 3: If  $D$  for the old median voter is greater than (or equal to)  $D$  for the young median voter, then the young will wish to permit more immigration in the first period than the old.*

*Proof:* The marginal utility of a young median voter from immigration in period 1, i.e.  $F_1$ , is given by:

$$\frac{\partial u_m^y}{\partial F_1} + \frac{\partial u_m^y}{\partial t} \frac{\partial t}{\partial F_1} + \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] \quad (7)$$

If the median voter is old, then  $F_1$  satisfies:

$$\frac{\partial u_m^o}{\partial F_1} = -\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} \quad (8)$$

Assuming that the contribution of immigration to welfare is identical for the young and the old, i.e.  $\frac{\partial u_m^y}{\partial F_1} = \frac{\partial u_m^o}{\partial F_1}$ , the marginal utility of a young median voter from immigration in period 1, i.e.  $F_1$ , as chosen by the old median voter, is given by:

$$-\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \frac{\partial u_m^y}{\partial t} \frac{\partial t}{\partial F_1} + \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] \quad (9)$$

If the social benefit of the old from preserving local social norms is at least equal to that of the young (who live for two periods), i.e.

$$\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} \geq \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] \quad (10)$$

then:

---

<sup>6</sup> For a psychological explanation why older people tend to be more cultural conservative see Cornelis et al. 2009 who uncovered consistent intermediate processes in terms of openness to experience and need for closure, suggesting that normative changes in personality and motivated cognition account for the rise of conservatism with increasing age.

$$-\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \frac{\partial u_m^y}{\partial t} \frac{\partial t}{\partial F_1} + \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] > 0 \quad (11)$$

and therefore the young median voter will choose to permit more immigration in period 1 than an old median voter.

However, if  $D$  is less for the old median voter than for the young one, then the effect on the number of immigrants permitted in the first period will be ambiguous. This is since:

If

$$\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} < \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right] \quad (12)$$

Then the sign of  $-\frac{\partial u_m^o}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \frac{\partial u_m^y}{\partial t} \frac{\partial t}{\partial F_1} + \frac{\partial u_m^y}{\partial D_{m1}} \frac{\partial D_{m1}}{\partial F_1} + \sigma \left[ \frac{\partial u_m^o}{\partial D_{m2}} \frac{\partial D_{m2}}{\partial F_1} \right]$  is ambiguous.

### 3.2 Wealth or income differences

We expect members of the local population to differ in wealth or income, which will determine how they are affected by immigration.

For the young generation, the contribution of immigration to utility through higher welfare, decreasing prices and higher consumer surplus in the first period is greater for a rich individual than for a poor one. Thus:

$$0 < \left( \frac{\partial u_i^y}{\partial F_1} \right)_{rich}, \quad \left( \frac{\partial u_i^y}{\partial F_1} \right)_{poor} \geq 0, \quad \Rightarrow \quad \left( \frac{\partial u_i^y}{\partial F_1} \right)_{rich} > \left( \frac{\partial u_i^y}{\partial F_1} \right)_{poor} \quad (13)$$

This is because the poor benefit less from the increase in welfare, receive a smaller proportion of the consumer surplus<sup>7</sup> and may be displaced by immigrants in the labor force.

However, the poor benefit more than the rich from immigration through the reduction in taxes to finance intergenerational transfers due to the decreasing marginal utility from consumption. That is,

$$\left( \frac{\partial u_i^y}{\partial t} \frac{\partial t}{\partial F_1} \right)_{rich} < \left( \frac{\partial u_i^y}{\partial t} \frac{\partial t}{\partial F_1} \right)_{poor} \quad (14)$$

The question of who among the young generation will favor immigration more—the rich or the poor—depends therefore on the balance between the effects represented by (13) and (14), assuming that  $D$  is equal for rich and poor (as Hainmueller and Hiscox 2010 found in the case of low-skilled immigration). Thus,

If  $\left( \frac{\partial u_i^y}{\partial F_1} + \frac{\partial u_i^y}{\partial t} \frac{\partial t}{\partial F_1} \right)_{rich} \geq \left( \frac{\partial u_i^y}{\partial F_1} + \frac{\partial u_i^y}{\partial t} \frac{\partial t}{\partial F_1} \right)_{poor}$  then the young rich prefer more (less)

immigration in the first period than the young poor.

