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**THE DYNAMICS OF INCOME AND EMPLOYMENT IN RURAL CANADA:  
THE RISK OF POVERTY AND EXCLUSION**

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## Executive Summary

The following Report provides a preliminary analysis of the dynamics of change on income and employment in rural areas of Canada, their influence on the risk of social exclusion and disadvantage (i.e. low-income and low pay), and the differences that may arise in relation to their non-rural counterparts, using the Survey of Labour and Income Dynamics (SLID). The availability of this longitudinal data set (two years of the Survey 1993 and 1994) allows for both static 'snapshots' and the dynamics of rural income and employment to be studied. The study uses Statistics Canada definition of 'rural' that is based on population levels, not addressing the diversity of rural areas in Canada. Thus, this study should be considered as a baseline to more disaggregated studies needed to facilitate information on future policies concerning social exclusion and rural development.

An analysis of the income dynamics demonstrates that Rural Small Towns (RST) average incomes are uniformly below those of Large Urban Centres (LUC) for the 1993-94 period, with a greater proportion of RST people concentrated in the bottom income classes. Overall, there seems to be a significant amount of income mobility but the majority of it is short range.

The proportion of 'persistently' poor (being poor for the two years of the Survey) is higher for RST individuals than for LUC ones, as is the proportion of individuals that have experienced at least one low-income spell in the two years of the Survey.

Qualitatively, the typical characteristics of those who experience low-income are similar in both sub-samples. Thus, female working age, unattached individuals in one person households, married/with children under 25 years old and female lone parents with children under 25 are the dominant characteristics in both low income sub-samples. The percentage of couples with either one or two earners that are low-income is higher in RST than in LUC. Low pay (and lower average pay levels) seems to be a more important component in low-income in RST than LUC, so that even if one or two household members are working the chances of them being in low income is higher.

The overview of employment mobility shows how the percentage of self-employment is considerably higher in RST against the LUC counterparts both for men and women. Equally, there seems to be a higher percentage of seasonal and temporary (short-term) jobs in RST. As expected, the average hourly wage rate for RST men and women was below the corresponding rate in LUC. In the average total number of hours worked, RST men worked longer hours than LUC ones, the proportion being more or less similar for RST and LUC women.

There is a higher proportion of both RST men and women affected by low pay relative to LUC areas as well as suffering more persistently low pay. The situation is more acute for women than for men. These results might suggest a link to low income, i.e. the greater importance of low pay in low income in RST.

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The data used in this report were made available through Statistics Canada where the data were originally collected. The original collectors of the data do not bear any responsibility for the analyses or interpretations presented here.

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As usual, responsibility for this work rests with the authors alone.

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## **1. Introduction**

Rural Canada comprises a massive geographical area with a population that is diverse in both its problems, and its opportunities (Biggs, et al.1993, p.5). In the last two decades, changes in rural economy and in wider society as well as policy responses to these changes have influenced the development of Rural Canada. These trends have different implications for different rural areas and they will have uneven impacts on different social groups, one of the potential outcomes being social exclusion and disadvantage. While specific issues related to disadvantage have received attention by researchers, it has been highlighted the extent to which our knowledge of disadvantage in rural areas is based on static analysis. The purpose of this research is to fill this gap by providing a better understanding of the dynamics of change on income and employment in rural areas of Canada, their influence on the risk of social exclusion and disadvantage, and the differences that may arise in relation to their non-rural counterparts. By doing so, this research will allow consideration of the policy implications of this work for realistic and sustainable development in rural areas of Canada. It will also provide a foundation of knowledge for future research in Canadian rural related issues.

The outline of this report is as follows: Section 2 outlines the objectives of the research. Some preliminary information on relevant concepts and the data set is provided in Sections 3 and 4. Section 5 investigates the distribution and dynamics of income and wealth as experienced by households and individuals in rural Canada as opposed to their Large Urban Counterparts (LUCs). Particular emphasis is given to the characteristics of those individuals with low income.

Section 6 investigates employment patterns, wages, employee characteristics, and the dynamics of employment status across the rural and non-rural sub-samples. The extent to which wage dynamics of low-pay individuals in rural areas differs from that of individuals in Large Urban Centres is also examined.

Section 7 concludes, and finally Section 8 provides the bibliography.

## **2. Objectives of the Research and Methodology**

The overall purpose of this research is to examine the dynamics of income and employment for individuals and families in rural areas of Canada. In doing so, the specific objectives related are:

1. To describe the extent of inequality in rural areas;
2. To look at the differences between low-income household characteristics in rural and non-rural areas;
3. To look at the differences between entrants/escapees from low-income in rural and non-rural areas;
4. To find out what economic and demographic events appear to be associated with low-income escape and entry in rural areas;
5. To measure the extent to which employment mobility is different in rural areas as opposed to their non-rural counterparts;



6. To look at the differences in the persistency of low pay in rural and non-rural areas.
7. To indicate of the relevance of above findings to policy makers and other researchers, and to provide a foundation of knowledge for future research in Canadian rural related issues.

In order to fulfill the objectives, descriptive analysis of the panel constructed upon the *Survey of Labour and Income Dynamics* (SLID) data set was carried out.

The construction of the panel for both years of the SLID data set has made it possible to follow the same individual(s) through time studying the dynamics of change. The proposed research is unique since it focuses on the SLID rural sub-sample (Rural Small Towns) looking at the differences between them and their non-rural counterparts (Large Urban Centres).

### **3. Review of Concepts**

Structural change is taking place in all rural sectors and areas of many developed countries, both as a result of changes in rural economy and in wider society. These trends have different implications for different rural areas and they will have uneven impacts on different social groups, disadvantage among individuals being one of the potential risks. Reliable and up-to-date information is essential if the incidence of economic and social disadvantage is to be represented to Governments and properly addressed.

A dynamic analysis of the socio-economic well-being of rural residents as compared with their non-rural counterparts is necessary for capturing the changing process taking place, as well as for the identification of 'pathways' to disadvantage and integration both in rural and non-rural areas.

Social exclusion and disadvantage encompasses a range of economic, political and social issues (Room, 1995), with income being an unarguably key component. Although the link between individual earnings and household income is imperfect (Machin, 1996), combating low pay is seen as an important instrument for alleviating low income. Thus, this research will concentrate on the dynamics of both income and employment as key-components of the social exclusion concept.

#### **3.1. Poverty and Social Exclusion**

There has been much debate in the literature as to what constitutes poverty and social exclusion, and whether these two concepts are in fact the same or different, and if they are different, what makes them so? However, the name given to any given set of circumstances does not in fact change those circumstances, although it may change the way they are addressed at a policy level. Indeed, as (Abrahamson, 1996) has pointed out, the political implications of using one concept or another may very well be what has prompted the shift from looking at poverty to talking of social exclusion: the latter is currently more politically acceptable than the former.

The two concepts are at least closely related, and in this research no distinction is made between the two. The reason for taking this stance is that the author believes that poverty, being multi-faceted, should be defined very widely, as indeed it is by many commentators. Townsend, (1979), for instance, sees poverty as being an *excluding* force:

"Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary.... in the societies to which they belong".

Room, (1990) has developed a definition of social exclusion that is not far from Townsend's idea of poverty, but takes the ideas somewhat further. He sees individuals as suffering from social exclusion where: they suffer generalised disadvantage in terms of education, training, employment, housing, financial resources, etc.; their chances of gaining access to the major social institutions which distribute these life chances are substantially less than those of the rest of the population; and these disadvantages persist over time.

Room also recognises the multi-dimensional nature of poverty/social exclusion, but suggests that the way to measure it should be through an examination of financial resources, which in itself fails to capture the complexity of poverty. This does of course beg the question of how you can actually measure this complexity. According to the Child Poverty Action Group (Oppenheim, 1993) however, the lack of financial resources is central to poverty/social exclusion:

"Poverty is not about shortage of money. It is about rights and relationships; about how people are treated and how they regard themselves; about powerlessness, exclusion and loss of dignity. Yet the lack of an adequate income is at its heart."

According to Berghman, (1995), the three major trampolines towards social reintegration are gaining employment, changes in family or household composition, and receiving welfare benefits. The question is how relevant is this in a rural context and are there any particular constraints imposed by a rural setting? Walker, (1995) notes that most poor people seek a full-time job as a route out of poverty, although this mode of escape is denied to many on account of their age, lack of skills, or child care commitments (Dawes, 1993). It might be expected that there are additional obstacles facing those in rural areas, on account of their small community, or the distances involved. In fact, regional disparities in terms of employment have long been regarded as a persistent feature of developed economies. As an example, it is well known that many rural workers are low paid, insecure, suffer poor work conditions, and are submissive in the face of their employer's power (Townsend, 1991).

The difficulty with a wide, multi-faceted, definition comes when attempts are made to measure or quantify poverty. At this point a narrow definition results. The authors believe this to be the case with social exclusion also: most of these attempts resort to a narrow definition relating to financial resources. In this research we do not attempt to

quantify social exclusion in rural areas, but to look at a range of factors (i.e. low income and low pay) which may contribute to poverty/social exclusion.

#### 4. The Survey of Labour and Income Dynamics

The Survey of Labour and Income Dynamics (SLID) is a longitudinal household survey conducted by Statistics Canada that consists of a national representative sample<sup>1</sup> of approximately 15,000 households recruited in 1992, containing a total of around 31,000 individuals aged 16 and over. It is designed to capture changes in the economic well-being of individuals and families over time and the determinants of their well-being. Individuals originally selected for the survey are interviewed once or twice per year (the income related interview is undertaken early in the year, whereas the employment related component is undertaken approximately 6 months later) for six years to collect information about their labour market experiences, income and family circumstances. In order to obtain complete information on families and to obtain cross-section data, people who live with the original respondents at any time during the two years are also interviewed during the time of cohabitation.

In order to begin the research, one panel has been constructed consisting of all those individuals (aged 16 and over) present in Year 1 (1993) who continue to appear in Year 2 (1994). This is what it is called ‘balanced panel’ containing the same number of observations in both years (N=26,841) (See Appendix III for further information on Panel Construction).

##### 4.1. Definitions

Before going into the data, a brief explanation of some of the definitions used in generating the figures is necessary for their meaningful interpretation.

The concept of rurality has no clear or agreed definition. Arbitrariness is normally the result of providing operational definitions for distinguishing rural from non-rural areas. Any dichotomous categorization will be somewhat inadequate in describing the amalgam of socio-economic and geographic factors that contribute to the rural experience. In order to ensure that the definition of rurality reflects as close as possible Canadian reality, the approach followed here has been that based on the CMA/CA and non-CMA/CA definition of the Canadian population (see Appendix II for further details) where:

**Large Urban Centre sub-sample (LUC):** Composed by CMA and CA. A CMA/CA is a large urban area, together with adjacent urban and rural areas that have a high degree of economic and social integration with that urban area. CMAs and CAs are defined around urban areas that have attained certain population thresholds: 100,000 for CMAs and 10,000 for CAs (Howatson, 1995).

**Rural Small Town sub-sample (RST):** Composed by Non-CMA and Non-CA areas (see Appendix II for further information).

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<sup>1</sup> The sample excludes people living in the Yukon or Northwest Territories, residents of institutions, persons living on Reserves, and full-time members of the Canadian Armed Forces living in barracks.

This geographical definition seems to be a better approach to indicate the type of labour market in which the individual lives.

The diversity of RST both in terms of remoteness and availability of resources is largely not addressed in this research. In this sense, this piece of work constitutes a baseline to more disaggregated studies of rural areas.

## **5. Income and Wealth**

Despite previous empirical work showing that Rural and Small Town populations in Canada have shared the lowest average income for, at least, the last three decades (Biggs, 1993), there has not been much research on the specific dynamics of income in rural areas, neither on how the rural poor live in Canada.

Given the importance acquired by concepts such as ‘social exclusion’ and ‘rural development’, rural economic issues such as rural income and poverty are increasingly becoming a concern for Canadian policy makers and researchers (e.g. The New Rural Economy Project of the Canadian Rural Restructuring Foundation is a significant example of Canadian awareness on this issue). Equally, rural poverty and the extent to which it differs from the urban experience have a particular policy resonance.

The principal aims of this section therefore are to address the dynamic of income, and to investigate the extent to which significant differences exist between Rural Small Towns and Large Urban Centres in Canada.

First, a basic comparison of the extent of low-incomes and inequality is provided. Secondly, an overview of the income dynamics in the two sub-samples (LUC and RST) is presented using a Markov transition matrix to trace the average movements between income categories and location over the two years. Thirdly, a more detailed picture of the degree of heterogeneity of those experiencing low-income, as well as, typical characteristics of ‘temporary’ and ‘persistent’ low-income individuals. Finally, much research has emphasised the notion of ‘trigger’ events that help explain why individuals enter or exit low-income or poverty (Bane, 1986, Berghman, 1995, Jarvis, 1996). As the identification of such ‘trigger’ events is clearly of importance in understanding the process of low-income, the last part considers the degree to which certain economic and demographic events coincide with individuals moving from or into low-income.

### **5.1. Income Distribution**

The after tax household income-based approach has been used for the measurement of the economic well being of RST and LUC residents. As it has been the feature for the last 3 decades, RST average incomes are uniformly below LUC ones for the 1993-94 period, RST income being around 80% of LUC in both year (see Figure 2). By province RST areas in British Columbia are closer to their LUC counterparts (approx. 90%) whereas Prince Edward Island has the highest difference between rural and urban residents with rural income being approximately 74% in Year 1 and 77% in Year 2 of LUC average

income. Ontario<sup>2</sup> has the highest average income for both LUC and RST followed by British Columbia.

An equal distribution of income would exist if, as we create income classes, each income class<sup>3</sup> receives an equal proportion of total income. The following income classes were created, namely:

- Less than half of 1993 mean income,
- Half to three quarters of 1993 mean income,
- Three quarters of 1993 mean income,
- 1993 mean to one and a quarter times 1993 mean income,
- One and a quarter times to one and a half of 1993 mean income, and
- Greater than one and a half times 1993 mean income.

It is important to indicate that the inequality measures used here are money-based ones, not providing information on the distribution of other elements of economic welfare such as income in kind, leisure, capital gains, etc.

We have looked at the distribution of people by income classes both for Canada as a whole and by province. As shown in Figures 3 (for all Canada) and 4 (for the provinces), “perfect equality” does not exist in either RST or LUC. Hence, for example, for the whole country, on average 14.2 % of the LUC sub-sample and 19.0% of the RST sub-sample had income levels below one half of the overall average. Similarly, for the richest income class (i.e. having income greater than one and a half time of the 1993 overall average income), 15.6% of those in LUC had incomes of this level, and only 7.7% of the RST sub-sample were in this class. Once again, Ontario followed by British Columbia and Alberta has the highest percentage of individuals in the richest income classes (both in LUC and RST).

