Canadian Towns and Villages: An Economic Profile, 1981

Research and Working Paper No. 14
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by Mohammed Qadeer & Kathleen Chinnery
1986

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The Institute of Urban Studies

INSTITUTE OF
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CANADIAN TOWNS AND VILLAGES: AN ECONOMIC PROFILE, 1981
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with the Assistance of Andrew Sibbald

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1.0 INTRODUCTION

Since the early 1970s, North America and Western Europe have been swept by the counter-urbanization movement. Their populations are spreading out into the countryside, and city centres are thinning out. The non-metropolitan areas are growing faster than the metropolises and, within metropolitan regions, fringe areas are outpacing central districts in growth. All in all, the demographic fortunes of the country-side and small communities are on the upswing. Canada shares these tendencies with the rest of the industrialized world. After 100 years of uninterrupted growth, the decade 1971-81 registered a slight decline in the population classified as urban.[1] The rural areas grew at a faster rate than the urban areas in this period. Towns and villages, the clustered communities, have also experienced a demographic upsurge, though their aggregate growth rate is not as high as that of the rural countryside.

It is apparent that the economic and social structures of small communities must have undergone changes which made them more acceptable places to live. What are these structural changes? This question underlines the necessity of searching for explanations of the counter-urbanization movement. Yet this is a broad question which cannot be answered in one fell swoop. In fact there is no single approach that can answer the question. We have attempted to nibble at a small piece of this puzzle.

2.0 ISSUES

As the population of Canadian non-metropolitan areas is increasing, the question then arises "how are these places faring economically?" Do they offer employment opportunities to the expanding labour force? What are the determinants of household incomes in small communities?

These questions are addressed in this article. Answering them, will
illuminate the economic structure of towns and villages in Canada which,
in turn, will point out the processes underlying the counter-urbanization
movement. Some further delineations of the scope of this study need
to be clarified.

Firstly, this study is addressed to only a segment of Canadian
non-metropolitan areas, namely the towns and villages, i.e. the incor-
porated and clustered settlements of less than 10,000 population
(operational definition follows later). It does not analyze the economic
situation of the countryside. Secondly, this is a cross-sectional study
of town and village economies as revealed by 1981 Census data. A
benchmark examination of these economies based on 1971 and 1976 data was
reported earlier.[2] This article is an update of the economic analysis
reported earlier. By comparing the two, some patterns of longitudinal
change will be revealed. Thirdly, the term towns and villages here
refers to clustered places. A definition of towns and villages is
essential here.

3.0 THE UNIVERSE

For this study, towns and villages mean communities of 9999 or less
population reported as Census subdivisions, and designated either as
a city, town, village, hamlet, ville, community or settlement by Census
Canada in 1981. They are usually compact, (relatively) high density
and incorporated settlements. A total of 2039 towns and villages meet
the two criteria and thus constitute the universe of this study. Appendix
Table 1 provides a breakdown by size and province of this universe. An
overview of the situation is provided here.

TABLE 1

Number of Towns and Villages, Canada, 1981

Population Levels	Number of Towns	Percentage
< 1000	1182	57.9 %
1000 - 2499	444	21.7
2500 - 4999	250	12.3
5000 - 9999	163	7.9
TOTAL	2039	100 %

More than half of the towns and villages are very small, having
less than 1000 population. Thus this discussion refers largely to small
places which originated as rural service centres, mining villages or
rail towns. What they are today is the question that underlies our
probe. This investigation might appropriately begin by briefly outlining
their recent growth trends.

4.0 DEMOGRAPHIC TRENDS

Canadian population increased from 22.99 million to 24.34 million
over the five year period 1976-81, yielding an average annual growth rate
of 1.16 percent. Over the same period the population of towns and
villages increased at the rate of 1.31 per cent per year, from 3.04 to
3.24 million. The growth of towns and villages at a rate about 12 per cent

higher than that of the national population may not be spectacular, but it is indicative of their stability and attractiveness as human communities. Of course, the medium sized cities had the highest rate of growth for the period 1976-81, as Statistics Canada concludes, but the towns and villages have retained a proportionate share in 1981. They have become more viable communities during this period. Comparatively more (61 per cent) of towns and villages have gained in population than have lost (39 per cent) in the period 1971-81.

Percentage of Towns and Villages

	Growing	Declining
All Sizes	61.4%	38.6%

A population of about 2000 appears as the threshold point below which the odds for decline were high, and above which almost two-thirds of settlements grew in size. (Appendix Table 2). The demographic trends in towns and villages moved in concert with provincial growth tendencies. Generally the provinces with declining or stagnating populations had proportionately more towns and villages losing population, and vice versa. Nova Scotia is the example of the former case, and Alberta and British Columbia of the latter. Bearing in mind these growth patterns of the towns and villages, the indices of economic structure should be considered.

5.0 HOUSEHOLD INCOMES

Household Income is the single most significant index of the economic welfare of individuals and families, and is a succinct measure of the 'income' opportunities in a community. High average household income is indicative of a prosperous community, and vice versa, assuming

that income is normally distributed and not unduly skewed.

TABLE 2

Average (Mean) Household Income by Size of Place, 1981

Population Levels	Annual Income	Percentage of National Average
< 1000	$ 19,144	78.3%
1000 - 2499	21,045	86.0
2500 - 4999	22,283	91.1
5000 - 9999	23,913	97.8
TOTAL CANADA	$ 24,460	100.0%

There is a positive relationship between the size of a place and the household income. Towns and villages of less than 1000 population had almost three-quarters of the average household income of places of 5000 or more population. Incidentally, the latter tend to be close to the national average in household incomes. In an earlier study, the disparity in individual incomes of towns and villages on the one hand, and the country as well as the metropolitan areas, was noted.[3] This disparity persists, particularly for very small places, but also between small communities and metropolises of more than 500,000 population (see Appendix Table 3). Yet the data presented in Appendix Table 3 suggest

that the disparities may have reduced slightly. The rural incomes were
closer to the national averages in 1981, and the differences between the
incomes of towns and villages and of metropolises were slightly reduced.