When the young poor are too poor to pay taxes, immigration has a weaker influence on them than on the young rich, since the reduction in taxes due to increased immigration will have no effect on them. Therefore, when  $D$  is equal for rich and poor, we obtain the following proposition:

*Proposition 4: If the median voter is young and too poor to pay taxes, then immigration policy in the first period will permit fewer immigrants than if the median voter were young and rich.*

This proposition remains valid even when the rich attach less weight to the influence of immigrants on social norms.<sup>8</sup> If the rich attach more weight to the influence of immigrants on social norms than the poor, then the answer is ambiguous. The old also benefit from

<sup>7</sup> Not only do the rich gain a higher proportion of the consumer surplus, they also gain the entire producer surplus.

<sup>8</sup> See Hainmueller and Hiscox (2010) who found that in states with high fiscal exposure in terms of immigrant access to public services, poor (rich) natives are more (less) opposed to low-skilled immigration than they are elsewhere.

immigration during the period of retirement, through higher welfare, i.e.  $\frac{\partial u_i^o}{\partial F_1}$ . The old rich benefit more than the old poor since they benefit more from the higher welfare, lower prices and higher consumer surplus:

$$\left(\frac{\partial u_i^o}{\partial F_1}\right)_{rich} > \left(\frac{\partial u_i^o}{\partial F_1}\right)_{poor} \quad (15)$$

Another difference between rich and poor can arise from intergenerational transfers. When the transfers are less than  $T$  (due to an overly high ratio of old to young), new immigrants who share the tax burden will increase the transfers to the old, i.e.  $\tilde{T}$ . If the ratio of old to young enables payment of the full  $T$ , then there is no difference between rich and poor. As a result, the more immigrants who enter the country in this period, the greater the extent to which the marginal utility of the old poor from the transfers will exceed that of the old rich. The poor also rely more on intergenerational transfers since they do not own capital. Thus,

$$\left(\frac{\partial u_i^o}{\partial \tilde{T}}\right)_{rich} < \left(\frac{\partial u_i^o}{\partial \tilde{T}}\right)_{poor} \quad (16)$$

A comparison of how differences in wealth or income affect the benefit from immigration when an individual is old therefore depends on the balance between two influences in the case of  $\tilde{T}$ : the effect of immigration on the welfare and consumer surplus of the local old population and the effect on the intergenerational transfer (assuming that in this stage there is no difference in  $D$  between rich and poor). That is:

if  $\left(\frac{\partial u_i^o}{\partial F_1} + \frac{\partial u_i^o}{\partial \tilde{T}}\right)_{rich} \geq \left(\frac{\partial u_i^o}{\partial F_1} + \frac{\partial u_i^o}{\partial \tilde{T}}\right)_{poor}$ , then the old rich prefer more (less) immigration in the current period than the old poor.

In the case of the constant payment  $T$ , the rich old median voter always favors more immigration than the poor old median voter (since immigration does not influence the intergenerational transfer and only (15) is valid). The only difference between the old rich and the old poor is then through the benefit from increased welfare, which is more significant for the rich than for the poor (following (15)) unless they have different utility from social norms. We can conclude therefore that as long as utility from social norms is identical for both rich and poor and the proportion of old to young leads to a fixed intergenerational transfer of  $T$ , then the following proposition can be stated:

*Proposition 5: If the median voter is old, then the wealthier he is, the more immigrants will be allowed to enter the country.*

However, when rich and poor have different utility from social norms, the following proposition holds:

