DESCRIPTION OF THE METHODOLOGY

USED TO CREATE MIGRATION DATA

FROM TAXATION RECORDS

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Updated Report by
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Report on the Methodology of
Migration Data from Taxation Records

Updated by
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Linda Standish
March 1993

Based on:
"A Technical Report on the Development of
Migration Data from Taxation Records"

Written by
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May 1983

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MIGRATION METHODOLOGY

1. INTRODUCTION:

Annual data on migration are very important to policy analysts, especially for those concerned with programs funded by various levels of government. Migration data are also key components of annual estimating of population, and for forecasting future population of a region.

Prior to migration data being produced from tax records, the main source of information was questions on the Census of Population which takes place every five years, and these questions measured where one lived five years ago, or the number of moves in a five year period. Beginning with the 1991 Census of Population, respondents were asked to report in which province they lived one year prior to Census Day. In the 1996 Census of Population, data were collected on the location of where one lived one year prior to Census Day, which resulted in migration data being available for various levels of geography.

This report provides a brief history of annual migration data methodology, and a description of the current methodology. New since the last methodology report was written is the production of migration estimates for census metropolitan areas (CMAs), beginning with the 1992-93 migration period.

2. METHODOLOGY:

About 70% of the Canadian population file a tax return each year, and by comparing the place of residence at the time of filing, it is possible to identify for those who file in two consecutive years, those who move, their place of origin, and their destination. There are a number of geographic identifiers on the file which are used to determine migration flows. Currently data are produced to show migration flows between census divisions, and also between census metropolitan areas, and within each province there is also an aggregation of non-census metropolitan areas. In addition, international flows between census divisions or census metropolitan areas/non-census metropolitan areas, to or from outside Canada are produced.

To produce migration data which reflect the movement of the total population, it has been assumed that the non-filing dependents of the tax filer will have the same migration patterns as the tax filer. Dependent information is gleaned from the tax filer's information, and from other sources including the Child Tax Benefit program, and the Vital Statistics' Birth file.

To date, migrants have been grouped by gender and broad age groups, and future consideration may be given to aggregating the data to income groups, or to provide other economic data so that analysis of why people migrate might be done. The broad age groups since 1981-82, are: 0-17, 18-24, 25-44, 45-64, 65+. Previously they were 0-15, 16-24, 25-44, 45-64, 65+.

2.1 Source Data:

2.1.1 Revenue Canada Tax file:

The main data source is the Revenue Canada Master Tax file, which contains a micro data record for each individual filing a tax return: 20,536,000 records for the 1995 tax year.

Prior to 1988 Tax Reform, the following variables from the tax file were used to estimate migration:

- postal code (part of mailing address)
- locality code (assigned by Revenue Canada, Standard Geographic Coding)
- year of birth of tax filer
- gender of tax filer
- marital status of tax filer
- dollar value of total personal exemptions claimed
- class code, indicating immigration/emigration to/from Canada during tax year.

As no direct information on the dependents of tax filers appeared on these records, prior to 1988, a second Revenue Canada file, containing a 2% sample of taxfilers, along with their dependent information (number of dependents and relationship to filer), was used to estimate dependent information for all taxfilers.

The 1988 Tax Reform replaced personal tax exemptions with non-refundable tax credits. This change resulted in the inability of the migration system of that time to assign non-filing dependents to taxfilers. Therefore, a new method of estimating non-filing dependents was developed and implemented in the 1989-90 migration period, based on the creation of family data. The following fields from the tax file after the 1988 reform became useful in estimating dependents:

- child tax credit
- chid tax benefit (replaced family allowance)
- child care expense deduction
- exemption claim for children
- exemption for spouse
- spousal social insurance number (SIN)
- marital status

In the 1993 tax year, Family Allowance was replaced by Child Tax Benefit, which unlike its predecessor, is not universal in coverage. Thus a combination of data from Revenue Canada's Child Tax Benefits file, Births File (created from provincial files of birth registrations) from Health

Statistics Division of Statistics Canada, and an historical family file created from the previous year's tax file are now used to estimate children and match them to filing parents.

2.1.2 International Migration Files:

International migrant data are produced from two sources: tax data and immigration/emigration records received from Human Resources Development Canada (HRDC), and the Demography Division of Statistics Canada. International migrant tax data differ from HRDC data in that tax data include data from returning Canadians (including military and embassy staff). Beginning with 1996-97 migration, it will be possible to identify immigrants separate from returning Canadians.

The immigration/emigration files from HRDC and Demography Division along with the tax data are used to create the international component of migration data. The tax data provide the distribution ratio amongst areas at the sub-provincial level for each province/territory, and the HRDC/Demography data are used to determine the actual number of immigrants/emigrants for each province/territory.

Preliminary data from HRDC/Demography are used initially to produce the first set of migration data for each time frame. Then approximately 12 to 15 months later, final data are received from HRDC/Demography and then the flows of migrants to and from Canada are up-dated for each geographic area.