Towns and villages are not 'autonomous' economic entities. In
contemporary Canada they operate as 'neighbourhoods' or 'parts' of a
'dispersed-city' constituted by a set of linked communities.[4] The members
of this set exchange commuters and complement each other in production,
trade and housing. They function as a unit. In order to analyze the
economic structure of a town or village, its regional setting has to be
considered. As a crude measure of the regional influences, provincial
household incomes have been used. Appendix Table 4 presents province-
wide distribution of average household incomes for towns and villages.
From this table, it can be readily observed that the town and village
household incomes are directly related to provincial incomes. Nova Scotia
and New Brunswick are provinces of relatively low average household incomes;
correspondingly the household incomes in their respective towns and villages
are also low. Alberta and British Columbia are 'high' income provinces
and so are their small communities.

Although Data limitations preclude a longitudinal analysis, it
may be noted that provincial household incomes are converging closer
to each other. Statistics Canada concludes that "most of the regions
with family incomes below the overall Canadian average moved closer to
the national average in 1980."[5] Since 1971, the relative standings of
various provinces have changed. Ontario and Quebec have slumped to third
and fourth positions, while Alberta has climbed to rank first in house-
hold incomes among the provinces. Apparently the incomes of towns and
villages have largely moved with the provincial averages.

Within towns and villages, the distribution of household income
suggests that as a group they are predominantly lower and middle class
communities.

TABLE 3

Distribution of Household Income, 1981

	Percentage of Households	
Income	Canada	Towns & Villages
$ 10,000	20.6 %	25.6 %
10,000 - 25,000	38.1	40.6
25,000	40.8	33.9

Compared to national income distribution, towns and villages have substantially higher proportions of less than $10,000 earners, and a significantly lower percentage of those making more than $25,000 per year. They remain 'truncated' communities, deficient in higher order functions and managerial positions, and with a slightly greater proportion of poor. This is the price of smallness in an urbanized society.

5.1 Findings

Following is a summary of observations derived from this section:

a) The household incomes of towns and villages vary directly with size: the larger the community, the higher the average income.

b) Although the disparity between the household incomes of small communities and big cities persists, there is a slight reduction of the difference since 1971.

c) The "regional" setting is directly related to the level of household income, hence the economic welfare of a community.

Towns and villages of 'high' income provinces have higher
household incomes than the communities of 'low' income
provinces.
d) Towns and villages are socially truncated communities.
They have relatively few high income (and status) and more
middle and low income households.

6.0 LABOUR FORCE: EMPLOYMENT, OCCUPATIONS AND INDUSTRIES

The foregoing findings trace a socio-geographic pattern of household
incomes in Canada. The size of a community is the defining variable
underlying this pattern. But the size is only an indicator (correlate)
of social and economic structures which give rise to jobs and incomes.
By itself, the size does not 'explain' the differences in household
incomes. It is necessary to probe the underlying structures for possible
explanations of the observed patterns. There is no singular theory
specifying the determinants of local incomes, though the location theory,
the economic base analysis, the regional resource and trade theories,
illuminate various aspects of local economies. From these diverse theo-
retical strands, a mode of empirical analysis has been forged. As a
first cut, the composition of the labour force and its occupational and
industrial characteristics are examined to explain the differences in
local household incomes.

6.1 Participation and Unemployment

The proportion of the local population which is available for economic
pursuits serves as an indicator of the labour supply. And the proportion
of the labour force which is actually employed is another significant
economic indicator. These indices are expressed as rates, in percentage
terms. Under the usual comparative static assumptions, the participation
rate bears a direct relationship, and the unemployment rate an inverse

relationship with the local household income.

Bearing in mind these empirical regularities, we can proceed to examine the town and village incomes in relation to these two factors. Appendix Table 5 presents these data.

	Participation Rate (%)	Unemployment Rate (%)
Towns and Villages		
5000 - 9999	63.0 %	7.4 %
< 5000	59.1	7.9
Canada	64.8	8.8

Table 5 shows that about 65 per cent of the Canadian population of 15 years of age or older participated in the labour force in 1981. The participation range for males was consistently higher (about 78 per cent) than that of females (52 per cent), regardless of the size of place. Conversely the unemployment rate was lower for males (6.5 per cent) than females (8.7 per cent). This pattern holds for metropolises, cities, towns and villages, and the countryside, without exception.

The participation as well as the unemployment rates ranged in a continuum-like pattern for large to small size communities. The participation rate is directly correlated (coefficient of rank correlation $[\gamma = 1.0]$) with the size of the place, and the unemployment rate is inversely related (coefficient of rank correlation $[\gamma = -0.8]$).[6] Thus, towns and villages have lower participation rates and higher unemployment rates. The combination of these two characteristics partially accounts for lower household incomes. Relatively low participation and high unemployment rates for the female labour force in towns and villages is striking. Such

a depressed state of female employment also contributes to lower house-
hold incomes. At this juncture, the question can be raised as to what
are the occupations of the labour force in towns and villages.

6.2 Occupations

The level of household income depends on the occupational status
of earners. Obviously managers and professionals earn much more than
clerks or production workers. These facts about individual incomes
yield indices of community welfare. Communities of proportionately
greater concentrations of upper class occupations are more prosperous
than those dominated by blue collar workers. Bearing in mind these
social facts, we can examine the Appendix Table 6.

The occupational profiles of both male and female labour force
in towns and villages are different from the Canadian norm only to
a small degree. Notably different are very small places of less than
1000 population, and those between 1000-2500 population. Small towns
(5000-9999) approximate the Canadian profile fairly closely. Yet
there are some noticeable differences.