This group of Figures appears to indicate that RST have a positively skewed income distribution (a greater proportion of people in the bottom income classes). The LUC sub-sample appears to have a surprisingly normal distribution, with the proportion of urban individuals in the richest income classification higher than their rural counterparts. The three inequality indices reported in Table 2 suggest that overall inequality is slightly less in the LUC sub-sample than for the RST case, however the values are so similar that we can not assert that greater inequality exists in RST than in LUC.

## 5.2. Overall Income Mobility

The average movements between income categories and location over the two years are given in Table 3. This table represents the matrix of transitions from any possible combinations of location (RST/LUC) and income category in one period to the next and is formally an (inefficient) estimate of the appropriate Markov transition matrix

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<sup>2</sup> Over the 1981-1988 period, Ontario was the only region to experience growth in average real incomes (Biggs, B. et al. 1994, p. 57).

<sup>3</sup> The reported figures are obtained by ‘pooling’ the two years of the Survey and constructing the appropriate weighted average values.

(StataCorp, 1997, p. 652). Each row represents an income class/location combination for an initial time period, each column an income class/location combination for the subsequent time period, with each cell being the proportion on average who 'move' from one income class/location to another between periods. Hence, for example, of the individuals in the sample who begun a period in a Large Urban Centre and are in the lowest income class, on average 72.5% are still in a Large Urban Centre and in the lowest income class at the beginning of next period. Of those in this category who moved up an income class but remained in Large Urban Centre, 17.3% 'moved' up one income class, 3.8% moved up two income classes, 1.6% moved up three, 1.1% moved up four and 0.7% moved to the highest income category. Of those who started in this lowest income class in the LUC sub-sample, on average 1.9% per year moved to a RST but remained in this income class.

The principal advantage of this type of analysis is that it accounts for both income and locational mobility simultaneously. Hence, it is possible to look at both intra and inter RST and LUC income mobility in a consistent manner. Firstly, considering intra income mobility in the RST and LUC, i.e. the sub-matrices reading **row, column**: (1,1-6,6) and (7,7-12,12) respectively. The highlighted figures give the average proportion of individuals who remain in the same income class between two periods. For both areas the greatest degree of income immobility occurs in the lowest and highest income classes. The percentage of individuals that remains in the poorest and richest income classes is higher for LUC (72.5% and 72.8%) compared to 65.6% and 68.6% in Rural and Small Towns (RST), being this rural/urban difference especially strong in the lowest income class (72.5% vs. 65.6%). It is also higher for the RST sub-sample the percentage of individuals that on average move location (to LUC) but remain in the same lowest income category (2.4% vs. 1.9% for LUC), thus we could say that, some of these rural individuals actually do not move out of the lowest income category, they simple undergo a locational movement (from RST to LUC). If we add up the first and second income class for both sub-samples we can see that approximately the same percentage of individuals are in those categories ( $65.6+24.1=89.7\%$  for RST and  $72.5+17.3=89.8\%$  for LUC).

For the second income class, rural individuals tend to remain in it more (62.8% vs. 59.0% for urban), whereas the percentage of those that move down to the lowest income category is similar in both sub-samples ( $\cong 15\%$ ). There is higher but short- range mobility out of the lowest income class in RST but lower mobility for the second income class for RST.

In contrast, in the middle income classes large proportions change income class from year to year.

However, if we look at the lower and upper lines from the highlighted diagonal, we can see higher downwards mobility in RST (18.8%; 16.8%; 21.8% in RST vs. 14.2%; 14.7%; 18.5% in LUC), as well as, higher upwards mobility in LUC (19.4%; 20.0%; 18.4% in LUC vs. 15.2%; 15.8%; 20.0% in RST).

While some care must be taken, as the results are sensitive to the income class definitions, there seems to be a significant amount of income mobility but the majority of it is short range. This can be seen from Table 3 considering the total proportion that

appears on the off diagonals. In all cases, most moves within the income distribution are one class up or down, for example LUC income class 1-1.25 mean income, 34.7% of all individuals move up or down one income class while only 10.9 % move by more than one class.

The limited number of total migrations observed from RST to LUC and vice-versa (approx. 1.75%) implies that any conclusions about the association of migration and income mobility must be treated with caution. However, some patterns do seem to emerge. In some cases, the diagonal elements do not dominate for example, RST-LUC on the 5<sup>th</sup> and 6<sup>th</sup> income class and LUC-RST on the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> income classes. This might imply that income mobility for those who move is higher than for those who remain in their original location. However, we should be careful with this conclusion since sample size might be very small. No apparent differences are visible for those migrants from LUC to RST as opposed to those migrants from RST to LUC.

From Table 3, projected income distributions for RST and LUC can be obtained by assuming that the current patterns of income mobility- as summarised by the transition matrix in Table 3 - will continue (indefinitely) in the future (Atkinson, 1992); (Prais, 1955). Table 4 provides estimates of the long run proportions for each income class in RST and LUC under a number of alternative assumptions. In the second row of Table 4, the long run estimates consistent with the Table 3 transition matrix are given. Comparing these to the actual 1993-1994 averages given in the first row (repeated from Table 3), these show that, if current trends continued, higher proportions would appear in the lowest income class in both RST and LUC (by 2.7% and 5.4% respectively), while the proportion of individuals in the highest LUC income class would fall (by 3.0%), remaining almost the same in RST.

In an attempt to explore the overall effect of RST/LUC migrations, the long run income distributions have been recalculated using a transition matrix where all individuals who moved between rural and non-rural areas removed. The results of this exercise are given on the third and sixth rows of Table 4. The absolute differences between the projected income distributions in rows 2 and 3 are unsurprisingly small (we only have 1.75% movers in the sample). However, in terms of the extremes of the income distributions it is interesting that there is a qualitative difference in the effect on the rural as compared with urban. For LUC areas, 'stopping' RST/LUC migration does not change the current situation very much. In contrast, in the RST it reduces the proportion in the lower income classes and increases the proportion in the higher income class marginally. Clearly, the RST/LUC classification is somewhat arbitrary and excludes by definition intra-area movements.

In order to provide an approximate estimate of the effect of moving in general, the final row of Table 4 reports the long run income distributions for RST and LUC areas for the transition matrix after all individuals who moved were eliminated. For both LUC and RST it decreases the proportion of individuals in the lowest income class and increases those in the highest income class. Generally, these results seem to suggest that migration and locational movement are associated with a higher degree of **downward** income mobility.

### 5.3. Low-Income in Rural Areas

While Table 3 illustrated the overall mobility of those with low-incomes in rural areas, it implicitly assumes that all individuals in the low-income groups are identical with equal exit and entry chances. In reality, those with low-incomes are an extremely heterogeneous groups both in terms of their typical characteristics and their propensities to ‘escape’ or remain poor, etc. This section therefore considers the pattern of low-income in more detail. The next section will deal with the characteristics of those who experienced low-income.

Before going into the individuals’ characteristics, Table 5 summarizes the 1993-1994 income sequence patterns for our longitudinal sample, where an income has been re-coded as L (Low) if it is below the low-income cut-off of that year, and H otherwise. Results are shown for any of the Low-income Cut-offs defined (see Appendix IV for the different cut-off definitions).

The last row in each income cut-off (LL) helps address the issue of how widespread the persistent<sup>4</sup> poverty problem is. We find that **10.45** % of the sample had an income below half-1993 mean income at all two interviews, whereas if the cut-off is the poorest quintile, the proportion rises to **14.41** %. Whether these figures indicate that the incidence of persistent poverty is relatively high or not is difficult to judge, and likely to depend on whether one believes the cut-offs are meaningful or not in terms of individual deprivation. The lesson is that estimates of the incidence of persistent poverty can be sensitive to the choice of low-income threshold, especially if they are located in a relatively crowded section of the income range (Jarvis, 1996). For our research this is not such an important issue since we are interested in the comparison across RST and LUC.

Some RST/LUC differences exist since the proportion of ‘persistently’ poor tends to be higher in RST as does the proportion of individuals that have experienced at least one low-income spell in the two years of the Survey.

We have also looked at the proportion of time spent in low-income by province (see Figure 5), using 0.5 of the 1993 mean income threshold. Unsurprisingly, the two most buoyant provinces (i.e. British Columbia and Ontario) have the smallest proportion of individuals affected by persistent low income both in LUC and RST. Newfoundland has the highest percentage of persistent low-income individuals in rural areas followed by Manitoba and Saskatchewan. For Saskatchewan and Newfoundland the percentage RST-LUC difference for low income incidence is the same (around 10%) but the two provinces are very different in terms of persistence, in the former the RST-LUC difference is less than 5% while in Newfoundland it is greater than 10%. In provinces such as British Columbia, Alberta, Manitoba, Ontario, Quebec and New Brunswick, low income persistence does not appear to be a particularly rural specific problem.

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<sup>4</sup> Here, we can argue to what extent poverty can be defined as “persistent” only after two years. Since data are only available for two years at time of this research, short period and persistency are artefacts of data point availability. Nevertheless, we feel that these preliminary results are indicative of longer run processes.



### 5.3.1. Rural poor characteristics

Table 5 illustrates that the low-income category in any period contains both individuals who are persistently poor and a substantial number who are in the low-income category for a ‘short’ period. Therefore, it is of interest to determine how the typical characteristics of those with persistent low-income differ from those in the low-income category in general, and whether there are discernible differences between RST and LUC. Table 6 disaggregates the persistent low-income group and all those in the low-income category by Person Type, Economic Family<sup>5</sup> Composition, Economic Family Status, and Education by the RST/LUC split (according to the different low-income cut-offs).

For example, considering Person Type, female working age (row 2) account for 43.1% of the LUC sub-sample and 41.1% of the RST overall. However, the percentage is considerable higher when looking at persistent low-income and low-income. For example, they account for 50.3% in LUC and 45.4% in RST of the **persistent** low-income sub-sample and 0.5 1993 mean income; and 49.2% for LUC and 44.5% for RST in the low-income sub-sample for the same cut-off. The same applies Female retired.

In terms of Economic Family Composition, unattached individuals in one person households, married/with children under 25 years old and female lone parents with children under 25 are the most important economic family composition categories in both the low-income and the persistent low-income sub-samples. For the RST sub-sample married with children under 25 is the predominant category in any of the low-income sub-samples.

Looking at Economic Family Status, different categories of families have been defined. As expected, no earners economic families are those at the highest risk of both low and persistently low-income (they include retired couples, students and unemployed families among others). The category “Couple and Single: PT (1 earner)” is also a risk group. An interesting characteristic here is how the percentage of couples with either one or two earners (categories 3,4 and 5) that are low-income and persistently low-income is higher in RST than in LUC. Low pay (and lower average pay levels) seems to be a more important component in low-income in RST than LUC so that even if one or two households members are working the chances of them being in low income is higher. Note that while 58% of those in persistent low income work in LUC, 64% work in RST.

In terms of the Level of Education, individuals who only attended elementary and elementary plus secondary schools are those at a higher risk of persistent low-income and low-income in general, this being more likely in RST.

### 5.3.2. Characteristics of escapees and entrants to low-income

To provide a picture of the typical characteristics of those that escape and those that enter low-income, Table 7 disaggregates low-income escapees and entrants by Age category, Person Type, Economic Family Composition and Economic Family Status and Level of

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<sup>5</sup> **Economic Family** is defined as all persons living together on December 31 of the reference year and related by blood, marriage, adoption, foster relationship or common-law relationship.

Education the period before their change in income status. As is standard practice (Jarvis, 1996; Bane, 1986), to prevent small changes in income being logged as escapes or entrants, only those who cross the low-income threshold and who have experienced at least a 10% change in their income are classified as escapees or entrants to low-income.

Firstly, the nature of low-income escapees is considered. Again, RST and LUC escapees share a number of broadly similar characteristics in terms of age (individuals ages <30), person type (males and females of working age), Economic Family composition (married or common-law with children), and Economic Family Status (no earners and at least 2 people at work). However, differences appear in terms of the importance of other characteristics. For example, the age profile of those who escape in RST appears generally more spread out, whereas in LUC younger people are more likely to escape. The percentage of female working age escapees in LUC is considerably higher than for RST. Similarly, the percentage of unattached individuals who escape in LUC is significantly higher in LUC (25.1% vs. 7.6% for 0.5 1993 mean income). On the other hand, the percentage of RST married or common-law with children who escape is higher than for LUC ones. In terms of economic family status, no earner families escape low-income more easily in LUC. In relation to the Level of Education, it is interesting to see how in RST individuals who attended elementary/secondary school are more likely to escape low-income, whereas in LUC the probability seems to also be higher for those who attended post-secondary courses either University or non-University courses.

For those who enter low-income, <30 aged individuals, female working age, married or common law with and without children, “no earner” families and couples where one works “full time” and the other one “part time” who attended elementary/secondary school dominate the RST sub-sample in proportional terms compared to their LUC counterparts.

In terms RST/LUC differences, it is important to mention how the proportion of “couples: 1 PT + 1 FT” who enter low income in RST is twice bigger than in LUC. This might be consistent with the previous comment about families in rural areas needing more people in employment to reach the same level of income as in LUC.

### *5.3.3. Economic and demographic events associated with escape and entry into low-income*

To provide some insight into possible ‘trigger’ events important for exit and entry into the low-income categories (Berghman, 1995; Room, 1995), Table 8 reports the relative incidence of a number of economic and demographic events for low-income ‘escapees’ and ‘entrants’ pooled across the two years. The results are reported relative to the overall incidence of these types of events in the appropriate sub-sample. For example, the proportion of RST low-income entrants where the entry coincided with a decrease in the number of earners in the economic family is 2.228 times the proportion in the entire RST sub-sample where the number of earners in the household decrease. While strictly not providing any causal information, these figures are suggestive as to which factors are important ‘associated events’ for exit from and entry to low-income.

For both sub-samples, the results are similar with low-income escapees more likely to be associated with an increasing number of earners or adults in the family, and therefore changes in economic family composition, as well as RST/LUC movement. Similarly, low-income entry is more associated with decreases in the number of earners or adults in the family, and changes in economic family composition. Although we have not undertaken a significance test to measure the strength of the results, there are some apparently significant quantitative differences between the RST and LUC sub-samples. It seems that the percentage of low-income entrants in RST where the entry coincides with a decrease in the number of earner is higher than in LUC (2.2 vs. 1.8). Similarly, the percentage of low income escapees in LUC where the escape is associated to an increase in the number of earners is much higher than in RST (4.1 vs. 2.5). Once again, this might be consistent with the idea that the increase in marginal income is higher in LUC due to the fact that wages are higher in urban areas.