2.2 Summary of the Method:

The four main steps in producing migration data are:

1. Geographic coding of tax records
2. Estimation of dependents and non-filing individuals
3. Identification of migrant tax filers by age group and gender
4. Adjustment for the population not covered as a tax filer or dependent

2.2.1 Geographic Coding:

The only geographic coding on these administrative (tax) records, initially, is the address, including the postal code, which now is a part of virtually all filing addresses. The postal code provides a summary of filing address information. Tax records also contain a "locality code" assigned by Revenue Canada based on place name, which is a combination of Standard Geographic Classification codes used by the Census. Note, that as the tax return is usually submitted several months after the end of the tax year, the postal codes will be those existing in the spring of the year following the tax year. About 99% of all tax records were filed with a postal code, or were assigned one, based on the filer's address by matching the address to a file similar to the Postal Code Directory from Canada Post.

The postal code on each tax record is then matched to a geography basefile to pick up additional geographic information such as CD (census division, county or regional municipality/district) and CMA (census metropolitan area) code; the geographies used in the

migration process.

2.2.2 Estimation of Dependents:

Before 1989-90, the estimation of dependents was done using an "inference" table developed from a sample tax file which contained demographic data on dependents. The table was then used to assign dependents to each tax filer, based on personal exemptions. Further details on this method are described in the "Technical Report on the Development of Migration Data from Taxation Records" by Douglas Norris and Linda Standish, and updated in March 1993 by Kara Montgomery and Linda Standish.

The current method uses the family data created from the tax file, by linking all filing family members together, using spousal SIN numbers, marital status, and matched addresses. This system imputes a non-filing spouse whenever a filer has declared himself/herself married but was not linked to a filing spouse. Children are imputed based on Child Tax Benefit data, which carry the SIN of the parent receiving the benefit, and newborns are added to tax filer records from the Births file from Vital Statistics, and in addition an historical file of imputed children is created from the previous year's tax file.

The family data from the tax file are then used to create a file of individual tax filers for the migration system. The migration file contains information for each tax filer and assigns dependents to each tax filer based on the number of filers in the family, and the number of dependents. If only one parent in the family has filed a tax return, then all dependents, including the spouse, if one exists, are added to the tax filer's record. If both parents filed tax returns, and their family record contained dependent children, then each tax filer would receive half the count of dependents.

If not already present, the age of the dependent spouse is estimated in the family system. The age of imputed children is provided (date of birth) on Child Tax Benefit records, Vital Statistics records (from Health Statistics Division), and from the historical family file. The family system does not impute gender for non-filing children. However, in migration, to compensate for this, each dependent child (aged 0-17 or 18-24) is assigned a male/female ratio based on the most current Census information, and thus the filer's record will carry both a male and female value, with the sum = 1 for each dependent child.

The current method of estimating non-filing dependents, based on Child Tax Benefits, which is not a universal benefit, has resulted in the loss of some information. However, using both the Births file from Vital Statistics and the historical family file from the previous tax year minimize this loss of information. The current method of estimating dependents also results in the loss of information on elderly relatives, but at the same time, it is more likely that these people will now file tax returns as they would be eligible for GST and other credits. In addition, the previous method in some cases double counted spouses (usually women) as both dependents and filers.

2.2.3 Identification of Migrant Tax Filers

After assigning the geography codes and non-filing dependents to each tax filer, records for two consecutive years are matched by SIN number, and migrant tax filers are identified by comparing current and previous geography codes (census divisions or census metropolitan

areas). After tabulating the "at risk" population, only records with a change in geographic coding are kept further in the migration process. Thus, with the exception of immigrants, it is only possible to determine migrant status for those who file two consecutive years. In 1995, 94% of tax filers also filed in the previous year. The identification of migrants is based on their address at the time of filing, and thus the migration period is not precisely one year, but is normally the period of April to April, of the year following each tax year. Adjustments are made to these counts to produce estimates for June to June.

The basic assumption underlying this method of estimation is that the address declared on the tax return is the residence of the filer. However, this address could also be that of the filer's business, a postal box, or that of a third party. Since the level of geography for migration is the census division or census metropolitan area, normally the filer will live in the same geographic region as the address from where he/she files, even if it is not their residence.

International migrants present special challenges. Immigrants are identified in one of two ways. If a person filed a tax return for the current year and not for the previous one, but indicated they had entered Canada during the current year, then they are counted as an immigrant. Note that, unlike other moves which occurred between April and April, these immigrants entered Canada during the taxation or calendar year. A second type of immigrant is one who filed in both years; the first year from outside Canada, and the second year from within Canada. Usually these persons are Canadians temporarily abroad, such as military/embassy staff. Emigrants are identified only if they file in both years; the first year from within Canada and the second year from outside Canada. People exiting Canada may file a tax return that year for a number of reasons related to a legal requirement or to choice in order to obtain a refund due to them.

2.2.4 Adjustment for Coverage

The final adjustment for coverage makes the assumption that the population in a given age-gender group that is not covered by the tax data has the same probability of migrating as the covered population. It also adjusts the counts to the June reference period. Therefore, using population estimates from Demography Division for each geographic area, it is possible to create an estimate of coverage, and then weight the observed migration, using the inverse of the coverage ratio, to produce the final estimates of the migration patterns of the total population.

An evaluation of the data suggested that some census divisions tend to have high over- or under-coverage (more than 10% above or below the provincial average). See the list of census divisions with extreme coverage in **Appendix A**, for 1995-96 migration. In these cases it was identified that using the census division weighting factor caused "over-adjusting", so for these areas, the provincial weighting factor was used instead. This problem tends to occur in rural areas where there is not a good match between Census geography and postal code geography (rural routes covering large areas crossing CD boundaries).

