

## **The Effect of Migration on Government Size**

### **Case study: Some Selected Middle-East Countries**

### **L'EFFET DE LA MIGRATION SUR LA TAILLE DU GOUVERNEMENT TAILLE UNE ÉTUDE DE CAS:**

### **CERTAINS CAS SÉLECTIONNÉS DES PAYS DU MOYEN-ORIENT**

**Neda Samiei<sup>1</sup>**

**Mohammad Reza Jalilvand<sup>2</sup>**

**Abstract:** Migration is caused by a push from behind and/or a pull from an appealing prospect in front. The combination of push and pull factors and research into which specific determinants play a significant role in migration patterns has received a lot of attention in the empirical literature. Immigration is the main demographic factor and the government is supposed to have the ability to control its size and skill composition. In high income countries natural population growth nowadays is low (or negative) and overall population growth is mostly driven by immigration.

A statistically significant role of migration in affecting the tax rate is found after controlling for income inequality and for several social and demographic variables that would be expected to reflect the government's revenue needs and thus determine the tax rate.

The aim of the present study is to examine if and how much the amount of public expenditures on social services has been affected by the migration among some Middle East countries over 1990-2007.

**Key words:** Migration; Government size; Middle-East

**Résumé** La migration est causée par une poussée de l'arrière et/ou une attraction à partir d'une perspective séduisante en face. La combinaison des facteurs de poussée et tirée et la recherche sur les déterminants spécifiques jouent un rôle important dans les modèles de migration. Et le problème de migration a reçu beaucoup d'attention dans la littérature empirique. L'immigration est le facteur démographique principal et le gouvernement est censé avoir la capacité de contrôler sa taille et la composition des compétences. Dans les pays à revenus élevés, la croissance naturelle de la population est faible (ou négative) aujourd'hui et la croissance de la population globale est principalement influencée par l'immigration.

Un rôle statistiquement significatif de la migration dans l'affectation du taux d'imposition est constaté après le contrôle de l'inégalité des revenus et de plusieurs variables socio-démographiques censées refléter les besoins de revenus du gouvernement et déterminer ainsi le taux d'imposition.

L'objectif de la présente étude est d'examiner si et dans quelle mesure le montant des dépenses publiques consacrées dans les services sociaux a été affecté par la migration entre certains pays du Moyen-Orient durant la période 1990-2007.

**Mots clés:** Migration; Taille du gouvernement; Moyen-Orient

**DOI:** 10.3968/j.css.1923669720110703.028

---

<sup>1</sup> M.A in Economics, the University of Isfahan, Iran  
E-mail: nedasamiei@hotmail.com

<sup>2</sup> M.A in management, the University of Isfahan, Iran  
E-mail: Mrjd.reza2006@gmail.com

\*Received 27 March 2011; accepted 10 May 2011

## **INTRODUCTION**

There are many researchers and academics that identify the financial impact of immigration on governments. An important impact of immigration on the economics of host country is the amount of welfare services and other social benefits the immigrants use. Moreover, the level of social security is usually higher in the host countries than in origin countries and it is cause of immigration. This is called the "welfare magnet effect" (Borjas, 1999).

Immigration has important economic impacts on public services such as education and health, so that on average, immigrants contribute to the public finances more than the local population. By providing public goods and services for immigrants – especially services related to education, health care and law enforcement- to individuals residing, total government expenditure is increasing. Another factor that influences government size is income of immigrants and paid taxes. Because immigrants earn less than nation – born citizens, thus they pay a smaller ratio of their income as taxes (Orszag, 2007).

Immigration is an increasingly important determinant of population growth as the rate of natural increase declines due to relatively low birth rates and also it represents an increasing share of the labor force. Immigrants are needed to grow the labor force to support the retiring generation. They can gain higher wage by employment in higher income countries, therefore, Immigrants' families and, in some cases, the economies of their countries of origin may also benefit. Many countries have gained human capital through international migration that this educated labor force is different from country to country.

However, the economic impacts of immigration remain disputed largely because the negative effects of the brain drain need to be balanced against the potentially beneficial effects of remittances.

