The Pakistan Development Review
28 : 4 Part II (Winter 1989) pp. 961–970

Do Third World Immigrants Impose a Cost on Canadian Public Treasury?

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INTRODUCTION

The recent rise in Third World immigrant flows into the U.S. and Canada has raised interest in the analysis of immigrant's impact on host nations. Among the various economic issues addressed in the literature are the immigrant's impact on the public treasury, the employment and income distribution effects, and the performance of immigrants in the labour market. The purpose of the present paper is to provide some evidence of the impact on Canadian public finances from immigrant flows from various world sources.

In Canada, a popular view argues that immigration should be encouraged from countries with similar cultural values as Canada. It is held that such immigrants have greater assimilative capacity and are likely to possess skills required in the Canadian labour market.[1] Despite this concern over the immigrants' country of origin, no study to date has been conducted in Canada to provide an economic justification for giving any country preference. The present study is an attempt to fill this gap. To this end, a life-cycle model for the consumption of public services and payment of taxes is estimated for immigrant households from various source countries. The public services consumption and tax payments of immigrant groups are then compared to those of non-immigrants. Finally, the net transfer balances of each of the immigrant groups with the non-immigrant population are provided.

IMMIGRANT SUB-GROUPS

Four major source areas of the immigrant population are identified. These are: (1) the United States, (2) the United Kingdom, (3) Western Europe,[2] and (4) Asia, Africa, South and Central America including the Caribbean.

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[1]Recently, the Immigration Association of Canada has expressed such a view. In addition, a survey conducted by the association showed that 52.7 percent of those questioned held that immigrants should be selected from countries with cultures similar to Canada's.

[2]The sub-sample of immigrant households denoted by Western Europe consists of those whose heads reported their country of birth to be Austria, Belgium, France, Germany, Luxembourg, Netherlands, Switzerland and "other Western Europe".

The above classification of immigrants focuses on some factors which may differentially affect immigrant performance in Canada. Chief among these factors is language. Our data indicate that, for nearly all U.S. and U.K. immigrant groups, household heads reported English as their mother tongue. The comparable figure for households from Asia, Africa, South and Central America is 40 percent and for those from western Europe is less than five percent.

Another comparable factor between individual immigrant groups is the state of technology in their place of origin. Whereas the United States has a similar or more advanced technology, the United Kingdom and Western Europe have a similar or slightly inferior technology when compared to Canada. Asia, Africa, and South and Central America (including the Caribbean) usually have a less sophisticated technology to work with.

ANALYTICAL FRAMEWORK

The life-cycle net benefits hypothesis has been tested for the U.S. immigrants by Simon (1984) and for Canadian immigrants by Akbari (1989). The present study is based upon a similar analysis using data for immigrants of various world origins residing in Canada. The impact of an immigrant household on the non-immigrant household is assessed by obtaining estimates of public services consumption and tax payments by immigrant households of different duration of stay in Canada. Due to space limitations, we will not provide details of our estimation technique and the assumptions involved as these can be referred to by the interested reader in Akbari (1989) or Simon (1984). In sum, the transfer balance between immigrants and non-immigrants has been obtained with and without allowance for the public goods contribution by immigrants and are summarised in Equations 1 and 2 presented below:

$$NB_{in} = (R_n - R_i) + (T_i - T_n) \quad \ldots \quad \ldots \quad \ldots \quad (1)$$

$$NB_{in} = (R_n - R_i) + (T_i - T_n) + aT_n \quad \ldots \quad \ldots \quad (2)$$

Where NB_{in} is the net balance of public funds transfer from an immigrant household to a non-immigrant household, R_i and R_n represent the amount of public services consumed by an immigrant and a non-immigrant household respectively, T_i and T_n represent the amount of taxes paid by an immigrant and a non-immigrant household respectively, and a is the percentage of expenditures on a pure public good out of total public expenditures. Thus Equation 2 calculates the transfer balance by accounting for public goods financing by immigrants.

DATA

The study is based on microdata obtained from the household/family file of the one percent public use sample drawn from the 1981 Canadian Census of Population.[3] This data file permits a detailed demographic breakdown of both the immigrant and non-immigrant groups. In addition, some secondary data had to be employed to compute values for certain variables. The units of analysis are a census family or a non-family person aged 15 years or above.