2.2.5 Other Adjustments

As noted above, the use of postal codes can in some cases cause spurious migration, because of postal codes crossing other geographic boundaries. Non-residential addresses on the tax file can be problematic such as when a person files from his/her office or uses an accountant who may change address or change accountants from one year to the next. In addition, Revenue

Canada assigns a Locality Code to each record, based on the municipality used by the filer in his/her address. These locality codes are based on SGC coding, and they are used to create the geographic codes when there is no valid postal code on the tax record. However in some cases there are several municipalities within a province with similar names which can result in an incorrect locality code being assigned. Therefore verification of suspect migrant records is done to ensure that spurious migrants are removed from the migration process.

These verifications include the removal of records with postal codes occurring primarily with address information in the "in care of" line. Records with census division changes where the locality code was stable are also examined and often removed. Any high-frequency flow from one single postal code to another (or one FSA to another) is also examined.

3. EVALUATION OF ESTIMATES

3.1 Evaluation Strategies:

An important dimension of the work on developing tax records (to produce migration estimates) has been the assessment of the quality of the estimates. There has been an attempt to validate the assumptions made in the migration methodology. Population estimates are created from tax data, and are compared with the Census population counts. **Appendix C** provides a provincial coverage report comparing 1995 population estimates from tax data to 1996 Census of Population data. Unfortunately it is not possible to provide coverage reports for census divisions and census metropolitan areas comparing 1996 Census data and 1995 tax data because the tax file (filed in 1996) carries 1991 SGC codes for these areas, as the conversion file for postal codes to 1996 SGC codes was not available at the time the 1995 tax file was processed. This report, though, shows that tax data and Census population counts are very close at the provincial level.

In addition, the count of tax filers and dependents from tax data can be compared to population estimates from the Demography Division of Statistics Canada. These comparisons are different than those done in the migration system to adjust the counts for the non-filing population, because in migration, the non-filing population includes those who did not file for two consecutive years. Also this adjustment in migration is to the census division (or CMA) of origin, the first year of the migration process (thus the year prior to the period the attached coverage ratios are produced for).

3.1.1 Census Division Migration

Appendix B provides a coverage report comparing counts of tax filers and dependents from tax records and population estimates from the Demography Division of Statistics Canada (adjusted each year for births, deaths, and also with migration data from the tax file) for census divisions, and Provinces for 1996 (1995 tax information is filed in 1996).

3.1.2 Census Metropolitan Area Migration

Appendix D provides coverage reports based on 1995 tax data (tax filers and dependents who filed in 1996) and 1996 Demography population estimates for Census metropolitan areas.

3.2 Discussion of Assumptions

3.2.1. General Comments

The previous section of this report contains a description of the methodology used to produce the tax estimates. Embedded in the method are several assumptions. Swain (1981) examined the methodology and identified the most important assumptions. The main assumptions embedded in the model fall into four general areas:

> i)   use of mailing address as a geographic identifier,
> ii)   the estimation of dependents,
> iii)   the assumption that dependents move with the taxfiler, and
> iv)   the assumptions for non-filers implicit in any coverage adjustment.

3.2.2 Mailing Address

Although the postal code is an efficient way of assigning geographic codes to the tax records, there are several potential problems.

The postal code usually refers to a residential address, but it may also refer to a convenience address such as a business address, post office box, accountant's address, etc. Such non-residential addresses may result in errors in coding census divisions but more importantly, these may also result in spurious migration. For example, a person may file a tax return from their residence one year and from an accountant's office the following year. If the accountant's office is in another census division, the individual would be counted as a migrant. A larger problem is the case where the accountant's office moves from one census division to another; resulting in all clients using the accountant's addresses being counted as migrants. Although measuring the exact size of the use of non-residential addresses is not possible, it is thought to be small (1-3% of all tax filers). Edits have been made to look for extreme cases (e.g. many tax filers from a single postal code) and these are followed up to determine if the records should be dropped, thus avoiding spurious migration.

The use of postal codes can result in incongruity between postal code service areas and census divisions. The problem may arise in rural areas where a postal code service area is large and crosses one or more census division boundaries. Since the postal code is assigned to only one census division, a certain amount of misallocation can occur. There may be positive and negative misallocation that cancels out in some census divisions, but geographic misallocation may result in net under or over-coverage. It is important to note that provincial totals are not affected by this problem.

Another problem related to geographic coding is the inconsistent coding over time. In a few cases, changes in postal codes (e.g. a suburban area acquiring door to door delivery) and corrections to postal codes result in spurious migration. Similar problems can be caused when in one year, an individual reported a postal code, but in the following year the postal code was missing and the locality code was used to assign a census division. Although in 98.5% of the cases, both postal code and locality code assigned the same census division; in the remaining cases an individual may have been counted as a migrant if coded from different sources in consecutive years.

Postal code software has been developed to verify and re-code postal codes from mailing addresses. Using this software, about 99% of all records contain or are assigned postal codes. The increased use of postal codes leads to a reduction in spurious migration flows and therefore more accurate data. Although the overall effect on the migration data is minor, there may be noticeable effects in specific geographic locations where the postal code and locality code are inconsistent.

Assigning either a postal code or locality code based on a filer's address can be somewhat problematic where there are several municipalities with similar names and also a variety of spellings. This is more likely to be a problem in Quebec, especially for municipalities named after "Saints", but is also a problem elsewhere where there are duplicate names. Checks are made to eliminate as many such records as possible when they appear to be spurious migrants.

