

Vancouver Centre of Excellence



Research on Immigration and Integration in the Metropolis

Commentary Series

#97-05

Canada's Independent Immigrant Selection Procedure: Quo Vadis

Don J. DeVoretz

October 1997

RIIM

Research on Immigration and Integration in the Metropolis

The Vancouver Centre is funded by grants from the Social Sciences and Humanities Research Council of Canada, Citizenship & Immigration Canada, Simon Fraser University, the University of British Columbia and the University of Victoria. We also wish to acknowledge the financial support of the Metropolis partner agencies:

- Health Canada
- Human Resources Development Canada
- Department of Canadian Heritage
- Department of the Solicitor General of Canada
- Status of Women Canada
- Canada Mortgage and Housing Corporation
- Correctional Service of Canada
- Immigration & Refugee Board

Views expressed in this manuscript are those of the author(s) alone. For more information contact the Co-Directors of the Centre, Dr. Don DeVoretz, Department of Economics, SFU (e-mail: devoretz@sfu.ca) or Dr. David Ley, Department of Geography, UBC (e-mail: davidley@unixg.ubc.ca).

Canada's Independent Immigrant Selection Procedure: Quo Vadis

By

Don J. DeVoretz
Co-Director RIIM
WMX 4655 Simon Fraser University
Burnaby, British Columbia
V5A 1S6
devoretz@sfu.ca

<http://www.sfu.ca/riim>

Presented at New Selection Criteria for Economic Stream Immigrants
Citizenship and Immigration, Selection Branch
Ottawa
October 30-31st 1997
(Nov. 5, 1997)

Please do not quote without author's permission

I. Introduction: Some Stylized Facts

Much of the rhetoric generated in the early 1990's over the then expanding immigration programme was predicated on the concept of restoring a "balance" to Canada's immigrant inflows. It was argued circa 1990 that in order to increase the proportion of economically assessed immigrants the only feasible policy was to expand the total number of immigrants Canada received each year. Since the family class or non-economically assessed immigrants initially could not be reduced, the yearly absolute total numbers were expanded to accommodate the policy goal of more economically assessed immigrants. This perceived need to expand the economic class also appears in the professional literature in the 1990's.

A. Green (1995) analyzed the post 1978 immigration trends and concluded that Canada was moving to a United States immigration model which emphasized family reunification. DeVoretz (1995) further argued that only an expansion of the economic entry class could insure that immigrants on average would continue to make a positive contribution to the Canadian treasury. Finally, an active debate emerged over the possible degradation in recent immigrant earnings under changing selection criteria and entry gates. Abbott and Beach (1993) and Fagnan and DeVoretz (1990) noted that the decline in the proportion of the economically assessed led to immigrant earnings degradation in the 1980's. Others including Bloom et al. (1995) dissented from this view that recent immigrant earnings were declining in the 1980's. In other words, the economic performance of immigrants was now explicitly tied to entry criteria in the 1980's.

These and other critics premised their critical remarks on two stylized facts. First, that prior to the 1978 Immigration Act Canada's selection procedure was dominated circa 1967-76 by a variant of the "points" system. Next, it is argued that the "points" system circa 1967-1976 had a positive impact on the labour market performance of immigrants and that the abandonment of this programme after 1978 somehow led to a degradation in immigrant economic performance. Let us review these two presumed facts below.

Briefly stated, for the period 1967 to the 1990's potential immigrants could enter as an independent points assessed candidate or as a sponsored relative in the family class or finally as a refugee. Only the principal applicant in the independent category was assessed to determine the potential immigrants presumed contribution to the economy. The points test initially required at a minimum, 50 marks, (later 70 points) for entry. Tables 1 and 2 report the points awarded at the beginning (1967) and end of the period (1992) under review according to arbitrarily defined short term and long term measures. Two trends are apparent. One is that over the 25 year period there has been a consistent division between short term and long term criteria. Next, the role of occupationally related criteria changes little over the period. However, by 1992 two new criteria have been introduced that were absent in 1967. First, a levels control measure was introduced in the 1980's which curtailed immigration when total immigrant movement closed in on the yearly target. Also, experience is explicitly recognized by 1992. In sum, a comparison of these two tables does indicate that subtle changes occurred in the points system but with the latter two exceptions no new criteria were introduced by 1992.