The analysis pertains to the calendar year 1980 since the 1981 Census collected information on earnings, consumption of government transfer payments and labour force activity for 1980. The immigrant cohorts that arrived in Canada upto the year 1979 are considered. Immigrant families where only the wife is an immigrant are excluded from the analysis in order to partially avoid double-counting.[4]

DISCUSSION OF RESULTS

The results of our computations using both Equations 1 and 2 are summarised in Table 2. Table 1 presents an overview of those calculations by summarising estimated results of public services consumption and tax payment by immigrant households of different years of entry.

The components of public services considered in this study include government transfer payments, educational services and health care services. These three items comprised around half of total government expenditure in 1980[5] and are expected to be affected by characteristics (especially age) that differentiate immigrants from non-immigrants.[6]

The tax estimates have been obtained by using the average 1980 earnings for each cohort from the census microdata and obtaining estimates of tax incidence by various income levels.

Computations of public services consumption and tax payment by each cohort are discussed in Akbari (1988, 1989).

For statistical conciseness, we summarise estimated results for public services consumption in Table 1 by computing the ratio of public services consumed by each

[3] The data are available on the Public Use Sample Tapes (PUST) produced by Statistics Canada.

[4] Such exclusion is consistent with literature. For example, Simon (1984) and Blau (1984).

[5] Statistics Canada (1983).

[6] The remaining half of government expenditures, for example, conservation of natural resources and environment, recreation and culture, etc., are not likely to be influenced by the characteristics that differentiate immigrants from non-immigrants. Hence, for an average household in each group, the difference between the consumption of all other public services is expected to be negligible.

Table 1

Average Consumption of Public Services and Payment of Taxes by Immigrant Households Relative to Non-immigrants, Canada, 1980[1]

Birth Place of Household Heads	Years since Immigration								
	1	2	3	4	5–9	10–14	15–19	20–24	25 or More
United States									
Consumption Ratio[2]	0.48	0.80	0.62	0.71	0.73	0.76	0.63	0.69	1.58
Tax Ratio[3]	1.13	1.37	1.16	1.29	1.08	1.24	1.16	1.29	0.79
No. of Households	26	17	25	25	167	190	79	74	768
United Kingdom									
Consumption Ratio	0.68	0.79	0.76	0.70	0.96	0.89	0.88	0.89	1.60
Tax Ratio	1.00	1.00	1.29	1.29	1.26	1.53	1.43	1.37	0.86
No. of Households	54	35	48	52	350	565	328	640	2858
West Europe									
Consumption Ratio	0.85	0.88	0.72	0.73	0.87	1.14	1.22	1.13	1.31
Tax Ratio	0.88	0.79	1.02	1.02	1.02	1.16	1.16	1.21	1.08
No. of Households	49	36	53	64	513	909	746	1309	2443
Asia, Africa, South & Central America									
Consumption Ratio	0.53	0.57	0.73	0.77	0.83	0.98	0.98	0.99	1.42
Tax Ratio	0.69	0.74	1.02	0.96	1.02	1.32	1.40	1.29	1.16
No. of Households	268	160	175	263	1319	824	268	183	309

[1]The average 1980 public services consumption by a non-immigrant household in Canada is estimated at $3,651, while tax payments by non-immigrants is estimated at $8,896.

[2] Ratio of public services consumption by immigrants to that by non-immigrants.

[3] Ratio of tax payments by immigrants to that by non-immigrants.

immigrant cohort to the amount consumed by the non-immigrant population.[7] For convenience, the ratio is termed the consumption ratio. A greater than unity consumption ratio implies that an immigrant household's average consumption of public services is higher than that of a non-immigrant household. Conversely, a less than unity consumption ratio implies that the average consumption by an immigrant household is less than that of a non-immigrant household.

The estimated tax payment results for each cohort are summarised likewise by computing a tax ratio with implications similar to the consumption ratio for values above and below unity.

In each case it is important to compare the length of stay in Canada after which the public services consumption and tax payment by a particular immigrant cohort begins to exceed that by non-immigrants.