A final geography problem relates to deceased and bankrupt tax filers. One of the fields on the tax record identifies tax filers who died, went bankrupt or immigrated and emigrated during the tax year. In the case of deaths, it is not possible to know if the address of the filer was the address at the time of the filer's death, and therefore the move preceded the death, or if the address was that of the estate manager. In the case of bankruptcies and other miscellaneous codes, there is similar uncertainty about the mailing address. Therefore in these cases, it was decided to exclude the records from the migration processing, unless the person had a filing spouse with a residential address in Canada and then in these cases the deceased or bankrupt filer was assigned the geography of the filing spouse. It is estimated that cases of records being excluded from migration account for approximately 3% of filers; most of these being bankrupt or deceased filers.

As described above, the accuracy of the geographic coding in the migration system is very important. Numerous improvements have been made to the geographic coding within the system which allows for more accurate data. Unfortunately, the problems that remain lie with the postal code assignment by Canada Post and cannot be tackled by the Small Area and Administrative Data Division. An example of such a problem: Canada Post providing a Post Office Box in one census division for residents who live in another census division.

3.2.3 Estimation of Dependents

Family data are created from the Revenue Canada tax file, by linking all filing family members together (including filing children), using spousal SIN numbers, marital status, and matched addresses. This system imputes a non-filing spouse whenever a filer has declared himself/ herself married but was not linked to a filing spouse. Non-filing children are imputed based on Child Tax Benefit data, which carry the SIN of the parent receiving the benefit, and newborns

are added to tax filer records from the Births file from Vital Statistics, and in addition an historical file of imputed children is created from the previous year's tax file. This information is then used as the input file for the migration system.   The data developed in this family system, have been compared with the 1996 Census and the 1995 tax filer and dependent data (from this family system) covered 99.9% of the 1996 Census population.

3.2.4 Assumption of Dependents Moving with Tax Filers

In addition to estimating the number of dependents, an assumption is made that dependents move with the tax filer. Although this is generally the case, since most dependents are children or spouses, the assumption may be more problematic in cases of separation or divorce, or cases of older dependents who form their own households. As well, there are cases of short term moves where tax filers may move on their own, temporarily leaving the family. As stated earlier, the assignment of dependents to respective tax filers is based upon the number of filing parents in a family. Thus, the assignment of children to each tax filer may be incorrect with separated or divorced families.

3.2.5 Coverage Adjustment

An important step in the development of tax migration estimates is the adjustment or weighting of the data to the total population. The primary purpose of the adjustment is to account for the population not covered by the tax system as either a tax filer or dependent. However, the adjustment also considers two other dimensions of coverage including: (1) non-matching of tax filers in two consecutive years; and (2) geographic misallocation.   The adjustment for coverage is actually an adjustment for the net effect of these factors. Since the coverage adjustment is a simple weighting of the estimated tax filers and dependents to the total population, bias will be introduced if either of the groups mentioned above have migration rates substantially different from the overall average. It is difficult to untangle the possible bias that may be introduced by the net coverage adjustment. Empirical comparisons have shown two possible problem areas.

First, in those census divisions where geographic misallocation is significant, the coverage adjustment may introduce bias in the estimate of net migration since it is applied only to the origin of moves. This adjusts out-migration but not in-migration. Therefore, if geographic mis-assignment results in under-coverage, the coverage adjustment modifies the out-migration but not the in-migration and the result is net migration is under-estimated. The opposite occurs if there is over-coverage because of geographic misallocation.

Second, the coverage adjustment also seems to lead to an over-estimation of out-migration and therefore an under-estimate of net-migration when coverage is low because of levels of tax filing. During the pre-tax credit period, a principal reason for low levels of tax filing was low income. Over-estimation of out migration may be because low income persons have much lower than average mobility. With the introduction of the Federal Sales Tax Credit in 1986 and the Goods and Services Tax Credit in 1990, most of the population is being covered through the tax system. **Appendix C** contains provincial population coverage of the 1995 T1 Family File (tax filers and dependents) compared with the 1996 Census of Population.

Both of the above problems were noticed in evaluations of earlier migration data (1971-72 to 1975-76). A modification was applied to the 1976-77 migration data: the provincial coverage

rates were used for census divisions that had extremely high or low coverage. The change resulted in using smaller adjustments to outward migration flows and thus improved the estimation of net migration. The shortfall of this adjustment was the continuation of higher than average errors for census divisions with extreme coverage rates. The "extreme" census divisions for 1995-96 Migration are listed in **Appendix A**.

3.3 Other Dimensions of Data Quality

3.3.1 Timeliness

The tax data for a given year, say 1995-96, are based on a comparison of tax returns for years 1994 and 1995, these being filed in approximately April 1995 and April 1996. The tax data for each year are received approximately 8 months after the April filing date and then 7 to 8 months is required for processing. The observations are adjusted to population estimates of July 1/June 30, resulting in migration estimates for that time period.

Thus, the migration estimates are produced with a time delay of approximately 15 months. This is a substantial delay and limits the usefulness of the data in producing timely population estimates. On the other hand, the detail on migration flows by origin and destination are only available from the Census of Population once every five years. In comparison, the tax data provide more frequent and timely data on migration.