Table 1: Points System in 1967

Category	Potential Points
Long term	
Education	20
Age	10
Occupational Demand	15
Occupation skill	10
Personal Suitability	15
Short term	
Arranged employment	10
English/French	10
Destination	5
Relative in Canada	5
Total	100

Source: D. Green (1995) p. 335

Table 2: Points System in 1992

Category	Potential Points
Long term	
Education	12
Age	10
Occupational Demand	10
Occupation skill	15
Experience	8
Personal Suitability	10
Short term	
English/French	15
Arranged Employment	10
Levels Control	10
Total	100

Source: D. Green (1995) p. 338

The central question remains: how frequently was this points based selection system used throughout our study period ? An analysis of the distribution of immigrants across entry level categories for the 1980's indicates that the majority (71 per cent) of the post-1980 immigrants were not economically assessed in the post-1978 period. During the 1980's immigrants either entered as reunited family members (53 per cent) or refugees (18 per cent). This represents a dramatic change over the earlier period when the selection factors in table 1 were the dominant entry criteria.

In contrast to the above, during the 1968-1976 period or prior to the 1978 Immigration Act the majority of immigrants were screened via a point system for their economic suitability. If I combine both the independent and nominated relatives (i.e. the total points assessed categories) they comprise 73 per cent of this earlier period's flow. Thus, in the decade 1980 to 1990 a substantive change occurred in the distribution across entry gateways for immigrants. In the 1967-76 period, and perhaps for a time afterwards, Canadians perceived immigration policy as driven by economics. However, by the late 1980's both the Canadian public's perception and policy maker's reality had changed. Post-1980 immigrants were predominantly seen to be drawn from Third World regions

and admitted without prior economic scrutiny as relatives of earlier immigrants or refugees. Thus, in terms of the superficial gate-keeper question: “Did the distribution across entry gates change ?” The answer to the question is a clear yes, thus, the critics were correct in these limited terms.

However, documenting altering entry gates is not the same as documenting a declining labour force performance for immigrants and the consequent need for a change in selection criteria. For this we need, at a minimum, a second set of stylized economic facts to document any structural breaks before and after 1978.

Table 3
Social and Economic Attributes by Place of Birth:1991

All Canadian	All Foreign	Variables	Econ Canadian	Econ Foreign
3.37	3.51	Family size	3.05	3.51
32.39	40.68	Age	39.49	41.841
22.67	20.6	Hrs worked	35.99	34.24
40.61	39.65	Weeks worked	46.21	44.53
\$22,038	\$20,757	Total income	\$33,108	\$31,112
\$16052	\$14360	Wages & Salaries	\$28,500	\$26324
\$1234	\$1130	Self employment income	\$2,219	\$2,030
\$1356	\$1363	Investment Income	\$975	\$963
\$678	\$884	OAP	\$ 4.18	\$5.39
\$497	\$545	CPP	\$10.21	\$60.58
\$501	\$606	UIC	\$189	\$806
\$485	\$483	Other govt	\$65	\$167
\$143	\$143	Fam Allow	\$386	\$25096
\$2304	\$2661	\$Total Gov't	\$1143.32	\$1288.97

Source: 1991 Canadian Population Census, PUST microdata

By taking successive economic snapshots before and after the 1978 Immigration Act it may be possible to confirm the presumed structural breaks in the economic performance of immigrants by sub-periods. With the aid of census data, economic profiles for representative foreign-born and Canadian populations will be made for 1981 and 1991. The assumption is that the characteristics of the pre-1978 immigrant flow are revealed in

the 1981 census while the 1991 census should reveal the affects generated by the post-1978 immigration policy that reigned during the 1980's. Tables 3 and 4 report the important demographic and economic variables by birth status.

The first two columns in table 3 report the average characteristics of the entire 1991 stock of Canadian and foreign-born populations respectively unfiltered for labour force participation. Columns four and five present similar information for the 1991 economically active populations by foreign- birth status. To more accurately detect structural breaks in Canada's immigrant population over time, it is more meaningfully to concentrate on the income performance of active labour force participants and their use of the public treasury. The economically active Canadian-born earned \$2296 more *circa* 1991 than their foreign-born cohorts. This earnings difference arose in spite of Canadians working fewer hours per week (47 versus 49). The last five rows in any column when summed indicate any population's draw on the federal treasury. For example, the economically active foreign-born group used \$1288 in federally financed pensions (OAP, CPP), unemployment insurance (UI), and family allowance (am allow) and other programs. By contrast , the Canadian-born cohort consumed \$1143 of these services or \$145 less than the foreign-born. This mediocre immigrant earnings performance and the accompanying use of public services superficially supports the earnings degradation argument of those academics (and others) who linked earnings decline with the change in selection criteria after 1978.