Compared with the Canadian norms, the proportions of managerial,
technological, artistic and transportation occupations were lower, while
teaching, agriculture and mining, processing and services (particularly
for the female labour force) were higher for towns and villages. These
differences were more pronounced for towns and villages of 2500 and
less population than the places approaching 5000 or above population
mark. This observation suggests that towns and villages, particularly
the very small ones, are the working class communities, whereas the
larger settlements replicate the Canadian economic structure to a greater
degree. But this finding is tempered by the fact that there is a
considerable convergence in the occupational profiles of communities all
across Canada.

6.3 Industrial Affiliations

Another labour force characteristic affecting the average household income is its industrial affiliation; in other words, the types of economic activities in which the members of the labour force are engaged. Since these industries are located within commuting distance, this characteristic has also been used for analyzing the economic base, and for composing the local industrial profile. Thus the industrial distribution of the residential labour force is a significant indicator of an area's economic structure.

To begin with, it is necessary to examine the industrial distribution of the Canadian labour force which serves as the norm, against which towns and villages can be examined. The two most predominant activities of the Canadian labour force were Business (28 per cent) and Trade and Finance (24 per cent) in 1981. These figures once again confirm the well-known fact that Canada now has a services based economy. The manufacturing sector employed about 18 per cent of the labour force, and another 14 per cent was engaged in Construction and Transportation activities. On comparing the 1981 and 1971 industrial profiles, it is evident that there has not been any substantial sectoral shift. The primary sectors have decreased slightly in proportion, and Community and Business, as well as Trade and Finance, have increased.

These gains and losses, though substantial for individual sectors, do not suggest any realignment of the economic structure. The overall profile of the Canadian economy remained very consistent over this period. Furthermore, these shifts may be illusionary in view of the fact that the proportion of "unspecified" industries was substantially reduced in 1981; perhaps due to better classification and processing of census data. It can be safely assumed that there has been little longitudinal change in the Canadian economic profile since 1971.

TABLE 4

Percentage of Labour Force by Industry, Canada, 1981

	Industry Not Applicable	Primary: Agriculture, Forest, Mining	Manufacturing	Construction	Transport & Communication
Canada					
1971	2.1	8.4	19.4	6.0	7.6
1981	2.1	7.8	18.1	6.1	7.6

	Trade & Finance	Community Business	Public Administration	Unspecified	Total
1971	18.5	23.2	7.2	7.7	100.0
1981	21.0	27.7	7.2	3.3	100.0

TABLE 5

Industrial Distribution of the Towns and Villages Labour Force, 1981

	Industry Inapplicable	Primary	Manufacturing	Construction
Towns & Villages, 1981	1.9	9.2	18.4	6.8

	Transportation & Communication	Trade & Finance	Community & Business	Public Administration
	8.0	20.7	27.7	7.3

The towns and villages almost replicate the Canadian industrial distribution. They have slightly larger proportions of the labour force engaged in primary, manufacturing and construction activities, while the proportions for services and business are similar to corresponding Canadian figures. Perhaps the slightly higher percentages for the former sectors have resulted in the complete clearance of the "unspecified industries" category. All in all, the conclusion is that an aggregate towns and villages recapitulate the national economic structure. There is a high degree of convergence across the national space in terms of the types of economic activities, and now the spatial economic differences arise more from the order and level of activities than from their mix. This is also the reflection of the modular society - a concept that has already been outlined but will be elaborated later.

6.4 Findings

a) As an aggregate towns and villages replicate the Canadian economic profile. There seems to be a considerable degree of convergence in occupational and industrial characteristics of the labour force between the national and local economies.

b) Within the above described general economic contours, there are small undulations. The labour force participation and unemployment rates are distributed as a continuum of values from villages to metropolises. Small places have lower participation rates and higher unemployment rates (within a narrow range) which correlate with lower household incomes, and vice versa.

c) Small communities of less than 2500 population seem to have more skewed (from the national norm) economic structures. They have greater concentrations of primary and processing activities, and of blue collar occupations. The towns of 5000 or above more closely approximate the Canadian national structure in economic terms.

7.0 ECONOMIC BASE

In previous sections the broad contours of town and village econo-
mies have been mapped. An attempt has been made to find out how towns
and villages compare with the rest of Canada in terms of household
incomes, and what factors contribute to the variations of their incomes.
These probes have focussed on the labour force characteristics for illu-
minating the economic structure of small communities. The economic
bases of towns and villages have yet to be identified. What productive
activities are concentrated in small communities? Are there any patterns
of economic specialization by size? These questions need to be answered
from the economic base analysis. One succinct index of the economic
base is the Location Quotient (LQ), which measures the relative propor-
tion of the local labour force in a specific industry in relation to
the provincial or national ratio.[7] An LQ of 1.00 indicates that a locality
has the same degree of concentration as the standardizing unit, while
the LQ's value of more than 1 is indicative that an area has a greater
share of the industry and thus specializes in the activity, and vice versa.

Appendix Table 7 presents LQ's by industry for towns and villages
in all provinces. These LQ's are based on provincial labour force ratios
as the comparative measure. By computing local indices of specialization
in relation to provinces, the regional effects have been taken into
account. From Table 7, Chart 1 has been abstracted. It reports the top
ranking activities of LQ values greater than 1.

The chart suggests that towns and villages specialize in divergent
economic activities. With the exception of minetowns and other single
industry communities, there are no prototypical economic activities in
towns and villages. The local economies are encased in provincial economic
systems, and thus are affected by them. Within this broad pattern, some
empirical regularities can be observed. Towns and villages of less than

CHART I

Industrial Specialization of Towns & Villages

1981

	Size of Place			
Province	< 1000	1000-2499	2500-4999	5000-10,000
Newfoundland	Primary & Manufact.	Manufacturing & Primary	Manufacturing & Trade	Transport & Trade
P.E.I.	Manufact. & Trans.	Trade & Transport	Transport & Construction	Trade & Business
Nova Scotia	Manuf. & Pub. Admin.	Manufacturing & Primary	Manufacturing & Business	Manufacturing & Trade
New Brunswick	Manuf. & Primary	Manufacturing & Construct.	Trade & Business	Business
Quebec	Primary & Construct.	Primary & Manufacturing	Primary & Construction	Primary
Ontario	Primary & Construct.	Primary & Construction	Transport	Transport & Primary
Manitoba	Construct. & Business	Primary & Construction	Construction & Business	Primary & Business
Saskatchewan	Transport & Constr.	Trade & Business	Trade & Business	Transport & Trade
Alberta	Transport & Primary	Primary & Transport	Public Administration	Primary & Transport
British Columbia	Primary & Manufact.	Primary & Manufacturing	Primary & Manufacturing	Primary & Manufacturing

Source: Appendix Table 7.

