EXECUTIVE SUMMARY

- The 2002-2003 results from the **Longitudinal Immigrant Database (IMDB)**[1] are now available from Statistics Canada.

- A noticeable decline in the average employment earnings one year after landing has been identified for immigrants landing in 2001 and 2002.
  - Immigrants who landed in 2001 reported average employment earnings one year after landing $2600 (2001$) lower than immigrants who landed in 2000, representing a 12.7 percent decline in earnings.
  - Immigrants who landed in 2002 reported average employment earnings one year after landing $600 (2001$) lower than the previous cohort, representing a 3.3 percent decline in earnings.

- The substantial decline in immigrant earnings appears to be driven by the economic skilled principal applicants (SPA).
  - SPAs who landed in 2001 reported average employment earnings one year after landing $5900 (2001$) lower than immigrants who landed in 2000, representing a 19.6 percent decline in earnings.
  - SPAs who landed in 2002 reported average employment earnings one year after landing $1000 (2001$) lower than the previous cohort, representing a 4.6 percent decline in earnings.

- One factor contributing to the decline in economic outcomes for recent SPAs is related to province of residence. Since 2000, there has been a 7 percentage point increase in the share of newly landed SPAs residing in Quebec (a province with lower than average annual employment earnings), coupled with a 7 percentage point decline in the share residing in Ontario (the province with the highest average employment earnings) may be one factor serving to depress the average annual employment earnings observed for SPAs.

- A second factor contributing to the decline in earnings of SPAs is related to intended occupation. As was the case for the 1999 and 2000 cohorts, more than half of the SPAs landing in Canada in 2001 and 2002 stated intentions to work in Professional Occupations in Natural and Applied Science (mainly engineering and computer and information systems professionals). The economic conditions for this occupational grouping largely dictate the earnings profile for recent SPAs.

- Many of the professional natural and applied science occupations struggled with the high-tech "bubble" and subsequent "bust" which has had an impact on the earnings of SPAs. Given that labour market conditions in the IT (information technology) sector deteriorated after the "bust" in 2001, it is reasonable to assume that fewer new workers (including immigrants) have been able to secure employment in the high paying IT sector. Consequently, immigrants

[1] The IMDB combines administrative records on immigration with taxation information to form a comprehensive source of data on the labour market experiences of the landed immigrant population. The IMDB is managed by Statistics Canada on behalf of a Federal-Provincial Funding Consortium led by Citizenship and Immigration Canada.

may be working in lower-skilled occupations and generally lower-paying occupations to secure entry into the labour market. In addition, SPAs who managed to secure employment in the natural and applied science occupational grouping encountered further impediments to higher earnings in the form of lower actual hours worked and marginal, if any, real increases in real wages.

- What may be the most revealing sign of the poor conditions in the IT sector was the large increase in EI (employment insurance) claims for those already in the labour market during the 2001-2003 timeframe. Looking at IMDB data for SPAs who intended to work in the natural and applied science sector, the data shows a large increase in the share of immigrants reporting EI as a source of income. Consistent with this trend was the fact that a lower share of SPAs reported employment earnings.

- In addition, recent research from Statistics Canada points to evidence that shows earnings of new employees fell during 2002 and 2003. The research suggests median hourly wages of male and female employees with two years of seniority or less declined. This is an important point to note given recent immigrants are new employees and the decline in earnings is an economy-wide phenomenon for new entrants into the labour market.

- Is this decline in entry level earnings related to changes in immigration policy or is it about domestic labour market conditions? From the labour market perspective, research done to date points to the fact that large numbers of IT professionals arrived at an inopportune time in terms of domestic labour market conditions in the IT sector.

- From the immigration policy perspective, new selection criteria has placed greater emphasis on human capital than in the past. However, not enough SPAs have come to Canada under IRPA for this to be relevant in this analysis. The human capital emphasis under IRPA may apply to analysis in future years particularly if the educational/training focus in our sending countries is concentrated to limited fields of study.

- The analysis of the IMDB and other data sources enabled the calculation of specific factors on the overall earnings declines for SPAs. The cornerstone of this analysis assumed that SPAs intending to work as professionals in the natural and applied sciences (computer professionals and engineers) had a tougher time getting a job in their intended occupation after the IT "bust" as compared to those who landed during the IT "boom". At this point, there is no data within IMDB to validate the relationship between intended and actual occupation. However, IMDB data development is currently underway to establish actual industry of employment which will improve the knowledge of intended and actual occupation.

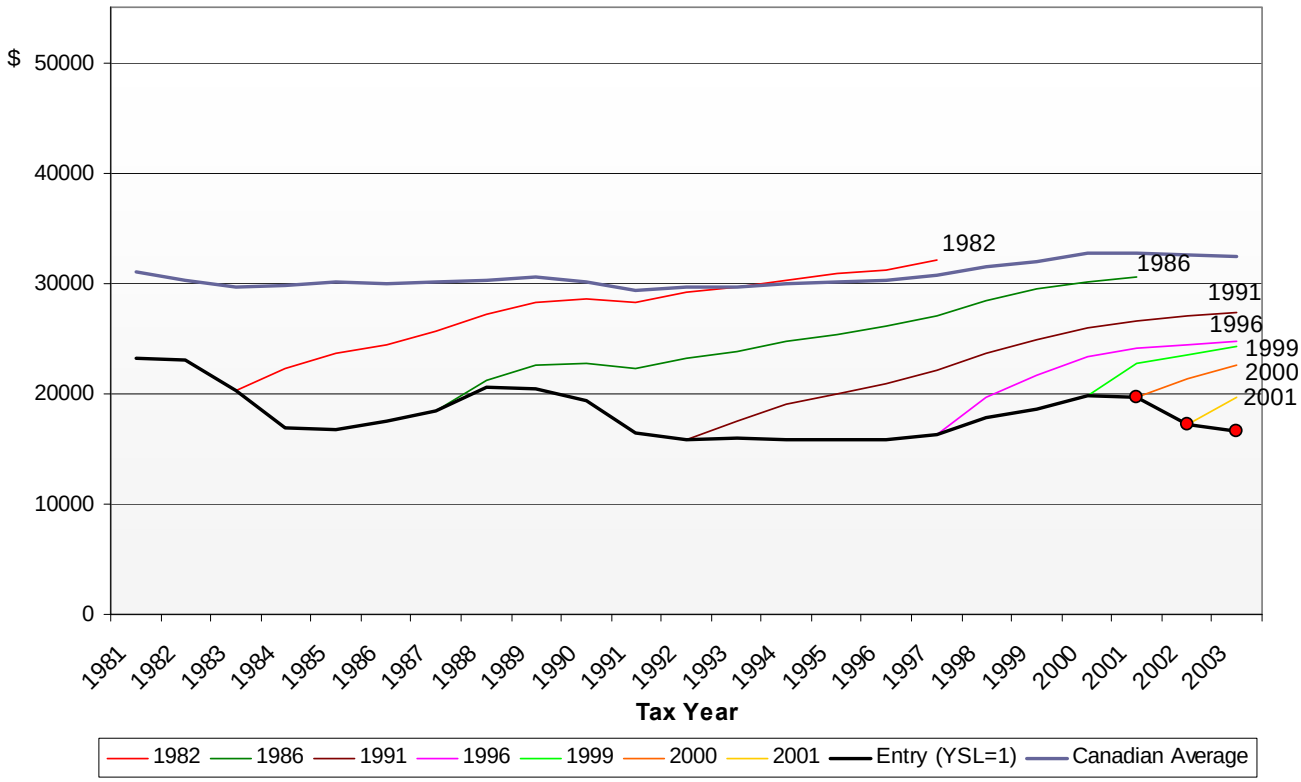
- The best estimate, at the current time, shows that an occupational shift out of IT related jobs and lower earnings in the sector appear to have accounted for 92.3% of the decline in earnings of SPAs. Changes in place of residence for SPAs accounted for 4.8% of the decline. There may be other factors affecting the outcomes of new SPAs, including lower hourly earnings for new entrants in the labour market, and other unknown factors. These factors are estimated to contribute 2.9% of the decline in earnings.

RECENT IMMIGRANT OUTCOMES – EMPLOYMENT EARNINGS

IMMIGRANT CATEGORY

- A noticeable decline in the average employment earnings one year after landing has been identified for immigrants landing in 2001 and 2002 (see Figure 1).
    - Immigrants who landed in 2001 reported average employment earnings one year after landing $2600 (2001$) lower than immigrants who landed in 2000, representing a 12.7 percent decline in earnings.
    - The downward trend in employment earnings slowed considerably for the 2002 cohort. Immigrants landing in 2002 reported average employment earnings one year after landing $600 (2001$) lower than the previous cohort, representing a 3.3 percent decline in earnings.

