

THE INCOME DEPENDENCY OF TAXFILER MIGRANTS ON UNEMPLOYMENT  
INSURANCE BENEFITS: A CASE STUDY OF THOMPSON, MANITOBA

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### I. INTRODUCTION

Administrative records have considerable social statistical potential in national statistical systems. They do not, however, possess all of the same or even similar characteristics to data derived from household surveys and censuses of population. In this paper, no attempt will be made to cite the many similarities and incongruities that arise in comparing the administrative social data with other social data. Rather, the emphasis will be upon a single application of data derived from the Canadian personal income tax records.

This case study has been prepared to achieve several objectives. First, the application will illustrate one dimension of the Canadian tax records, a dimension that is not within the domain of the U.S. tax system. Secondly, in the choice of Thompson, a small community in northern Manitoba, it is possible to highlight the small area migration data derived from administrative records. Finally, for small communities such as Thompson, data are generally only available with a Census of Population. Thus, for events such as the recent recession in 1982, administrative records provide an opportunity to monitor the impact of the recession on its economy.

Thompson, Manitoba is a small mining community that grew rapidly with the development of a nickel mine in the 1950's. Its population grew from about 3,000 in 1961 to 19,000 in 1971. A slow population decline began during the late 1970's with the population declining to 14,300 in 1981. These population counts offer few insights into what happened in the years between censuses. And even the administrative tax records offer no real assistance in the years preceding 1976 since the annual 100 percent tax records are not available. Nevertheless, the tax records do offer an inherent richness of data for a small area such as Thompson.

The growth and decline of resource-based communities are largely beyond their control and destiny. In general, they are dependent on the resource abundance, its price, and the demand. Thompson is no exception. The mine was established during a period when the Canadian nickel industry almost completely monopolized the world's nickel market. This dominance has been eroded in recent years, and the recent recession further weakened the price and international demand for Canadian nickel.

### II. DATA SOURCES AND GENERAL METHODOLOGY

The Canadian personal income tax system has a number of differences from the American system. One of the differences is exploited in this paper, namely, that some transfer payments are subject to taxation and are, therefore, reported by taxfilers (e.g., Unemployment Insurance benefits). Thus, by comparing UI benefits to income, inferences can be made about the income dependency of individual taxfilers on UI

as a source of their income.

Since a mailing address is associated with taxfiling, migrants from one tax year to the next can be identified (assuming, of course, that a change of address is associated with a real geographical movement). In the case of Thompson, there is virtually no hinterland; hence, a change of address to a non-Thompson locale is assumed to have been an example of residential change. Thus, UI dependency, both before and after migration can be studied.

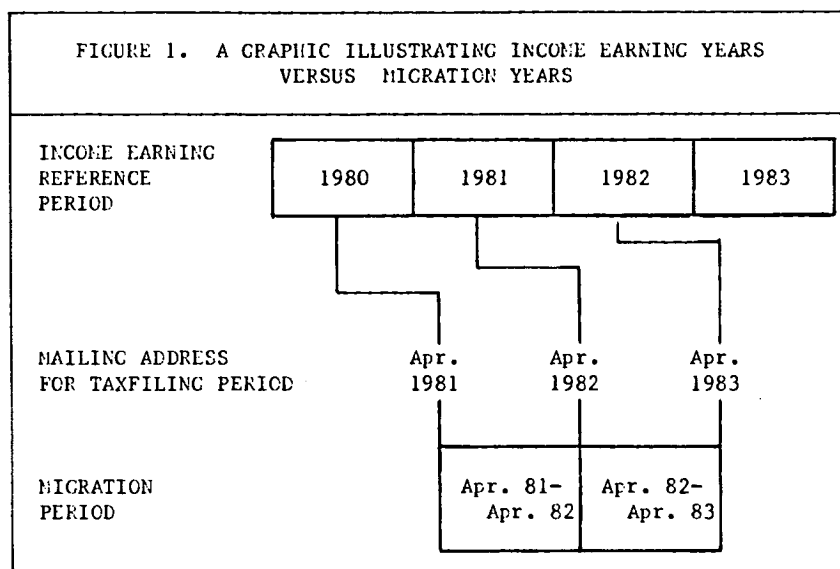
Comparisons have been developed in this paper for two migration periods, between 1981 and 1982, and between 1982 and 1983. The individual taxfilers selected for this study include those Thompson taxfiler residents that migrated and who earned income from employment in the year prior to migration. In addition, a number of comparisons are made between Thompson taxfiler migrants and all Canadian taxfiler migrants.