2500 population specialize in Primary activities (Mining, Fishing, Forestry, etc.), in combination with Manufacturing (processing of raw materials), or Construction. In the Maritime provinces, Manufacturing activities in combination with Primary production predominate in towns and villages of less than 2500 population. Such small places specialize in the production and processing of fish and minerals. Small towns of Prince Edward Island are exceptions. They specialize in Transportation and Utilities as the basic economic activity. Ontario and Quebec show a concentration of Primary and Construction activities in these places. This observation seems credible in view of the fact that forestry and mining are major activities in rural parts of these provinces. Small places (less than 2500 population) of Saskatchewan and, to a lesser extent, of Manitoba and Alberta, come closest to being local service centres. The Transport and Trade sectors appear to constitute the economic bases of such places in these provinces. The small places of Alberta and British Columbia specialize in primary and manufacturing or transport sectors, reflecting the influence of forestry and mining as the provincial staples.

Larger towns and villages (2500-10,000 population) on the whole tend to specialize in Transport, Communication and Utilities, as well as Trade, Finance and Manufacturing sectors. At this level, the service function begins to emerge as the basis of local economies. In the Maritime Provinces, Trade and Finance appear to be the basis of local economies for towns of 5000-10,000, and even 2500-4999 populations. In Prince Edward Island and New Brunswick, the service sectors completely dominate, but in Nova Scotia and Newfoundland Transport, Utilities and Manufacturing activities also constitute the functional base of towns. Such towns in Quebec and British Columbia have Primary and Manufacturing activities for their economic bases, followed by Manitoba and Alberta, where Primary activities appear in combination with Business and Transportation sectors. These observations suggest that in provinces heavily dependent on minerals and forestry for economic production, even the towns of 5000-10,000

population operate as mining and processing centres. Saskatchewan remains a province of prototypical service centres.

On examining the chart in conjunction with Appendix Table 4, the relationship between the sectoral specialization (economic base) and the household incomes is illustrated. Generally the towns whose economic base essentially lies in Trade, Finance and Transport and Utilities affords higher household income within respective provincial income levels. For example, towns of more than 5000 population in Newfoundland, Prince Edward Island, New Brunswick and Saskatchewan have household incomes higher than provincial averages. These are also the places which specialize in Trade, Finance and Business, and Transportation and Utilities, i.e. tertiary activities. Only in Quebec did towns of 5000 or more population, having the household income higher than the provincial average, specialize in primary production. All in all, specialization in higher order functions brings income premiums for resident households. This is not a discovery. The analysis only reaffirms a known fact about the economic structure of Canadian towns and villages.

7.1 The "Community" in Towns and Villages

Towns and villages have been discussed as if they were well-demarcated, self-contained communities. Undoubtedly the reality is not so simple. Towns and villages are woven into regional and national fabrics. Economically and socially they are intertwined with nearby settlements. This realization raises the question of how valid are the industrial and occupational distributions as indices of local economic structures. If a majority of the labour force does not work in a town, how can its industrial distribution be an indicator of the economic base? To answer this question, the commuting data was examined in Appendix Table 8.

From Appendix Table 8 it can be observed that only a minority of town and village residents work outside their communities. Prince Edward Island and Quebec are the two exceptions. It is interesting that in every province there is equal or more reverse commuting. Often a larger proportion of workers commute to work in towns and villages than those who go out for work. In fact, except for Newfoundland, the ratio of the local workforce (working in a place) to employed but resident labour force is more than 1, suggesting that jobs in a locality are often more than the aggregate number of employed workers. These findings indicate a very high degree of commuting across town and village boundaries. This fact bears out the hypothesis of a dispersed-city, which regards small settlements as elements of an interrelated set of communities which together operate a single economic unit.

7.2 Findings

a) The town and village economies are based on numerous combinations of activities. There are not any prototypical small community economic activities, except for mining and timber production in single industry towns.

b) The local economies are shaped by provincial economic structures. The mix of activities as well as range of incomes are determined by provincial economies.

c) Generally towns of less than 2500 population specialize in 'Primary', 'Processing', 'Transportation and Utilities' sectors, while larger towns and villages tend to have 'Trade and Finance', 'Construction', and 'Manufacturing' as the bases of their economies. There are marked divergences from this pattern by provinces. For example, even the larger towns in Quebec and British Columbia are based on 'Primary' activities - a reflection of resource based provincial economies.

d) Household incomes are directly related to the order of activities.

Towns specializing in higher order activities have higher
incomes.

e) Generally a majority of local labour force work within
    a town or village, and those working outside are matched
    by an equal or larger proportion of workers from other
    places who come to the place for work.

8.0 A TEST OF INCOME DETERMINANTS

In the foregoing sections, various factors which seem to be correlated
with town and village household incomes have been identified, e.g. size
of a place, provincial economy, labour force participation rates, occupa-
tional and industrial characteristics. Apart from these factors, there
are a few others that are believed to affect local incomes. For example,
the proximity to metropolises and cities is assumed to bring prosperity
for a small community. Similarly, the availability of jobs locally is
thought to have a positive effect on household incomes. These observed
as well as assumed factors constitute a set of income determinants
whose relative contributions can be sorted out through the multiple
regression analysis. For this purpose, factors listed in Chart II have
been posited as independent variables and regressed on the average
household income of towns and villages.