Table 4 reports the comparative 1981 performance of the immigrant stock and highlights this alleged structural break in the labour force performance with its attendant public finance implications.

Table 4
Social and Economic Attributes by Place of Birth: 1981

All Canadian	All Foreign	Variables	Econ Canadian	Econ Foreign
3.44	3.10	Family size	3.29	3.36
30.16	43.24	Age	40.81	43.1
21.7	22.5	Hours work	34.32	39.82
31.79	41.1	Weeks worked	46.90	47.2
\$7062	\$11,110	Total income	\$22,617	\$23,075
\$6092	\$8251	Wages & Salaries	\$18,896	\$19,400
\$483	\$719	Self employment income	\$2,110	\$2,077
\$516	\$609	Investment Income	\$821	\$937
\$303	\$609	OAP	\$8.22	\$4.37
\$74	\$102	Family allowance	\$308	\$300
\$135	\$111	UIC	\$226	\$154
\$153	\$160	Other govt	\$93.79	\$59.90
\$665	\$982	\$Total Gov't	\$636	\$1154.28

Source: 1981 Canadian Population Census, microdata

In 1981 the economically active foreign-born worked more hours per week (5) than the Canadian-born and this greater effort in the labour market yielded the foreign-born a larger income (i.e. \$1,064). In contrast to 1991, this greater 1981 earning power of the foreign-born resulted in the foreign-born using substantially less public services: (\$518.27) than the Canadian-born-headed household (\$636.01).

This declining economic performance between 1981 and 1991 for the stock of foreign-born Canadians adds further grist to the policy critics' mill. However, these reported stylized facts are just uncontrolled cross-sectional summary statistics which are not conditioned for macro-economic conditions. Thus, to attribute all this 1991 decline in the foreign-born economic performance to the post-1978 cohort is no doubt too gross a statement. If we appeal to more refined studies, it may be possible to clarify the impact of partially abandoning the point system in the 1980's.

It has also been noted that the decline in the relative importance of the "points" system also affected particular economic characteristics of the immigrant flow. For example, Green and Green (1996) argue that the independent selection device did not markedly

improve Canada's ability to attract highly skilled immigrants but just reduced the proportion of unskilled during the 1970's. The work of Coulson and DeVoretz (1993) presents some facts which quantify the changing value of this flow of immigrant skills. They estimate that between 1967-1986 over \$41.1 billion (1995 dollars) in post-secondary human capital was transferred with this period's immigrant flows into Canada. However, over 54 per cent (or \$ 22.2 billion) of the measured transfer occurred in the initial 1967-73 period. In contrast, during the 1979-1986 period with a smaller economically assessed group the transfer had declined to \$9.2 billion (1995 dollars). In sum, the average annual flow of human capital embodied in all immigrants regardless of entry class fell from \$3.2 billion (1995 dollars) per year over the 1967-73 period to \$1.0 billion (1995 dollars) per year after 1979. More significant than this decline in the human capital embodied in immigrants is their finding that the average human capital contained in each professionally trained immigrants did not decline after 1978. It was only the number of highly skilled immigrants which fell off as the family class was emphasized. The important point to observe is that when the "points" system was employed its ability to maintain the high human capital remained in tact after the 1978 Immigration Act. It was just employed less frequently.

II. Economic Reality and Canada's Selection Procedure

Borjas (1988) has challenged the whole notion of Canada (or the United States) being able to actually select its immigrant candidates as implied by the existence of a "points" based immigration policy. Borjas argues that any one immigrant, from any one country will select both when to move and the destination country. This view of self selection leaves limited discretion for the operation of an active screening device by the country of destination, regardless of the exact selection procedure in place. I however, dissent from this immigrant supply sorting view (for most occupational groups) for Canada given the existence of two stylized facts. First, Canada is able to obtain a very large number of any specific type immigrant it wants at the going wage and secondly for most skill groups a

world-wide queue exists to enter Canada.¹ This set of stylized facts rules out the possibility, in most cases, that supply shifts for any particular occupational grouping of immigrants is owing to immigrants collectively shifting their chosen country of destination and thus preventing Canada meeting its perceived demand for a particular set of immigrants.