Figure 1: Average Employment Earnings (2001$) for Immigrants in All Categories by Landing Year and Tax Year



Source: IMDB

- Although this decline is identified for all immigrant categories, it appears to be driven by the economic outcomes of skilled principal applicants (SPAs) who represented 36.6 percent and 35.1 percent of the 2001 and 2002 cohorts of immigrants reporting employment earnings one year after landing (see Table 1).

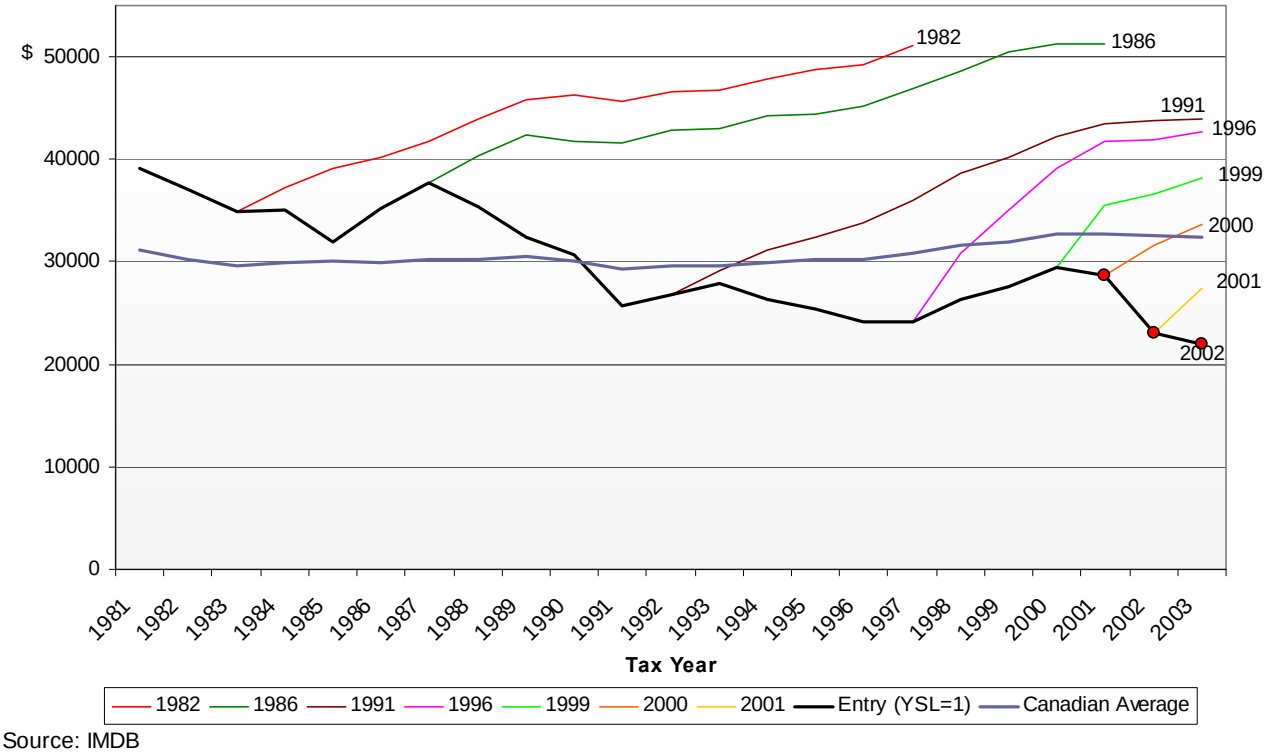
Table 1: Number and Share of Immigrants Reporting Employment Earnings One Year After Landing by Landing Year and Immigrant Category, 2001-2002

	2001		2002	
Immigrant Category	**Number**	**%**	**Number**	**%**
Skilled PAs	35785	36.6	30610	35.1
Business	2820	2.9	1970	2.3
Other Economic	20800	21.3	17690	20.3
Family Class	27000	27.6	26385	30.2
Refugees	8975	9.2	8115	9.3
Other	2465	2.5	2525	2.9
Total	**97845**	**100.0**	**87295**	**100.0**

Source: IMDB

- SPAs who landed in 2001 reported average employment earnings one year after landing $5900 (2001$) lower than SPAs who landed in 2000, representing a 19.6 percent decline in earnings (see Figure 2). The decline was $600 (4.9 percent) for business class immigrants, $1500 (10.5 percent) for economic spouses and dependents, and $800 (4.9 percent) for family class immigrants. Refugees reported an increase of $100 (0.8 percent).

Figure 2: Average Employment Earnings (2001$) for Skilled Principal Applicants by



Source: IMDB

Landing Year and Tax Year

- SPAs landing in 2002 reported average employment earnings one year after landing $1000 (2001$) lower than the previous cohort, representing a 4.6 percent decline in earnings (see Figure 2).

The decline was $200 (1.8 percent) for business class immigrants, $100 (0.9 percent) for economic spouses and dependents, $350 (2.4 percent) for family class immigrants, and $200 (1.6 percent) for refugees.

GENDER

- For the 2001 cohort 77.5 percent of SPAs reporting employment earnings one year after landing were male and 22.5 percent were female. For the 2002 cohort the split was similar with 76.6 percent male and 23.4 percent female.

- The decline in average employment earnings for new SPAs seen in Figure 2 is observed for both males and females (see Table 2a).

- Male SPAs who landed in 2001 reported average employment earnings one year after landing $5900 (2001$) lower than male SPAs who landed in 2000, representing a 19.8 percent decline in earnings. For the 2001 cohort, employment earnings one year after landing were $900 (3.8 percent) lower than the previous cohort.

- Female SPAs who landed in 2001 reported average employment earnings one year after landing $4500 (2001$) lower than female SPAs who landed in 2000, representing an 18.8 percent decline in earnings. For the 2002 cohort, employment earnings one year after landing were $1300 (6.7 percent) lower than for the previous cohort.

Table 2a: Average Employment Earnings One Year After Landing (2001$) for Skilled Principal Applicants, by Landing Year, Age at Landing, and Gender

	Males				Females				Total			
		%Δ		%Δ		%Δ		%Δ		%Δ		%Δ
Age	2001	2000-01	2002	2001-02	2001	2000-01	2002	2001-02	2001	2000-01	2002	2001-02
15-24	23,794	-24.5	21,054	-11.5	12,531	-10.5	12,411	-1.0	23,276	-17.6	20,261	-13.0
25-34	24,123	-22.0	22,713	-5.8	19,627	-21.0	18,320	-6.7	22,996	-21.8	21,576	-6.2
35-49	24,054	-17.0	23,703	-1.5	18,611	-15.8	17,449	-6.2	23,000	-17.1	22,439	-2.4
50-64	29,009	-16.2	27,092	-6.6	24,940	15.7	20,206	-19.0	28,490	-12.7	25,877	-9.2
Total	**24,166**	**-19.8**	**23,243**	**-3.8**	**19,329**	**-18.8**	**18,029**	**-6.7**	**23,077**	**-19.6**	**22,022**	**-4.6**

Source: IMDB

Table 2b: Share of Skilled Principal Applicants Reporting Employment Earnings One Year After Landing by Landing Year, Gender and Age at Landing

	2001			2002		
Age	Males	Females	Total	Males	Females	Total
15-24	0.5	0.3	0.9	0.5	0.4	0.9
25-34	40.2	13.4	53.6	39.4	13.8	53.2
35-49	35.6	8.5	44.1	35.2	8.9	44.2
50-64	1.2	0.2	1.4	1.4	0.3	1.7
65 +	0.0	0.0	0.0	0.0	0.0	0.0
Total	**77.5**	**22.5**	**100.0**	**76.6**	**23.4**	**100.0**

Source: IMDB

AGE

- The decline in average employment earnings one year after landing for new SPAs seen in Figure 2 is observed for all age groups, albeit to different degrees (see Table 2a).

- For both males and females the majority of SPAs landing in 2001 and 2002 were aged 25-49 (see Table 2b).
    - For the 2001 and 2002 cohorts males aged 25-34 represented approximately 40 percent of all SPAs reporting employment earnings one year after landing. Males SPAs aged 35-49 represented roughly 35 percent.