CHART II

Test of Income Determinants

Variable	Description	Index of	Type of Variable
X_1	Population of town or village	Size	Continuous
X_2	Lies in a Census Division (CD) which has a city of more than 100,000 pop.	Proximity to a metropolis	Discrete
X_3	Lies in a CD with a city of 50,000-100,000 pop.	Proximity to a city	Discrete
X_4	Lies in a CD with a city of 25,000-49,999 pop.	Proximity to a city	Discrete
X_5	Provincial Average Household Income	Provincial Income	Continuous
X_6	Labour Force Participation Rate	Employability	Continuous
X_7	Female Labour Force Participation Rate	Employability	Continuous
X_8	Percentage of resident labour force engaged in managerial occupations	Higher order activities	Continuous
X_9	Percentage of resident labour force in Business	Entrepreneurship	Continuous
X_{10}	Internal Migration Rate	Mobility	Continuous
X_{11}	Ratio of local jobs to resident labour force	Job opportunities	Continuous
X_{12}	Ratio of In-Commuters to Total Jobs	Job opportunities	Continuous
X_{13}	Average Household Size	Social Structure	Continuous

Y = Average Household Income of a Town or Village

A stepwise linear regression was carried out, yielding the following equation:

$$Y = -4039 + 0.263X_1 + 2262X_2 + 650X_3 + 585X_4 + 756X_5$$
$$\quad\quad\quad (5.65)^* \quad (6.27)^* \quad (2.19) \quad (2.29) \quad (3.80)^*$$

$$+ 439X_6 - 155X_7 + 300X_8 + 31.2X_9 + 24X_{10} - 11.5X_{11}$$
$$\quad (21.03)^* \quad (-8.55)^* \quad (14.96)^* \quad (2.99) \quad (1.00) \quad (-3.01)^*$$

$$+ 12.7X_{12} + 916X_{13}$$
$$\quad (3.08)^* \quad (7.13)^*$$

R^2 = 51.9 adjusted for degrees of freedom

( ) = t value

* = significant at 99 per cent level

This equation explains about 52 per cent of the variation of household income - a reasonable result; yet the R^2 value is not so high that this equation can be used for predicting incomes. The signs of the coefficients are generally in the expected direction, i.e. except for X_7 (Female Labour Force Participation Rate) and X_{11} (Ratio of Local Jobs to Residential Labour Force). Interestingly, one thinks that higher female participation should lead to increased incomes due to larger numbers of earners in a household. Similarly, the greater the ratio of local jobs to residential labour force, the more should be the income. Yet the coefficients of these two variables show negative signs. Perhaps in small communities the female labour force may be

associated with single female households, which tend to have lower incomes. Also, the more numerous local jobs may not necessarily mean higher average incomes, if they happen to be low income yielding. With these two exceptions, the equation upholds the postulated variables.
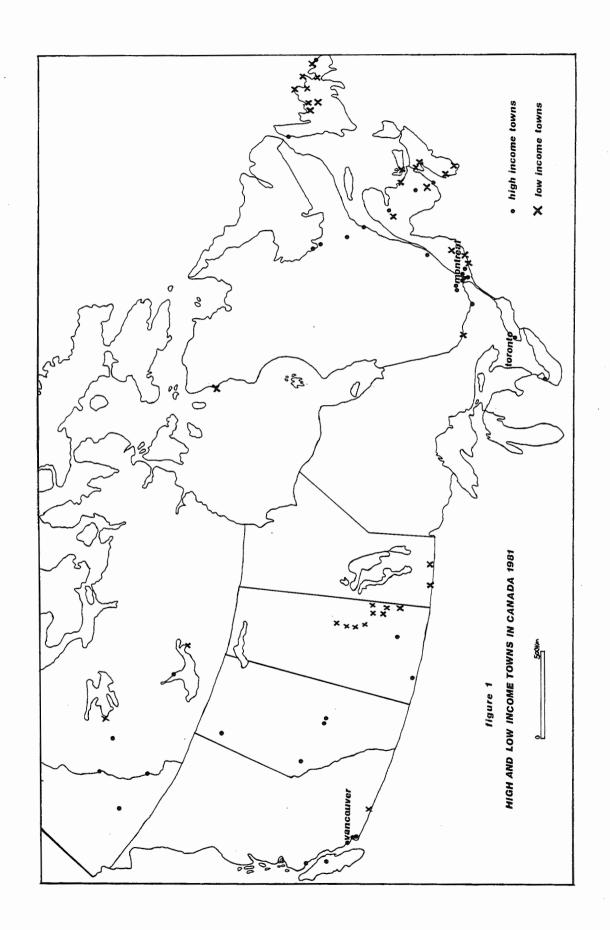
X_3 (Proximity to a city of 100,000), X_4 (Proximity to a city of 50,000-100,000), X_9 (Percentage of Resident Labour Force in Business), and X_{10} (Internal Migration Rate), are four variables whose t values are not significant at .01 probability, though X_3, X_4 and X_9 are significant at .05 probability.

In the stepwise procedure, X_6 (Labour Force Participation Rate), X_8 (Percentage of Population Employed in Managerial Occupations), and X_7 (Female Labour Force Participation Rate) entered as the first, second and third variables stand out as the most significant determinants of local incomes. Except for the inverse correlation of the female labour force participation, the result is in line with our earlier findings.

Conversely, some interesting observations can be derived from the factors which have not come out so prominently in the regression equation. The proximity to a metropolis (large city) affects local incomes positively, but intermediate and small cities do not cause the same effect. This finding can be deduced from statistically significant high coefficient of X_2 in comparison with low 't' values of X_3 and X_4. Similarly, the low statistical significance of X_9 (Entrepreneurship - labour force in business) is a counterintuitive result.

9.0 THE HIGH AND LOW INCOME TOWNS AND VILLAGES

Another way in which the economies of towns and villages can be fruitfully examined is to probe for any discernable locational patterns in the distribution of high and low income communities. To explore this

figure 1

HIGH AND LOW INCOME TOWNS IN CANADA 1981

possibility, a simple procedure was devised. The researchers mapped the location of ten towns having the highest average household income for each of the four population size groups, i.e. (i) < 1000; (ii) 1000-2499; (iii) 2500-4999; and (iv) 5000-9999. Similarly, the ten lowest income places for each size group were plotted on a map of Canada (Figure 1).