Perhaps the most confusing aspect in using migrant detail and income data together arises because of the differing time periods involved. Income earned in one calendar year is not reported until the next calendar year. Thus, income data for 1981 is reported in April, 1982, and income earned in 1982 is reported in April, 1983. When references are made to income versus migration, two different periods of time are involved. A change of address between the 1981 and 1982 taxfiling periods, represents migration between April, 1982 and April, 1983.

Figure 1 has been provided below to illustrate the timing of the reference years versus the taxfiling and migration periods.

Even the most casual review of the above figure surely reveals a few fundamental flaws -- taxfilers need not reside at the address they use; taxfilers need not obtain all of their UI income in the location where they file; and with the continuous updating of the address file in an administrative tax system, the original filing address can differ from the address on the file itself. How were these caveats handled? Earlier research experience with the taxfile for deriving migration data led to the conclusion that the tax file is a good source of inter-censual migration data in Canada. Since the tax migration data have been found to be of relatively high quality, it seemed reasonable to assume away the above caveats.

The data in this paper have been limited to two sources of income, namely, employment income (i.e., wages and salaries, tips and gratuities, and the self-employment sources of income), and UI income. This source of income is not, however, a clean source of unemployment income since UI beneficiaries in Canada need not be ready and able to work and since UI benefits are granted for reasons such as maternity, self-employed fishing during the off-season, retirement, sickness and disability. Finally, this paper has a composite income concept, labour income, that is defined as the sum of employment



income plus UI income.

### III. EMPLOYMENT INCOME PATTERNS OF THOMPSON OUT-MIGRANTS, 1981-82 AND 1982-83

Reference to Table 1 illustrates the general trend of median employment income (Part 1) and the number of taxfilers (Part 3) for Thompson residents for 1976 through 1982. Since these numbers provide no inherent point of reference, similar data have been included in Parts 1 and 3 of this table for Canada.

A relative comparison has then been included as Part 2 of Table 1 -- the median employment income value for each Thompson cell was divided by the corresponding cell value for Canada (and multiplied by 100). The index for males was consistently about 35 to 40 percent higher than the comparable Canada value except for two years, 1976 and 1981. In both of these years there were labour disputes (The 1981 strike lasted three months).

A comparison of the number of Thompson and Canada taxfilers over the period from 1976 to 1982 is included as Part 3 of Table 1 to illustrate the general seven-year trend. Reference to the percentage change line indicates that the total number of Thompson taxfilers decreased over the period while the number of taxfilers in Canada increased. (Even for Canada, however, there was a decline in taxfiling for 1982, the recession year.)

The next step involves a comparison of the migrants from Thompson with all resident Thompson taxfilers in each year. In Table 2 data are provided for two migration periods, 1981-82 and 1982-83. In 1980 (using male taxfilers as the example), Thompson had 4,190 male taxfilers. A subset of the 4,190 (i.e., 543) filed in Thompson for the 1980 tax year but filed from a location external to Thompson for the 1981 tax year. Thus, the 543 taxfilers are included in the 4,190 in 1980 but not in the 4,149 taxfilers in 1981.

For each of the males, females and total,

the median employment income in both 1980 and 1981 was lower for the migrants than for all taxfilers. But in comparing the median employment income for the migrants (right hand column) for before and after migration, they were all marginally better off in current dollars after migration. Interestingly enough, for all male taxfilers in Thompson, the median employment income level was lower in 1981 than in 1980, due no doubt, to the 3-month strike in 1981.

A similar comparison has been included in Part 2 of Table 2 for Thompson out-migrants for 1982-83. As noted in Part 1, the out-migrants had lower medians before migration than did all Thompson residents. Also, the medians for migrants in 1982 were again lower than for all Thompson residents. Finally, it can be noted in this part of Table 2 that all Thompson residents experienced an increase in median employment income between 1981 and 1982 while, for the out-migrants, the males experienced an increase, the females a decrease.