## 6. Work and Opportunity

This section of the research seeks to explore two principal issues relating to work and opportunity in rural areas. Firstly, much research suggests that the rural workforce is faced with a number of disadvantages relative to its non-rural counterpart, e.g. restricted job choice, limited training and job progression, lower pay rates. While particular questions, e.g. lack of training, are difficult to address using the SLID, some insights can be obtained through the more general question - how different is work and the opportunity for work in Rural and Small Town Canada? The first part of this section seeks to provide a detailed comparison of employment patterns, wages, employee characteristics, and the dynamics of employment status across the RST/LUC sub-samples.

In the second part of this section, attention focuses on the nature of low pay in rural and small towns. These aspects are important in terms of their ‘social exclusion’ dimension, but clearly also link to low household income in rural areas.

### 6.1. Patterns of Work and Pay

In order to explore the question of whether work and opportunities for work are different in rural areas, a detailed comparison of the patterns of work and pay is required. To provide a basic picture this section considers a number of different aspects such as employment status, distribution of wages and hours worked and certain employee characteristics all disaggregated by sex and RST and LUC sub-samples.

Table 9 reports the employment status for RST and LUC for the two years of the Survey<sup>6</sup>. In terms of men, the main rural/non-rural difference is the higher rural proportion of self-employed in rural areas. There is a much higher proportion of self-employed men without pay (as to mean “complementary wages to self-employment earnings”) help in RST than

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<sup>6</sup> It is important to remember that for the Work and Opportunity Section we are considering a balanced panel of those individual aged 18 or older in 1993 and 65 or younger in 1994 (N= 11,652 individuals).

in LUC. For women, there are again considerable differences between the proportion of self-employed and unemployed.

As expected, the percentage of women out of the labour force all year is higher than the percentage of men, being higher for RST women than LUC. Family care is an important component of this out of the labour force category.

It is also worth noting how if we add up the three categories where some spell of employment exist (i.e. employed/unemployed; employed/not in the labour force; employed/unemployed/not in the labour force), we find that the percentage of individuals within this category is higher in RST than in LUC (11.99 % vs. 8.75% for 1993) for both men and women. If we compare men to women the percentage is higher for women (14.09% for RST and 11.12% for LUC in 1993). In general, we might suggest that the higher percentage of seasonal and temporary jobs in RST may be causing this result.

The provincial breakdown is shown in Table 10. It is worth noting the high levels of male self-employment (adding up 'with' and 'without' pay help) in RST of Saskatchewan and Manitoba as supposed to the lower levels in Quebec, New Brunswick and Newfoundland. This table shows, the heterogeneity of the labour market in Canada by provinces.

Table 11 presents the average hourly wage rates over the two years both in aggregate and the distributions by various percentiles. As expected, the average hourly wage rate for RST men was below the corresponding rate in LUC. The same applies to both RST and LUC women. British Columbia and Ontario are again the two provinces with the highest average hourly wages both in RST and LUC for men and women.

The average wage rate by percentiles provides more detail on the movements within the wage distribution. These percentiles are calculated using the whole sample and then the averages for the relevant rural and non-rural sub-samples are computed. For example, for those individuals whose wages fell in the first overall decile the average RST male wage was \$7.12 per hour in 1993 compared to \$7.16 per hour for LUC men. In general we can say that there has been an overall dominance of LUC wage rates over RST wage rates both for men and women.

In Table 12 the distribution of normal hours worked with the relevant hourly wage rates are reported. Comparing the RST and the LUC sub-samples, while overall the distribution of hours between the two samples is more or less similar, there are some differences in the average total number of hours worked (longer for RST men than LUC ones, and more or less similar for RST and LUC women). For men, few work less than 30 hours and around 4.6% in LUC (slightly more in RST -6.5%-) work normally more than 50 hours per week.

The pattern for women is different but again similar across the RST/LUC divide with significant proportions working less than 20 hours, with 34.2 % the RST sub-sample and 29.8% for the LUC one. By province the average hours at work seems to be evenly distributed.

Table 13 provides a picture of a number of the key characteristics of the RST and LUC workforces. Firstly in terms of age, the LUC and RST working population profiles seem to be very similar. However, RST/LUC differences arise for men in their job tenure profile where almost 89.9% of rural men have been in their present job for more than five years as opposed to 80.6% in LUC. For women the situation is just the opposite, with urban women experiencing longer job tenure periods than rural women. It could be suggested that there is higher job mobility for men in Large Urban Centres whereas rural women have to fit their employment spells with other social and family commitments, and this is why their job tenure average is smaller.

In terms of qualifications (education) there is a (perhaps significantly) larger proportion of women with higher qualification than men in both RST and LUC. It also seems to be true that the qualifications in LUC tend to be higher than in RST. Differences do emerge in terms of the size of the workplace with - not unexpectedly- a third of the RST male workforce employed in workplaces with fewer than 20 employees and fewer employed in institutions of more than 100 employees. For women the situation is even clearer with 75% of the RST female workforce employed in <100 employee firms (only 60% of the LUC female workforce).

The overall distribution of occupations across the RST/LUC divide is also broadly similar although for both sexes there is a higher proportion of managerial and technical workers and slightly fewer skilled, semi-skilled and unskilled worker in the LUC sub-sample. As one should expect the differences in terms of household economic status are very similar across the sexes. Finally, in terms of industry classification and although agriculture in absolute terms does not seem to be the main source of employment in RST, compared to the LUC sub-sample, it is an important source of employment for both the male and female workforce.

## 6.2. Dynamics of Employment and Pay

To provide a picture of the extent of overall employment and wage mobility, Tables 14 and 15 report the transition matrices between employment states, three wage classes and RST/LUC location. Each row represents an employment status/location combination for an initial time period, each column an employment/status location for the subsequent period, with each cell being the proportion on average who “move” from one employment status/location to another between periods. Hence, for example, of the men in the sample who began a period employed all year in low pay (<2/3 median wage) in RST, 72% were still in low pay in a rural area in the next period, 10.74% had experienced a sufficient increase in wages to take them out of the low pay category but remained in RST, 0.42% became unemployed, 0.57% left the labour force, 3.28% became RST others such as self-employed, retired, students, etc). Furthermore, 1.70% moved to LUC but stayed in the low pay class, and 0.31 % increased their wages and moved into LUC. This matrix accounts for intra and inter RST and LUC employment mobility and wage mobility in a consistent manner.

Let us consider the mobility of those in the low pay class (< 2/3 median wage) within RST and LUC. A significantly higher proportion of low pay RST employees for the

whole year remained in this class in the next period compared with the LUC case (72.16% vs. 63.96%). Further, a higher proportion of LUC employees all year moved up a wage class (16.30% for LUC against 10.74% for RST).

Turning to mobility from the middle wage class<sup>7</sup> (if we include migrants), there are a greater proportion in RST areas who remain in the same wage class (69.71% for RST and 66.26% for LUC), more movements to a lower pay class and fewer movements to a higher wage class.

Male low pay mobility seems to be another key result, i.e. lower mobility out of the lowest class in RST and high downward mobility in the second lowest pay class which may link to the low income persistency problem.

The destinations of unemployed all year men seem to differ considerably between the RST and LUC location. In LUC it appears that the chances of moving from unemployment to low pay are much higher than the RST case.

As in the income section, the limited number of average ‘migrations’ per period means that the elements of the off-diagonal sub-matrices are small. However, it is notable that the proportions in the diagonals of these matrices (in most of the cases) tend to dominate, i.e. the first employment status destination of migrants tends to be the same as the one the individual had before migration. This is particular interesting as it agrees with the picture in the income section where overall movement seemed to increase downward wage mobility.

Looking now at Table 15 and the transition matrix for women, again a higher proportion of RST women on low pay remain in this class for the next period compared to the LUC ones. Also interesting is the percentage of unemployed all year women in RST that move into the employed/unemployed category against their LUC counterparts (75.57% vs. 59.77%), this might be consistent with previous thoughts about the possibility for rural women to get more temporary and seasonal jobs than urban ones.

### 6.3. Patterns of low-pay

Similar to what we did for low-income, and in order to provide an initial impression (when more years of the SLID become available, more complex and consistent analysis will be able to be undertaken) of the extent of low pay, Table 16 reports the low pay proportions disaggregated by the number of years in which individuals reported being in low pay.

The picture is pretty clear with a higher proportion of both RST men and women affected by low pay relative to LUC areas and suffering more persistently low pay<sup>8</sup>. The situation is more acute for women than for men. These results might suggest a link to low income, i.e. the greater importance of low pay in low income in RST.

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<sup>7</sup> The lack of observations for the upper wage class (male sub-sample) reduces the analysis of the different income classes. However, when more years of SLID become available this problem will disappear.

<sup>8</sup> As with the income section, we understand ‘persistently’ low pay as more than 1 year. Data limitation provoke this limitation that will be solved when more years become available.

### *6.3.1. Low pay characteristics*

Table 17 provides an overview of the general low pay characteristics for the RST and LUC sub-samples. There appears few significant overall RST/LUC differences in terms of age and job tenure with as one might expect higher proportion of younger employees and employees with job tenures less than 2 years falling in the low pay category relative to the overall proportion for the appropriate RST/LUC groups. For women (both in RST and LUC) the length of job tenure does not seem to matter to decrease the likelihood of being low paid. In terms of education, similar results are achieved with both RST and LUC low pay falling particularly on those without qualifications. Qualitatively, the results for the size of workplace are similar across RST/LUC with the preponderance of low pay employees found in workforces of less than 20 employees. However, a relatively much larger proportion of RST low pay individuals is found in this workplace size. Given the importance of this size of workplace in rural employment in general, this may be one of the reasons why there is higher low pay and low pay persistence in RST.

Few notable RST/LUC differences appear in terms of occupation. The proportion of semi-skilled LUC men and women who fall into the low pay class is slightly larger than the RST proportions.

No major differences appear in Family Economic Status. However, some interesting differences appear when the industry classification is considered. For all groups, the incidence of low pay is greater in Agriculture, Trade Industries and Accommodation/Food and Beverages. However in the last category men have a larger likelihood of falling into low pay. Also it is worth noting that RST women employed in Banking/Finance and Insurance have a higher probability of being low pay than their urban counterparts.

### *6.3.2. Characteristics from escapees and entrants to low-pay*

As we did for low-income, and in order to provide a picture of the typical characteristics of those that escape and enter low-pay, Table 18 disaggregates low-pay escapees and entrants by Age, Years of Job Tenure, Education, Size of Workplace, Occupation, Economic Family Status and Standard Industrial Classification for the period before their change in income status. We are considering only, individuals that go from low into high pay, omitting those that go into unemployment or out of the labour force.

Firstly, consider the nature of low-pay to high escapees characteristics. For age, we can see a higher proportion of people between 25-34 years of age escaping into high pay both in RST and LUC relative to the low pay average. By job tenure, in LUC seems to be easier to escape into high pay with shorter periods of job tenure than in RST. In terms of Education, it is also worth noticing the considerable higher proportion (as supposed to the low pay average) of University/College graduates that escape low pay in LUC.

Professional and high level managers are also more likely to escape low pay than less qualified people, with no significant differences between RST and LUC. By Family Economic Status lone parents working part time in RST seem to be more likely to escape low pay than in LUC, however the small number of observation makes this result insignificant until the appropriate test is undertaken.

For low pay entrants from high pay, it is maybe worth noticing the higher proportion of individuals in under 20 employee firms that are likely to go into low pay in RST as suppose to their LUC counterparts, who are more likely to go into low pay if they work for  $\geq 1,000$  employee firms. Unskilled individuals in RST are also potential entrants into low pay.



## 7. Conclusions

This document has sought to provide an initial picture of the dynamics of low income in Rural and Small Towns areas of Canada by comparing the evidence on income mobility and low income of their individuals with their Large Urban Centres counterparts. Equally, it has examined the differences in work and opportunity between RST and LUC of Canada, focusing on the dynamics of employment and particularly the related issue of low pay.

### 7.1. Income and Wealth

The main findings are as follow:

As has been the feature for the last 3 decades, RST average incomes are uniformly below LUC ones for the 1993-94 period, RST income being around 80% of LUC income. At the same time, while the LUC sub-sample appears to have a surprisingly normal distribution, a greater proportion of RST population is concentrated in the bottom income classes.

We have also found how more individuals remain in the lowest income class in LUC as opposed to their RST counterparts who move out of the lowest income class. However, the mobility of RST individuals is lower in the second lowest income class. In contrast, in the middle income classes large proportions both in LUC and RST change income class from year to year. Overall, there seems to be a significant amount of income mobility but the majority of it is short range.

The proportion of 'persistently' poor (being poor for the two years of the Survey) is higher for RST individuals than for LUC ones, as well as, the proportion of individuals that have experienced at least one low-income spell in the two years of the Survey.

By province, Newfoundland has the highest percentage of persistent low-income individuals in rural areas followed by Manitoba and Saskatchewan. For Saskatchewan and Newfoundland the percentage RST-LUC difference for low income incidence is the same (around 10%) but the two provinces are very different in terms of persistence, in the former the RST-LUC difference is less than 5% while in Newfoundland it is greater than 10%.

Qualitatively, the typical characteristics of those who experience low-income are similar in both sub-samples. Thus, female working age, unattached individuals in one person households, married/with children under 25 years old and female lone parents with children under 25 are the dominant characteristics in both low income sub-samples.

The percentage of couples with either one or two earners (categories 3,4 and 5) that are low-income is higher in RST than in LUC. Low pay (and lower average pay levels) seems to be a more important component in low-income in RST than LUC so that even if one or two household members are working, the chances of them being in low income is higher. Note that while 58% of those in persistent low income work in LUC, 64% work in RST.

Looking at the possibilities of escaping low income, younger people in LUC are more likely to escape whereas in RST the age range/profile appears generally more spread out.

In terms of entering low-income, it is important to mention how the proportion of couples: 1 PT + 1 FT who enter low income in RST is twice bigger than in LUC. This might be consistent with the previous comment about families in rural areas needing more people in employment to reach the same level of income as in LUC.

Finally, to provide some insights into possible “trigger” events important for low-income exit and entry, the relative incidence of a number of economic and demographic events for low-income “escapees” and “entrants” were calculated. Overall, for both sub-samples, the results are similar with low-income escapees more likely to be associated with increasing number of earners or adults in the family, and therefore changes in economic family composition, as well as RST/LUC movement. Similarly, low-income entry is more associated with decreases in the number of earners or adults in the family, and changes in economic family composition.