The figure reveals an interesting pattern. It can be observed that low and high income towns and villages are distributed in distinct geographic clusters. The towns and villages of low average household incomes are sprinkled along the coast of Newfoundland. They form a necklace around the Bay of Fundy in Nova Scotia and New Brunswick, and there is a string of such places in North-Eastern Saskatchewan. A sprinkling of low income towns and villages can be found in the Eastern Townships of Quebec. Thus the 'poor' towns and villages are in depressed regions of the Maritime Provinces, Quebec and Saskatchewan. The high income towns and villages are essentially the suburbs and ex-urbs of metropolitan Vancouver and Montreal. The second type of high income places are the resource towns of Quebec, Alberta and British Columbia - perhaps those whose staples were in high demand, e.g. oil, gas or electricity, in 1981.

The non-appearance of Ontario, Manitoba, Alberta, or Central or Northern British Columbia as locales of either high or low income towns and villages suggests that small communities in these regions are clustered around the middle in terms of incomes and economic structure. This exploration further reinforces our conclusion that regional setting has a pre-eminent role in the economic welfare of small communities.

9.1 Findings

a) Towns and villages with high labour force participation rates, as well as those specializing in managerial functions have high household incomes.

b) Towns and villages seem not to offer remunerative job oppor-
tunities for females. The female participation rate is inversely
related to the household income. Seemingly only low level
jobs are avialable for females.

c) The regional setting of a town or village has a significant
bearing on local incomes. In the depressed, resource regions,
the incomes tend to be low, whereas large and thriving metro-
polises raise the income opportunities of nearby towns and vil-
lages. Not all cities and urban areas have a similar effect.
Seemingly, only the large metropolises cast such an uplifting
influence.

10.0 IMPLICATIONS

The picture emerging from the findings reported earlier portrays
that town and village economies are robust but unexceptional. The
household incomes in towns and villages are lower than the national
average, but there is some evidence of a narrowing of the gap since 1971.
The occupational and industrial characteristics of the resident labour
force approximate respective national norms. The economic bases of towns
and villages are constituted by a wide-ranging combination of manufactur-
ing, construction, transport, trade and finance and administrative activi-
ties. With the exception of resource communities specializing in mining,
forestry and other primary activities, town and village economies are
not based on any prototypical set of activities.

On all these counts, towns and villages reflected the influences of
their provincial economies. Towns and villages are not self-sustaining
and autonomous economic systems. They are small pieces of the provincial
and national fabrics. It, therefore, seems that the population growth
witnessed recently in small communities may not be the result of
reassertion of localism or any back-to-the-land movement. The counter-

urbanization movement may not be a reaction to metropolises, but could be a new phase of the on-going urbanization processes.

10.1 The Modular Society

The mass society produced by modern industrialism has been around for many decades. It is characterized by standardization of production, comsumption and institutions. A MacDonald's hamburger franchise or the marriage laws are similar in Newfoundland and British Columbia. The national society and culture have undergone considerable convergence to common norms in modern times. Within the emergence of corporate chains and universalized public services, the tendency towards standardization has restructured institutions and organizations on the modularity principle. For various population thresholds, particular modules of goods, services and the corresponding organizations have come to be instituted. For example, wherever, say, a thousand people live, a school, a snow removal crew, a local council and Shell or Esso stations, a bank and a supermarket are to be found, at least. Similar thresholds characterize other activities and organizations. These threshold sizes are not precise, and are often difficult to measure, but their existence is amply evident. These institutional modules now undergrid the Canadian economic and social organizations.

Since 1960, the basic public services have been universalized, e.g. postal, pensions, police, road, ambulance, schools, unemployment insurance, television and radio, etc. They have become available in the countryside and in small communities. The availability of these public and private services has improved the liveability of the towns and villages on the one hand, and on the other it has introduced corresponding organizational modules in the form of branch offices and franchises. Concretely they have provided towns, villages and the countryside with teachers, policemen, bank managers, vehicle inspectors, and other functionaries whose presence

strengthens the economic base and enhances employment opportunities. The mere presence of a few hundred households precipitates the provision of services and goods, and introduces professional and commercial roles in the social structure. This process enriches a community and enhances its economic viability. A number of officials and professionals are, thus, circulated through small communities during their careers. The process of counter-urbanization is being stimulated by these circulations, which represent the incorporation of the peripheral areas in the mass society.

The recent growth spurt of towns and villages has been sustained by the introduction of organizational modules. With the completion of this phase of national development, towns and villages may not continue to grow at the present rate. Already there are reports from the United States that the rural boom is faltering (NYT, March 21, 1981).

10.2 Interdependence and Economic Viability

Although towns and villages as an aggregate seem to have as many or more jobs as the members of the labour force, they do not operate as closed economies. There is a substantial cross-commuting among towns and villages, and between them and the surrounding countryside. Towns and villages function like separated districts of a dispersed city, as Hart, Dahm and others have also affirmed.[8] Town and village economies are not territorially bound. The functional unit is often a cluster of small communities and the intervening countryside - a sub-region. Given this structural feature of town and village economies, it means that their economic development requires focussing on sub-regions and not on a partic- ular locality.

Another interesting pattern discovered by the analysis is that communities of less than 2500 population have markedly lower household incomes, and are vulnerable to population decline. To the extent these

observations are reliable, they suggest that the economic viability of small villages and towns is dicey. They do not have the threshold populations to sustain service and activity modules which lend stability to a community. It may be noted that urban households primarily prefer to live in the countryside on leaving a city. Small villages and towns receive relatively few of these out-migrants, whereas places of 5000-10,000 tend to have numerous public and private agencies serving the surrounding sub-region. These activities strengthen their economic bases and enhance their viability.