### IV. UNEMPLOYMENT INSURANCE INCOME PATTERNS OF THOMPSON OUT-MIGRANTS, 1981-82 AND 1982-83

As noted above, UI benefits are subject to personal income taxation in Canada. A reasonable question might be -- "To what extent do Canadian taxfilers report their UI benefits to Revenue Canada-Taxation?" The results vary from year to year, but, in general, for every \$1 paid out in benefits, about 92 to 93 cents is reported in the tax system.

Reference to Table 3 indicates the pattern of UI benefits of Thompson residents in the year before and after migration for 1980-81 and for 1981-82, for the two migration periods, 1981-82 and 1982-83. And to provide some frame of reference, the UI income data are included for both Thompson out-migrants and all migrants in Canada for the same migration period. For example, of the Thompson male out-migrants (i.e., 543) in the 1981-82 migration period, the number receiving UI income increased about 49 percent

TABLE 1. MEDIAN EMPLOYMENT INCOME AND TAXPILER COMPARISON FOR THOMPSON, MANITOBA AND CANADA: 1976-82

YEAR	THOMPSON			CANADA		
	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
1976	14135	5860	11390	11160	5840	8505
1977	16095	6885	13075	12075	6370	9175
1978	17685	13880	12880	12880	6635	9725
1979	19345	7361	14170	14095	7225	10595
1980	21295	8000	15720	15400	7920	11560
1981	19745	9390	16045	17000	8785	12735
1982	23240	10615	19960	17835	9615	13565
X CHANGE,						
1976-1982	79.6	81.1	75.2	59.8	64.6	59.5

PART 2. MEDIAN EMPLOYMENT INCOME INDEX\*

YEAR	MALES	FEMALES	TOTAL
1976	126.7	100.3	133.9
1977	133.3	108.1	142.5
1978	137.3	103.9	142.7
1979	137.2	101.9	133.7
1980	138.3	101.0	136.0
1981	116.1	106.9	126.0
1982	141.5	110.4	147.1

\* INDEX = ((THOMPSON MEDIAN) / (CANADA MEDIAN) X 100)

PART 3. NUMBER OF TAXFILERS WITH EMPLOYMENT INCOME

YEAR	THOMPSON, MANITOBA			CANADA (000'S)		
	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
1976	5423	2849	8300	6647	4004	10670
1977	4904	2842	7726	6715	4124	10854
1978	4133	2542	6679	6829	4412	11254
1979	4140	2621	6764	6949	4601	11557
1980	4190	2749	6943	7021	4811	11839
1981	4149	2798	6947	7167	5068	12235
1982	4122	2826	6948	7006	5033	12039
X CHANGE,						
1976-1982	(24.3)	(0.8)	(16.3)	5.4	25.7	12.8

TABLE 2. MEDIAN EMPLOYMENT INCOME COMPARISON FOR ALL THOMPSON, MANITOBA RESIDENTS VERSUS ALL THOMPSON OUT-MIGRANTS FOR 1981-82 AND 1982-83

TAX YEAR	SEX	ALL THOMPSON RESIDENTS		ALL THOMPSON OUT-MIGRANTS	
		NUMBER	MEDIAN INCOME	NUMBER	MEDIAN INCOME

PART 1. TAXPILER MIGRANTS: 1981-82

1980	MALES	4,190	21,295	BEFORE MIGRATION	
	FEMALES	2,749	8,000	543	17,710
	TOTAL	6,943	15,720	379	6,150
1981	MALES	4,149	19,745	AFTER MIGRATION	
	FEMALES	2,798	9,390	543	17,785
	TOTAL	6,947	16,045	379	6,275

PART 2. TAXPILER MIGRANTS: 1982-83

1981	MALES	4,149	19,745	BEFORE MIGRATION	
	FEMALES	2,798	9,390	283	7,040
	TOTAL	6,947	16,045	663	12,460
1982	MALES	4,122	25,240	AFTER MIGRATION	
	FEMALES	2,826	10,615	380	17,920
	TOTAL	6,948	19,960	283	6,605

NOTE: There are some apparent inconsistencies in reviewing the right hand column for the before and after median values. For example, in Part 1, the median male increases 75, the female 125, and the total increases by 895. These data are correct. The apparent discrepancy arises due to the bi-modal income distribution.