THE NET EFFECT: TAXES AND SERVICES

Table 2 presents estimates of overall transfer balance obtained by employing Equations 1 and 2 and the results of Table 2. A positive balance implies that non-immigrants are net recipients of public funds from the immigrants. A negative balance implies that immigrants are net recipients of public funds from non-immigrants.[8] Again, in each case it is important to note when the transfer balance becomes positive.

The Table 2 results have been utilized in Table 3, to report the net present values to the non-immigrant population of an average immigrant household entering Canada in 1980 with characteristics similar to the present immigrant stock. This is done under the assumption that immigrant cohorts by various dates of entry represent different ages in the life-cycle. The Canadian relevant real discount rate for the year 1980 was 2.5 percent and the risk-adjusted real discount rate was 5 percent. The present values can be compared with the 1980 non-immigrant household employment earnings of $ 17,311.

As shown in Table 3, with the exception of West Europeans, all immigrant households are profitable investment for native-born Canadians. The West Europeans

[7] Estimated results for consumption of public services by individual components can be found in Akbari (1988).

[8] The items from the Canadian federal government expenditures, which best represent pure public goods include national defence ($4761m), science and technology ($2000m) and, foreign affairs and international assistance ($1076m). These federal expenditure items together comprised 5.9 percent of consolidated government expenditures in 1980 ($132535m) after elimination of intergovernmental transfers. Thus 5.9 percent of taxes paid in 1980 were for pure public goods. By virtue of their presence, immigrants reduce by 5.9 percent the taxes paid by the original set of residents through pure public goods financing as this financing is not offset by an increase in consumption.

Table 2

Balance of Transfers between Immigrant and Non-immigrant Households, Canada, 1980

Birth Place of Household Heads	Years since Immigration								
	1	2	3	4	5–9	10–14	15–19	20–24	25 or More
United States									
Balance[1]	3,579	4,560	3,335	4,164	2,222	3,512	3,268	4,244	–2,652
Alternate Balance[2]	3,054	4,035	2,810	3,639	1,697	2,987	2,743	3,719	–3,957
United Kingdom									
Balance	1,689	1,288	4,000	4,197	3,006	5,689	4,784	4,197	–2,937
Alternate Balance	1,164	763	3,475	3,672	2,481	5,164	4,259	3,672	–3,462
West Europe									
Balance	6	–884	831	1,672	1,191	1,416	1,133	1,916	104
Alternate Balance	–519	–1,409	306	1,152	666	891	608	1,391	–421
Asia, Africa, South & Central America									
Balance	–521	–157	448	994	1,319	3,434	4,124	3,141	394
Alternate Balance	–1,046	–682	–77	469	794	2,909	3,599	2,616	–131

[1]With provision for public goods financing – conforms to Equation 1.
[2]Without provision for public goods financing – conforms to Equation 2 (with a = 0.059).

Table 3

Present Net Worth[1] *of an Immigrant Household for the Non-immigrant Population, Canada, 1980*

Birth Place of Household Head	Discount Rate 2.5 %		Discount Rate 2.5%	
	Result[2] ($)	Alternate Result[3] ($)	Result[2] ($)	Alternate Result[3] ($)
United States	42,886	31,198	36,628	28,442
United Kingdom	56,763	45,075	45,118	36,933
West Europe	21,044	9,356	14,829	7,065
Asia, Africa, South & Central America	42,535	30,846	28,779	20,595

[1]Evaluated over 45 years in Canada.
[2]With provision for pure public goods financing.
[3]Without provision for pure public goods financing.

are profitable investment only when the stream of transfers resulting from them is discounted at a lower rate and their public goods contribution is also counted. Households from the United Kingdom provide the highest net benefits; followed by the U.S. immigrants. Immigrants from the "Third World" countries of Asia, Africa, and South and Central America, initially impose a cost on Canadians; however, when analysed over their life-cycle, the performance of these immigrants is comparable to those from the United States and the United Kingdom.

In sum, the present study has demonstrated some evidence to suggest that concerns over rising immigrant flows from the Third World countries may not be justified on economic grounds.