APPENDIX

APPENDIX TABLE 1

Number of Towns and Villages by Size and Province, 1981

Province	Size of Place (Population)				
	< 1000	1000-2499	2500-4999	5000-9999	Total
Nfld.	216	56	20	7	299
P.E.I.	23	12	1	2	38
N.S.	2	13	12	9	36
N.B.	42	46	12	9	109
Quebec	159	96	95	58	408
Ont.	73	72	39	37	221
Man.	44	20	6	5	75
Sask.	409	43	14	5	471
Alta.	136	49	32	17	234
B.C.	23	30	17	13	83
Yukon	1	1	0	0	2
N.W.T.	54	6	2	1	63
Canada Total:	1182	444	250	163	2039

Source: Census Canada, 1981.

APPENDIX TABLE 2

Growth and Decline of Towns and Villages, 1976-1981

Size of Place (Population)	Percentage	
	Growing	Declining
< 100	29.9	70.1
100-199	47.8	52.2
200-299	63.4	36.6
300-499	63.8	36.2
500-999	62.7	37.3
1000-2499	66.4	33.6
2500-4999	68.4	31.6
5000-9999	64.4	35.6
All sizes	61.4	38.6

Source: Census Canada, 1981.

APPENDIX TABLE 3

Average Annual Income of Individuals 15 Years and Over
(current dollars)

Urban	1981		1971	
	Income ($)	Percentage	Income ($)	Percentage
500,000+	14,098	109	5,641	112
100,000-499,999	12,878	99	5,382	106
30,000-99,999	12,642	97	5,012	99
10,000-29,999	12,629	97	5,052	100
5,000- 9,999	12,367	95	4,847	96
5,000	11,692	90	4,540	90
Non-Farm	11,543	89	4,090	81
Farm	11,486	88	3,561	70
Canada	12,993	100	5,033	100

Source: Census Canada, 1971.

APPENDIX TABLE 4

Average Annual Household Income, 1981

Province	Income ($) by Size of Place				Province	Percentage
	< 1000	1000-2499	2500-4999	5000-9999		
Nfld.	18,053	18,962	21,278	21,526	21,198	86.6 %
P.E.I.	17,007	20,690	20,653	22,536	19,338	79.1
N.S.	17,308	18,322	19,467	20,644	20,476	83.7
N.B.	18,402	20,321	21,408	20,994	20,112	82.2
Quebec	19,752	20,628	22,499	25,339	22,869	93.5
Ont.	18,773	20,303	21,426	22,507	25,577	104.6
Man.	16,476	18,932	17,933	21,786	21,721	88.8
Sask.	19,161	20,789	21,318	23,230	22,637	92.5
Alta.	20,625	24,051	24,758	26,196	27,969	114.3
B.C.	24,225	26,074	23,808	24,725	26,171	106.9
Canada	19,144	21,045	22,283	23,913	24,460	100.0

Source: Census Canada, 1981.

APPENDIX TABLE 5

Labour Force Activity, Population 15 Years or Over

	Participation Rate (Percentage of Population)			Unemployment Rate (Percentage of Labour Force)		
	Total	Male	Female	Total	Male	Female
Canada	64.8	78.2	51.8	7.4	6.5	8.7
500,000+	68.2	80.5	56.7	5.9	5.3	5.8
100,000-499,999	65.3	78.4	53.3	7.8	6.7	9.3
30,000-99,999	63.9	77.7	51.0	8.1	6.7	10.0
10,000-29,999	63.4	77.4	50.1	9.2	7.8	11.2
5,000-9,999	63.0	77.4	49.1	7.9	6.4	10.3
< 5,000	59.1	73.9	44.9	8.8	7.8	10.5
Rural Non-Farm	58.2	72.6	43.2	10.4	9.3	12.3
Farm	71.5	88.9	50.4	2.9	2.0	4.5

APPENDIX TABLE 6

Occupations	Male Labour Force					Female Labour Force				
	Size of Place					Size of Place				
	< 1000	1000-2499	2500-4999	5000-9999	Canada	< 1000	1000-2499	2500-4999	5000-9999	Canada
	(Percentage)					(Percentage)				
Occupation inapplicable	1.1	1.1	1.3	1.2	1.1	3.0	2.7	3.2	2.7	2.1
Managerial, administrative	9.0	9.1	9.9	10.6	11.2	4.8	4.0	4.1	4.3	5.4
Teaching & related	3.3	2.9	3.3	3.1	2.7	9.2	7.7	7.5	7.0	6.1
Medicine & Health	0.7	1.4	1.6	1.8	1.7	7.6	9.0	9.3	9.5	8.5
Technological, social, religious, artistic	3.8	4.9	5.9	7.0	7.9	3.3	3.3	3.9	4.1	4.8
Clerical	3.4	4.2	4.9	5.8	6.9	25.8	29.0	30.6	33.0	35.5
Sales	6.4	7.5	8.3	8.4	8.6	8.7	9.2	9.7	10.0	9.2
Services	5.9	7.5	8.2	9.4	9.5	22.0	21.2	20.1	18.1	15.4
Primary, agriculture, forestry, mining	19.3	11.2	8.0	6.6	7.9	2.8	1.6	1.1	1.2	2.4
Processing	6.8	8.2	7.4	7.3	5.3	6.6	5.2	3.1	2.6	2.2
Machine & Fabricating, repairing	11.0	13.9	14.9	14.2	14.2	3.5	4.4	4.7	4.3	5.2
Construction & Trade	15.4	13.8	12.5	11.2	10.7	-	-	-	-	0.3
Transportation & handling	7.6	7.3	7.2	6.8	10.5	-	-	-	-	2.4
Others - Unspecified	6.2	6.9	6.4	6.5	1.8	2.6	2.7	2.7	3.0	0.5
Total Labour Force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Census Canada, 1981.