While these results provide us with some preliminary understanding of the dynamics of low-income in Rural Small Town Canada, further work is required before firm conclusions can be drawn. For example, the tentative conclusion that - more families in work are likely to be in low income in rural areas of Canada - suggests that the link between low wage employment and low-income in Rural and Small Towns in Canada needs to be thoroughly investigated. Clearly, the availability of further years of the Survey of Labour and Income Dynamics will certainly add greater depth to the findings and insights gained so far. For example, will the apparent difference in the extent of the low-income persistence in RST be found when more years are added? Are the rates of exit or re-entry from and to low-income different in RST areas as opposed to LUC? How far is the ultimate income category of RST to LUC migrants determined by their first income category?

## 7.2. Work and Opportunity

The main results in this work and opportunity section are summarized below:

Looking at employment status, it has been found that the percentage of self-employment is considerably higher in RST compared with the LUC counterparts both for men and women. It is also worth noting how if we add up the three categories where some spell of employment exist (i.e. employed/unemployed; employed/not in the labour force; employed/unemployed/not in the labour force), we find that the percentage of individuals within this category is higher in RST than in LUC for both men and women. If we compare men to women the percentage is higher for women. In general, we can say that the higher percentage of seasonal and temporary jobs in RST may be causing this result.

As expected, the average hourly wage rate for RST men and women was below the corresponding rate in LUC. In the average total number of hours worked RST men work longer hours than LUC men, the proportion being more or less similar for RST and LUC women. By province, the average hours at work seems to be evenly distributed.

There seems to be higher job mobility in LUC for men (smaller percentage of individuals with longer periods job tenure) as well as for women in RST. The case of RST women might be due to higher seasonality of their jobs.

A third of the RST male workforce were employed in workplaces with fewer than 20 employees and fewer were employed in institutions of more than 100 employees. For women the situation is even clearer with 75% of the RST female workforce employed in <100 employee firms. Finally, in terms of industry classification and although agriculture in absolute terms does not seem to be the main source of employment in RST, compared to the LUC sub-sample it is an important source of employment for both the male and female workforce.

Male low pay mobility seems to be another key finding, i.e. lower mobility out of lowest class in RST and high downward mobility in second lowest pay class which may link to the low income persistency problem.

Also interesting observation is the percentage of women in RST unemployed all year that move into the employed/unemployed category compared with their LUC counterparts (75.57% vs. 59.77%). This might be consistent with previous thoughts about the possibility for rural women to get more temporary and seasonal jobs than urban women.

There is a higher proportion of both RST men and women affected by low pay relative to LUC areas as well as suffering more persistently low pay<sup>9</sup>. The situation is more acute for women than for men. These results might suggest again a link to low income, i.e. the greater importance of low pay in low income in RST.

Analysis of the key characteristics associated with low pay in general revealed only a few significant differences between RST and LUC. It might be worth noting here how the results for the size of workplace are similar across RST/LUC with the preponderance of low pay employees found in workforces of less than 20 employees. However, a relatively larger proportion of RST low pay individuals is found in this workplace size. Given the importance of this size of workplace in rural employment in general, this may be one of the reasons why there is higher low pay and low pay persistence in RST. Also, the proportion of semi-skilled LUC men and women who fall into the low pay class is slightly larger than the RST proportions.

Similar to the income and wealth section, these results are just a preliminary analysis of the dynamics of employment and pay. Further areas for research include the relationship between the employment status/wage dynamics and those in low-income; The participation of women and men in the labour market and the events associated with labour market entry and exit, and the determinants of self-employment in rural areas among others. While to answer such questions requires the use of a more formal statistical framework, it is the availability of longitudinal data that allows these questions to be properly addressed.

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<sup>9</sup> As with the income section, we understand 'persistently' low pay as more than 1 year. Data limitation provoke this limitation that will be solved when more years become available.

## 8. References

- Abrahamson, P. (1996) *Social Exclusion in Europe: Old Wine in New Bottles?* Blarney, Ireland.
- Atkinson, A. B., Bourguignon, F., Morrison, C. *Empirical Studies of Earnings Mobility*. Reading: Harwood Academic Publishers, 1992.
- Bane, M. J. a. E., D.T. “Slipping into and out of poverty: the dynamics of spells.” *Journal of Human Resources* 21(1986): 1-23.
- Berghman, J. (1995) Social Exclusion in Europe: policy context and analytical framework, ed. G. Room. Bristol, The Policy Press.
- Biggs, B., Bollman, R. and McNames, M. “*Trends and Characteristics of Rural and Small Town Canada.*” *Statistics Canada Agriculture Division. Working Paper # 15.* (1993).
- Dawes, L. “*Long Term Unemployment and Labour Market Flexibility.*” *University Centre for Labour Market Studies, Leicester.* (1993).
- Howatson, L. E., L. A New Approach to Non-CMA/CA areas, October, 1995.
- Jarvis, S. a. J., S.P. “Changing Places: Income Mobility and Poverty Dynamics in Britain.” *Working papers of the ESRC Research Centre on Micro-social Change. Colchester: University of Essex.* Paper 96-19(1996).
- Machin, S. a. M., A. “Employment and the introduction of the minimum wage in Britain.” *Economic Journal*, 106(1996): 667-676.
- Oppenheim, C. *Poverty: The Facts*. London: CPAG, 1993.
- Prais, S. J. “Measuring social mobility.” *Journal of the Royal Statistical Society, Series A* 118(1955): 56-66.
- Room, G. *Beyond the Threshold: The Measurement and Analysis of Social Exclusion*. Bristol: The Policy Press, 1995.
- Room, G. *New Poverty in the European Community*. Basingstoke: Macmillan, 1990.
- StataCorp. *Stata Statistical Software : Release 5.0 (Reference Manuals)*. Edited by C. Station. TX: Stata Corporation., 1997.
- Townsend, P. *Poverty in the United Kingdom*. London: Penguin, 1979.
- Townsend, A. (1991) New forms of employment in rural areas: a national perspective, ed. A. a. W. Champion, C. London, Paul Chapman Publishing.
- Walker, R. (1995) The dynamics of poverty and social exclusion, ed. G. Room. Bristol, The Policy Press.

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**APPENDIX I**  
**TABLES AND FIGURES**

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**TABLE 1**  
**POPULATION WITHIN CMA/CAs (LUC) AND NON-CMA/CAs**  
**(RST) CENSUS 1991 AND SLID SAMPLE\***

	1991 CENSUS		1993 SLID	
	Population	Percent within major group	Sample Counts (unweighted)	Percent within major group (weighted)**
Total population	27,296,859	100	26,841	100
CMA/CA (LUC)	21,067,214	77	16,543	78
Non CMA/CA (RST)	6,229,645	23	10,298	22
<b>POPULATION BY PROVINCES (Non-CMA/CA only)</b>				
Newfoundland	315,095	55	1,153	59
Prince Edward Island	57,056	44	259	40
Nova Scotia	356,582	40	937	33
New Brunswick	347,394	48	912	47
Quebec	1,568,488	23	1,872	22
Ontario	1,589,282	16	1,640	14
Manitoba	362,974	33	1,108	35
Saskatchewan	430,816	44	861	41
Alberta	643,971	25	970	26
British Columbia	505,645	15	582	15

\* We use CMA/CA areas for our Large Urban Centre sub-sample and Non-CMA/CA areas for the Rural Small Town one.

\*\* Interestingly, 22% of Canada's population lives in RST, but a considerably higher percentage (38.4%=[10,298/26,841]\*100) of the SLID sample is in RST areas. This sample design feature is obviously related to the need for Statistics Canada to provide reliable estimates at the provincial level and, many provinces have a high share of their population in RST areas. Thus, the sample in RST areas is considerably higher than its share of population. In order, to make inferences to the total population, the sample longitudinal weights must be used to take into account the degree of over-sampling in RST areas.

**Figure 1. SLID Sample Summary Statistics. Percentage of population in RST and LUC (Weighted results)**

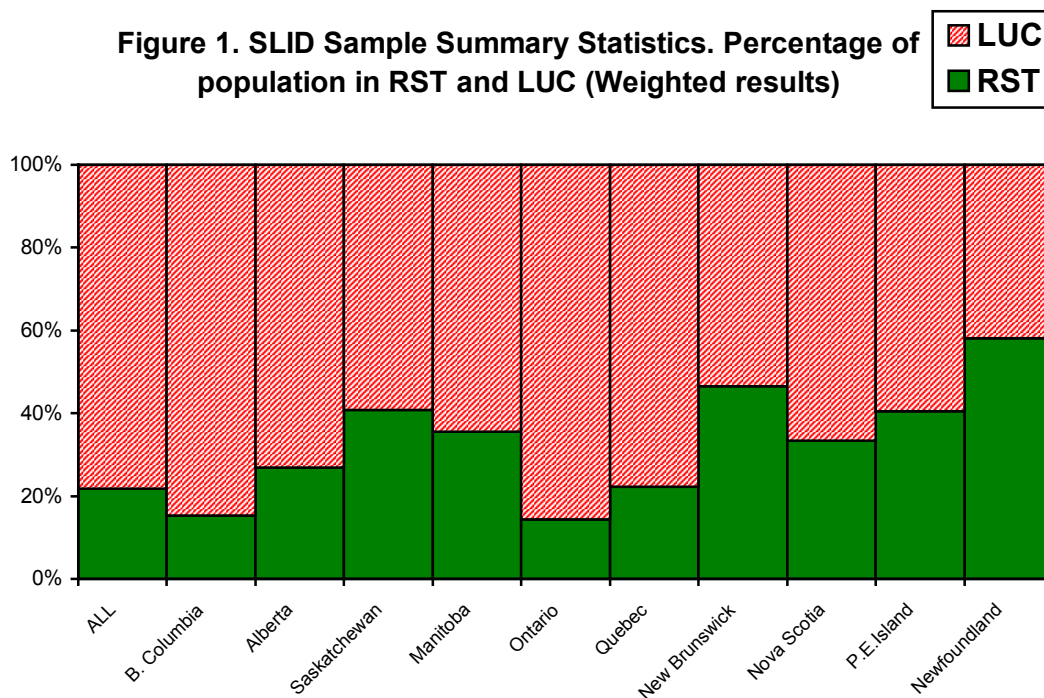


Figure 2. Average equivalised annual household income by province (1993 and 1994)

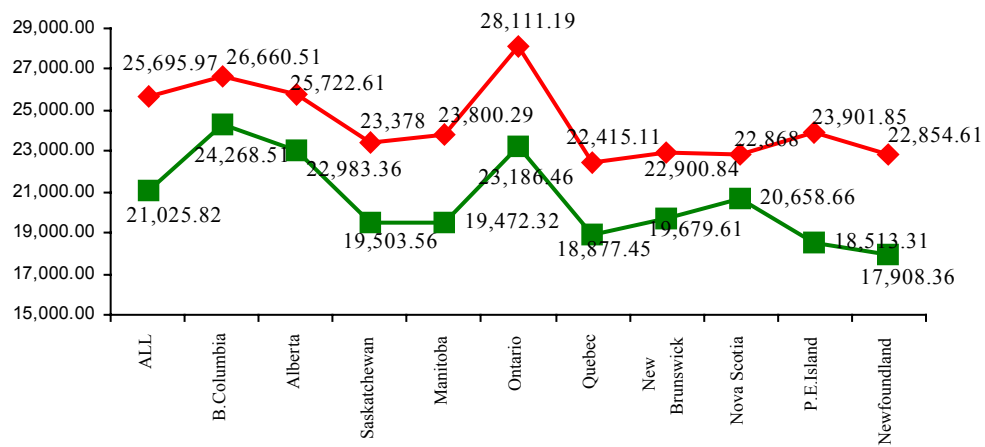
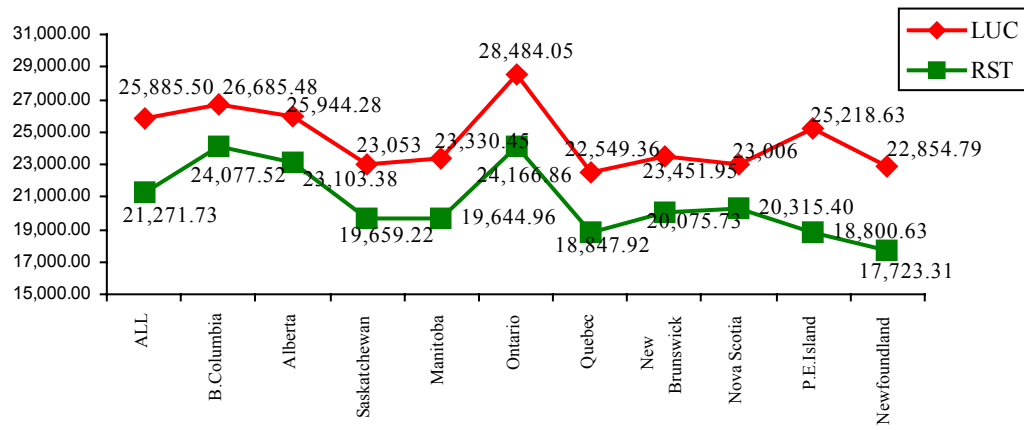
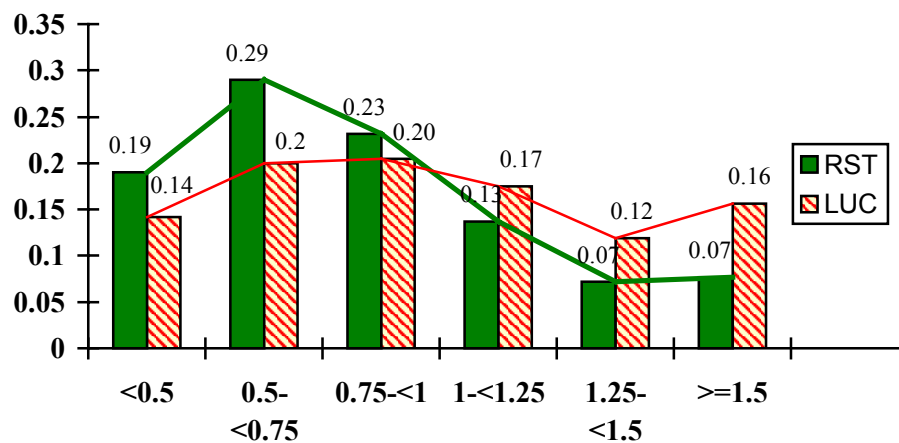


Figure 3. RST and LUC distribution of Household Income by Income Classes. All Canada.