TABLE 3. MEDIAN UNEMPLOYMENT INSURANCE BENEFITS REPORTED BY THOMPSON TAXIFILER OUT-MIGRANTS TO ALL DESTINATIONS COMPARED TO ALL TAXIFILER MIGRANTS IN CANADA: 1981-82 AND 1982-83

MIGRANTS BY SEX	TOTAL MIGRANTS	U.I. INCOME BEFORE MIGRATION		U.I. INCOME AFTER MIGRATION	
		NUMBER	MEDIAN	NUMBER	MEDIAN
PART 1. MIGRANT COMPARISON: THOMPSON VERSUS CANADA, 1981-82					
		1980 TAX-YEAR	1981 TAX-YEAR		
THOMPSON OUT-MIGRANTS TO ALL DESTINATIONS					
MALES	543	98	1310	146	1970
FEMALES	379	78	1135	135	1540
TOTAL	922	176	1280	281	1700
UI INCIDENCE		19%		30%	
ALL CANADIAN MIGRANTS					
MALES	440191	77349	1705	89334	1860
FEMALES	390357	61021	1385	82161	1606
TOTAL	830748	138370	1550	171495	1720
UI INCIDENCE		17%		21%	
PART 2. MIGRANT COMPARISON: THOMPSON VERSUS CANADA, 1982-83					
		1981 TAX-YEAR	1982 TAX-YEAR		
THOMPSON OUT-MIGRANTS TO ALL DESTINATIONS					
MALES	380	78	1540	176	2390
FEMALES	283	48	1705	129	1655
TOTAL	663	126	1565	305	1890
UI INCIDENCE		19%		46%	
ALL CANADIAN MIGRANTS					
MALES	371918	63910	1740	111862	2650
FEMALES	341121	52157	1490	94065	2020
TOTAL	713039	116067	1620	205927	2310
UI INCIDENCE		16%		29%	

$$\text{UI INCIDENCE} = \frac{\{(\text{NUMBER OF MIGRANTS WITH UI}) / (\text{TOTAL MIGRANTS})\} \times 100$$

TABLE 4. DEPENDENCY OF THOMPSON OUT-MIGRANTS ON UNEMPLOYMENT INSURANCE BENEFIT INCOME TO ALL DESTINATIONS COMPARED TO CANADA, 1981-82 AND 1982-83

MIGRANTS BY SEX	TOTAL MIGRANTS (1)	UI BENEFIT TO LABOUR INCOME INDICATOR				
		No. of Migrants with UI Indicator (2)	UI to Lab. Inc. Indicator (3)	No. of Migrants with UI Indicator (4)	UI to Lab. Inc. Indicator (5)	
PART 1. MIGRANT COMPARISON: THOMPSON VERSUS CANADA, 1981-82						
		1980 TAX-YEAR	1981 TAX-YEAR			
THOMPSON OUT-MIGRANTS TO ALL DESTINATIONS						
MALES	543	98	1.8	146	3.2	
FEMALES	379	78	3.6	135	6.9	
TOTAL	922	176	2.2	281	4.1	
ALL CANADIAN MIGRANTS						
MALES	424,809	77,349	2.5	89,334	2.7	
FEMALES	324,727	61,021	3.9	82,161	5.3	
TOTAL	749,536	138,370	2.9	171,495	3.4	
PART 2. MIGRANT COMPARISON: THOMPSON VERSUS CANADA, 1982-83						
		1981 TAX-YEAR	1982 TAX-YEAR			
THOMPSON OUT-MIGRANTS TO ALL DESTINATIONS						
MALES	380	78	2.2	176	6.7	
FEMALES	283	48	3.6	129	10.1	
TOTAL	663	126	2.6	305	7.6	
ALL CANADIAN MIGRANTS						
MALES	336,315	63,910	2.2	111,862	5.1	
FEMALES	280,647	52,157	3.6	94,065	8.0	
TOTAL	636,962	116,067	2.6	205,927	5.9	

UI Dependency Indicator = Total UI income received by taxfiler migrants, divided by the labour income of all taxfiler migrants times 100.

from 98 in 1980 to 146 in 1981, and the median benefit increased from \$1310 to \$1970, or about 50 percent.

By contrast, for all male migrants in Canada, the increase in the number of male migrants reporting UI income increased about 15 percent (i.e., from 77,349 to 89,334), while the median UI income increased about nine percent (i.e., \$1705 to \$1860).