3.3.2 Demographic Detail

An important strength of the tax migration data is the level of demographic detail available. Although not as extensive as that available from Census data, the tax data are available annually allowing for much more thorough time series analysis of migration trends. Compared with other estimates such as those derived from Child Tax Benefit (CTB) data or residual estimates of net migration, tax data provide much more detail on migration. Migration flows between census divisions and between census metropolitan areas are available by major age groups and gender.

4. A DESCRIPTION OF THE MIGRATION DATA

4.1 Migration Data Base

The final output of the annual migration production for 1976-77 to 1995-96 is contained within annual files showing migration flows among all census divisions in Canada, and international flows to and from these census divisions. From the migration period of 1992-93 on, files also exist for census metropolitan areas. This data base can be used to provide detailed data for a specific census division or a region that is an aggregate of census divisions (e.g. a province). It also provides comparative data on mobility across census divisions/census metropolitan areas. The data are available in four tables containing five years of migration data, enabling comparisons on the mobility of tax filers to be made.

4.2 Standard Tables:

To summarize the migration data available, several standard tabulations exist. Each table shows annual data for each census division (for five years) or census metropolitan area (4 years currently exist). The tables are:

A)   Total In, Out and Net Migration by province;

B)   Total In, Out and Net Migration by Age Group;

C)   Total In, Out and Net Migration by Type - (Intraprovincial, Interprovincial, International) and Gender; and

D)   Major Migration Flows (based on churn rate for the current period > 10) by Origin/Destination - Ranked by Gross Migration and showing Net Gain and Net Loss.

4.3 Availability of Migration Data

The above tables can be obtained on a cost recovery basis. To request tabulations or to obtain further information, please contact:

Statistics Canada,
Small Area and Administrative Data Division,
Room 1306, Statistics Canada Building,
Tunney's Pasture,
Ottawa, Ontario,
KIA OT6
TEL: (613) 951-9720
FAX: (613) 951-4745

CENSUS DIVISIONS WITH EXTREME COVERAGE
(1995-96 CD Migration)
(based on Year 1 population counts, as of June 30, 1995)

Province	**Census Division**
NOVA SCOTIA	
Hants County	1208
Victoria County	1218
NEW BRUNSWICK	
Sunbury County	1303
Albert County	1306
Victoria County	1312
QUEBEC	
Témiscamingue	2485
Maria-Chapdelaine	2492
MANITOBA	
Census Division 10	4610
Census Division 13	4613
Census Division 18	4618
Census Division 19	4619
BRITISH COLUMBIA	
Stikine	5957
Fort Nelson-Liard Regional District	5959

APPENDIX B
Coverage Ratios By Census Division (CD)

CD Name	CD	Population Estimates (Demography) (July 1, 1996)	Tax Filers and Dependents (SAADD) 1995 (Filed in 1996)	Coverage Ratio (%)
Canada		**29963631**	**28815030**	**96.2**
Nfld. - T.-N.		**570711**	**564940**	**99.0**
Division No. 1	1001	258203	254230	98.5
Division No. 2	1002	29137	28900	99.2
Division No. 3	1003	23454	23450	100.0
Division No. 4	1004	25706	26030	101.3
Division No. 5	1005	45447	45170	99.4
Division No. 6	1006	40353	40490	100.3
Division No. 7	1007	43170	42800	99.1
Division No. 8	1008	50368	49750	98.8
Division No. 9	1009	23968	23600	98.5
Division No. 10	1010	30905	30510	98.7
P.E.I. - Î.-P.É.		**137312**	**135120**	**98.4**
Kings	1101	20280	19330	95.3
Queens	1102	71270	69280	97.2
Prince	1103	45762	46510	101.6
N.S. - N.É.		**942796**	**915270**	**97.1**
Shelburne	1201	17618	17290	98.1
Yarmouth	1202	28595	28530	99.8
Digby	1203	21310	19840	93.1
Queens	1204	12909	13190	102.2
Annapolis	1205	23307	21020	90.2
Lunenburg	1206	49351	45380	92.0
Kings	1207	61515	60340	98.1
Hants	1208	41180	44020	106.9
Halifax	1209	355238	340010	95.7
Colchester	1210	50492	48990	97.0
Cumberland	1211	35090	34190	97.4
Pictou	1212	50240	49790	99.1
Guysborough	1213	11273	10540	93.5
Antigonish	1214	19956	19980	100.1
Inverness	1215	21543	21650	100.5

Richmond	1216	11392	10740	94.3
Cape Breton	1217	123029	122180	99.3
Victoria	1218	8758	7600	86.8
N.B. - N.-B.		**762501**	**749550**	**98.3**
Saint John	1301	82844	81910	98.9
Charlotte	1302	28673	29100	101.5
Sunbury	1303	23805	19860	83.4
Queens	1304	13034	12720	97.6
Kings	1305	66409	62010	93.4
Albert	1306	26538	21070	79.4
Westmorland	1307	124573	126720	101.7
Kent	1308	33518	32660	97.4
Northumberland	1309	54998	55820	101.5
York	1310	89469	89000	99.5
Carleton	1311	27704	27480	99.2
Victoria	1312	22433	25230	112.5
Madawaska	1313	37860	35340	93.3
Restigouche	1314	39620	39460	99.6
Gloucester	1315	91023	91180	100.2
Que. - Qc		**7389137**	**7121990**	**96.4**
Les Îles-de-la-Madeleine	2401	14362	14210	98.9
Pabok	2402	21863	21780	99.6
La Côte-de-Gaspé	2403	20769	21210	102.1
Denis-Riverin	2404	14207	14210	100.0
Bonaventure	2405	20465	20500	100.2
Avignon	2406	16170	16260	100.6
La Matapédia	2407	21097	21250	100.7
Matane	2408	24160	24030	99.5
La Mitis	2409	20513	20300	99.0
Rimouski-Neigette	2410	53286	52930	99.3
Les Basques	2411	10236	10480	102.4
Rivière-du-Loup	2412	31952	32220	100.8
Témiscouata	2413	23868	23370	97.9
Kamouraska	2414	23397	23360	99.8
Charlevoix-Est	2415	17252	17030	98.7
Charlevoix	2416	13570	13430	99.0
L'Islet	2417	20493	20190	98.5
Montmagny	2418	23684	23920	101.0
Bellechasse	2419	30088	29900	99.4
L'Île-d'Orléans	2420	6978	6840	98.0
La Côte-de-Beaupré	2421	22636	22200	98.1