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Comments on "Do Third World Immigrants Impose a Cost on Canadian Public Treasury?"*

The author has selected an important topic for analysis which has lately been the main focus of attention for American and Canadian policy-makers. Although, the cost-benefit analyses of population movements play a crucial role in formulating the host countries' immigration policies yet little research has so far been done on the topic. This very fact makes the author's attempt worth appreciating.

My comments about the paper are general in nature and are mostly for the purposes of clarification. Two points may be made. First, the author uses the average consumption ratio and the average tax ratio to arrive at net transfers to non-immigrants. The analytical framework used by the author is similar to Simon (1984) who has tested the hypothesis for US immigrants. But Simon (1984) has used actual values of services used and taxes paid by immigrants which is a more comprehensive and straightforward approach to get the net effect of migration. The use of consumption and tax ratios does not change the conclusions, I agree, but creates a lot of confusion when the explanations of the ratios in the text are compared with their numerical values in the tables. For instance, while discussing Table 2, the author's conclusions for Western Europe are not compatible with the estimates of the average consumption ratio. Immigrants from Western Europe transfer funds to non-immigrants after 1970 i.e., after spending 14-15 years in Canada and not during their first ten years as the discussion of the ratio shows. Table 3 is more confusing when a comparison is made with the discussions given in the text especially in the case of the U.K. Here, tax payments by U.K. immigrants exceed payments by non-immigrants till 1977. Thereafter, it becomes equal to that of the natives. The author's explanations in the case of the U.K. are confusing and are the opposite of what Table 3 reveals. Furthermore, contrary to the explanations given, the estimates in Table 3 show that West European immigrants pay more taxes than the natives right from the beginning and it is only in 1978 and 1979 that the tax ratio in their case becomes less than unity. Similarly, immigrants from Asia, Africa and South and Central America pay more taxes till 1975, pay less in 1976, pay more in 1977 and thereafter they pay less than the non-immigrants. The confusion further compounds when suddenly Table 4 brings forward the actual values of the net transfer from immigrants to the non-immigrants without any discussions as to how and where

*These comments were prepared on the original paper as presented in the Sixth Annual General Meeting of the Pakistan Society of Development Economists.

have these values been derived from. Furthermore, the negative balance in 1978 and 1979 in respect of Asia, Africa and South and Central America is not compatible with their corresponding consumption and tax ratios. For instance, in 1978 their average tax ratio (ATR) had decreased to .74 from 1.02 in 1977 and their average consumption ratio (ACR) had declined to 0.57 from 0.73 in the preceding year thus registering a decline of 27 percent and 22 percent respectively. In 1979, the ATR is reduced to 0.69 from 0.74 in the previous year and the ACR reducing to 0.53 from 0.57 in 1978 thus positing a decline of 7 percent for both the ratios. If the two ratios decline at more or less the same rate, how then can the negative values of the net transfer in 1978 and 1979 be explained? The paper would improve substantially if these inconsistencies are removed. One way of removing them would be to construct separate tables showing the total transfer payments and services used by various groups of immigrants in various years after entry and by natives before arriving at Table 4. But then it seems from the reference list of the paper that Akbari (1988) discusses the same subject and has followed the same theoretical framework under a slightly different title. It is possible that more elaborate statistical analysis is undertaken in the paper under reference which is not available here to read.

My second comment is about the net present value calculations which have been dealt with very inadequately. Table 5 presents this showing that immigrants contribute more to the public treasury than they take from it assuming a 2.5 percent real discount rate. My queries, here, are (a) how is the real discount rate defined? If it reflects, simply, the opportunity cost of capital to the economy, then it ignores the distributional considerations which are important when cost-benefit analysis of population movements is undertaken. (b) In a similar type of study for the US, Simon (1984) has shown that immigrants in the USA are worth more to the natives at a much higher rate, 9 percent. How would the author compare his findings with those of Simon's regarding the economic performance of immigrants in Canada *vis-a-vis* those in America, in general, and, in particular, for the West European group which is not worth investing in if the net transfers are discounted at 5 percent. Presumably, the immigrant groups in both countries come from almost the same sources of origin.

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