- Male SPAs who landed in 2001 aged 25-34 years had an above average decline in employment earnings one year after landing, 22.0 percent lower than the previous cohort. Males SPAs aged 35-49 had earnings 17 percent lower than the previous cohort.

- For the 2002 cohort male SPAs in both age groups had lesser declines in employment earnings one year after landing. Those aged 25-34 and 35-49 reported earnings 5.8 percent and 1.5 percent lower than the previous cohort.

- Although they represent a smaller share of SPAs, a similar pattern is seen for female SPAs aged 25-34 and 35-49 (approx. 14 percent and 9 percent of all new SPAs, respectively) (see Tables 2a,b).
    - For the 2001 cohort female SPAs aged 25-34 and 35-49 had earnings 21 percent and 15.8 percent lower than the previous cohort.
    - For the 2002 cohort, the declines were lower at 6.7 percent for those aged 25-34 and 6.2 percent for those aged 35-49.

EDUCATION

- Although the decline in average employment earnings one year after landing for new SPAs seen in Figure 2 is observed for all levels of education (see Table 3a), the majority (84 percent) of SPAs who landed in Canada in 2001 or 2002 had a university degree at the time of landing (see Table 3b).

- SPAs who landed in 2001 with a university degree had an above average decline in employment earnings one year after landing, 20.6 percent lower than the previous cohort.
    - For the 2002 cohort, university educated SPAs showed a lesser decline in earnings relative to the 2001 cohort. In fact, university educated SPAs who landed in 2002 had the lowest decline in employment earnings one year after landing, with earnings 3.8 percent lower than the previous cohort.

Table 3a: Average Employment Earnings One Year After Landing (2001$) for Skilled Principal Applicants, by Landing Year, Level of Education at Landing

Level of Education	2001	%Δ 2000-01	2002	%Δ 2001-02
12 years or less	22,208	-7.2	19,844	-10.6
13 years or more	21,523	-20.8	19,594	-9.0
Trade Certificate	25,777	-7.7	23,346	-9.4
Non-university Diploma	22,710	-15.1	20,861	-8.1
University Degree	23,100	-20.6	22,220	-3.8
Total	**23,077**	**-19.6**	**22,022**	**-4.6**

Source: IMDB

Table 3b: Share of Skilled Principal Applicants Reporting Employment Earnings One Year After Landing by Landing Year, Gender and Level of Education

	2001			2002		
Level of Education	**Males**	**Females**	**Total**	**Males**	**Females**	**Total**
12 years or less	1.2	0.3	1.5	1.0	0.3	1.4
13 years or more	2.6	1.1	3.6	2.5	1.0	3.5
Trade Certificate	2.3	0.6	2.9	2.3	0.7	3.0
Non-university Diploma	6.2	1.9	8.0	6.3	1.9	8.2
University Degree	65.2	18.6	83.8	64.5	19.5	84.0
Total	**77.5**	**22.5**	**100.0**	**76.6**	**23.4**	**100.0**

Source: IMDB

PROVINCE OF DESTINATION AND PROVINCE OF RESIDENCE

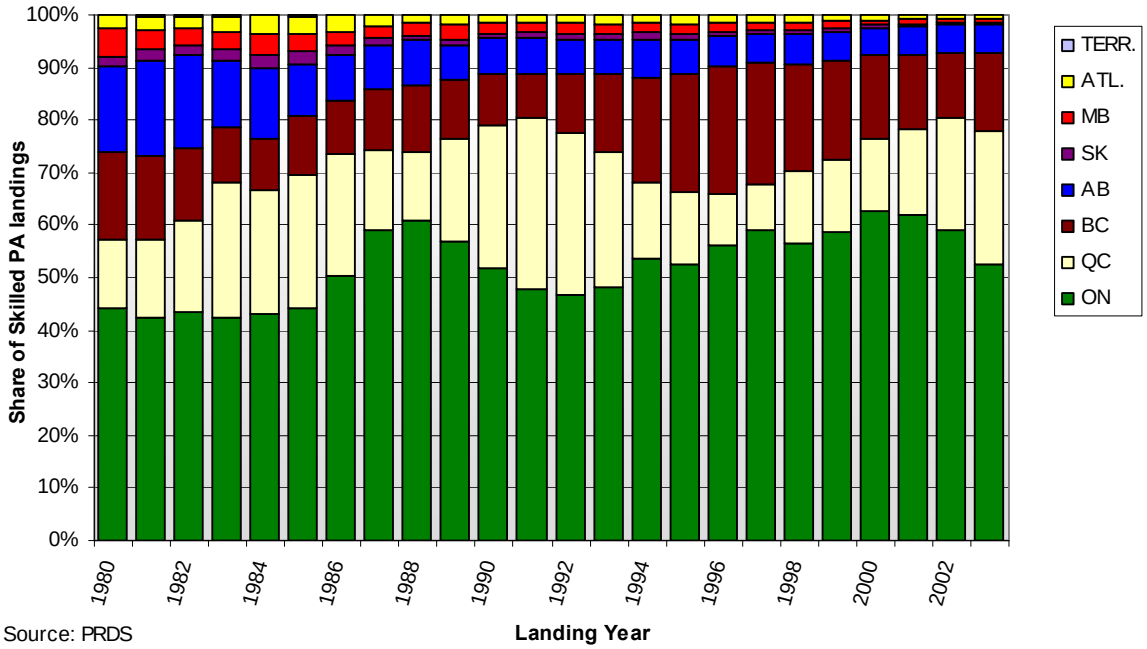
- The decline in average annual employment earnings one year after landing for SPAs seen at the national level is also seen at the provincial level for British Columbia, Ontario, and Quebec, albeit to different degrees.

- SPAs who resided in Ontario illustrated the largest decline in average annual employment earnings one year after landing. SPAs who resided in Ontario in 2002 reported $6800 (2001$) less in average annual employment earnings one year after landing than those who resided in Ontario in 2000. For SPAs in British Columbia and Quebec the decline was $5200 and $5800, respectively. With the majority of new SPAs residing in Ontario in 2002 and 2003, this may be one factor depressing average employment earnings for all SPAs observed in Figure 2.

- Since 2000 there has been a shift in the intended destination of SPAs (see Figure 3). While the share of SPAs destined to British Columbia remained stable, the share destined to Ontario declined by 11 percentage points, and the share destined to Quebec rose by 13 percentage points.

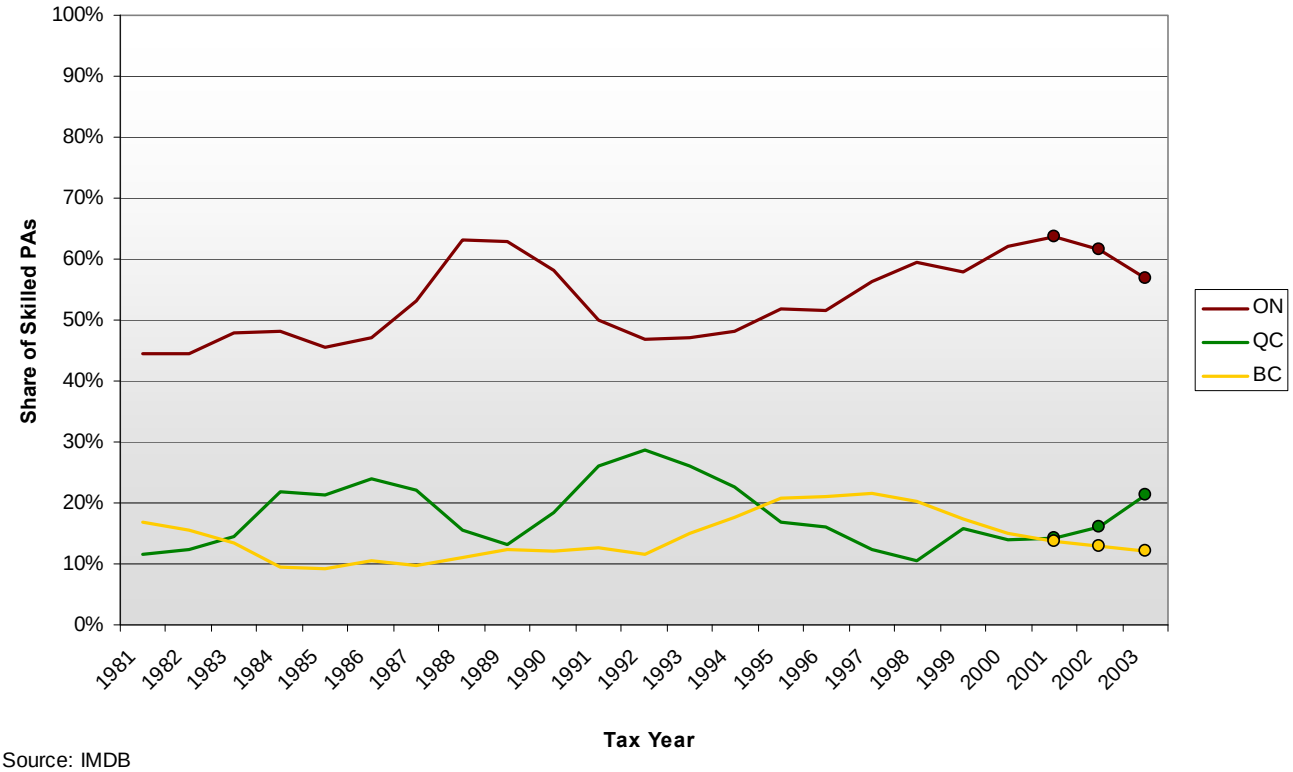
- The shift in intended destination resulted in a lower share of recently landed SPAs residing in Ontario and a larger share residing in Quebec (see Figure 4). As a result, the share of SPAs residing in Ontario and reporting employment earnings one year after landing decreased from 64 percent for the 2000 cohort to 57 percent for the 2002 cohort. The share of SPAs residing in Quebec and reporting employment earnings one year after landing increased from 14 percent for the 2000 cohort to 21 percent for the 2002 cohort (see Figure 4).