**TABLE 2**  
**INCOME DISTRIBUTION SUMMARY:**  
**INEQUALITY MEASURES FOR ALL CANADA**

	Whole Sample	LUC	RST
	Years 93-94 Average	Years 93-94 Average	Years 93-94 Average
Coefficient of variation	0.568	0.569	0.535
Gini coefficient	0.282	0.281	0.270
Theil entropy measure	0.136	0.136	0.124

Notes. Longitudinal sample n=26,841

All LUC pooled=33,155; All RST pooled=20,527

RST: Rural Small Town; LUC: Large Urban Centre



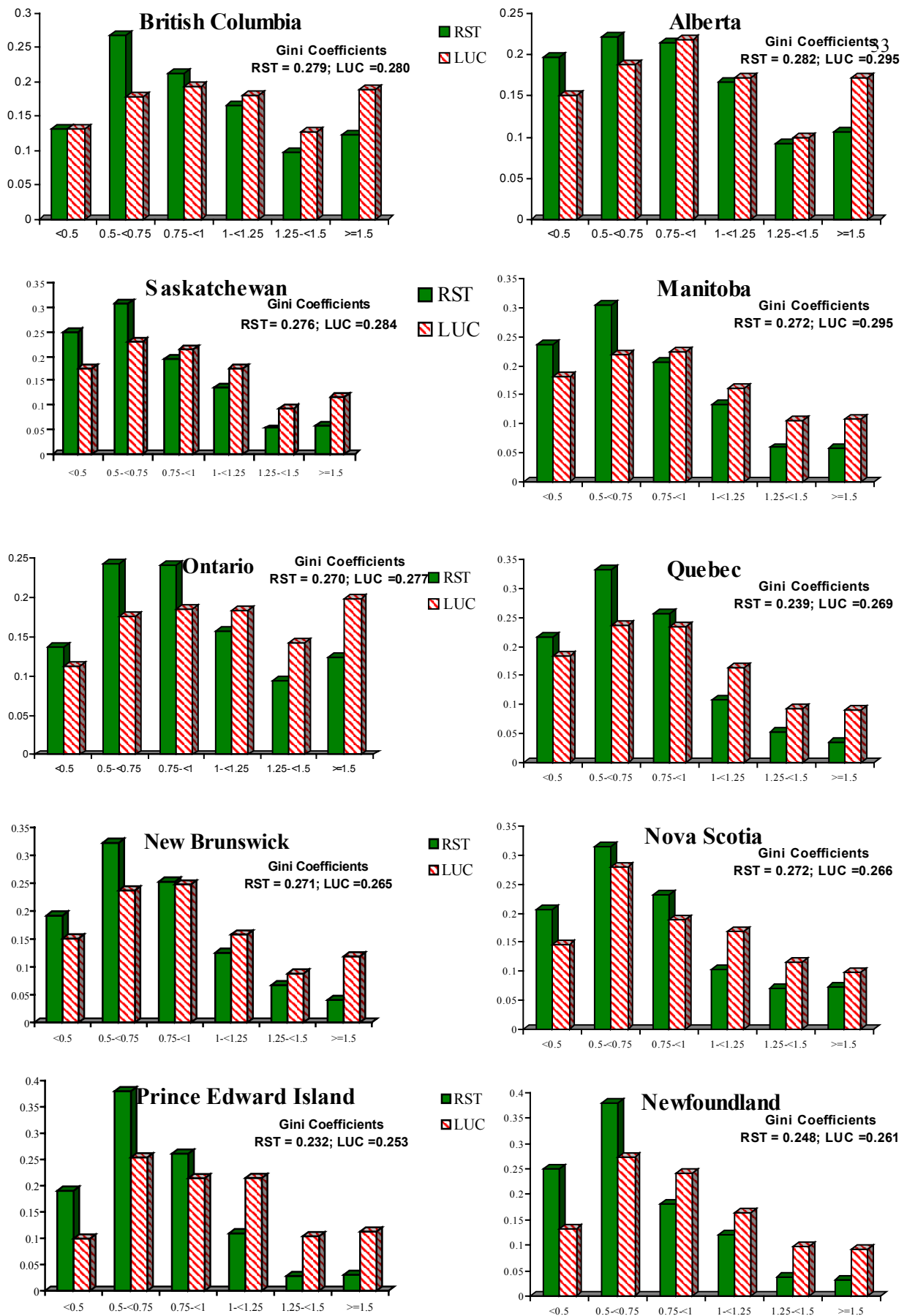


Figure 4. RST and LUC distribution of Household Income by Province and Income Classes

**TABLE 3**  
**TRANSITION MATRIX INCOME CLASS AND RST/LUC LOCATION**

Income Class	Period 't+1'											
	1	2	3	4	5	6	7	8	9	10	11	12
<b>RST</b>												
1. <0.5	0.656	0.241	0.039	0.019	0.002	0.003	0.024	0.009	0.002	0.000	0.000	0.000
2. 0.5-<0.75	0.152	0.628	0.159	0.024	0.004	0.002	0.008	0.009	0.004	0.003	0.001	0.000
3. 0.75-<1	0.035	0.188	0.561	0.152	0.011	0.011	0.007	0.006	0.018	0.002	0.001	0.001
4. 1-<1.25	0.034	0.042	0.168	0.512	0.158	0.033	0.009	0.010	0.005	0.013	0.009	0.001
5. 1.25-<1.5	0.011	0.043	0.069	0.218	0.407	0.200	0.012	0.000	0.003	0.014	0.013	0.004
6. >=1.5	0.024	0.033	0.023	0.057	0.138	0.686	0.008	0.005	0.001	0.013	0.002	0.004
<b>LUC</b>												
7. <0.5	0.019	0.005	0.000	0.000	0.000	0.000	0.725	0.173	0.038	0.016	0.011	0.007
8. 0.5-<0.75	0.002	0.005	0.003	0.001	0.000	0.000	0.151	0.590	0.178	0.043	0.010	0.010
9. 0.75-<1	0.002	0.003	0.003	0.001	0.000	0.000	0.051	0.142	0.552	0.194	0.037	0.010
10. 1-<1.25	0.001	0.000	0.002	0.002	0.002	0.000	0.021	0.054	0.147	0.529	0.200	0.034
11. 1.25-<1.5	0.001	0.000	0.001	0.000	0.001	0.001	0.034	0.050	0.075	0.185	0.462	0.184
12. >=1.5	0.000	0.001	0.000	0.000	0.000	0.002	0.015	0.012	0.030	0.051	0.156	0.728

*Notes:* Longitudinal sample n=26, 841 All LUC pooled=33, 155; All RST pooled=20, 527

Rows represent an income class/location combination for an initial time period. Columns represent an income class/location combination for the subsequent period. Cells represent the proportion who on average move from one income class/location to another between consecutive periods.

**TABLE 4**  
**PROJECTED INCOME DISTRIBUTION**

Income classes						
Proportions of overall mean equalised annual income						
	<0.5	0.5-<0.75	0.75-<1	1-<1.25	1.25-<1.5	≥1.5
RST						
Observed 93-94 average (*)	0.190	0.290	0.232	0.137	0.072	0.077
Projected (**)	0.217	0.298	0.208	0.135	0.065	0.075
Projected No RST-LUC migrations (***)	0.194	0.292	0.213	0.144	0.070	0.083
Projected No Movement (****)	0.175	0.277	0.214	0.157	0.080	0.095
LUC						
Observed 93-94 average	0.142	0.200	0.205	0.175	0.119	0.156
Projected (Table 3)	0.196	0.197	0.186	0.169	0.123	0.126
Projected No RST-LUC migrations	0.196	0.197	0.186	0.169	0.123	0.128
Projected No Movement	0.168	0.188	0.187	0.169	0.135	0.151

*Notes.* Longitudinal sample n=26,841; All LUC pooled=33,155; All RST pooled=20,527

\* Figures are obtained by “pooling”, the 2 years and constructing the appropriate weighted average values.

\*\* Estimates of long run proportions for each income class (whole sample).

\*\*\* Long run income distributions using a transition matrix where all individuals who moved between RST and LUC are removed.

\*\*\*\* Long run income distributions using a transition matrix after all individuals who moved at all in the two years are eliminated.

**TABLE 5**  
**PROPORTION OF TIME SPENT IN LOW INCOME**  
**IN 1993 AND 1994**

	Proportion of time spend in low income		
	Overall Sample	LUC	RST
<b>0.5 1993 mean income</b>			
HH	79.93	81.37	74.74
HL	5.68	5.39	6.72
LH	3.92	3.37	5.92
LL	10.45	9.86	12.60
<b>Poorest Quintile</b>			
HH	74.41	76.41	67.18
HL	5.58	5.22	6.88
LH	5.58	5.09	7.33
LL	14.41	13.25	18.59

Notes: L = Below Low Income cut-off income; H= Above Low Income cut-off  
 N =26,841

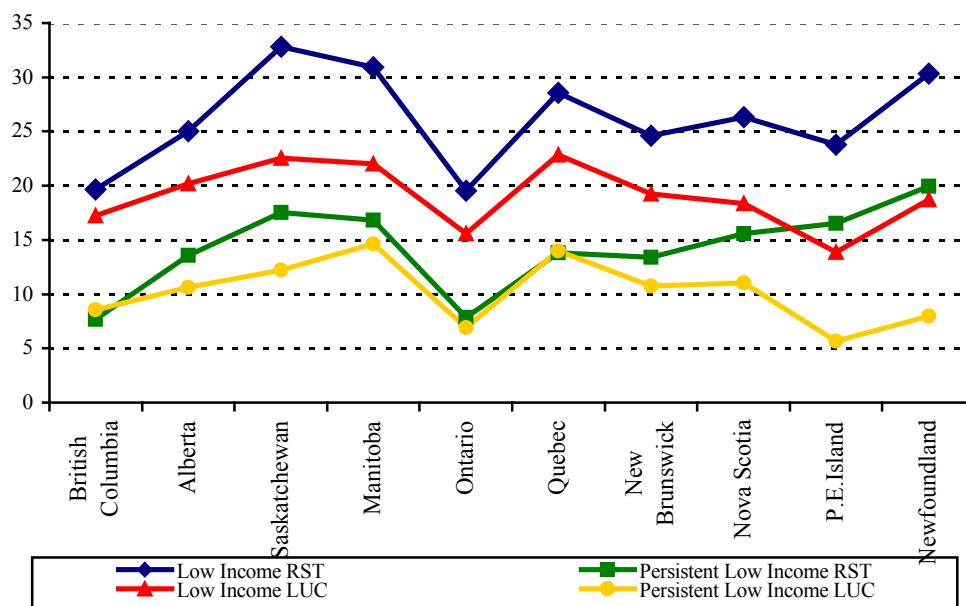


Figure 5. Low Income experience by province and RST/LUC location (0.5 1993 mean income threshold)

**TABLE 6**  
**CHARACTERISTICS OF THOSE EXPERIENCING LOW INCOME**

	0.5 of 1993 MEAN INCOME						POOREST QUINTILE					
	overall RST	overall LUC	persistent low income RST	persistent low income LUC	low income RST	low income LUC	persistent low income RST	persistent low income LUC	low income RST	low income LUC		
<b>Person Type</b>												
1. Male working age (aged 16-65)	0.436	0.424	0.402	0.382	0.416	0.395	0.383	0.367	0.398	0.383		
2. Female working age (aged 16-65)	0.411	0.431	0.454	0.503	0.445	0.492	0.426	0.478	0.425	0.467		
3. Male retired	0.071	0.059	0.039	0.014	0.044	0.019	0.065	0.029	0.065	0.036		
4. Female retired	0.081	0.084	0.102	0.100	0.093	0.092	0.124	0.124	0.111	0.112		
<b>Economic Family Composition</b>												
1. Unattached indiv. One person hold	0.102	0.141	0.238	0.318	0.209	0.308	0.215	0.307	0.192	0.289		
2. Unattached indiv. multiperson hold	0.019	0.032	0.041	0.085	0.040	0.087	0.035	0.076	0.036	0.079		
3. Married or common law/no children	0.258	0.226	0.142	0.063	0.165	0.077	0.186	0.082	0.193	0.104		
4. Married or common law/ with children (<25 years old)	0.421	0.363	0.361	0.230	0.371	0.236	0.365	0.240	0.376	0.244		
5. Female lone parents children (<25)	0.030	0.048	0.096	0.158	0.085	0.135	0.075	0.139	0.070	0.125		
6. Male lone parents children (<25)	0.007	0.011	0.007	0.017	0.009	0.015	0.006	0.014	0.008	0.012		
7. Other economic family types	0.136	0.155	0.082	0.105	0.089	0.119	0.086	0.115	0.093	0.122		
<b>Family Economic Status</b>												
1. No earners	0.184	0.175	0.362	0.415	0.323	0.362	0.369	0.405	0.327	0.363		
2. Single: Full time /Self employee	0.031	0.054	0.022	0.028	0.021	0.029	0.020	0.026	0.022	0.030		
3. Couple: 1 full time + 1 Not in work	0.074	0.060	0.048	0.039	0.066	0.045	0.055	0.042	0.067	0.050		
4. Couple: 1 FT + 1 PT	0.133	0.117	0.067	0.040	0.072	0.045	0.066	0.044	0.074	0.051		
5. Couple: 2 FT	0.100	0.110	0.029	0.006	0.035	0.009	0.032	0.013	0.035	0.014		
6. Couple and single: 1 PT (1 earner)	0.071	0.054	0.143	0.124	0.137	0.144	0.125	0.117	0.121	0.126		
7. Lone Parents: PT (1 earner)	0.007	0.008	0.034	0.040	0.029	0.033	0.026	0.036	0.024	0.030		
8. Lone Parents: At least 1 FT at work	0.020	0.034	0.023	0.035	0.026	0.036	0.019	0.035	0.022	0.038		
9. At least 2 at work	0.326	0.347	0.211	0.231	0.236	0.248	0.229	0.233	0.255	0.248		
10. Others	0.050	0.036	0.055	0.036	0.050	0.044	0.052	0.045	0.048	0.045		
<b>Level of Education</b>												
1. Never attended school	0.006	0.004	0.014	0.011	0.012	0.009	0.015	0.011	0.012	0.009		
2. Attended elem./secondary school	0.552	0.417	0.650	0.538	0.650	0.516	0.669	0.548	0.664	0.526		
3. Post-sec. Non-university courses	0.318	0.355	0.249	0.301	0.256	0.318	0.242	0.293	0.251	0.311		
4. Attended University	0.099	0.160	0.074	0.112	0.070	0.114	0.063	0.108	0.061	0.109		
5. Post-graduate degrees	0.015	0.046	0.004	0.015	0.003	0.017	0.003	0.013	0.003	0.017		

Key Persistent low income = low income in the two years. (RST=RST in 1993)

Low income = average characteristics of all those experiencing low income over the two years.