The economic impacts of immigration depend on the characteristics of the immigrants and of the economy of the migrant-receiving country. In theory, the net fiscal impacts of immigration are likely to depend on a range of factors: immigrants' age; their earnings; their eligibility for and take up of public services and benefits and the nature of the tax and transfer system, especially on the extent to which it redistributes income from high to low income earners. Everything else being equal, high skilled immigrants can expect to find works in higher-paying jobs and thus make a bigger net fiscal contribution than low-skilled immigrants (report of HOUSE OF LORDS, 2008).

Dustmann et al (2007) noted that the impacts of immigration can vary with and depend on: the skills mix of migrants and the native population; the capital structure of the receiving economy; and whether and how quickly the economy adjusts to immigration through, for example a change in capital, technology, and/or the output mix.

In addition, government policies toward migration have perhaps important effect on the size and direction of migration patterns as do economic, social and demographic forces.

Immigrants differ from natives in age, education, language, culture, region of residence, emigration, and fertility. These characteristics affect their own public-sector as well as the numbers and characteristics of their descendants who likewise affect the public sector.

The rest of the paper unfolds as follows. Section II discusses previous literature. Section III offers a brief review of relation between government size and immigration. Section IV presents the data, while Section V discusses the method. Section VI shows the results of the estimation method. Section VII presents the main results of the estimations and Section VIII offers some conclusions.

## **1. LITERATURE REVIEW**

Immigration played a crucial role in the politics leading to the creation of the modern welfare state. Over the last 15 years a substantial body of literature has accumulated on the topic of "immigration and the welfare state". Both immigration and the welfare state are subjects that are normally studied in various social science disciplines, primarily in economics, political science, and sociology.

Pedersen et al.(2004) have examined the determinants of immigration from 129 source countries into 27 OECD countries over the period 1990–2000. The study includes as predictors, among others, cultural and linguistic distance between source and destination country, networks, and a proxy for the generosity of the welfare regimes in the destination countries. They do not find clear evidence of a "welfare magnet" effect. A partial explanation for this lack of evidence could be the restrictive migration policies of many OECD countries since 1973. A study of asylum applications in Western European countries in the period 1993–2004 (Nærø, 2005) likewise fails to find a sorting of asylum seekers in accordance with welfare benefit levels.

Lindbeck (1995) attends to the way that "habits, norms, attitudes, and ethics" in Western societies could deviate from norms of certain groups of immigrants and that such groups could "be a threat to a generous welfare state". Such

view on immigrants is aligned with the idea of Western states being "welfare magnets" for people from less-developed countries, an issue that is frequently raised in the immigration debate. Advocates of such views claim that immigrants would be negatively self-selected through the generosity of the public welfare system in the host country (see Borjas 1999 and Boeri et al. 2002 for a discussion), which ultimately would erode the basis for state-sponsored welfare.

Parmenter (1990) and a growing number of other authors have recognized that assessing the economic welfare effects of immigration on the basis of changes in measures of income per capita of the post-immigration population can be misleading (see Parmenter & Peter 1991; Fel 1992; Peter 1993a, 1993b; Clarke & Ng 1993). Parmenter argues that in an ex-ante sense, the immigrants reveal their preferences by the act of choosing to migrate. That is, from their choice to migrate, we can infer that immigrants are better off than had they remained in their countries of origin. It is changes in the welfare of the residents which is the missing information necessary for the assessment of the welfare effects of immigration. If the residents' welfare increases, the welfare of the post immigration population unambiguously increases. If the residents' welfare declines, the effect of immigration on the population's welfare is ambiguous and depends on the magnitude of the decline and the relative weighting given to residents' and immigrants' welfare.

Alesina and Glaeser (2004) regard immigrants coming from Africa or Eastern Europe (pp.217–218) as the main threat to European-style welfare regimes. The focus is on the effect of immigration on the established welfare system. Certain groups of people with immigrant backgrounds might be in demand of other forms of publicly provided welfare than what is customary for the majority population.