Figure 3: Intended Destination for Skilled Principal Applicants, by Landing Year



Source: PRDS

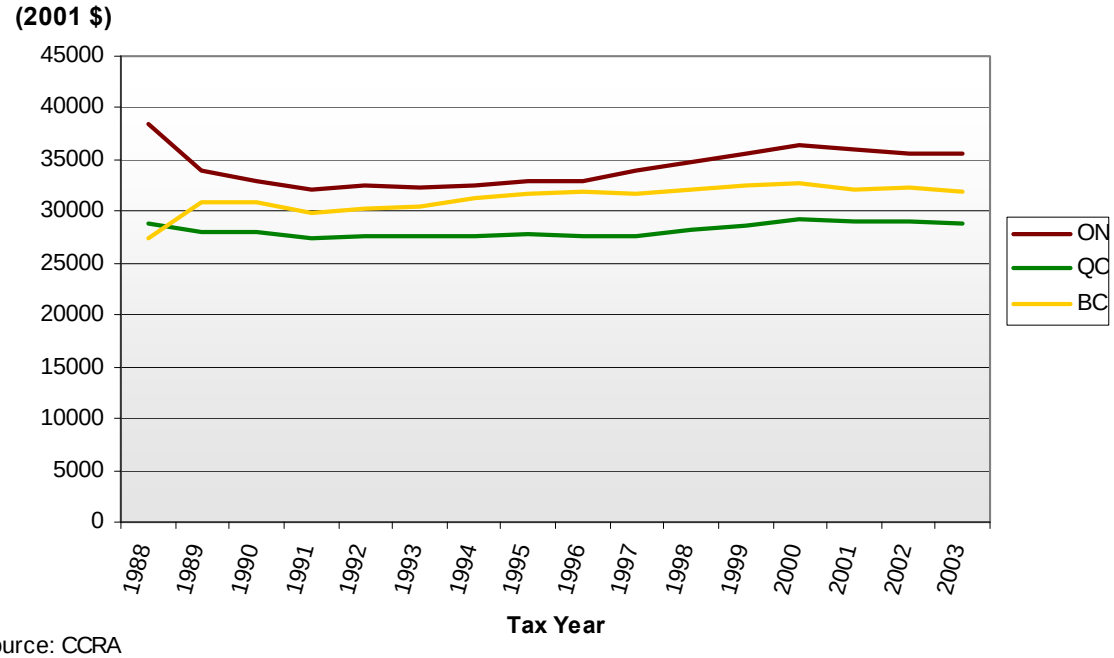
Figure 4: Share of Skilled Principal Applicants Reporting Employment Earnings One Year After Landing, by Province of Residence



Source: IMDB

- Since 2000, average annual employment earnings for the Canadian population have been stagnant at approximately $32 500 (2001$). Similarly, the average employment earnings for the Canadian population in Ontario, British Columbia, and Quebec have changed very little since 2000. Ontario has maintained average annual employment earnings of roughly $36 000, for British Columbia the average was constant around $32 000, and for Quebec the average has remained near $29 000 (see Figure 5).

Figure 5: Average Annual Employment Earnings (2001$) for the Canadian Population, by Province of Residence



Source: CCRA

- The recent increase in the share of newly landed SPAs residing in Quebec, coupled with the lower average annual employment earnings reported for that province, may be a second factor serving to depress the average annual employment earnings observed for SPAs in Figure 2. (A larger share of the newly landed SPA population is residing in a province with, on average, lower employment earnings. This is cutting into the share that, previous to 2001, were residing in Ontario the province with the highest average employment earnings.)

- For the 2001-2002 cohorts, the shift in province of residence appears to have accounted for $330 of the $6,900 decline, representing roughly 5% of the decline experienced by SPAs.

OCCUPATION

- Based on intended National Occupation Classifications (NOC) at time of landing, the occupational composition of SPAs landing in Canada has changed very little since the 1999 cohort (see Tables 2a,b).[2]

- As was the case for the 1999 and 2000 cohorts, more than half of the SPAs landing in Canada in 2001 and 2002 stated intentions to work in *Professional Occupations in Natural and Applied Science (mainly engineering and computer and information systems professionals),* and an additional 8 percent intended to work in *Technical Occupations Related to Natural and Applied Science (mainly technical occupations to support engineering and computer and information systems occupations).* Approximately 8 percent intended to work in *Professional Occupations in Business and Finances.*

Table 4a: Top Ten Intended 2-Digit NOCs for Skilled Principal Applicants, by Landing Year, 1999-2003 (Numbers)

Major Group	2-Digit NOC	1999	2000	2001	2002	2003
Professional Occupations in Natural and Applied Sciences	**21**	21,448	28,206	30,931	26,573	24,029
Professional Occupations in Business and Finance	**11**	2,950	3,798	4,389	4,162	3,549
Technical Occupations Related to Natural and Applied Sciences	**22**	2,303	3,344	4,243	4,028	2,808
Professional Occupations in Social Science, Education, Government Service and Religion	**41**	1,816	2,199	2,770	2,692	2,598
Skilled Administrative and Business Occupations	**12**	2,097	2,114	2,174	1,989	1,759
Skilled Sales and Services Occupations	**62**	1,825	1,974	2,136	2,057	1,632
Trades and Skilled Transport and Equipment Operators	**72/73**	1,682	1,920	2,126	1,880	1,287
Professional Occupation in Art and Culture	**51**	1,060	1,248	1,362	1,324	1,171
Professional Occupations in Health	**31**	620	903	1,038	1,268	1,164
Middle and Other Management Occupations	**01**	475	926	1,277	1,169	1,086
Technical and Skilled Occupations in Health	**32**	639	891	1,103	1,077	753
Intermediate Sales and Services Occupations	**64**	885	959	1,063	1,011	729
Top Ten 2-Digit NOC		**36,686**	**46,688**	**52,511**	**47,142**	**41,083**
Other 2-Digit NOC		**3,377**	**4,014**	**4,631**	**4,712**	**4,287**
Total Skilled Principal Applicants		**40,063**	**50,702**	**57,142**	**51,854**	**45,370**