**TABLE 7**  
**CHARACTERISTICS OF ENTRANTS AND ESCAPEES FROM LOW INCOME**

	<i>0.5 of 1993 MEAN INCOME</i>				<i>POOREST QUINTILE</i>			
	<i>Escapees</i> <i>RST</i>	<i>Escapees</i> <i>LUC</i>	<i>Entrants</i> <i>RST</i>	<i>Entrants</i> <i>LUC</i>	<i>Escapees</i> <i>RST</i>	<i>Escapees</i> <i>LUC</i>	<i>Entrants</i> <i>RST</i>	<i>Entrants</i> <i>LUC</i>
<b>Age Category</b>								
<30	0.357	0.379	0.399	0.360	0.322	0.398	0.407	0.362
30-39	0.202	0.304	0.140	0.206	0.231	0.228	0.142	0.210
40-54	0.224	0.162	0.214	0.208	0.234	0.177	0.226	0.208
55+	0.215	0.153	0.245	0.224	0.210	0.195	0.222	0.217
<b>Person Type</b>								
1. Male working age (aged 16-65)	0.496	0.419	0.432	0.450	0.464	0.421	0.439	0.465
2. Female working age (aged 16-65)	0.419	0.500	0.503	0.476	0.429	0.474	0.499	0.473
3. Male retired	0.041	0.031	0.039	0.016	0.052	0.047	0.030	0.014
4. Female retired	0.043	0.049	0.026	0.057	0.053	0.055	0.029	0.046
<b>Economic Family Composition</b>								
1. Unattached indiv. One person hhold	0.076	0.251	0.071	0.144	0.100	0.215	0.052	0.130
2. Unattached indiv. multiperson hhold	0.038	0.190	0.022	0.014	0.035	0.166	0.020	0.017
3. Married or common-law/no children	0.193	0.058	0.228	0.172	0.168	0.118	0.193	0.182
4. Married or common-law/ with children (<25 years old)	0.439	0.273	0.406	0.312	0.434	0.263	0.463	0.343
5. Female lone parents children (<25)	0.080	0.104	0.029	0.061	0.068	0.104	0.033	0.039
6. Male lone parents children (<25)	0.038	0.017	0.019	0.019	0.020	0.008	0.022	0.017
7. Other economic family types	0.113	0.087	0.174	0.265	0.133	0.085	0.173	0.256
<b>Family Economic Status</b>								
1. No earners	0.164	0.203	0.169	0.154	0.144	0.223	0.112	0.139
2. Single: Full time /Self employee	0.017	0.052	0.004	0.048	0.028	0.058	0.006	0.039
3. Couple: 1 full time + 1 Not in work	0.117	0.060	0.071	0.055	0.115	0.067	0.061	0.055
4. Couple: 1 FT + 1 PT	0.096	0.052	0.135	0.058	0.112	0.049	0.153	0.054
5. Couple: 2 FT	0.072	0.008	0.026	0.045	0.043	0.010	0.043	0.039
6. Couple and single: 1 PT (1 earner)	0.086	0.178	0.063	0.074	0.078	0.140	0.073	0.077
7. Lone Parents: PT (1 earner)	0.011	0.026	0.000	0.015	0.011	0.020	0.002	0.007
8. Lone Parents: At least 1 FT at work	0.071	0.044	0.045	0.057	0.060	0.059	0.046	0.042
9. At least 2 at work	0.320	0.323	0.436	0.454	0.360	0.329	0.461	0.498
10. Others	0.041	0.050	0.046	0.036	0.044	0.041	0.039	0.044
<b>Level of Education</b>								
1. Never attended school	0.004	-	0.001	0.009	-	0.000	0.001	0.007
2. Attended elem./secondary school	0.700	0.421	0.623	0.477	0.675	0.433	0.639	0.478
3. Post-sec. Non-university courses	0.238	0.365	0.313	0.339	0.254	0.360	0.281	0.354
4. Attended University	0.042	0.157	0.056	0.125	0.050	0.143	0.073	0.118
5. Post-graduate degrees	-	0.041	0.002	0.023	0.002	0.052	0.002	0.019

Key Persistent low income = low income in the two years, (RST=RST in 1993)

Low income = average characteristics of all those experiencing low income over the two years.

**TABLE 8**  
**COINCIDENCE OF ECONOMICS AND DEMOGRAPHIC EVENTS WITH**  
**LOW INCOME ESCAPE AND ENTRY**

	0.5 1993 Mean Income				Poorest Quintile			
	<i>RST</i> <i>Escape</i>	<i>LUC</i> <i>Escape</i>	<i>RST</i> <i>Entry</i>	<i>LUC</i> <i>Entry</i>	<i>RST</i> <i>Escape</i>	<i>LUC</i> <i>Escape</i>	<i>RST</i> <i>Entry</i>	<i>LUC</i> <i>Entry</i>
No. earners down *	1.033	1.032	2.228	1.800	0.830	0.897	2.165	1.832
No. earners up	2.330	2.390	0.503	0.664	2.263	2.382	0.589	0.804
No. adults own*	0.648	0.632	3.395	4.379	0.912	0.643	3.439	4.264
No. adults up	2.506	4.142	1.049	0.935	2.320	4.000	1.370	0.831
No. children down *	1.530	1.142	1.818	2.040	1.378	0.673	1.727	2.081
No. children up	1.156	1.026	1.549	1.947	0.588	0.973	1.764	1.500
Family Economic Status change	0.710	0.874	0.817	0.813	0.645	0.840	1.355	1.330
Economic Family Composition Change	2.066	2.248	2.588	2.770	1.955	2.279	2.772	2.763
Move	1.767	2.000	2.395	4.200	2.279	1.000	2.069	3.800
LUC-RST/RST-LUC								

Notes: (\*)Unit is the household. Low income escapees and entrants defined as in Table 7.

**TABLE 9**  
**EMPLOYMENT STATUS FROM SLID CROSS-SECTIONS**

	<b>RST</b>		<b>LUC</b>	
	Year 1993	Year 1994	Year 1993	Year 1994
<b>Men (N)</b>	<b>2,166</b>	<b>2,147</b>	<b>3,864</b>	<b>3,883</b>
Employed all year	62.82	66.02	65.17	73.41
Unemployed all year	1.35	1.64	0.92	1.06
Not in the labour force all year	1.84	2.02	1.42	2.29
Employed/Unemployed	5.91	4.31	4.75	3.89
Employed/Not in the labour force	3.29	5.33	2.51	3.15
Unemployed/Not in the labour force	0.92	0.61	0.97	0.48
Employed/Unemployed/Not in the labour force	2.79	2.25	1.49	2.35
Self-employed with pay help	4.48	4.36	2.52	2.74
Self-employed without pay help	9.07	9.40	3.77	4.62
Don't know	7.47	4.00	16.42	5.96
<b>Women (N)</b>	<b>1,947</b>	<b>1,955</b>	<b>3,675</b>	<b>3,667</b>
Employed all year	59.55	61.52	61.82	71.97
Unemployed all year	1.38	2.47	0.69	0.86
Not in the labour force all year	5.07	7.09	3.30	4.07
Employed/Unemployed	5.39	4.88	3.67	4.79
Employed/Not in the labour force	4.07	5.45	4.10	4.72
Unemployed/Not in the labour force	1.82	1.02	0.93	0.88
Employed/Unemployed/Not in the labour force	4.63	4.06	3.35	3.40
Self-employed with pay help	1.28	1.48	1.10	1.29
Self-employed without pay help	8.13	7.55	3.89	3.61
Don't know	8.62	4.45	17.10	4.35



**TABLE 10  
EMPLOYMENT STATUS FROM SLID POOLED SAMPLE (1993 AND 1994) BY PROVINCES**

	B.C.		Alberta		Sask.		Manitoba		Ontario		Quebec		N.B.		N.S.		P.E.I.		Nfld.		
	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	RST	LUC	
<i>Men (N)</i>																					
Employed all year	66.7	71.7	68.4	77.5	53.4	75.9	54.6	75.3	65.8	64.9	67.9	71.7	61.1	64.6	63.7	72.4	55.6	68.7	48.8	70.8	
Unemployed all year	0.00	0.73	0.48	0.89	0.20	0.44	0.57	0.88	1.69	1.05	2.75	1.22	1.37	0.32	0.61	0.30	1.51	1.22	2.70	1.46	
Not in the labour force all year	1.01	1.80	1.91	1.58	1.04	3.43	1.69	1.60	1.69	1.89	1.88	1.65	2.72	2.21	0.83	3.58	1.97	1.12	7.39	1.13	
Employed/Unemployed	3.38	3.67	2.56	5.18	2.91	4.15	4.24	6.96	4.95	2.80	6.80	6.55	6.45	4.14	5.00	4.83	11.5	5.19	7.04	8.10	
Employed/Not in the labour force	7.07	3.36	3.67	2.27	3.16	4.14	2.22	2.48	2.82	2.34	4.62	2.96	4.89	5.81	7.52	5.35	1.81	1.74	7.11	4.59	
Unemployed/Not in the labour force	0.00	0.55	0.07	0.25	0.53	0.22	1.71	1.33	0.57	0.41	0.81	1.34	1.31	1.92	1.03	0.43	0.00	2.14	3.61	2.33	
Employed/Unemployed/Not in the labour force	1.91	1.16	1.14	1.72	2.07	1.10	2.83	1.89	1.63	2.18	2.86	1.70	5.26	2.18	0.92	4.41	3.92	3.00	9.67	2.80	
Self-employed with pay help	3.53	3.51	3.27	1.23	18.1	2.95	7.01	2.09	4.10	3.40	2.97	1.58	1.75	1.28	5.36	1.12	7.16	5.14	3.88	1.26	
Self-employed without pay help	11.7	5.32	10.9	5.10	13.6	3.97	20.7	5.15	9.59	3.87	5.79	4.19	2.57	3.27	6.65	1.16	10.3	3.91	7.44	3.79	
<i>Women (N)</i>																					
Employed all year	53.1	71.1	54.2	71.6	66.2	72.2	60.1	73.3	63.3	60.5	66.8	72.7	55.6	68.8	58.6	67.7	55.6	73.3	42.2	73.1	
Unemployed all year	1.12	0.65	0.93	0.89	1.84	0.97	0.88	0.68	1.73	0.79	2.76	0.67	1.30	0.31	2.28	1.23	1.71	0.00	3.75	2.97	
Not in the labour force all year	8.98	3.42	9.25	5.44	3.51	4.91	4.46	2.13	4.71	3.24	5.85	4.33	5.33	2.04	3.74	2.95	4.88	3.57	10.6	3.40	
Employed/Unemployed	4.97	4.47	5.54	3.66	1.48	3.06	4.86	4.33	3.39	4.40	5.38	3.73	7.40	4.20	9.55	6.74	11.4	4.72	8.59	5.74	
Employed/Not in the labour force	6.27	3.16	4.96	5.42	2.96	4.94	5.02	3.58	3.42	4.32	4.11	5.24	6.19	2.62	5.38	4.25	8.64	2.89	10.8	3.10	
Unemployed/Not in the labour force	1.47	1.01	1.33	0.48	0.43	1.45	1.75	2.15	1.61	0.70	1.00	1.11	0.95	0.30	1.05	1.40	2.20	1.51	3.97	1.66	
Employed/Unemployed/Not in the labour force	2.45	3.76	4.99	3.62	3.13	2.79	2.27	4.05	4.69	3.10	4.16	3.58	3.51	2.60	5.78	3.32	1.51	3.61	9.04	4.24	
Self-employed with pay help	3.13	1.80	0.73	0.17	2.28	0.92	2.19	0.53	1.38	1.28	0.95	1.17	0.84	1.02	1.75	1.30	1.19	1.58	0.32	1.27	
Self-employed without pay help	10.5	4.01	10.8	4.74	9.97	5.84	11.5	4.76	7.18	3.77	6.12	2.95	5.07	3.04	5.23	4.06	7.71	3.26	8.97	2.08	

Note: "Employed/Unemployed" implies that the individual has been in both situations during the interview year.

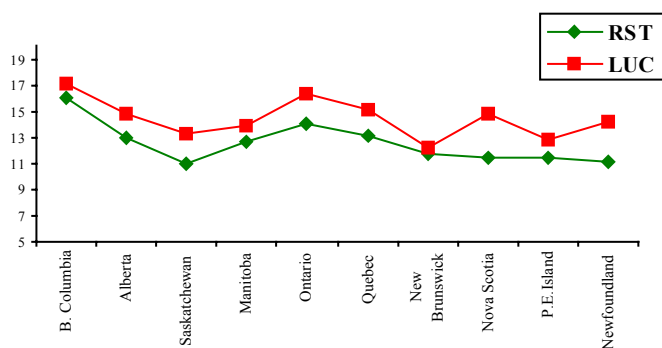
And equally for the categories "Employed/Not in the labour force" and "Employed/Unemployed/Not in the labour force"

"Self-employed with and without pay help": By "pay help" we mean complementary wage earnings from the self-employment ones

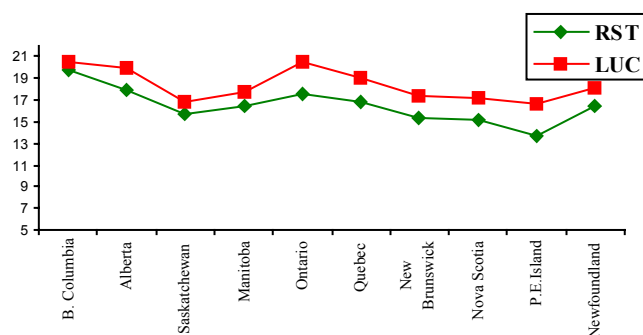
**TABLE 11**  
**PERCENTILE POINTS OF THE SLID HOURLY WAGE DISTRIBUTION**  
**(1993 PRICES)**

MEN	RST		LUC	
	Year 1993	Year 1994	Year 1993	Year 1994
10th	7.12	7.95	7.16	7.69
20th	10.77	11.49	10.90	11.54
½ Median	9.65	10.50	9.79	10.18
2/3 Median	10.96	11.38	11.07	11.28
70th	20.65	21.43	20.59	21.47
100th	33.84	35.49	35.54	36.77
Average Hourly wage	16.96	17.43	19.23	20.04