*Proposition 6: If the rich attach less weight to the influence of immigration on social norms than the poor, then the wealthier the old median voter, the more immigrants will be allowed to enter the country. Otherwise, the answer is ambiguous.*

When the conditions above lead to the result that the rich prefer more immigration than the poor, who do not pay taxes, then rich countries will permit more immigration than poor ones. Therefore, we can conclude:

*Proposition 7: Whenever the median voter is young and rich, the local social norms will change faster than when the median voter is young and too poor to pay taxes. Whenever the median voter is old and rich, then as long as the ratio of old to young is such that the intergenerational transfer is  $T$ , the social norm will also change faster than when the median voter is poor and old.*

This is due to the preference of the rich median voter for more immigration, which leads to a greater effect on local social norms. Therefore, wealthier countries should pay greater attention to the cultural implications of immigration relative to its financial implications.



## 4. Conclusions

The model has shown that immigration policy can provide a solution to the problem of financing intergenerational transfers as the population ages. Aside from the purely economic benefits of immigration for the host country, it also takes into account the influence of immigration on social norms.

The model uses median voter theory to choose immigration policy in a system of majority voting. The choice of immigration policy depends on the attributes of the median voter, including age and wealth.

Although the tax burden on the median voter increases with the ratio of old to young, it is not necessarily the case that he will prefer more immigration in period 1. This is because he suffers disutility from the change in local social norms throughout his lifetime. However, a young median voter who does not care about local social norms would prefer more immigration than the old median voter who does.

In addition to age, we also considered the effect of wealth on the determination of immigration policy by the median voter: when the rich attach less weight to the influence of immigrants on social norms, then the number of immigrants allowed to enter the country will increase with the wealth of the median voter.

It can therefore be concluded that richer countries will allow more immigration and as a result will experience greater change in social norms relative to poorer countries whose social norms will tend to remain unchanged. If the threat to local social norms exceeds some critical level there may be an influence on the attitude toward immigration. This could explain the changes currently taking place in the political preferences in Europe and the US according immigration. In order to preserve the host country's culture and make immigration a more plausible solution to the problem of ageing populations, change must be implemented or through immigration policy that will encourage entrance of immigrants with a "culture" close to that of locals or implementing a change in education and developing programs for the integration and assimilation of immigrants. Those policies could minimize the threat of immigration to the local social norms and therefore would achieve better outcomes to the local economy as a whole.

## Bibliography

United Nations, Department of Economic and Social Affairs, Population Division (2017) *World Population Prospects: The 2017 Revision, World Population 2017* <https://www.compassion.com/multimedia/world-population-prospects.pdf>  
Accessed 6 January 2018

United Nations, Department of Economic and Social Affairs, Population Division (2015) *World Population Ageing 2015 (ST/ESA/SER.A/390)*..  
[http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015\\_Report.pdf](http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf) Accessed 2 January 2018

Akerlof, G.A. (1980) "A theory of social custom, of which unemployment may be one consequence" *The Quarterly Journal of Economics* 94, 749-775.

Alber, J. (1994) "Toward explaining anti-foreigner violence in Germany" Working Paper no. 53, Center for European Studies, Harvard University.

Arltová, M, Smrcka, L., Vrabcová, J. and Schönfeld, J. (2016) "The Ageing of the Population in Developed Countries – the Economic Consequences in the Czech Republic" *Economics & Sociology* 9(2), 197-219.

Bengtsson, T. and Scott, K. (2011) "Population ageing and the future of the welfare state: the example of Sweden" *Population and Development Review* 37, 158-170.

Berger, J., Davoine, T., Schuster, P. and Strohner, L. (2016) "Cross-country differences in the contribution of future migration to old-age financing" *International Tax Public Finance* 23, 1160-1184.

Bergstrom, T.C. (1996) "Economics in a family way" *Journal of Economic Literature* 34(4), 1903-1934.