Source: PRDS

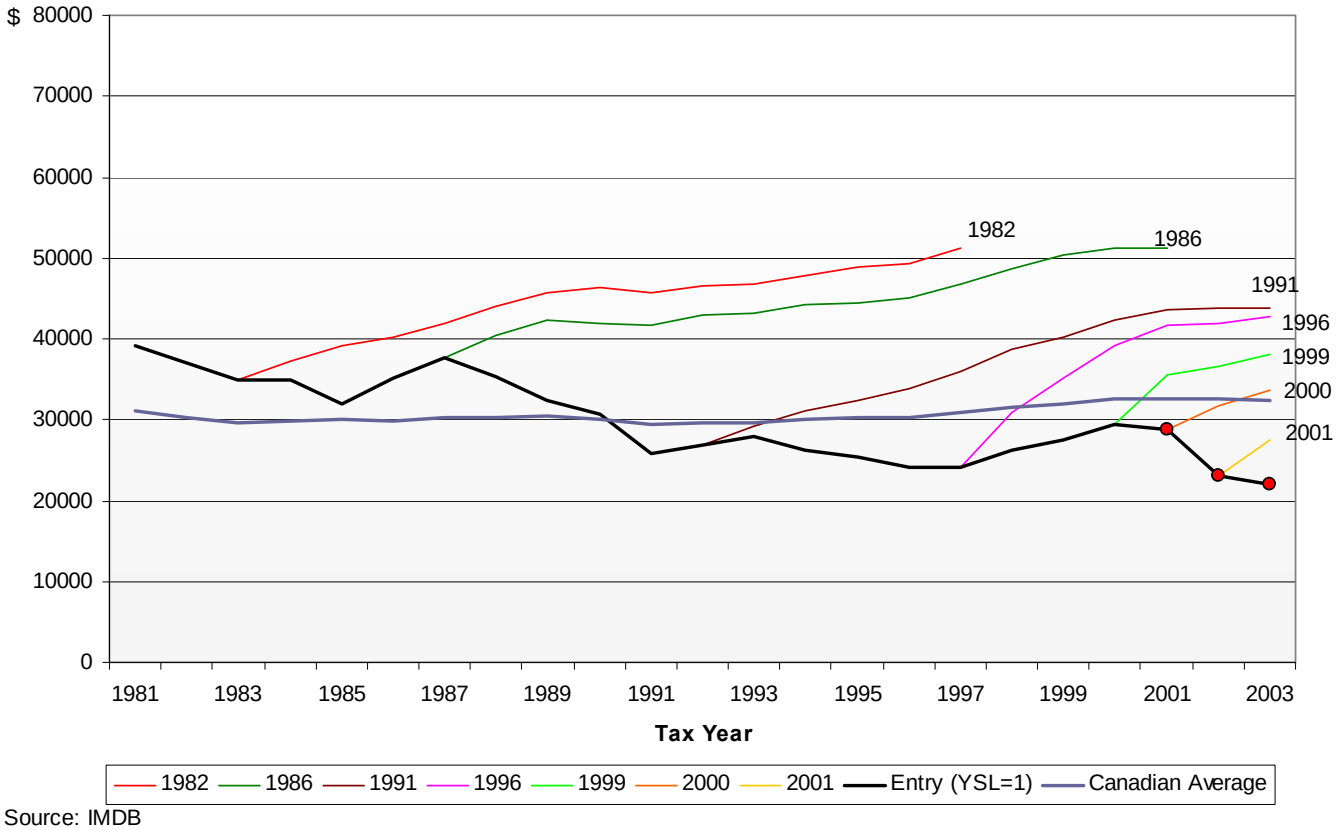
[2] According to the second wave results from the Longitudinal Survey of Immigrants to Canada (LSIC), 48 percent of skilled principal applicants who had employment within the first two years in Canada had found a job in their intended occupation.

Table 4b: Top Ten Intended 2-Digit NOCs for Skilled Principal Applicants, by Landing Year, 1999-2003 (Shares)

Major Group	2-Digit NOC	1999	2000	2001	2002	2003
Professional Occupations in Natural and Applied Sciences	**21**	53.5	55.6	54.1	51.2	53.0
Professional Occupations in Business and Finance	**11**	7.4	7.5	7.7	8.0	7.8
Technical Occupations Related to Natural and Applied Sciences	**22**	5.7	6.6	7.4	7.8	6.2
Professional Occupations in Social Science, Education, Government Service and Religion	**41**	4.5	4.3	4.8	5.2	5.7
Skilled Administrative and Business Occupations	**12**	5.2	4.2	3.8	3.8	3.9
Skilled Sales and Services Occupations	**62**	4.6	3.9	3.7	4.0	3.6
Trades and Skilled Transport and Equipment Operators	**72/73**	4.2	3.8	3.7	3.6	2.8
Professional Occupation in Art and Culture	**51**	2.6	2.5	2.4	2.6	2.6
Professional Occupations in Health	**31**	1.5	1.8	1.8	2.4	2.6
Middle and Other Management Occupations	**01**	1.2	1.8	2.2	2.3	2.4
Technical and Skilled Occupations in Health	**32**	1.6	1.8	1.9	2.1	1.7
Intermediate Sales and Services Occupations	**64**	2.2	1.9	1.9	1.9	1.6
Top Ten 2-Digit NOC		**91.6**	**92.1**	**91.9**	**90.9**	**90.6**
Other 2-Digit NOC		**8.4**	**7.9**	**8.1**	**9.1**	**9.4**
Total Skilled Principal Applicants		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

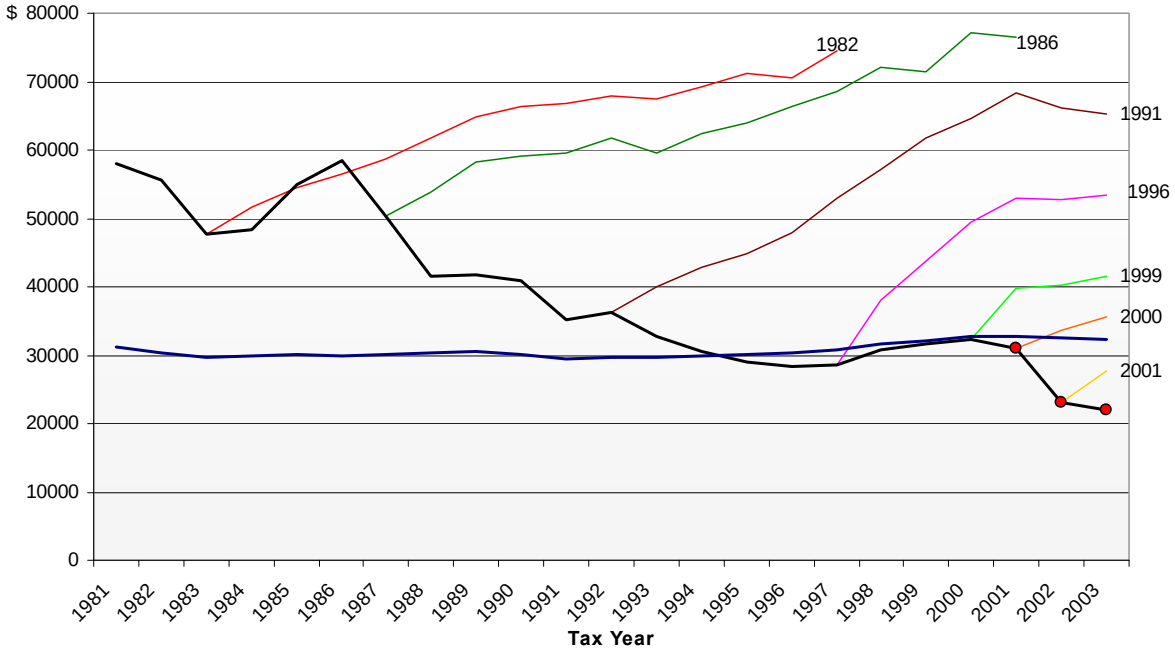
Source: PRDS

Figure 6: Average Employment Earnings (2001$) for Skilled Principal Applicants, by Landing Year and Tax Year