One of the most important determinants of the economic impact of immigration is effect of immigration in the host country labor markets. This is done by comparing immigrant and native wages and employment in different regions and countries. The fiscal aspect of immigration has been modelled by Wildasin (1994), Razin and Sadka (1995), Gatsios et al. (1996) and Wellish and Walz (1998). In a neoclassical model, the real wage declines (e.g. Borjas, 1995). In the case of wage rigidity, immigration increases unemployment (Razin and Sadka, 1995). There are of course positive effects of immigration that my model will not address. Immigration can increase total remuneration to non-labor factors of production (Borjas, 1995). Immigration of unskilled labor reduces wage of unskilled workers and hence induces local workers to acquire skills, so upgrading of domestic labor in the skill profile of the population (Fuest and Thum, 2001).

Immigrants can contribute to tax revenue, in particular to solve or ameliorate demographic problems of social security (Storesletten, 2000; Hillman, 2002). Storesletten (2000) applies a calibrated general equilibrium overlapping generation model to demographic trends in the United States and demonstrates that selective immigration can resolve the fiscal problems associated with an aging population. Hillman (2002) shows that the impact of immigration on private consumption for individuals in the local population depends on the age, job situation and income so that preferences regarding immigration among voters in the local population differ because of how private consumption is affected.

Razin et al. (2002) define a model predicting a negative correlation between the size of the public sector (as determined by transfer redistributions and labor tax payments) and low-skilled immigrants—the cause of which is said to be a "fiscal leakage" to immigrants.

Böheim and Mayr (2005) propose a negative correlation between native preferences regarding public spending (transfer payments and expenditures on publicly provided goods) and low-skilled immigration—a result that they attribute to "anti-social sentiments". A study by Hopkins (2006) that analyzes data for cities and counties in the US over a period of 44 years finds some fluctuation in the impact of immigration on local public spending.

Hatton and Williamson (2000) find that per capita income and education levels in source countries have significant effects on migration. They also find that immigration into the US increases with the degree of income inequality in source countries. On the other hand, they find that factors like cultural affinity (language) and pure geographical distance are also important for immigration into the US. So is the size of the immigrant population from a particular source country already residing in the US, which indicates network or herding effects.

## **2. A RELATION BETWEEN GOVERNMENT SIZE AND IMMIGRATION**

A systematic account of the size of government in democratic countries includes at least three elements: 1) demand for government stem from attempts to coercively redistribute, as well as from demand for public services; 2) the supply of taxable activities; and 3) the distribution of political influence when influence and economic welfare are distinct (Tridmas and Winer, 2005).

Researches on the demand for government, including Wagner (1958), Peacock and Wiseman (1967), and Bird (1970), emphasized the role of income, urbanization, and war as determinants of the demand for public services. Immigration can effect on the demand for government indirectly. The impact of immigration can be considered under four heading:

- Unemployment and Wages
- Government Finances
- Ageing
- Population

Every 4 headline can influence the demand for government expenditure. Since immigration influences these 4 elements, also it can change the amount of government expenditure. Thereby, we entered the net immigration rate in the model and this relation except in countries that they have migratory people, should be negative. But this relation in countries that migration is entering to them is positive.

### **3. DATA**

The case of the study is selected Middle East countries, and used data are in five years intervals in 1970 – 2005<sup>3</sup>. Data of government size, population, labor female and urban rate have been obtained from World Development Indicators (WDI), net immigration is retrieved from www.NationalMaster.com and data of openness is from International Monetary Fund (IMF).

### **4. THE MODEL**

The main purpose of this study is to survey the impact of the net immigration on government public expenditure in the Middle East countries.

The specified model used in the study is the Mueller and Stratmann (2002). The model appears as follows:

$$\text{Gov Size} = \alpha + \beta_1 \text{Log GDP} + \beta_2 \text{Open} + \beta_3 \text{Female} + \beta_4 \text{Urban} + \beta_5 \text{Pop-14} + \beta_6 \text{Pop+65} + \beta_7 \text{Net Migration} + \mu$$

Where:

Gov Size which shows Government Size is General government final consumption expenditure (% of GDP). According to 'Wagner's Law', for testing the relationship between size of government and national income, logarithm of GDP per capita is used. Such studies as Cameron (1978) and Rodrik (1998) present that international trade have an effect on the government size. We examined this hypothesis by including the ratio of imports plus exports to GDP (Open) in the equation. Following Kau and Rubin (1982, 1999) the fraction of the labor force that is female is included as a proxy of a country at the capability of raising tax revenue that show with Female. When the rate of labor female is raise, the amount of government expenditure is increased.

