Immigration, fertility, and human capital: A model of economic decline of the West

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A B S T R A C T

I show how the influences of unskilled immigration, differential fertility between immigrants and the local indigenous population, and incentives for investment in human capital combine to predict the decline of the West. In particular, indigenous low-skilled workers lose from unskilled immigration even if the indigenous low-skilled workers do not finance redistribution, do not compete with immigrants in the labor market, and do not compete with immigrants for publicly financed income transfers. For the economy at large, high-fertility unskilled immigrants and a low-fertility indigenous population result in economic decline through reduced human capital accumulation and reduced growth of per-capita output.

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1. Introduction

In European countries the total fertility rate among indigenous populations has long been far below the replacement level of 2.1 children per woman. In recent times the average total fertility rate in Europe has been 1.4 children per woman. At the same time, the reproduction rate among immigrant populations and their European-born descendants has been higher and above the replacement level. The demographic trends if continued herald the decline of the indigenous European populations to levels from which recovery is near impossible. The trends are also associated with decline in supply of high-income high-skilled labor, which forms a principal tax base for public finance. Against the background of these issues, I consider the political economy of relations between immigrants and indigenous or local population, in particular the less educated segments of local populations.

Both economic reasons and non-economic considerations such as cultural differences (for example relating to treatment of women) have also been noted as reasons for opposition to immigration. See Hillman (1994), Hillman and Weiss (1999a), Bauer et al. (2000), Hansen (2003), Dustmann and Preston (2001, 2006, 2007), Scheve and Slaughter (2001), Gang et al. (2002), O’Rourke and Sinnott (2006), Miguet (2008), among others. In this paper, I focus only on the economic aspects of immigration.
Much immigration is illegal. I do not consider illegal immigration in this paper but focus on legal migration and the political economy of immigration policy and its long-run consequences.¹

The principal economic reason for opposition of low-skilled indigenous workers to immigration is usually portrayed as competition in the labor market that reduces the low-skilled wage. However, immigrants often do not integrate into the work force but rather remain unproductive and so do not reduce the low-skilled wage. I do not consider the reasons why parts of immigrant population remain unproductive: Nannestad (2009) reviews possible reasons. I show how, when immigrants do not compete in the local labor market, low-skilled workers who do not pay taxes to finance income transfers to immigrants nonetheless lose from the presence of immigrants through the relationship between fertility and human capital investment.

I link immigration-induced redistribution to reductions in fertility of the indigenous population, high fertility of the immigrants, and low attractiveness of human capital investment. With high-fertility unskilled immigrants and a low-fertility indigenous population, income transfers to immigrants raise fertility of the immigrants while decreasing fertility of the indigenous skilled population that finances the income transfers. Human capital accumulation and the growth of per-capita income decline. Immigration-induced income redistribution, although financed by taxes on the skilled workers, disadvantages the local unskilled workers through the disincentive for investment in human capital. Indigenous unskilled workers lose from the presence of immigrants, although they do not finance redistribution and do not compete with immigrants for publicly financed income transfers. Due to the differential fertility and skills, economic decline takes place among the entire population. As a consequence, without reference to the non-economic considerations, income redistribution to immigrants is the reason for opposition to immigration, especially among indigenous low-skilled workers.

To demonstrate these relationships and conclusions, I use a growth model with endogenous fertility as developed in Dahan and Tsiddon (1998) and Azarnert (2004). I describe an economy populated by two indigenous groups, one consisting of low-income unskilled workers and the other of high-income skilled workers. An unskilled minority group comprised of immigrants and their descendants is also present. The latter receive tax-financed income transfers because of insufficient own-earned income. The local unskilled workers, who earn lower wages than the skilled workers, are exempt from taxation. However, if they invest in human capital, they join the skilled and begin paying taxes. This directly reduces their potential after-tax incomes and discourages them from acquiring human capital. With children a normal good, income redistribution raises fertility of the unskilled minority beneficiaries and lowers fertility among the taxpaying local skilled population. When growth of skilled population declines, so does the total stock of human capital. Output growth declines, as does the rate of increase in the return to human capital via a human capital externality. The decline in the rate of increase of the pre-tax gross income of the skilled is a disincentive for the indigenous unskilled population to invest in human capital. The transition of the indigenous unskilled population to being skilled is thereby delayed.

2. Background empirical evidence

The model that I shall set out is based on the following empirical background evidence:

(1) Immigrants are over-represented among welfare beneficiaries.

The evidence, from the United States, Germany, and Scandinavia, includes Borjas (1994a, 1999), Borjas and Hilton (1996), Riphahn (2004), Hansen and Lofstrom (2003, 2009), Nannestad (2004). For example, an immigrant family that came to Germany during ten years receives a net benefit of EUR 120,000. In the case of the U.S., a non-white immigrant aged between 20–30 years on arrival with less than high school education typically imposes a net fiscal burden of approximately USS 100,000 in present value terms (Razin and Sadka, 2004). In Germany and Sweden, the proportion of immigrants among income support recipients has exceeded their share in the total population since at least 1980.² In Denmark, during the 1990s, an increase in non-Western immigration was associated with a sharp increase in the amount of net transfers from indigenous Danes to the public sector.³ In his survey of the literature on immigration and welfare state, Nannestad (2007) summarizes the evidence as concluding that immigration was disadvantageous for the indigenous population and beneficial for immigrants. The evidence indicates that European-born descendants of non-white immigrants in general do not assimilate into local labor markets and exhibit very high welfare dependency (Nannestad, 2004 and references therein).⁴ In Europe, a considerable part of immigrant minorities do not

¹ Hillman and Weiss (1999b) describe illegal immigration that is permitted as long as an immigrant remains employed in a particular sector. I also do not consider such permissible illegal immigration. Immigrants in these cases are productive and do not receive income transfers from the state. In Azarnert (2010b) I consider the relationship between fertility in the host economy and the intensity of the struggle against immigration.

² For example, in 1996, the share of minority immigrants among income support recipients in Germany was 25.8%, while their share in the total population was less than 10%. In Western Germany, between 1991 and 1996 an increase in the number of minority immigrants was associated with an increase in real expenditures on income support by 141% (Riphahn, 2004). It is also noteworthy that since 1994 these statistics exclude expenditures on asylum seekers. Ethnic German immigrants from Eastern Europe are considered in these statistics as German nationals. Similarly, in Sweden, an increase in the share of immigrants in the population from 7.6% to 10.8% between 1983 and 1996 was associated with an increase in real expenditure on social assistance by 170%, while by the mid-1990s immigrants accounted to nearly half of the country’s expenditure on social assistance, up from less than one quarter of total expenditures in the early 1980s (Hansen and Lofstrom, 2009).

³ Net transfers from indigenous Danes to the public sector in Danish kroner (1997 prices) per person increased from 14,900 in 1991 to 24,500 in 1998 (Nannestad, 2004, table 2). The first estimate of the fiscal impact of immigration in Denmark published in December 1997 shows that the net cost of non-Western immigrants amounted to 11.3 billion Danish kroner in 1995 (Nannestad, 2007, note 27).

⁴ Borjas and Hilton (1996) report that in the U.S. in the early 1990s, as compared to American Whites, Hispanics and blacks were more likely to participate in some welfare program by factors of 3 and 4 respectively.
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