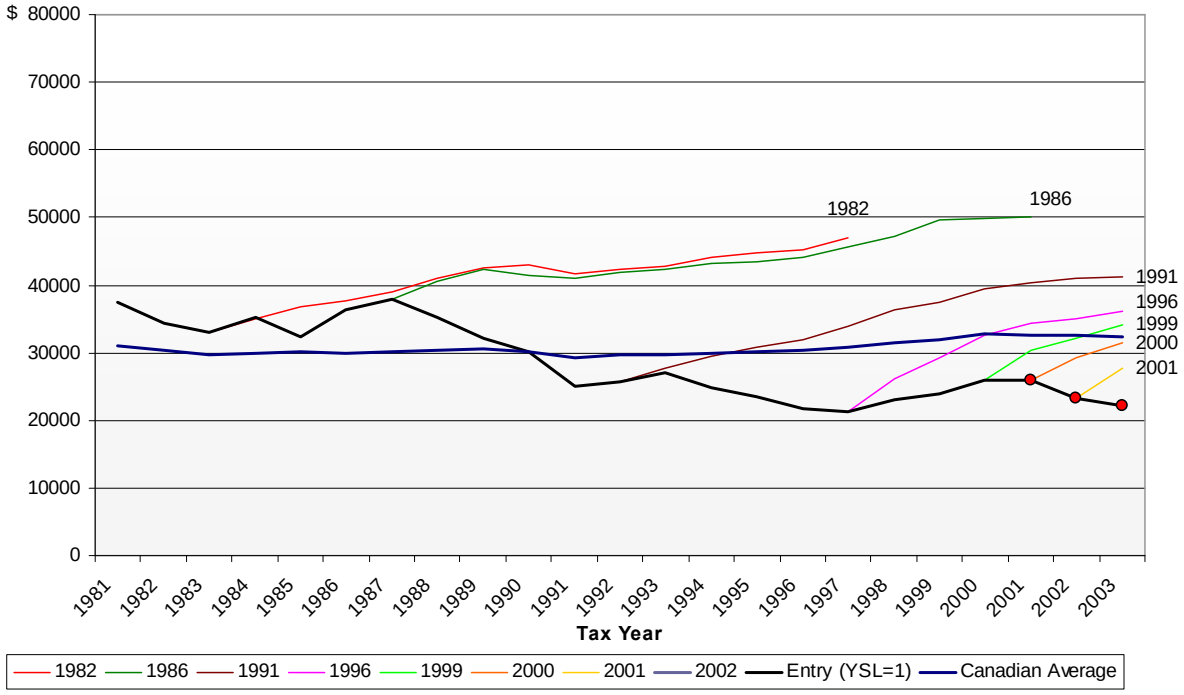
Source: IMDB

Figure 7: Average Employment Earnings (2001$) for Skilled Principal Applicants, intending to work in Professional Occupations in Natural & Applied Science (NOC=21), by Landing Year Cohort



Source: IMDB

Figure 8: Average Employment Earnings (2001$) for Skilled Principal Applicants (excluding Professional Occupations in Natural & Applied Science (NOC=21)), by Landing Year Cohort



Source: IMDB

- Figure 6 illustrates the average employment earnings of SPAs for all intended occupations. Figure 7 illustrates average employment earnings for SPAs intending to work in NOC21 only and figure 8 illustrates the average employment earnings of SPAs excluding NOC21 (professionals in natural and applied science). For those SPAs who intend to work in NOC21 (figure 7) the results show significantly higher entry and overall earnings as compared to the average (figure 6). However for 2002 and 2003 those intending to enter NOC21 have noted substantial declines in entry level earnings and this is the major factor impacting the results of the IMDB. If we exclude NOC21 (figure 8), entry level earnings of SPAs would have declined marginally during the 2002-03 period.

REAL WAGE RATES OF KEY IMMIGRANT OCCUPATIONS

- Professional occupations in natural and applied science have been the dominant intended occupational field of skilled worker principal applicants during the 1999-2003 period. Well over 50 percent of these immigrants intended to find employment in this occupational classification which is dominated by computer professionals and engineers.

Table 5: Ranking of Real Hourly Wage Rates (2001$) by Key Immigrant Occupations, 2003

Occupational Title	2003 ($/hr)
Other Engineers	31.23
Civil, Mechanical, Electrical And Chemical Engineers	29.64
Computer and Information Systems Professionals	26.99
Human Resources And Business Service Professionals	26.18
Secondary And Elementary School Teachers And Counsellors	25.12
Nurse Supervisors And Registered Nurses	24.86
Auditors, Accountants And Investment Professionals	23.68
University Professors And Assistants	22.57
Technical Occupations in Computer and Information Systems	21.85
Technical Occupations In Civil, Mechanical And Industrial Engineering	21.81
Technical Sales Specialists, Wholesale Trade	20.12
Technical Occupations In Electronics And Electrical Engineering	19.76
Mechanical, Electrical And Electronics Assemblers	17.43
Secretaries, Recorders And Transcriptionists	15.03
Machine Operators And Related Workers In Food, Beverage And Tobacco Processing	13.60
Clerical Occupations, General Office Skills	12.84
Other Assembly And Related Occupations	12.76
Labourers In Processing, Manufacturing And Utilities	12.71
Childcare And Home Support Workers	12.35
Machine Operators And Related Workers In Textile Processing	12.08
Machine Operators And Related Workers In Fabric, Fur And Leather	10.30
Retail Salespersons And Sales Clerks	10.17
Total, all occupations	**17.18**

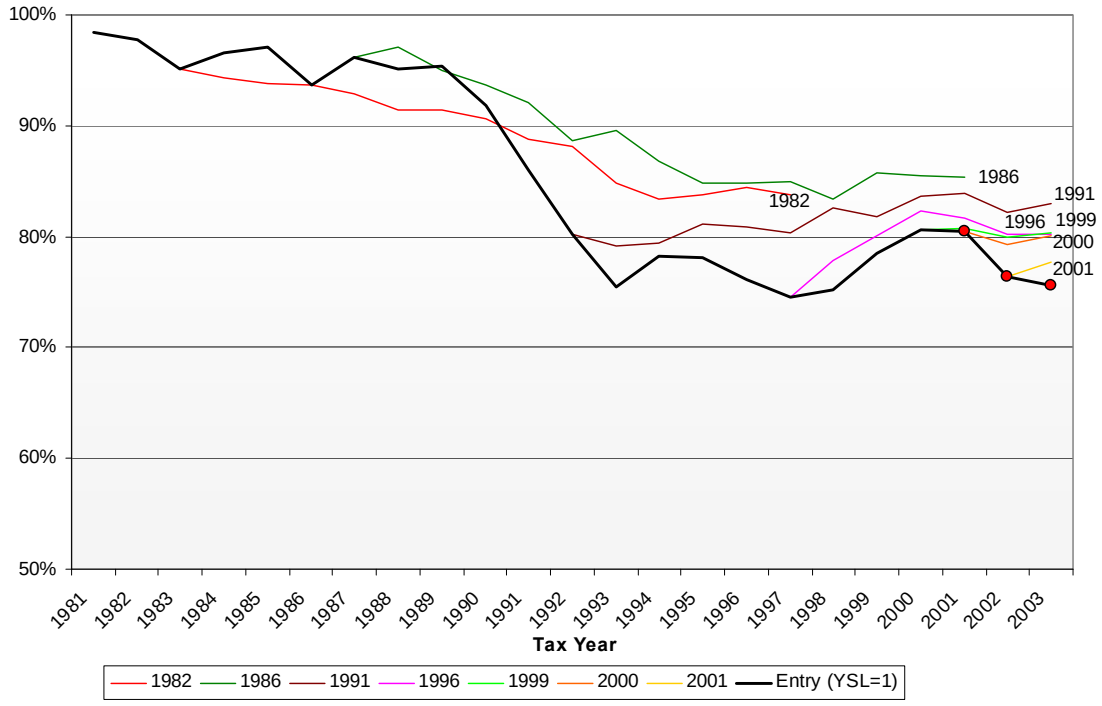
Source: Labour Force Survey, Statistics Canada

- Table 5 provides information on real wage rates of key immigrant occupational fields. An important point to take from table 5 is that computer professionals and engineers (including software and electrical engineers) are found in the natural and applied science category and are among the best paying occupations in the economy. These occupations had to endure the

high-tech “boom” and subsequent “bust” which seems to be having an impact on immigrant earnings. Given that labour market conditions in the IT (information technology) sector have deteriorated after the “bust” in 2001, it is reasonable to assume that fewer new workers (including immigrants) have been able to secure employment in the high paying IT sector. Given this condition, immigrants may be working in lower-skilled occupations to secure entry into the labour market.