La Jacques-Cartier	2422	27282	25070	91.9
Communauté urbaine de Québec	2423	526043	498600	94.8
Desjardins	2424	52712	51530	97.8
Les Chutes-de-la-Chaudière	2425	77061	76190	98.9
La Nouvelle-Beauce	2426	25758	25560	99.2
Robert-Cliche	2427	18811	19100	101.5
Les Etchemins	2428	19137	18440	96.4
Beauce-Sartigan	2429	46721	47070	100.7
Le Granit	2430	22368	21790	97.4
L'Amiante	2431	45701	45450	99.5
L'Érable	2432	25593	24730	96.6
Lotbinière	2433	27725	27420	98.9
Portneuf	2434	47116	45390	96.3
Mékinac	2435	14032	13390	95.4
Le Centre-de-la-Mauricie	2436	69262	68510	98.9
Francheville	2437	143083	139630	97.6
Bécancour	2438	20213	20030	99.1
Arthabaska	2439	64227	63630	99.1
Asbestos	2440	15302	15590	101.9
Le Haut-Saint-François	2441	21926	21000	95.8
Le Val-Saint-François	2442	34486	34480	100.0
Sherbrooke	2443	136136	131790	96.8
Coaticook	2444	16536	15310	92.6
Memphrémagog	2445	39825	40240	101.0
Brome-Missisquoi	2446	46782	45080	96.4
La Haute-Yamaska	2447	79214	78630	99.3
Acton	2448	15889	15640	98.4
Drummond	2449	85622	84710	98.9
Nicolet-Yamaska	2450	24668	24290	98.5
Maskinongé	2451	24440	24190	99.0
D'Autray	2452	41225	40790	98.9
Le Bas-Richelieu	2453	54158	53720	99.2
Les Maskoutains	2454	80647	78940	97.9
Rouville	2455	33511	30890	92.2
Le Haut-Richelieu	2456	102018	98050	96.1
La Vallée-du-Richelieu	2457	119957	122930	102.5
Champlain	2458	333268	309910	93.0
Lajemmerais	2459	98621	90820	92.1
L'Assomption	2460	107404	103470	96.3
Joliette	2461	51377	50390	98.1

Matawinie	2462	40999	41100	100.2
Montcalm	2463	39075	38620	98.8
Les Moulins	2464	108863	104910	96.4
Laval	2465	347643	330510	95.1
Communauté urbaine de Montréal	2466	1831849	1730450	94.5
Roussillon	2467	144001	137040	95.2
Les Jardins-de-Napierville	2468	23824	22970	96.4
Le Haut-Saint-Laurent	2469	24192	24180	100.0
Beauharnois-Salaberry	2470	62011	60790	98.0
Vaudreuil-Soulanges	2471	98448	95070	96.6
Deux-Montagnes	2472	83608	79430	95.0
Thérèse-De Blainville	2473	124211	119810	96.5
Mirabel	2474	22858	21750	95.2
La Rivière-du-Nord	2475	87152	86070	98.8
Argenteuil	2476	28491	27770	97.5
Les Pays-d'en-Haut	2477	28608	30110	105.3
Les Laurentides	2478	36694	37390	101.9
Antoine-Labelle	2479	34256	33870	98.9
Papineau	2480	21320	19890	93.3
Communauté urbaine de l'Outaouais	2481	229065	217490	94.9
Les Collines-de-l'Outaouais	2482	33065	29990	90.7
La Vallée-de-la-Gatineau	2483	20594	20180	98.0
Pontiac	2484	15788	15120	95.8
Témiscamingue	2485	18382	21420	116.5
Rouyn-Noranda	2486	43424	39740	91.5
Abitibi-Ouest	2487	24406	23990	98.3
Abitibi	2488	25887	25650	99.1
Vallée-de-l'Or	2489	45368	44900	99.0
Le Haut-Saint-Maurice	2490	16829	16460	97.8
Le Domaine-du-Roy	2491	34804	34200	98.3
Maria-Chapdelaine	2492	29039	32270	111.1
Lac-Saint-Jean-Est	2493	52841	51020	96.6
Le Fjord-du-Saguenay	2494	180222	173520	96.3
La Haute-Côte-Nord	2495	13785	13720	99.5
Manicouagan	2496	37279	37310	100.1
Sept-Rivières - Caniapiscau	2497	42481	40080	94.3
Ming.-Côte-N-du-Golfe-St-Laurent	2498	13311	13260	99.6
Territoire nordique	2499	37561	37990	101.1