A comparable section has been included in Table 3 for migrants in the 1982-83 migration period for those Thompson residents in 1981 who filed from a non-Thompson address for the 1982 taxfiling year, and for all migrants in Canada. Three observations can be made in reviewing both Parts 1 and 2. First, for all migrants, the median UI income was lower in the year before migration than after migration except for female out-migrants from Thompson in 1982-83. Second, the total migrants column indicates that there were more migrants in 1981-82 than in 1982-83.

Finally, reference to the row labelled UI Incidence also reveals an interesting comparison. In the year before migration, for both Thompson out-migrants and all migrants in Canada, the incidence of UI (i.e., number with UI divided by total migrants) was about the same (19% versus 17% in 1980, and 19% versus 16% in 1981). But the UI incidence was quite different after migration, about 50% higher for the Thompson migrants compared to the Canadian migrants in the migration year (30% versus 21% in 1981 and 46% versus 29% in 1982).

#### V. UNEMPLOYMENT INSURANCE DEPENDENCY INDICATOR, 1981-82 and 1982-83

By adding employment income to unemployment income, labour income is obtained. If reported UI benefits are divided by labour income, a UI to labour income dependency concept is defined -- To what extent do taxfilers depend on UI as a source of labour income? Clearly, a lot is subsumed in a concept such as this. For one, the emphasis is on the average when dependency can be expected to be highly skewed -- lower income persons having a very different kind of dependency than higher income persons. In this example, since female taxfilers have lower incomes than males, they can be considered a type of low income group. Also, individuals can receive UI benefits for reasons other than unemployment *per se*, hence, the receipt of UI benefits for reasons such as maternity, sickness and illness, retirement and self-employed fishing are also subsumed under the UI dependency concept.

Reference to Table 4 provides some empirical evidence on UI dependency. Several observations can be made about the contents of this table. First, for every pair of indicators (columns 3 and 5), the UI Dependency Indicator is lower in the year before migration. This observation has an interesting implication. Migration, presumably, occurs in response to economic incentives to move. This expectation does not seem to be met.

A review of the right hand column of Table

2 does not reveal much in the way of economic gains from migrating; Table 3 confirms this with the large incidence of UI after migration; and Table 4 reveals considerable dependency on UI after migration. Taken together, for both the Thompson and all Canadian taxfiler migrants, the economic incentives expectation does not appear to exist for the whole migrant cohort. Nevertheless, the economic incentives expectation could hold for all migrants if the expected employment income in Thompson would be zero.

A number of speculative possibilities could account for this. The migrants, in general, may be marginal members of the labour force; and two working spouses could move with only one or none obtaining employment. (The introduction of two working spouses offers considerable complexity and indicates the need for additional research.)

#### VI. CONCLUDING OBSERVATIONS

In this case study, emphasis was placed on Unemployment Insurance dependency for two selected cohorts of taxfiler migrants. Clearly, there are many other relationships that could be studied. For example, it would be possible to undertake the above work with respect to (a) the marital status of taxfilers, (b) the age of migrants, (c) other taxable transfer payments (e.g., family allowance income, pension income), and (d) a variety of other possibilities, including combinations of those used or noted in this sentence.

Nevertheless, this review of selected variables from the Canadian personal income tax system indicates the potential of this data source to analyse the dynamics of UI dependency and migration for relatively small geographical source areas such as Thompson, Manitoba.

What is clear, however, in reviewing these results is that the dynamics of the income and migration relationships are complex. The use of data for only two periods is obviously limiting. One neither knows nor can conclude whether the migrants had migrated previously, whether they had been dependent on UI in previous years, or whether UI dependency continued in succeeding years. In other words, this case study, although illustrative, is incomplete -- two years is a short longitudinal study.

Finally, and as noted above, the conventional wisdom of the income and migration dynamics can be stated simply: Migrants move when higher incomes can be obtained. The data in this study are neither supportive nor opposed to this hypothesis. The migrants did not appear to move for higher real incomes, and were more dependent on transfer payments than either (a) all Thompson residents or (b) all Canadian taxfiler migrants.

#### ACKNOWLEDGMENTS

The author would like to thank his colleagues in Statistics Canada for their many thoughtful and insightful comments. The words, nevertheless, reflect those of the author and in no way reflect the official position of Statistics Canada.