After establishing the pre-conditions for an effective selection procedure we turn to a well known economic model to rationalize Canada's selection procedure over the two policy epochs. The goal of this exercise is to identify the underlying economic arguments, if any, which drove the ultimate values accorded to the criteria in the points component of the selection criteria.

Green (1976:176-206) argued that during the 1962-73 a manpower shortage model explained Canada's demand for highly skilled and even semi-skilled European workers. DeVoretz and Maki expanded his set of arguments and argued that a perceived or actual shortage can be removed by one of four forces, more domestic graduates, a rising occupational income, more immigrants or some combination of the above. In an operational sense this model argues that under the points system the weight given to occupational demand, the value of experience, etc. was generated by one of the three forces noted. In short, if this is true in reality then the selection procedure was responding to valid shortages in the labour market and operating in an efficient manner. If this model does not prove to be valid when tested then from an economist's point of view no matter how complicated the gradation of the "points system" that existed prior to, or after the 1978 Immigration Act, the system could not be justified on a sound underlying economic rationale. Moreover, given the literature and issues cited in the introductory section any test of the efficacy of this model must be made for both the pre and post 1978 period to ascertain whether the changing mix under the post 1978 "points system" selection procedure was still valid for the then limited number of immigrants that were being assessed by it. In short, did the "points system" method of selection fall from grace after 1978 because it was economically untenable ?

¹ This implies an infinitely elastic supply curve for this occupational grouping of immigrants. This does not hold in 1997 for some high tech jobs but only because Canada does not effectively recruit from India and other countries.

DeVoretz and Maki (1983) and Akbar and DeVoretz (1993) provide tests for this economic model across both policy periods. DeVoretz and Maki (1983) delineate the most cogent time period and occupational groups to test an economic model for the “points” based selection criteria. The 1967-73 period that they use is one of high immigration levels (annual average approximately 200,000) with a substantial percentage of “points” assessed in the highly trained or professional categories. They estimate the underlying economic determinants of Canada’s demand for nurses, teachers, physicians and several other professions with the aid of the model described above. For this period the strongest arguments which explained any one years demand for a collection of the highly skilled immigrant occupational groupings were the previous number of immigrants admitted in that occupation and absolute number of last years Canadian graduates in the relevant occupation. The fact, that the numbers admitted were a fraction of the previous year’s flow further indicated that caution was practiced.

Did this efficient policy carry forward under the 1978 Immigration Act? The results of Akbar and DeVoretz which retest the dynamic shortages model of Maki and DeVoretz confirm that the model held for the now more severely limited numbers of highly trained immigrants who arrived after 1978. Thus, we conclude that when applied, the “points” system, regardless of era, had the impact of mitigating employment gaps in selected skilled occupations when there existed excess demand. This of course implies that a policy which filled in gaps, could not in the first instance lead to or exacerbate unemployment in these highly skilled professions (Akbari and DeVoretz,1992). There is evidence however, for the post-1978 period that this policy suppressed wage growth in these highly skilled professions.(Laryea,1997).

Green and Green (1995) ask a broader question and ask if the “points” system alter the occupational composition of immigrants. They argue that changes in the points system did alter the occupational mix but the change in entry class and source country swamped the effect of the points system. In particular, they review immigration policy circa 1959-1992 and conclude that Canadian immigration policy is particularly vulnerable to immigrant lobby pressures. Their empirical tests attempt to explain shifts in the occupational admission patterns for six turning points between 1960 and 1986. The 1960 and 1967

policy changes affected the occupational composition of immigration flows due to processing priorities and the "points" system respectively. In the later period 1982-1993 shifts in entry class distribution to favor the family class and third world country source countries reduced the skill content of the occupational flows. Finally, they ask do movements in the awarded occupational demand points ultimately create changes in immigrant occupational composition ? They conclude for the "points assessed" group a combination of forces: i.e. the existence of a threshold level for entry and the number of points awarded to a characteristic (age, education, etc.) were significant conditioners on the immigrant occupational mix. However, these effects are swamped by the entry class composition. In sum, according to Green and Green changes in source country have the greatest effect on skill levels with the growth in the family class having the second largest impact, thus leaving the "points" system a limited role in determining the skill composition.