Another effective variable is the fraction of the population living in urban areas which is shown by Urban in the model. For showing the effect of population variables on the government expenditure, we consider the fractions of the population, which are under 14 (pop-14) and over 65 (pop+65), since they are two major groups that are particularly dependent on government transfers and outlays.

Another population variable is Net Migration which is measured by the ratio of net immigration in total population. We added this variable to the equation for examining the relationship between net immigration and size of government. At least  $\mu$  is standard error so that it is  $\mu \sim \text{IID} (0, \sigma_\mu^2)$ .

### **5. THE ESTIMATION METHOD**

In order to estimate the given model, the panel data method has been applied. The term panel data typically refers to data collected across units and over time. By combining time series of cross-section observations, panel data gives "more informative data, more variability, less co linearity among variables, more degrees of freedom and more efficiency" (Gujarati, 2004; 637). We have used F-test and Hausman tests in order to select the Fixed Effect or Random Effect Models.

---

<sup>3</sup> Considered countries are Kuwait, Turkey, Oman, Qatar, Saudi Arabia, United Arab Emirates, Yemen, Iran, Israel, Jordan, Syrian Arab Republic, Egypt, Bahrain, and Libya.

The null hypothesis which shows there are no Period Fixed Effects in the data is not accepted for our model at significance level of 5 present. Therefore, the model cannot be estimated by the Pooled least squares method. In order to select Fixed Effects or Random Effects, and also to make sure reliable results are obtained, the Hausman test has been used. Hausman Test for Random Effects is based on comparing the slope estimates of Random Effects regression model and Fixed Effects regression model (Greene, 2003; 302; Wooldridge, 2002; 288). This test evaluates the null hypothesis, both of Fixed Effect and Random Effect estimators are consistent, but Random Effects estimators are more efficient (has smaller asymptotic variance) than Fixed Effects estimators.

Also the Hausman statistic from the test comparison, confirm the consistency of the coefficients estimated by both Fixed and Random Effects. Based on the assumption that Random Effects are more efficient in comparison to Fixed Effects at significance level of 5 present, the former is chosen. Thus the Random Effects model is preferred to the Fixed Effects model.

## 6. OBTAINED RESULTS

Table 1 shows the estimated results of GLS regression. We know that an increase in the amount of national income, rise the government expenditure. As obtained results, one percent rising at the logarithm of GDP per capita causes a rise of 8.02 present in the general government final consumption expenditure rate. Thus, this is consistent to the theory that an economic size growth will cause a rise in the government expenditure.

According to the obtained result, one percent increase in urban rate increase the amount of the government size about 0.20 percent. When urban rate is increasing, people who live in cities need to public services like safety and security, education and insurance more than. Therefore the size of the government will increase.

A growth of one unit in the population that they are under 14 years will result into a 0.83 unit rise in government size. This can be due to the assumption that this people need more government protection like education and on the other hand they will be future force labor. So their dependency on government is very high. The results obtained by this research reveal that there is significant negative relationship between net immigration rate and the government size. Because these countries are developing countries and their people are migratory. The increase of one unit in the net immigration rate leads to a decrease of 0.21 present government size. This result is according to theory, because net immigration rate is the population variables that can effects on the government expenditure. In these countries that people are going out, who needs job, security and insurance, government expenditure must be decreasing and it is according to estimate result.

In this case, other variables including female labor, population over 65 years and openness aren't statistically significant and don't have effect on the government size.