Ontario		**11252425**	**10724610**	**95.3**
Stormont, Dundas and Glengarry	3501	116998	114430	97.8
Prescott and Russell	3502	77532	74690	96.3
Ottawa-Carleton	3506	762971	703700	92.2
Leeds and Grenville	3507	100545	96650	96.1
Lanark	3509	62519	60430	96.7
Frontenac	3510	139528	129670	92.9
Lennox and Addington	3511	41176	38660	93.9
Hastings	3512	128711	129600	100.7
Prince Edward	3513	25648	24140	94.1
Northumberland	3514	84631	75600	89.3
Peterborough	3515	128274	122560	95.5
Victoria	3516	71295	68940	96.7
Durham	3518	480334	454130	94.5
York	3519	622774	588500	94.5
Toronto Metropolitan	3520	2446123	2349960	96.1
Peel	3521	901384	849150	94.2
Dufferin	3522	47548	45240	95.1
Wellington	3523	179808	168550	93.7
Halton	3524	356257	335650	94.2
Hamilton-Wentworth	3525	489943	460750	94.0
Niagara	3526	422622	405140	95.9
Haldimand-Norfolk	3528	108908	106090	97.4
Brant	3529	125195	118650	94.8
Waterloo	3530	428426	407860	95.2
Perth	3531	75819	72980	96.3
Oxford	3532	103161	101190	98.1
Elgin	3534	83657	81450	97.4
Kent	3536	115955	117530	101.4
Essex	3537	367329	350740	95.5
Lambton	3538	136870	129410	94.5
Middlesex	3539	410060	387460	94.5
Huron	3540	62470	56830	91.0
Bruce	3541	70825	70870	100.1
Grey	3542	89915	81740	90.9
Simcoe	3543	344766	333240	96.7
Muskoka	3544	52054	48930	94.0
Haliburton	3546	15808	14730	93.2
Renfrew	3547	103944	99040	95.3

Nipissing	3548	89301	85730	96.0
Parry Sound	3549	42394	41610	98.2
Manitoulin	3551	12693	12670	99.8
Sudbury (District)	3552	27012	24820	91.9
Sudbury (R.M.)	3553	170479	168640	98.9
Timiskaming	3554	39910	39180	98.2
Cochrane	3556	96763	95280	98.5
Algoma	3557	133640	130560	97.7
Thunder Bay	3558	165920	159070	95.9
Rainy River	3559	24402	23610	96.8
Kenora	3560	68128	68580	100.7
Man.		**1143524**	**1127500**	**98.6**
Division No. 1	4601	16613	17690	106.5
Division No. 2	4602	48868	47310	96.8
Division No. 3	4603	41485	40760	98.3
Division No. 4	4604	10543	9400	89.2
Division No. 5	4605	15094	14190	94.0
Division No. 6	4606	10689	10980	102.7
Division No. 7	4607	58186	61610	105.9
Division No. 8	4608	14602	13350	91.4
Division No. 9	4609	23984	23800	99.2
Division No. 10	4610	8927	6640	74.4
Division No. 11	4611	641183	630870	98.4
Division No. 12	4612	18838	17560	93.2
Division No. 13	4613	41402	35950	86.8
Division No. 14	4614	16771	15680	93.5
Division No. 15	4615	23632	23780	100.6
Division No. 16	4616	10728	10290	95.9
Division No. 17	4617	24924	26180	105.0
Division No. 18	4618	22595	25690	113.7
Division No. 19	4619	13637	11670	85.6
Division No. 20	4620	11959	12180	101.8
Division No. 21	4621	23718	24350	102.7
Division No. 22	4622	35667	37750	105.8
Division No. 23	4623	9479	9830	103.7
Sask.		**1022537**	**1003950**	**98.2**
Division No. 1	4701	33114	32290	97.5
Division No. 2	4702	23898	23500	98.3
Division No. 3	4703	16798	16400	97.6
Division No. 4	4704	12608	11380	90.3

Division No. 5	4705	36935	37210	100.7
Division No. 6	4706	227238	221430	97.4
Division No. 7	4707	50956	48330	94.8
Division No. 8	4708	32683	32620	99.8
Division No. 9	4709	39814	39370	98.9
Division No. 10	4710	22051	20990	95.2
Division No. 11	4711	239475	229390	95.8
Division No. 12	4712	24997	23720	94.9
Division No. 13	4713	25580	25340	99.1
Division No. 14	4714	42540	43400	102.0
Division No. 15	4715	83092	81870	98.5
Division No. 16	4716	38160	38720	101.5
Division No. 17	4717	41015	44880	109.4
Division No. 18	4718	31583	33110	104.8
Alta. - Alb.		**2789528**	**2704110**	**96.9**
Division No. 1	4801	64666	62450	96.6
Division No. 2	4802	130835	129440	98.9
Division No. 3	4803	38569	37720	97.8
Division No. 4	4804	13138	11740	89.4
Division No. 5	4805	43120	40560	94.1
Division No. 6	4806	911189	876990	96.2
Division No. 7	4807	42718	40900	95.7
Division No. 8	4808	141073	141850	100.6
Division No. 9	4809	18727	17600	94.0
Division No. 10	4810	81194	77460	95.4
Division No. 11	4811	929340	897640	96.6
Division No. 12	4812	48928	48560	99.2
Division No. 13	4813	63360	61810	97.6
Division No. 14	4814	28014	27940	99.7
Division No. 15	4815	30040	29910	99.6
Division No. 16	4816	50193	47520	94.7
Division No. 17	4817	55939	55740	99.6
Division No. 18	4818	15271	14660	96.0
Division No. 19	4819	83214	83640	100.5
B.C. - C.-B.		**3855140**	**3673920**	**95.3**
East Kootenay	5901	58715	56830	96.8
Central Kootenay	5903	59834	57790	96.6
Kootenay Boundary	5905	34508	33290	96.5
Okanagan-Similkameen	5907	78898	77690	98.5
Fraser-Cheam	5909	85287	80980	94.9
Central Fraser Valley	5911	109325	104950	96.0