The existence of an administrative data set in the late 1980's allowed an even more refined assessment of the points based system. The above reported work of Green and Green (1995) assumed that the declared occupation was the ultimate immigrant occupation.

What if it was not ?

D. Green (1995) explores the impact of a changing selection procedure circa 1973-86 on the match between intended occupation declared upon admission and actual occupation as revealed in a later census period. Green essentially asks two questions, does the structural change in immigration policy between 1967 and 1978 alter the probability of a match between intended and actual immigrant occupations and secondly does intended occupation more closely parallel the later actual occupation of an immigrant if we control for age, education, occupation, place of birth and entry class ? When Green assess the intentions and actual occupational distributions he finds for female immigrants that:

"the actual distributions of immigrant women ...are different from their stated intention and from the distribution of native-born women.": (1995, p.349)

In fact, female immigrants were more likely to be in sales and service than their stated intentions upon arrival.

In a similar fashion male immigrants also were actually more heavily concentrated in sales, processing and services in later census periods (1981 and 1986) than their intentions upon arrival.

Would these matches between intended and actual occupational choices be closer if we control for the selection criteria (age, education) used in admission ? The answer is yes, thus Green concludes that :

"the characteristics such as education and location are more important determinants of occupation than statements of intent at time of landing."

S. Lui Gurr (1995) addresses another aspect of the influence of the selection procedure in terms of the incidence of social assistance use by the foreign-born in British Columbia during the 1989-91 period. Using administrative data Gurr is both able to document the use of social assistance by entry class as well as estimate the factors which influence the use and duration of social assistance for both the foreign-born and Canadian-born populations. The first finding is that circa 1989-91 the incidence of use of social assistance by the foreign-born is small. The foreign-born social assistance population was only 3.9 % of the total British Columbia social assistance population. This was in a period when the foreign-born constituted 22 percent of British Columbia's population.

Moreover, this was a period in which refugees were not allowed to work while their claims were being reviewed. Keeping in mind the absolute small use of social assistance two further trends are documented by Gurr. First, the family class represents the dominant share of the foreign-born users while the independent class provided the smallest group of users. One additional fact was of important in the Gurr analysis, once the family class entered the social assistance they tended to stay on for a greater period of time and draw greater benefits than their Canadian-born cohort.

In sum, this case study indicates that for British Columbia the selection procedure is really a minor conditioner of the use of social assistance by the foreign-born circa 1989-91.

A. DeSilva (1997) asks a more central question than either of the above case studies using longitudinal data. Do immigrant earnings depend upon class of entry and/or measurable immigrant attributes upon landing ? With a limited male sample drawn from the 1981-84

IMDB records DeSilva compares the earnings performance of refugees to independently assessed immigrants. The issue as stated by DeSilva is whether there exists earnings convergence between refugees and those admitted under the independent class. The presumption is that the independent class should outperform the refugee class if selection criteria are truly efficacious. DeSilva finds that for non-Third World refugees that the initial earnings disadvantage vis a vis the independent class is significantly diminished overtime but that observed immigrant attributes do not explain the convergence. Given this finding, DeSilva argues that age - or the younger the better- is the determinant of earnings convergence and hence should be the primary selection criterion used.

Worswick (1996) advances the assessment of Canada's immigration policy when he attempts to assess the economic outcomes of immigrant households rather than individual's. Worswick is asking how the selection criteria affect the economic outcomes of cohorts of married immigrants. The theoretical paradigm is that female married immigrants immediately enter the labour force while their spouses accumulate human capital for later earnings increments. Of course, since married women are not accumulating capital their income does not rise in later years. Worswick does not find overwhelming evidence to support this interpretation. However, Worswick finds a strong wage performance for female immigrants and recommends that immigration policy incorporate both the potential performance of the principal applicant (usually male) and the accompanying spouse. Moreover, Worswick argues that male based studies of immigrant performance in evaluating selection criteria are misplaced and settlement assistance to female immigrants may yield large economic rewards.