**Table 1: The Estimated Results of Government Size and Migration**

Dependent Variable: <b>Government Size</b>						
Random-effects GLS regression			Number of obs = 84			
Group variable: Some middle East countries			Number of groups = 16			
R-sq: within = 0.1227				Obs per group: min = 3		
between = 0.8602				avg = 5.3		
overall = 0.5489				max = 6		
Random effects u_i ~ Gaussian			Wald chi2(7) = 92.47			
Corr (u_i, X) = 0			Prob > chi2 = 0.0000			
Government Size	Co ef	Std. Err.	Z	P>z	[ 95% Conf. Interval ]	
Pop14	0.8332284	0.1154828	7.22	0.000	0.6068862	1.05957
Pop65	0.382901	0.4084794	0.94	0.34	-0.417704	1.183506
Urban	0.2030797	0.0546496	3.72	0.000	0.0959685	0.3101909
Woman	0.1446006	0.1341232	1.08	0.281	-0.118276	0.4074772
Openness	0.0072086	0.0205834	0.35	0.726	-0.0331341	0.0475514
Log GDP per	8.020812	2.437541	3.29	0.001	3.24332	12.7983
Net Migration	-0.2135295	0.0825755	-2.59	0.010	-0.3753745	-0.0516845
_cons	-59.42503	11.99703	-4.95	0.000	-82.93877	-35.91129
Sigma_u			0			
Sigma_e			3.8614262			
rho			0 (fraction of variance due to u_i)			

Source: research computation.

## CONCLUSION

In this paper we have estimated the effect of immigration on the government expenditure in some selected Middle East countries. The estimated coefficient of the ratio of net migration to population is negative, because almost of this countries are developing countries; therefore, people want to immigrate to developed countries or countries with higher wage payment. According to the obtained results, immigrants can affect on the labor market, public services such as education and health, welfare and population growth and all of these elements influence on demand for government expenditure. Exiting people of countries decrease the size of government as estimation results show that an increase in the migrants that exit their home countries, size of government decrease 0.21 present.

## REFERENCES

- Alesina, A. F., Glaeser, E. L. (2004). *Fighting Poverty in the US and Europe: A World of Difference*. Oxford, Oxford University Press.
- Bird, R. (1970). *The growth of Government Spending in Canada*. Canadian Tax Foundation, Toronto.
- Boeri, T., Hanson, G. and McCormick, B. (Eds.). (2002). *Immigration Policy and the Welfare System*. Oxford: Oxford University Press.
- Böheim, R. and Mayr, K. (2005). Immigration and Public Spending. *IZA Discussion Papers No. 1834*.
- Borjas, G.J. (1995). The Economic Benefits from Immigration. *Journal of Economic Perspectives*, 9, 3-22.
- Borjas, G.J. (1999). Immigration and Welfare Magnets. *Journal of Labor Economics*, 17, 607-637.
- Borjas, G.J. (2003). Welfare reform, labor supply, and health insurance in the immigrant population. *Journal of Health Economics*, 22, 933-958.
- Clarke, H., Y.K. Ng. (1993). Immigration and Economic Welfare: Resource and Environmental Aspects. *Economic Record*, 69(206), 259-273.
- D'Amuri, F., G. Ottaviano, Giovanni, P. (2009). The Labor Market Impact of Immigration in Western Germany in the 1990s. *European Economic Review*, 10(002).
- Dustmann et al, (2007). A Study of Migrant Workers and the National Minimum Wage and Enforcement Issues that Arise. Low Pay Commission, 159-161.
- Feinleib, J., Warner, D. (2005). The Impact of Immigration on Social Security and the National Economy. *Social Security Advisory Board ISSUE BRIEF*.
- Fel, G. (1992). *The Economic Impact of Immigration in Australia* (DPhil thesis). Hertford College, University of Oxford.
- Fuest, C., Thum, M. (2001). Immigration and Skill Formation in Unionized Labor Markets. *European Journal of Political Economy*, 17, 557-573.
- Gatsios, K., Hatzipanayotou, P., Michael, M.S. (1996). International Migration, Welfare and the Provision of Public Goods. *CEPR Discussion Paper No 1500*. Centre for Economic Policy Research, London.
- Gerdes, C. (2009). *The Impact of Immigration on the Size of Government: Empirical Evidence from Danish Municipalities*. APSA meeting in Toronto, Canada. 12
- Greene, William H. (2003). *Econometric Analysis* (5th Edition). New Jersey: Prentice Hall, Inc.
- Gujarati, Damodar N. (2004). *Basic Econometrics* (4th Edition). New York, McGraw-Hill.
- Hatton, T., Williamson, J.G. (2000). What Fundamentals drive world migration? National Bureau of Economic Research, Cambridge MA. *NBER Working Paper, 9159*.
- Hillman, A.L. (2002). Immigration and Intergenerational Transfers. In Siebert, H. (Ed.), *Economic Policies of Aging Societies* (pp. 213-226). Berlin: Springer.
- Hopkins, D. J. (2006). *All Local Politics are National: How Salient National Issues Shape Diversity's Local Impacts* (Dissertation Paper). Harvard University.
- House of Lords. (2007, 08). *The Economic Impact of Immigration* (Volume I: Report. HL Paper 82-I). Published by the Authority of the House of Lords Select Committee on Economic Affairs. London: The Stationery Office Limited.