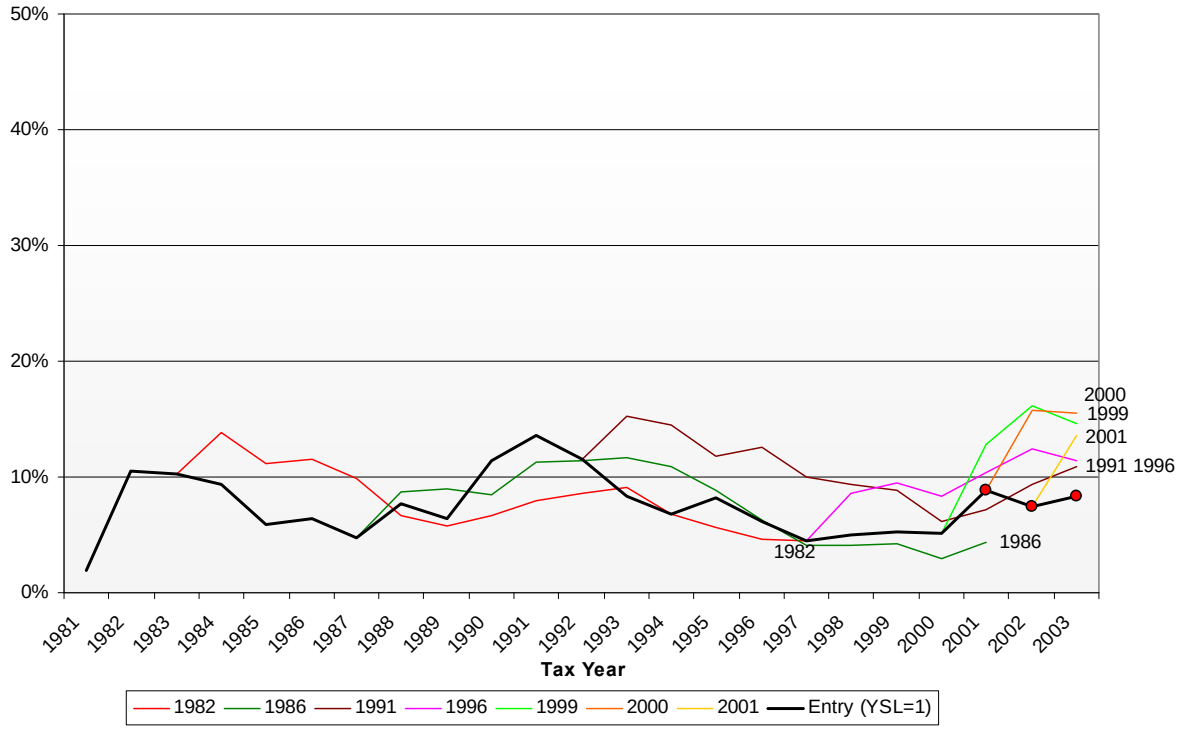
- Flows of temporary foreign workers (from the Client-Based Data System) support this argument and give an indication of the domestic labour market demand for these key immigrant occupations. For professionals in natural and applied science a total of 9,425 foreign workers were issued work permits in 2000 and this number fell to 5,695 in 2003, a 40% decline. The number of permits issued for workers going to technical occupations in natural and applied science fell by 52% during the same timeframe and the number of work permits for professionals in business and finance also fell by 42%. Under the rules of the foreign worker program job offers must be “confirmed” by HRSDC and this requirement provides some validity to the labour market requirements presented above.

Figure 9: Incidence of Employment Earnings for Skilled Principal Applicants, intending to work in Professional Occupations in Natural & Applied Science (NOC=21), by Landing Year Cohort



Source: IMDB

Figure 10: Incidence of Employment Insurance for Skilled Principal Applicants, intending to work in Professional Occupations in Natural & Applied Science (NOC=21), by Landing Year Cohort



Source: IMDB

- In addition to the flows of temporary workers, the incidence of employment earnings and employment insurance (EI) for immigrants who had intended to work in the natural and applied science sector is a gauge of the labour market conditions for these occupations. Looking at data from the IMDB, one notices a significant decline in the percentage of SPAs reporting employment earnings (Figure 9) during the most recent period. Consistent with a lower share of SPAs reporting employment earnings, a higher share was reporting EI as a source of income during the same period (Figure 10). Further, what may be the most revealing sign of the poor conditions in the IT sector was the large increase in EI (employment insurance) claims for those already in the labour market during the 2001-2003 timeframe. This underscores the fact that not only did new entrants into the labour market have difficulty with layoffs, but established workers also noted significant increases in the incidence of EI earnings.

- Perhaps the greatest disadvantage of the IMDB data is that information on actual occupation for immigrants is not available. In order to determine the impact of this occupational shift, a proxy was developed to estimate the impact on IMDB earnings. Information from the first and second waves of the Longitudinal Survey of Immigrants to Canada (LSIC), LFS, and foreign worker flows were incorporated to develop the estimates.

- These estimates assumed that workers landing after the IT “bust” had a tougher time getting a job in their intended occupation as compared to those who landed at the peak and during the

IT "boom" for professionals in natural and applied sciences. For this analysis, our calculations assumed a SPA (intending to work in NOC 21) who landed in 2000 during the height of the IT "boom" had a 60% chance of securing employment in his/her intended job. It is assumed that this share fell to 30% for those who landed in 2001-2002 coinciding with the "bust" of the IT sector. SPAs who did not secure employment within NOC21 and had employment earnings were assumed to have found jobs in other occupations and were assumed to have employment earnings equal to the SPA average for all other occupations.

Table 5b: Sensitivity Analysis of the Occupational Shift of SPAs

SHARE OF SPAs SECURING EMPLOYMENT IN INTENDED OCCUPATION by Landing Year			DOLLAR AMOUNT AND SHARE OF DECLINE IN EMPLOYMENT EARNINGS			
2000	2001	2002	Provincial Shift	Occupational Shift	Wage Change	Unexplained
60%	**30%**	**30%**	**$330**	**$6,125**	**$245**	**$200**
			4.8%	**88.8%**	**3.6%**	**2.9%**
60%	40%	40%	$330	$4,425	$325	$1,820
			4.8%	64.1%	4.7%	26.4%
60%	50%	50%	$330	$2,720	$410	$3,440
			4.8%	39.4%	5.9%	49.9%
60%	60%	60%	$330	n/a	$490	$6,080
			4.8%	n/a	7.1%	88.1%

- Table 5b outlines different possible scenarios related to the occupational shift that may explain the declines in entry level earnings for SPAs. The most likely scenario, given current information is highlighted in blue and is described in the bullet above. Under this scenario 88.8% of the earnings decline is explained by the occupational shift, 4.8% is explained by the provincial shift, and another 3.6% is explained by wage changes occurring within the major immigrant occupations. Under the 60%-30%-30% scenario only 2.9% of the decline in employment earnings experienced by SPAs remains unexplained. Examining the "no occupational shift" scenario (i.e. 60%, 60%, 60% scenario) the table shows, as expected, no decline in earnings related to occupational shift. The share explained by the wage change increases slightly as more SPAs are assumed to remain in the occupations that experienced these wage changes. Note in the absence of accounting for an occupational shift (no IT "boom", "bust" scenario), the share of the decline related to unexplained factors rises significantly. The other two scenarios presented in Table 5b show varying degrees of occupational shifts for comparison purposes.

- A key priority for further research related to the IMDB is to add an industry identifier from T4 slips that will enable identification of actual industrial classification of employment. The development of this type of data is a key piece of information since it will be able to help answer questions related to the relationship of intended versus actual occupations of newcomers. For instance, one would be able to see if an immigrant intending to be a computer programmer (which is concentrated in the professional, scientific and technical services industry) is in that industry or is, for example, in the retail trade industry (which has significant numbers of sales clerks).

- For the 2001-2002 cohorts, the shift in occupation appears to have accounted for roughly $6,125 of the $6,900 decline, representing 88.8% of the decline experienced by SPAs.

AVERAGE ACTUAL HOURS WORKED IN KEY NATURAL AND APPLIED SCIENCE OCCUPATIONS

- In addition to the possibility that fewer immigrants are finding employment in natural and applied science, the average actual hours worked by workers in key occupations within the sector have declined. Table 6 shows the average actual hours worked according to the Labour Force Survey (LFS) for key natural and applied science occupations. Note that this data is for the total Canadian labour market and that specific estimates for the immigrant-born population are not possible at this time.

Table 6: Average Actual Hours Worked (per week) for Key Occupations in Natural and Applied Science, 1999-2003

Occupations in Natural and Applied Science	1999	2000	2001	2002	2003
Civil, Mechanical, Electrical And Chemical Engineers	39.7	40.1	38.5	38.4	37.6
Other Engineers	39.1	39.6	39.8	38.0	37.1
Computer and Information Systems Professionals	37.3	37.7	36.5	36.6	35.4
Technical Occupations In Civil, Mechanical And Industrial Engineering	37.9	39.5	36.8	36.8	36.7
Technical Occupations In Electronics And Electrical Engineering	37.5	37.0	36.8	36.0	35.0
Technical Occupations in Computer and Information Systems	35.7	36.5	35.4	35.2	34.9

Source: Labour Force Survey, Statistics Canada

- The general trend in Table 6 shows that actual hours worked per week peaked in 2000 and, since that time, average hours worked have declined. The declines have been fairly consistent among all of these important occupations in natural and applied science. This data also suggests that the native-born labour market participants have seen declines in actual hours worked. The declines in the number of average hours worked per week are an indication of weaker labour demand (including the possibility of less overtime or compressed work weeks).