Bernheim, D.B. (1994) "A theory of conformity" *Journal of Political Economy* 102(5), 841-877.

Borjas, G.J. (1995) "The economic benefits from immigration" *Journal of Economic Perspectives* 9(2), 3-22.

Card, D., Dustman, C. and Preston, I. (2005) "Understanding attitudes to immigration: The migration and minority module of the first European Social Survey". CREAM Discussion Paper 03/05 .

Ceobanu, A. and Koropecj-Cox, T. (2013) "Should international migration be encouraged to offset population ageing? A cross-country analysis of public attitudes in Europe" *Population Research and Policy Review* 32, 261-284.

Chojnicki, X. and Ragot, L. (2016) "Impacts of Immigration on an Ageing Welfare State: An Applied General Equilibrium Model for France" *Fiscal Study* 37(2), 258-284.

- Coleman, D. (2008) "The demographic effects of international migration in Europe" *Oxford Review of Economic Policy* 24(3), 452–476.
- Cornelis, I., Van Heil, A., Roets, A. and Kossowska, M. (2009) "Age differences in conservatism: Evidence on the mediating effects of personality and cognitive style" *Journal of personality* 77(1), 51-88.
- Dustmann, C. and Preston, I.P. (2007) "Racial and Economic Factors in Attitudes to Immigration" *The B.E. Journal of Economic Analysis and Policy* 7 (1): Article 62
- Epstein , G.S. (2007) "Extremism within the Family" *Journal of Population Economics* 20, 707-715.
- Epstein G.S. (2008) "Herd and Network Effects in Migration Decision-Making", *Journal of Ethnic and Migration Studies*, 34(4), 567 – 583
- Epstein G.S. and Heizler, O. (2015) "Ethnic identity: A Theoretical Framework" *IZA Journal of Migration*, 4:9
- Hainmueller, J. and Hiscox, M. J. (2010) "Attitudes toward highly skilled and low-skilled immigration: Evidence from a survey experiment" *American Political Science Review* 104 (01), 61-84.
- Krueger, A.B and Pischke, J.S. (1997) "A statistical analysis of crime against foreigners in unified Germany" *The Journal of Human Resources* 32 (1), 182-209.
- Leers, T., Meijdam, L. and Verbon, H.A.A. (2004) "Ageing, migration and endogenous public pensions" *Journal of Public Economics* 88(1), 131-159.
- Lazear, E. (1999) "Culture and Language" *Journal of Political Economy* 107(S6), S95-S126.
- Malchow-Møller,,N., Munch, J.R., Schroll, S. and Skaksen,, J.R. (2008) "Attitudes towards immigration-Perceived consequences and economic self-interest" *Economics Letters* 100(2), 254-257.
- Mayda, A.M. (2006) "Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants" *Review of Economics and Statistics* 88(3), 510-530.
- Nekby, L. and Rodin, M. (2010) "Acculturation identity and employment among second and middle generation immigrants" *Journal of Economic Psychology* 31(1), 35-50.
- O'rouke, K.H. and Sinnott, R. (2006) "The determinants of individual attitudes towards immigration" *European Journal of Political Economy* 22, 838-861.
- Razin, A. and Sadka, E. (1999) "Migration and pension with international capital mobility" *Journal of Public Economics* 74, 141–150.
- Razin, A. and Sadka E. (2000) "Unskilled migration: a burden or a boon for the welfare state?" *Scandinavian Journal of Economics* 102, 463-479.

Serrano, F., Eguía, B. and Ferreiro, J. (2011) "Public pensions' sustainability and population ageing: Is immigration the solution?" *International Labour Review* 150(1-2), 63-79.

Storesletten, K. (2000) "Sustaining Fiscal Policy through Immigration" *Journal of Political Economy* 108, 300–323.

Zimmermann, K.F. (eds) (2005) *European Migration: What Do We Know?* Oxford University Press, Oxford/New-York