- IMF. (2009). World Economic Outlook Jørgen Drud Hansen, Immigration and Income Redistribution in Welfare States. *European Journal of Political Economy*, 19(2003), 735-746.
- Lindbeck, A. (1995). Hazardous Welfare-State Dynamics. *American Economic Review*, 85, 9–15.
- Nærø, A. (2005). *Refugees' Choice of Destination Country in Europe: Welfare State Magnets?* (BA Thesis). Department of Political Science, Aarhus University, Aarhus.
- Nannestad, P. (2007). Immigration and Welfare States: A Survey of 15 Years of Research. *European Journal of Political Economy*, 23, 512-532.
- Orsza, P.R. (2007). The Impact of Unauthorized Immigrants on the Budgets of State and Local Governments. *A CBO paper*, The Congress of the United States, Congressional Budget Office. Pub. No. 2500.
- Ortega, F. (2009). Immigration, Citizenship, and the Size of Government. *IZA Discussion paper* No. 4528.
- Parmenter, B. (1990). The Economics of Immigration. *Economic Papers*, 9(2), 39-50.
- Parmenter, B., Peter, M. (1991). A Reinterpretation of the CIE Projections of the Long-Run. Economic Effects of Immigration. *Economic Record*, 67(199), 33, 1-7.
- Peacock, A., Wiseman, J. (1967). *The Growth of Public Expenditure in the United Kingdom*. George Allen and Unwin, London.
- Pedersen, P.J., Pytlikova, M., Smith, N. (2004). Selection or Network Effects? Migration Flows into 27 OECD Countries, 1990-2000. *Discussion Paper*, 1104. IZA, Bonn.
- Pekkala, S. (2005). Economic Impacts of Immigration. *Government Institute for Economic Research* (ISSN 1795-3359), 362, 13.
- Peter, M. (1993a). *The Economic Effects of Immigration in Australia: An Applied General Equilibrium Analysis* (PhD thesis). Monash University.
- Peter, M. (1993b). The Use of the ORANI Model in the Immigration Debate. *People and Place*, 1(2), 27-34.
- Peter, W. M., G.Verikios. (1996). Effect of Immigration on Residents' Incomes in Australia. *The Australian Economic Review*, (2nd Quarter).
- Razin, A., Sadka, A. (1995). Resisting Migration: Wage Rigidity and Income Distribution. *American Economic Review, Papers and Proceedings*, 85, 312- 316.
- Razin, A., Sadka, E. and Swagel, P. (2002). Tax Burden and Migration: A political Economy Theory and Evidence. *Journal of Public Economics*, 85, 167-190.
- Storesletten, K. (2000). Sustaining fiscal policy through immigration. *Journal of Political Economy* 108, 300- 323.
- Tridimas, G., Winer, L. (2005). The political economy of government size. *European Journal of Political Economy*. Vol. 21, 643-666.
- Wagner, A. (1958). Three Extracts on Public Finance. In Musgrave, R., Peacock, A. (Eds.), *Classics in the theory of public finance* (pp. 1- 16). London: Macmillan.
- WDI. (2008). World Development Indicators.
- Wellisch, D., Walz, U. (1998). Why do Rich Countries Prefer Free Trade over Free Migration? the Role of the Modern Welfare State. *European Economic Review*, 42, 1595- 1612.
- Wildasin, D.E. (1994). Income Redistribution and Migration. *Canadian Journal of Economics*, 27, 637- 656.
- Wooldridge J.M. (2002). *Econometric Analysis of Cross Section and Panel Data*. Cambridge, M.A.: The MIT Pres.