WOMEN	RST		LUC	
	Year 1993	Year 1994	Year 1993	Year 1994
10th	5.75	5.90	5.83	6.08
20th	7.88	8.09	7.92	8.18
½ Median	7.31	7.48	7.36	7.65
2/3 Median	7.92	8.19	8.20	8.48
70th	16.32	16.94	16.45	16.98
100th	29.59	29.91	30.02	30.87
Average Hourly wage	12.97	13.30	15.36	15.91



**Women**



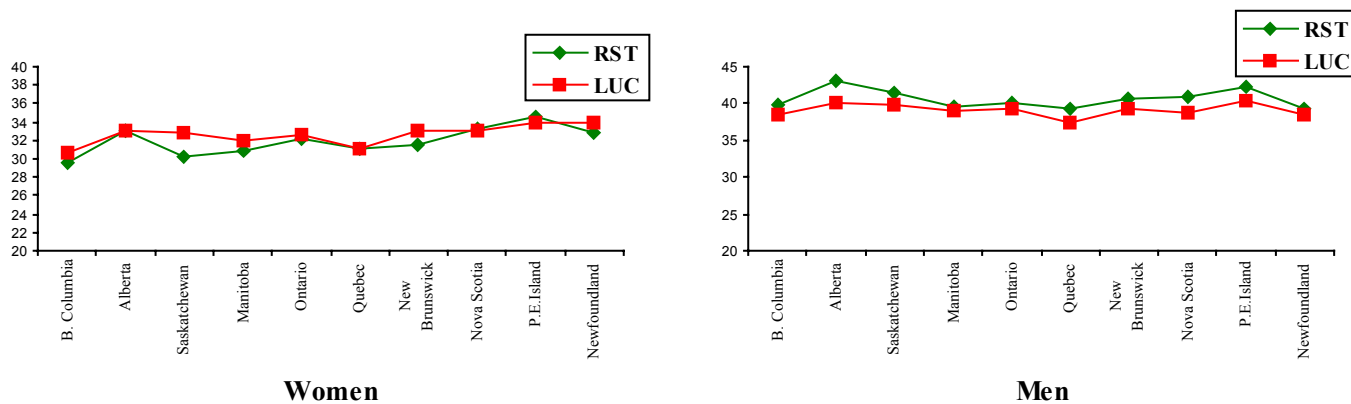
**Men**

**Figure 6. Average Hourly Wage by Province and sex.**

**TABLE 12**  
**NUMBER OF HOURS AT WORK\* %**  
**& AVERAGE HOURLY WAGE (IN BRACKETS)**

	RST			LUC		
	<i>ALL</i>	<i>MALE</i>	<i>FEMALE</i>	<i>ALL</i>	<i>MALE</i>	<i>FEMALE</i>
10 h or less	0.030 (12.419)	0.008 (11.063)	0.057 (12.665)	0.027 (15.793)	0.009 (14.718)	0.045 (16.045)
10-20	0.060 (12.255)	0.014 (11.713)	0.116 (12.334)	0.073 (14.071)	0.025 (12.667)	0.124 (14.378)
20-30	0.095 (14.011)	0.035 (17.362)	0.169 (13.152)	0.083 (15.610)	0.039 (17.244)	0.129 (15.087)
30-40	0.640 (16.082)	0.682 (17.873)	0.588 (13.551)	0.704 (18.384)	0.752 (20.329)	0.652 (16.018)
40-50	0.130 (15.598)	0.193 (16.495)	0.054 (11.746)	0.084 (17.931)	0.126 (18.719)	0.040 (15.314)
>50	0.041 (13.537)	0.065 (14.170)	0.012 (9.615)	0.027 (17.166)	0.046 (17.994)	0.008 (12.461)
AVERAGE (Hours of work)	36.317	40.195	31.595	35.392	38.663	31.945

\* It does not include overtime hours



**Figure 7. Average Hours at work by provinces and sex**

**TABLE 13  
CHARACTERISTICS OF EMPLOYEES – ALL CANADA**

<i>Characteristics</i>				
	MALE		FEMALE	
	<i>RST</i>	<i>LUC</i>	<i>RST</i>	<i>LUC</i>
<b>AGE</b>				
Under 25	0.066	0.054	0.050	0.072
25-34	0.628	0.616	0.636	0.608
35-44	0.227	0.231	0.219	0.249
45-55	0.077	0.097	0.093	0.069
<b>YEARS OF JOB TENURE</b>				
Under 2	0.035	0.037	0.064	0.069
2-5	0.064	0.055	0.091	0.077
5-10	0.103	0.134	0.207	0.172
> 10	0.796	0.772	0.637	0.680
<b>EDUCATION</b>				
No qualifications	0.000	0.001	0.000	0.000
Elementary	0.072	0.044	0.050	0.025
Secondary	0.353	0.272	0.362	0.243
University/College	0.539	0.584	0.557	0.667
Graduate degreee	0.026	0.086	0.025	0.059
<b>SIZE OF WORKPLACE</b>				
Under 20 employees	0.333	0.223	0.448	0.300
20-99 employees	0.290	0.319	0.310	0.312
100-499 employees	0.240	0.247	0.174	0.215
500-999 employees	0.059	0.087	0.033	0.074
>=1,000 employees	0.071	0.115	0.031	0.090
<b>OCCUPATION</b>				
Professional/High Level Management	0.103	0.163	0.118	0.169
Semi-professional/Technical/Middle Manag.	0.058	0.097	0.139	0.147
Supervisors; Foremen/Forewomen	0.151	0.176	0.073	0.124
Skilled workers/Employees/Farmers	0.247	0.201	0.174	0.176
Semi-skilled workers/Employees	0.202	0.193	0.276	0.230
Unskilled occupation	0.229	0.161	0.216	0.148
<b>FAMILY ECONOMIC STATUS</b>				
Single FT/s/emp	0.095	0.115	0.061	0.116
Couple: 1FT + 1 Not in work (learner)	0.137	0.104	0.021	0.015
Couple: 1FT + 1 PT (2 earners)	0.207	0.188	0.231	0.174
Couple: 2 FT (2 earners)	0.198	0.236	0.264	0.272
Couple + Single (PT): 1 earner	0.037	0.029	0.038	0.029
Lone Parents: PT (1 earner)	0.002	0.002	0.006	0.008
Lone Parents: 1+ FT	0.017	0.022	0.039	0.057
Two in work. Other Families	0.260	0.268	0.314	0.303
Other categories	0.041	0.031	0.021	0.021
<b>STANDARD IND. CLAS.</b>				
Agriculture, forestry and fishing	0.057	0.007	0.030	0.004
Mining	0.051	0.020	0.005	0.004
Manufacturing	0.284	0.262	0.105	0.098
Construction	0.053	0.048	0.012	0.009
Transport/Communication	0.124	0.135	0.048	0.049
Trade Industries	0.141	0.158	0.153	0.150
Banking/Finance/Insurance	0.038	0.083	0.099	0.138
Accommodation/Food/Beverage	0.017	0.031	0.071	0.044
Government/Educational/Health	0.199	0.217	0.431	0.446

**TABLE 14**  
**TRANSITION MATRIX EMPLOYMENT AND WAGES CLASS AND RST/LUC LOCATION**

	MALE													
	RST							LUC						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Employed all year, lowest wage interval (2/3 median)	72.16	10.19	0.55	0.42	0.57	3.28	8.99	1.70	0.31	0.00	0.00	0.46	0.33	1.00
2. Employed all year, medium wage interval	11.88	67.58	9.26	0.00	0.57	1.09	6.75	0.00	2.13	0.23	0.00	0.00	0.00	0.46
3. Employed all year, highest wage interval	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4. Unemployed all year	4.35	0.00	2.14	0.00	0.00	69.64	19.13	0.00	0.00	0.00	0.00	0.00	4.71	0.00
5. Not in labour force all year	19.42	0.00	0.00	0.00	0.00	35.55	33.91	5.17	0.00	0.00	0.00	0.00	5.93	0.00
6. Employment/Unemployment spell	23.13	9.92	0.00	12.37	4.36	25.01	21.34	0.00	0.00	0.00	0.00	0.49	0.44	2.91
7. Others (Self-employment, family care, retirement, etc.)	7.58	4.36	0.29	0.46	3.72	5.16	74.30	1.69	0.14	0.00	0.00	0.33	0.68	1.24
8. Employed all year, lowest wage interval (2/3 median)	0.40	0.11	0.12	0.00	0.00	0.03	0.00	63.96	15.27	1.03	0.71	1.68	3.73	12.90
9. Employed all year, medium wage interval	0.06	0.44	0.09	0.00	0.00	0.03	0.00	6.39	65.82	19.17	0.36	0.53	1.55	5.50
10. Employed all year, highest wage interval	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11. Unemployed all year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.70	9.97	0.00	0.00	0.00	56.99	12.32
12. Not in labour force all year	0.64	0.00	0.00	0.00	0.00	0.00	0.00	3.99	2.28	0.00	0.00	0.00	54.13	38.94
13. Employment/Unemployment spell	0.00	0.00	0.00	0.31	0.00	0.20	0.00	24.78	11.45	1.08	8.41	5.25	24.54	23.93
14. Others (Self-employment, family care, retirement, etc.)	0.25	0.34	0.00	0.00	0.03	0.09	0.36	17.48	16.89	1.62	0.41	3.84	7.49	51.13

\* This table represent the initial (row) and final (column) location of individuals. Since there was no one initially on the category "Employed all year, highest wage interval", rows 3 and 10 are empty.



**TABLE 16**  
**PROPORTION OF TIME SPENT IN LOW PAY**  
**BETWEEN 1993 AND 1994**

	Proportion of time spend in low pay (2/3 median wage)	
	RST	LUC
<b>MALE</b>		
HH	58.02	66.87
HL	10.28	9.64
LH	11.02	10.98
LL	20.66	12.49
<b>FEMALE</b>		
HH	28.11	45.78
HL	16.38	15.08
LH	17.75	12.79
LL	37.75	26.33

**TABLE 17**  
**CHARACTERISTICS OF LOW PAY RELATIVE TO ALL EMPLOYEES**

<i>Characteristics</i>	MALE		FEMALE	
	<i>RST</i>	<i>LUC</i>	<i>RST</i>	<i>LUC</i>
<b>AGE</b>				
Under 25	3.136	4.222	1.540	2.097
25-34	0.947	0.878	0.988	0.911
35-44	0.528	0.515	0.872	0.847
45-55	0.987	1.123	1.086	1.118
<b>YEARS OF JOB TENURE</b>				
Under 2	2.800	3.810	1.390	1.971
2-5	2.078	2.436	1.131	1.480
5-10	1.174	1.544	1.154	1.063
> 10	0.811	0.669	0.890	0.832
<b>EDUCATION</b>				
No qualifications	N/A	2.000	N/A	N/A
Elementary	1.833	1.522	1.580	1.960
Secondary	1.342	1.382	1.320	1.395
University/College	0.708	0.849	0.784	0.892
Graduate degreee	0.153	0.383	0.080	0.169
<b>SIZE OF WORKPLACE</b>				
Under 20 employees	1.555	1.883	1.227	1.526
20-99 employees	0.982	1.031	0.967	1.057
100-499 employees	0.579	0.582	0.660	0.641
500-999 employees	0.423	0.758	0.484	0.432
>=1,000 employees	0.338	0.260	0.483	0.377
<b>OCCUPATION</b>				
Professional/High Level Management	0.349	0.312	0.338	0.289
Semi-professional/Technical/Middle Manag.	0.362	0.577	0.374	0.374
Supervisors; Foremen/Forewomen	0.688	0.619	1.068	0.951
Skilled workers/Employees/Farmers	0.789	0.691	1.005	0.960
Semi-skilled workers/Employees	1.148	1.875	1.369	1.786
Unskilled occupation	1.786	1.677	1.263	1.290
<b>FAMILY ECONOMIC STATUS</b>				
Single FT/s/emp	0.957	1.026	0.737	0.732
Couple: 1FT + 1 Not in work (1 learner)	0.817	0.500	1.142	1.000
Couple: 1FT + 1 PT (2 earners)	0.739	0.712	0.995	1.068
Couple: 2 FT (2 earners)	0.883	0.588	0.916	0.705
Couple + Single (PT): 1 earner	1.297	1.793	1.105	1.586
Lone Parents: PT (1 earner)	3.5	3.500	1.000	1.125
Lone Parents: 1+ FT	1.470	1.681	0.820	0.947
Two in work. Other Families	1.261	1.511	1.114	1.260
Other categories	1.365	1.677	1.095	1.238
<b>STANDARD IND. CLAS.</b>				
Agriculture, forestry and fishing	1.842	1.857	1.466	1.750
Mining	0.470	0.050	1.200	0.750
Manufacturing	0.890	0.763	1.180	1.142
Construction	0.962	0.833	1.250	1.555
Transport/Communication	0.669	0.496	0.833	0.673
Trade Industries	1.801	1.955	1.522	1.680
Banking/Finance/Insurance	0.710	0.710	1.121	0.949
Accommodation/Food/Beverage	2.294	4.415	1.690	2.204
Government/Educational/Health	0.532	0.410	0.552	0.556