Conclusions

The 1967-1997 period provides an historical context and a substantial body of literature to partially assess the efficacy of Canada's immigrant selection prior to and after the 1978 Immigration Act. Concentrating exclusively on the economic efficacy of the "points" based selection criteria some conclusions are available. The evidence available indicates that the "points" system when invoked increased the human capital content of Canadian immigrant

flows while diminishing the prospects of immigrants using social assistance. Moreover, some selection criteria (age and education) predicted a substantial match between intended and actual occupations over successive census periods. The "points" system regardless of the exact weighting used over the thirty year period did reflect sound underlying measures of labour market shortages in a limited number of highly technical professions.

Corroborating evidence of the existence of a manpower gap model is the relative absence of labour displacement or increased unemployment owing to immigration flows. Wage suppression and/or unemployment owing to foreign born competition in the labour market is also found to be minimal and again confirms that selection criteria did not exacerbate this problem.

The introduction of the family class and a refugee stream under the 1978 Immigration Act has led to allegations of immigrant earnings degradation and inappropriate occupational selection amongst the potential foreign born. The latter conclusion concerning occupational degradation has more support than the former proposition.

What the literature points to that the "points based" selection criteria based upon broader measures than are currently employed (age, language and education) meet the economic goals of the 1978 Immigration Act. Other entry criteria, i.e. family reunion, while important, lessened the realization of the economic goals in the immigration act. Thus, economic scrutiny before entry, rather than remedial training and expensive recertification programmes after arrival should be the thrust of any revised selection procedures.

References

Abbott, M.G. and C. M. Beach (1993) "Immigrant Earnings Differentials and Birth year Effects for Men in Canada: Postwar-1972", Canadian Journal of Economics, Vol. 26, pp. 505-24.

Akbar, S. and D. J. DeVoretz, (1992) "Canada's Demand for Highly Trained Immigrants", World Development, pp. 177-87.

Akbari, A. and D.J. DeVoretz (1992) "The substitutability of Immigrants in Production: Evidence for Canada", Canadian Journal of Economics, Vol.25, pp. 604-614

Baker, M. and D. Benjamin (1994) "The Performance of Immigrants in the Canadian Labour Market", Journal of Labour Economics, Vol. 12, pp. 369-405.

Beach, C. and C. Worswick, "Is There a Double Negative Effect on the Earnings of Immigrant Women?", Canadian Public Policy, (1993) pp. 36-53.

Bloom, D.E., M.K. Gunderson and G. Grenier (1995) "The Changing Labour Market Position of Canadian Immigrants", Canadian Journal of Economics, Vol. 28, No. 4b pp. 987-1001

Coulson, R.G. and D.J.DeVoretz, "Human Capital Content of Canadian Immigrants: 1967-87", Canadian Public Policy, (1993) pp. 357-366.

DeVoretz, D.J. and D. Maki, "The Immigration of Third World Professionals to Canada:1968-73", World Development, (1983) pp.55-64.

DeSilva, A. (1997) "Earnings of Immigrant Classes in the Early 1980's in Canada: A Reexamination", Canadian Public Policy, Vol. XXIII, No. 2, pp. 179-199

Green, A. G. Immigration and the Post-War Canadian Economy (Toronto, Macmillan of Canada, 1976).

Green, A. G. (1995), "A Comparison of Canadian and US Immigration Policy in the Twentieth Century" in Diminishing Returns: The Economics of Canada's Recent Immigration Policy, ed. D. DeVoretz, (Toronto, C.D. Howe Institute)

Green, A.G. and D. A. Green, (1995) "Canadian Immigration Policy: The Effectiveness of the Point System and Other Instruments, Canadian Journal of Economics, Vol. 28, No. 4b pp. 1006-1041.

Green, D. A. (1995), "Intended and Actual Occupations" in Diminishing Returns: The Economics of Canada's Recent Immigration Policy, ed. D. DeVoretz, (Toronto, C.D. Howe Institute)

Green, A. and D. Green, "The Economic Goals of Canada's Immigration Policy, Past and Present", Canadian Public Policy, (1997) pp. ??-??.

Worswick, C. "Immigrant Families in the Canadian Labour Market", Canadian Public Policy, (1997) pp. 378-396.

Back issues of working papers are available for \$5 from
Vancouver Centre of Excellence: Immigration, WMX4653, Simon Fraser University, 8888 University
Drive, Burnaby, B.C, Canada V5A 1S6. Tel: (604) 291-4575 Fax: (604) 291-5336

E-mail: riim@sfu.ca

<http://www.riim.metropolis.globalx.net/>