REAL WAGE RATES IN KEY NATURAL AND APPLIED SCIENCE OCCUPATIONS

- The earnings profile in the IMDB is related to the wages immigrants earn in their specific occupations. From the LFS wage rates by occupations can be produced for the Canadian labour market. While we cannot single out the immigrant-born population from the survey, one can nevertheless get an indication of compensation rates provided for all Canadians. Table 7 provides real wages rates (deflated using the CPI) for the identical occupations provided in Table 6.

- The real wage rates shown in Table 7 are quite variable. For instance, civil, mechanical, electrical and chemical engineers noted real declines in pay during 2002 and 2003. However, for computer and information systems professionals, steady real gains were noted.

Table 7: Average Real Hourly Wages (2001$) for Key Occupations in Natural and Applied Science, 1999-2003

Occupations in Natural and Applied Science	1999	2000	2001	2002	2003
Civil, Mechanical, Electrical And Chemical Engineers	28.85	28.52	30.25	30.01	29.64
Other Engineers	28.16	29.49	29.43	31.00	31.23
Computer and Information Systems Professionals	25.27	25.42	26.31	26.57	26.99
Technical Occupations In Civil, Mechanical And Industrial Engineering	20.41	21.60	22.66	21.81	21.81
Technical Occupations In Electronics And Electrical Engineering	19.77	20.14	20.57	20.42	19.76
Technical Occupations in Computer and Information Systems	19.49	21.63	22.59	23.20	21.85

Source: Labour Force Survey, Statistics Canada

- With the information provided in Table 6 and 7, the essential pieces are in place to determine an earnings profile for key immigrant occupations. Table 8 is an estimate of average real earnings per week of key occupations in natural and applied science (multiplication of real average hourly wage rates by actual average hours worked per week). Although the weekly earnings provided are for the total Canadian labour market, this does give an idea of the occupational earnings profile during the 1999-2003 timeframe.

Table 8: Average Real Weekly Earnings (2001$) for Key Occupations in Natural and Applied Science, 1999-2003

Key Occupations in Natural and Applied Science	1999	2000	2001	2002	2003
Civil, Mechanical, Electrical And Chemical Engineers	1145.44	1143.67	1164.63	1152.51	1114.59
Other Engineers	1100.95	1168.00	1171.31	1178.03	1158.72
Computer and Information Systems Professionals	942.61	958.46	960.32	972.49	955.38
Technical Occupations In Civil, Mechanical And Industrial Engineering	773.72	853.12	833.89	802.54	800.48
Technical Occupations In Electronics And Electrical Engineering	741.46	745.25	756.98	735.10	691.45
Technical Occupations in Computer and Information Systems	695.71	789.45	799.69	816.53	762.54

Source: Labour Force Survey, Statistics Canada

- The key points to take from Table 8 is that the prevailing trends emerging suggest that an average employee (regardless of whether they were an immigrant or not) would have seen a decline in weekly earnings, and consequently annual earnings, for most of the occupations in natural and applied science (remember that over 50 percent of skilled workers principal applicants come to work in this field). Results from the first wave of the Longitudinal Survey of Immigrants to Canada (LSIC) show that during October 2000 and September 2001, roughly 21,800 skilled worker principal applicants arrived intending to work as a professional in the natural and applied sciences. After 6 months in Canada, 38 percent of those who had found work were working in the same occupational group as originally intended.

- Data from Table 8 show declines for all occupations at some point during 2002 or 2003. For instance, civil, mechanical, electrical and chemical engineering noted real weekly earnings declines of 1 percent and 3.3 percent during 2002 and 2003, respectively. Reasons for this general decline in earnings is not fully known, but most certainly the IT “bust” has played a role in limiting wage gains and hours worked for many employed in these occupations

- For example, this suggests that a SPA who landed in 2000 and found work as an electrical engineer in 2001 would have higher earnings than a SPA who landed in 2002 and found work as an electrical engineer in 2003. For the 2001-2002 landing cohorts (2002-2003 taxation year), the deterioration in compensation for these key IT sector occupations appears to have accounted for $245 of the $6,900 decline, representing roughly 3.6% of the decline experienced by SPAs.

OTHER FACTORS

- In addition to the factors outlined above, recent research from Statistics Canada points to evidence that shows earnings of new employees have fallen during the 2002-03 period. The research done suggests that median hourly wages of male and female employees with two years of seniority or less fell during 2002-2003. This, of course, is an important point to note given recent immigrants are included in this group and the decline in earnings is an economy-wide phenomenon for new entrants into the labour market.[3]

- The overall impact of this and other unexplained factors is hard to determine, but a rough estimate of 2.9% is calculated from the total loss in earnings less the explained factors.

CONCLUSION

Data through 2003 that is now available from the IMDB show a trend of declining earnings for immigrants one year after landing. The declines are most evident for SPAs but are not confined to this group alone.

There is a combination of factors precipitating the declining earnings profile for these recent immigrants. Among the identifiable factors is a shift in actual province of residence from Ontario to other provinces (mostly Quebec). This is an important factor given that Ontario has the highest average earnings in Canada. Another important factor is Canada-wide data from the LFS that suggests the IT sector had a challenging period, especially in 2001 and 2002. Immigrants who managed to secure employment in the IT sector encountered impediments to higher earnings in the form of lower actual hours worked and marginal, if any, increases in real wages.

However, the most important factor contributing to the decline in entry level earnings of recent SPAs is related to an occupational shift. Given that labour market conditions in the IT sector deteriorated after the “bust” in 2001, it is reasonable to assume that fewer new SPAs have been able to secure employment in the high-paying IT sector. Consequently, these new workers are most likely working in lower-skilled occupations and generally lower-paying occupations to secure entry into the Canadian labour market. It is important to note that this occupational shift is based on an assumption that uses a number of data sources (LSIC, LFS, CIC administrative data) to gauge labour market conditions pre- and post- IT “bust”. As a basic description, the hypothesis assumes immigrants intending to work in the IT sector had a much better chance of securing employment in their intended occupation during the “boom” period as compared to those who landed during and after the “bust”.

[3] Morissette and Johnson, “Are Good Jobs Disappearing in Canada”, Catalogue no. 11F0019MIE — No. 239, January 2005

What may be the most revealing sign of the poor conditions in the IT sector was the large increase in EI (employment insurance) claims for those already in the labour market during the 2001-2003 timeframe. Looking at IMDB data for SPAs who intended to work in the natural and applied science sector, the data shows a large increase in the share of immigrants reporting EI as a source of income. Consistent with this trend was the fact that a lower share of SPAs reported employment earnings.

For this analysis, it is assumed that a SPA (intending to work in natural and applied sciences) who landed in 2000 and had employment earnings during the height of the IT "boom" had a 60% chance of securing employment in his/her intended job. This share fell to 30% for those who landed in 2001-2002 coinciding with the "bust" of the IT sector and the resulting spike in the incidence of EI. This assumption is based on the best available data which support the argument that is being presented. Data development that is currently underway will incorporate the actual industry of employment in the IMDB. This development will allow for further industry analysis. It will not only strengthen the results presented here, but it will also allow for improvements to CIC's labour market early warning capacity.

Is this decline in entry level earnings related to changes in immigration policy or is it about domestic labour market conditions? From the labour market perspective, research done to date points to the fact that large numbers of IT professionals arrived at an inopportune time in terms of domestic labour market conditions in the IT sector. From the immigration policy perspective, new selection criteria has placed greater emphasis on human capital than in the past. Many occupations within the IT sector require high levels of education and the move toward higher levels of human capital may have added to the oversupply of qualified workers in this specific segment of the labour market.

The analysis of the IMDB and other data sources enabled the calculation of specific factors on the overall earnings declines for SPAs. The best estimate, at the current time, shows that an occupational shift out of IT related jobs and lower earnings in the sector appear to have accounted for 92.3% of the decline in earnings of SPAs. Changes in place of residence for SPAs accounted for 4.8% of the decline. There may be other factors affecting the outcomes of new SPAs, including lower hourly earnings for new entrants in the labour market, and other unknown factors. These factors are estimated to contribute 2.9% of the decline in earnings.