**TABLE 18**  
**CHARACTERISTICS OF ENTRANTS AND ESCAPEES FROM LOW PAY**  
**INTO HIGH PAY (%)**

<i>Characteristics</i>	<i>RST</i>			<i>LUC</i>		
	<i>Escape to High Pay</i>	<i>Entrant from High Pay</i>	<i>Low Pay (all)</i>	<i>Escape to High Pay</i>	<i>Entrant from High Pay</i>	<i>Low Pay (all)</i>
<b>AGE</b>						
Under 25	9.83	2.01	12.74	8.76	8.04	17.81
25-34	72.02	64.77	61.60	71.04	53.93	55.04
35-44	15.75	19.17	16.46	14.64	14.94	17.94
45-55	2.38	14.02	9.18	5.54	23.07	9.20
<b>YEARS OF JOB TENURE</b>						
Under 2	5.13	4.76	9.27	12.84	8.54	13.81
2-5	7.42	4.68	11.51	9.08	7.91	12.12
5-10	19.42	22.95	19.42	20.88	16.56	19.14
> 10	68.01	67.60	59.78	57.18	66.97	54.90
<b>EDUCATION</b>						
No qualifications	0.00	0.00	0.08	0.00	1.12	0.19
Elementary	3.36	5.65	9.98	6.73	3.97	5.60
Secondary	42.84	35.74	47.69	24.11	36.70	35.25
University/College	50.47	53.14	41.60	64.82	56.07	56.10
Graduate degreee	3.31	3.38	0.35	4.32	1.12	1.82
<b>SIZE OF WORKPLACE</b>						
Under 20 employees	43.26	43.30	53.84	27.07	28.72	44.52
20-99 employees	24.97	22.82	29.46	36.24	31.44	33.03
100-499 employees	23.05	21.50	12.46	19.25	22.54	14.05
500-999 employees	2.99	4.38	1.99	8.74	5.63	4.43
>=1,000 employees	4.50	7.97	1.89	7.36	10.64	3.28
<b>OCCUPATION</b>						
Professional/High Level Management	12.17	5.44	3.90	16.61	5.70	5.03
Semi-professional/Technical/Middle Manag.	4.95	13.67	4.06	11.68	13.34	5.60
Supervisors; Foremen/Forewomen	7.97	8.09	8.86	9.63	11.41	11.54
Skilled workers/Employees/Farmers	21.88	19.38	18.30	28.49	20.29	15.87
Semi-skilled workers/Employees	26.60	23.10	32.24	12.76	24.79	39.44
Unskilled occupation	26.39	30.28	32.56	19.13	23.01	21.94
<b>FAMILY ECONOMIC STATUS</b>						
Single FT/s/emp	0.00	0.00	0.00	0.00	0.00	0.00
Couple: 1FT + 1 Not in work (1earner)	7.53	7.31	6.32	6.11	17.62	9.69
Couple: 1FT + 1 PT (2 earners)	3.55	9.85	5.80	9.00	4.41	2.86
Couple: 2 FT (2 earners)	25.03	30.18	20.13	22.48	29.44	16.85
Couple + Single (PT): 1 earner	22.64	15.69	21.67	22.21	8.34	17.41
Lone Parents: PT (1 earner)	6.23	3.39	4.48	1.90	5.17	4.82
Lone Parents: 1+ FT	0.00	0.00	0.69	0.00	0.00	0.87
Two in work. Other Families	3.41	0.96	2.99	1.03	3.17	4.87
Other categories	27.61	29.99	34.22	31.88	29.49	39.02
<b>STANDARD IND. CLAS.</b>						
Agriculture, forestry and fishing	7.29	3.16	6.74	0.65	0.00	0.95
Mining	3.59	0.96	1.35	0.70	0.84	0.26
Manufacturing	16.30	14.87	17.36	15.19	25.18	14.34
Construction	2.77	2.94	2.91	5.43	3.95	2.39
Transport/Communication	12.69	9.97	5.72	6.78	5.05	4.51
Trade Industries	5.02	15.04	24.15	16.38	19.96	27.21
Banking/Finance/Insurance	6.60	7.17	7.92	14.72	2.00	10.62
Accommodation/Food/Beverage	5.84	0.00	8.94	3.01	6.89	11.20
Government/Educational/Health	38.50	40.70	18.81	27.27	27.78	19.34

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APPENDIX II  
THE RURAL/NON-RURAL SUB-SAMPLES  
**(CMA/CA and Non-CMA/CA classification)**  
TECHNICAL NOTES

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## **The rural/non-rural sub-samples (CMA/CA and non-CMA/CA classification)**

Defining the “rural” and “non-rural” sub-samples to be compared has some practical and theoretical difficulties. Firstly, it has to be argued that there is not a clear and agreed definition of rurality (Cloke and Edwards, 1986, Errington, 1990). Many authors have complained that studies of rural issues have been hampered by the “undifferentiated use of ‘rural’ in a research context” (Hoggart, 1990, p. 245-257). Secondly it is not clear whether the definition should be a “uni or multi-dimensional” and whether rurality should be regarded as a dichotomous or continuous variable. It is argued that any dichotomous categorization is somewhat inadequate in describing the amalgam of socio-economic and geographic factors that contribute to the rural experience (Biggs, B., et al. 1993, p 6).

Low population density and remoteness of a population centre from another population centre are outstanding features of rural Canada (Fellegi, 1996). Population in rural regions grew 6% between 1981 and 1991, this growth being higher for those rural regions adjacent to metropolitan centres (11%) than for those not adjacent to metropolitan centres (2%). In order to ensure that the definition of rurality reflects as close as possible Canadian reality, the approach followed here has been that based on the CMA/CA and non-CMA/CA definition of the Canadian population.

A **CMA/CA** is a large urban area, together with adjacent urban and rural areas that have a high degree of economic and social integration with that urban area. CMAs and CAs are defined around urban areas that have attained certain population thresholds: 100,000 for CMAs and 10,000 for CAs (Howatson and Earl, 1995) (see Technical Notes at the end of this Appendix for further information).

Thus, the SLID sample has been split up into two sub-samples:

- **CMA/CA sub-sample:** This will be used as a proxy for Large Urban Centres (LUC).
- **Non CMA/CA sub-sample:** It will be used as a proxy for Rural and Small Towns (RST).

This geographical definition seems to be a better approach to indicate the type of labour market in which the individual lives.

Table 1 reports a brief summary of the composition of the sample as well as Census 1991 information for comparison. Provincial breakdown of RST areas is also provided on this Table.

A second issue that arises in this section is how to deal with those who move between the different categories over the two years (this is a case where a dichotomous variable makes the analysis easier). Clearly, it is potentially important for a number of reasons that the ‘migration’ event is not excluded from the analysis so that, for example, we can

test how far migration is a 'strategy' for escape from low-income. However, since our analysis is concentrated on LUC/RST differences and the percentage of migrants in the two year sample is relatively small (1.75%), the migration issue will not be considered in this analysis (when more waves become available, the percentage of migrant will surely increase and it will become worthwhile including them in the analysis). Two main sub-samples will be considered namely LUC and RST. They do not contain all the same individuals for the two years.

### *Technical Notes*

#### **Census Metropolitan Areas and Census Agglomeration (CMA/CA)**

A CMA/CA is delineated using census subdivisions (CSDs) as building blocks. These CSDs are included in the CMA/CA under at least one of the following rules. The rules are ranked in order of priority. A CSD obeying the rules for two or more CMA/CAs is included in the one for which it has the highest ranked rule. If the CSD meets rules that have the same rank, the decision is based on the number of commuters involved.

1. **The urban core rule.** The CSD falls completely or partly inside the urban core or is enclosed by a CSD that is at least partly within the urban core. Those CSDs that are holes within a CSD are called core holes and must be included for spatial contiguity reasons.
2. **The forward commuting flow rule.** At least 50% (a minimum of 100 commuters) of the employed labour force living in the CSD work in the urban core as determined from commuting data based on the place of work question in the 1991 Census.
3. **The reverse commuting flow rule.** At least 25% (a minimum of 100 commuters) of the employed labour force working in the CSD live in the urban core as determined from commuting data based on the place of work question in the 1991 Census.
4. **The spatial contiguity rule.** Where necessary to maintain spatial contiguity, CSDs that do not meet a commuting flow threshold may be included in a CMA/CA, as CSDs that do meet a commuting flow threshold may be excluded from a CMA/CA.

There are two situations which can lead to inclusion or exclusion of a CSD in a CMA or CA for reasons of spatial contiguity. Specifically these are:

**Hole:** A CSD with insufficient commuting flows (either forward or reverse) is enclosed by a CSD adjacent to the CMA/CA with sufficient commuting flows. When this situation arises, the commuting flows of all CSDs within and including the enclosing CSD are added together to create one unit. If the entire unit has sufficient commuting flows (either forward or reverse) then all of the CSDs are included in the CMA/CA.

**Outlier:** A CSD with sufficient commuting flows (either forward or reverse) is enclosed by a CSD adjacent to the CMA/CA with insufficient commuting flows. As with the treatment of holes, when this situation arises, the commuting flows of all CSDs within and including the enclosing CSD are added together to create

one unit. If the entire unit has sufficient commuting flows (either forward or reverse) then all of the CSDs are included in the CMA/CA. Conversely, if the entire unit has insufficient commuting flows (either forward or reverse), then all of the CSDs are excluded from the CMA/CA.

5. **The historical comparability rule.** To maintain the historical comparability of a CMA or CA that is Census tracted, CSDs are retained even if their commuting flow percentages fall below the commuting flow thresholds (rules 2 and 3).

Finally, manual adjustments to the above criteria may sometimes be made in order to achieve the goal of CMA/CA delineation. This goal is to support the general concept of a CMA/CA (a socially and economically integrated area) by producing CMA/CAs composed of as many CSDs meeting at least one commuting flow threshold, and as few CSDs that do not meet even one commuting flow threshold, as possible. (Statistics Canada, 1996 Census Dictionary).

### **Census Subdivision (CSD)**

It refers to the general term applying to municipalities (as determined by provincial legislation) or their equivalent, e.g. Indian reserves, Indian settlements and unorganized territories. (Statistics Canada, 1991 Census Dictionary).

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**APPENDIX III**  
**PANEL CONSTRUCTION: WEIGHTING, INCOME EQUIVALISATION AND**  
**DEFLATION OF MONETARY VALUES**

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## Panel Construction

The Survey of Labour and Income Dynamics (SLID) contains nowadays, two years (1993-1994), available for analysis. In order to begin the research, one panel has been constructed consisting of all those individuals (aged 16 and over) present in Year 1 (1993) who continue to appear in Year 2 (1994). This is what it is called a 'balanced panel' containing the same number of observations in both years (N=26,841). Children are important members of the household and for analysis which relates to the household as a unit, for instance in relation to income, it is necessary to include children because they are part of the household and draw on its resources. Thus, for household characteristics, the appropriate response of the household is attributed to every child and adult within the household. That is, a household-level variable is built from the characteristics of the individuals in the household. Unattached individuals are also considered by this study as single household.

Cross-referencing between the Household identifier and Individual identifier means that data collected at the individual level can be used to construct household types accordingly. An example of this can be found in relation to employment status that is collected at an individual level, but in some of the analysis which follows, this information has been used at the household level to develop 'Family Economic Statuses'. Equally in relation to income: the income of each individual member is added together and taken as the household income, which is then given to every member of the household after having been equivalised for household size and type (see below for more details of income equivalisation).

For the work and opportunity section a different panel has been used. Looking at the relationship between gender and employment status implies the need to carry out the analysis at the level of the individual. Consistent with Gosling, et al. 1997), the basic sample is of those individuals who were of working age in the two years, i.e. only those who were aged over 18 in wave 1 or less than 60 on wave 2 (N=11,652).

### *Weights*

Over the 2 years (and subsequently the years to come) the SLID attrition rate (the rate at which respondents are lost from the sample) varies for different types of household. It is important to weight responses in order to ensure representativeness over time. The weight applied is dependent on the likelihood of that individual still being part of the SLID in any given wave (the actual weight applied is also dependent on the latest wave for which analysis is being conducted). Those individual types that are most likely to drop out of the SLID will be given a higher weight than an individual type more likely to remain in the sample.

As the analysis that is going to be carried out in this project is longitudinal rather than cross-sectional, the longitudinal weights within the SLID have been applied, namely Year 2 (1994) longitudinal weights.

All statistics provided are weighted.

### *Income Equivalisation and Deflation of Monetary Values*

The income variable that is being used is the **after-tax income** (closer to the definition of disposable income). The income of the household is attributed to each member of the household, but in order to account for differences in household size and composition, it is necessary to apply some means of equivalising incomes. In keeping with the system used by Statistics Canada, the LIM (Low-income measure) Equivalence Scales are used. These assign a weight of 1.0 to the oldest family member. The next oldest family member receives a weight of 0.4, regardless of age. All subsequent family members aged 16 or over receive a weight of 0.4, while those under 16 have a 0.3 weight value.

In addition to applying equivalence scales to income data, it was also necessary to deflate income data (in order to be able to make comparison between years). This will be the case for any other monetary data to be used in the analysis, for instance wages and salaries. Monetary data was deflated to 1993 prices by adjusting the data according to annual Consumer Price Index (CPI).



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**APPENDIX IV**  
**OTHER DEFINITIONS: LOW INCOME CUT-OFFS, INEQUALITY INDEXES**  
**AND LOW PAY THRESHOLDS**

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## Low-income Cut offs

The income variable used here is the after tax household income (closer to disposable income). The unit of study is the individual, so this value is attributed to each individual in the household, deflated to 1993 prices (for inter-annual comparisons), and adjusted using the LIM Equivalence Scale. There are two definitions of low-income used throughout the research, namely:

1. Less than half 1993 mean income;
2. The poorest quintile in each wave.

The first definition is fixed in real income terms; the last one vary in real income terms. There are empirical and conceptual advantages to using these definitions in parallel. From a conceptual point of view, the dual usage strikes a balance between those who argue for a fixed real income cut-off, often on the grounds that the incidence of low-income should necessarily decline as real income grows (an absolute approach), and those who argue for a threshold which depends on the income distribution in question (a relative approach). From an empirical point of view, using both thresholds allows sensitivity analysis of the conclusions drawn to variations in the generosity of the threshold (Jarvis, S. & S. Jenkins, 1996, p11).

## Inequality Indexes

**Gini Coefficient:** It is an income inequality measure. The Gini coefficient measures the area between the Lorenz curve and the 45° line as a fraction of the total area under the 45° line. According to the Gini coefficient the distribution of income is considered to be relatively even, if its value falls between 0.2 and 0.35:

**Coefficient of variation:** It is a measure of spread in a distribution. The coefficient of variation  $\sigma/\mu$  is scale invariant and satisfies other properties required of an index of relative inequality.

### Low Pay

As in the case of the definition of what constitutes 'rural', there is no generally agreed way to define 'low pay'. There are two main issues here; firstly, whether hourly or weekly pay is to be considered and secondly, the actual value of the low pay threshold to be used. While there is no consensus on the question of the appropriate low pay threshold, there is agreement that hourly pay is preferable to weekly pay as it controls for changes in earnings arising from changes in hours at work (Gosling *et al*, 1997; Stewart and Swaffield, 1996; Sloane and Theodossiou, 1996). This is especially important if part-time work is significant.

The question of the appropriate low pay threshold is more difficult to resolve satisfactorily. While the thresholds most commonly used are defined with reference to

the median wage (Gosling *et al*, 1997; Stewart and Swaffield, 1996; Sloane and Theodossiou, 1996), the actual value chosen varies considerably ranging from the bottom decile to two-thirds the median wage. However, some recent evidence suggests that the qualitative nature of results is fairly robust to the exact cut-off used (Gosling *et al*, 1997) and therefore - in part for reasons of brevity - a single threshold is used here, namely two thirds the overall median wage. This threshold provides a reasonable sample of rural individuals experiencing 'low pay' and is one of those used by Stewart and Swaffield (1996). The calculated values for this cut-off point for the sample of all employees range are reported in Table 3 ranging from \$9.15 per hour in wave 1 to \$9.5 per hour in wave 2.