Dewdney-Alouette	5913	109125	102830	94.2
Greater Vancouver	5915	1811200	1713370	94.6
Capital	5917	327916	312120	95.2
Cowichan Valley	5919	73754	72850	98.8
Nanaimo	5921	126228	119720	94.8
Alberni-Clayoquot	5923	33836	32330	95.5
Comox-Strathcona	5925	102723	98120	95.5
Powell River	5927	21440	20190	94.2
Sunshine Coast	5929	26106	24400	93.5
Squamish-Lillooet	5931	31427	29360	93.4
Thompson-Nicola	5933	124722	120810	96.9
Central Okanagan	5935	139723	135610	97.1
North Okanagan	5937	76126	74340	97.7
Columbia-Shuswap	5939	50091	46410	92.7
Cariboo	5941	70429	68330	97.0
Mount Waddington	5943	15238	14200	93.2
Central Coast	5945	3880	3660	94.3
Skeena-Queen Charlotte	5947	25300	23560	93.1
Kitimat-Stikine	5949	46654	43520	93.3
Bulkley-Nechako	5951	43508	42650	98.0
Fraser-Fort George	5953	102873	99830	97.0
Peace River	5955	58501	56160	96.0
Stikine	5957	1580	1190	75.3
Fort Nelson-Liard	5959	6193	6830	110.3
Yukon		**31452**	**30040**	**95.5**
Yukon	6001	31452	30040	95.5
N.W.T. - T.N.-O.		**66568**	**64040**	**96.2**
Baffin	6104	13209	12820	97.1
Keewatin	6105	7195	6840	95.1
Fort Smith	6106	31888	30390	95.3
Inuvik	6107	9192	8890	96.7
Kitikmeot	6108	5084	5100	100.3

APPENDIX C   **PROVINCIALCOVERAGE   RATES**

Province	1996* Census of Population	1995* Tax filers and Dependents	Coverage Ratio (%)
Newfoundland	551,792	564,940	102.4
Prince Edward Island	134,557	135,120	100.4
Nova Scotia	909,282	915,270	100.7
New Brunswick	738,133	749,550	101.5
Quebec	7,138,795	7,121,990	99.8
Ontario	10,753,573	10,724,610	99.7
Manitoba	1,113,898	1,127,500	101.2
Saskatchewan	990,237	1,003,950	101.4
Alberta	2,696,826	2,704,110	100.3
British Columbia	3,724,500	3,673,920	98.6
Yukon Territory	30,766	30,040	97.6
Northwest Territories	64,402	64,040	99.4
Canada	28,846,761	28,815,030	99.9

* Taxfiler and dependent counts are based on the 1995 T1 tax file, which is filed as of April 1996.
* Census of Population counts are as of May 14, 1996.

APPENDIX D

1995 Coverage Ratios

CMA NAME	CMA	Taxfilers and Dependents 1995 Tax file Filed April 1996	Population Estimate Demography July 1, 1996	Coverage Ratio(%)
CANADA		**28,815,030**	**29,963,631**	**96**
CALGARY	825	817,650	853,711	96
CHICOUTIMI-JONQUIERE	408	160,940	167,854	96
EDMONTON	835	859,290	890,771	96
HALIFAX	205	333,630	344,135	97
HAMILTON	537	613,290	657,230	93
KITCHENER	541	384,170	404,216	95
LONDON	555	397,700	420,614	95
MONTREAL	462	3,192,960	3,365,160	95
OSHAWA	532	267,440	281,922	95
OTTAWA-HULL (ONT.)	505	722,080	781,147	92
OTTAWA-HULL (QUE.)	505	246,770	258,160	96
OTTAWA-HULL (TOTAL.)	505	968,850	1,039,307	93
QUEBEC	421	667,380	699,035	95
REGINA	705	194160	199,243	97
SAINT JOHN	310	125,550	129,380	97
SASKATOON	725	215,440	223,524	96
SHERBROOKE	433	144,610	148,925	97
ST.CATHARINES-NIAGARA	539	373960	391,086	96
ST. JOHN'S	001	173,690	175,249	99
SUDBURY	580	164,620	166,661	99
THUNDER BAY	595	129,160	130,006	99
TORONTO	535	4,218,470	4,410,269	96
TROIS RIVIERES	442	139,200	142,028	98
VANCOUVER	933	1,781,850	1,883,679	95
VICTORIA	935	299,620	315,168	95
WINDSOR	559	276450	294,063	94
WINNIPEG	602	633,100	680,285	93
				95
ALL CMAs		17,533,180	18,413,521	

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