APPENDIX TABLE 7

Location Quotients (L.Q.'s)

Province and Size of Place	Primary	Mfg.	Const.	Transport & Util.	Trade & Finance	Community & Business	Public Admin.
Nfld.							
< 1000	1.84	1.56	1.32	0.82	0.74	0.79	0.69
1000-2499	1.33	1.38	1.30	0.89	0.84	0.91	0.80
2500-4999	0.82	1.19	1.04	0.95	1.16	1.02	0.92
5000-9999	0.31	1.19	0.75	1.43	1.21	1.06	1.26
P.E.I.							
< 1000	1.00	2.00	1.13	1.41	0.94	0.86	0.55
1000-2499	0.38	0.90	0.88	1.29	1.35	1.18	1.09
2500-4999	0.38	1.20	1.25	1.57	0.94	1.00	1.55
5000-9999	0.25	0.90	0.75	1.00	1.30	1.25	1.55
N.S.							
< 1000	0.57	1.50	0.50	0.58	1.38	0.68	1.42
1000-2499	1.14	1.71	0.83	0.64	1.05	0.93	0.75
2500-4999	0.71	1.65	0.67	0.76	1.09	1.11	0.75
5000-9999	1.00	1.21	0.83	1.15	1.19	1.11	0.58
N.B.							
< 1000	1.38	1.44	0.93	1.00	0.80	0.96	0.89
1000-2499	1.06	1.38	1.14	0.78	0.95	1.07	0.78
2500-4999	0.63	1.06	1.00	1.00	1.15	1.15	0.78
5000-9999	0.38	0.75	0.71	0.89	1.05	1.11	2.22
Quebec							
< 1000	2.43	1.23	1.40	1.00	0.56	0.90	0.90
1000-2499	1.90	1.29	1.20	0.88	0.90	0.97	0.71
2500-4999	2.00	1.19	1.20	0.88	0.90	1.00	0.90
5000-9999	1.25	1.09	1.00	1.00	1.05	1.00	0.90
Ontario							
< 1000	1.75	0.91	1.50	1.29	1.05	0.89	0.71
1000-2499	1.25	1.04	1.17	1.00	1.05	0.96	1.00
2500-4999	1.00	1.00	1.00	1.29	1.00	1.00	1.00
5000-9999	1.25	1.13	0.83	1.29	0.91	1.04	1.00

APPENDIX TABLE 7 (Continued)

Location Quotients (L.Q.'s)

Province and Size of Place	Primary	Mfg.	Const.	Transport & Util.	Trade & Finance	Community & Business	Public Admin.
Man.							
< 1000	1.10	0.50	1.60	0.90	1.09	1.18	1.00
1000-2499	1.40	0.64	1.40	0.80	1.09	1.07	1.00
2500-4999	0.60	0.79	1.40	0.90	1.18	1.18	0.88
5000-9999	1.30	1.00	0.80	0.80	1.05	1.11	0.88
Sask.							
< 1000	1.09	0.67	1.14	1.25	1.05	1.00	0.75
1000-2499	0.68	1.17	1.14	1.00	1.19	1.15	0.75
2500-4999	0.55	0.83	1.00	1.13	1.33	1.19	1.00
5000-9999	0.55	1.00	1.14	1.50	1.24	1.19	0.75
Alta.							
< 1000	1.15	0.67	1.00	1.50	0.95	1.00	1.00
1000-2499	1.15	0.78	1.09	1.13	1.05	1.04	1.14
2500-4999	0.85	0.89	1.00	1.00	1.09	1.07	1.29
5000-9999	1.15	0.89	0.91	1.13	1.05	1.04	1.00
B.C.							
< 1000	2.57	1.29	0.88	1.00	0.73	0.93	0.86
1000-2499	2.57	1.64	0.75	0.67	0.77	0.83	0.86
2500-4999	2.14	1.14	1.00	0.89	0.86	0.97	0.71
5000-9999	1.71	1.14	1.00	0.89	0.91	0.97	1.14

APPENDIX TABLE 8

Commuting Patterns

	Percentage of resident labour force working outside (1)	Percentage of workforce coming to work in a place (2)	Ratio of Work-force to the resident labour force (3)
Nfld.	43.9	38.5	70.6
P.E.I.	62.0	69.6	105.5
N.S.	38.6	62.1	148.3
N.B.	46.9	58.7	113.1
Quebec	51.3	59.2	100.8
Ont.	39.2	54.3	122.0
Man.	20.1	38.8	119.4
Sask.	25.8	38.9	98.3
Alta.	34.8	44.5	104.2
B.C.	27.4	55.4	149.9
Canada (Small Towns)	40.3	52.8	109.7

Source: Census Canada, 1981.

NOTES

1. Statistics Canada, Urban Growth in Canada (Ottawa: Statistics Canada, 1984), 11.

2. Gerald Hodge and Mohammad Qadeer, Towns and Villages in Canada (Toronto: Butterworth, 1983).

3. Hodge and Qadeer, Towns and Villages, 60.

4. The term 'dispersed city' refers to the notion that in rural parts of contemporary western societies daily life activities are dispersed across a number of villages and communities. It also implies that these functions are now essentially urban in nature and, instead of being concentrated in one place, as in a city, they are spread out sparsely over a large area.

    Hart expresses the notion, "Today many villages are dominated by a single function, and their residents drive to other villages to obtain the other goods and services they require," John Fraser Hart, The Look of the Land (Englewood Cliffs, N.J.: Prentice Hall, 1975), 168.

5. Statistics Canada, Changes in Income, 1970-80 (Ottawa: Statistics Canada, 1984), 15.

6. These correlation coefficients have been computed by excluding Farm population, which is a special case.

7. The Location Quotient (LQ) is a coefficient of localization or specialization. It is computed by the following formula:

    $$L_i/L_E / \frac{N_i}{N_E}$$

    where L_i = Local Employment in Industry i

    L_e = Total Local Employment

    N_i = National (Provincial) Employment in Industry i

    N_E = Total National (Provincial) Employment

    In this study, provincial employment figures have been used in the denominator.

8. John Fraser Hart, The Look of the Land (Englewood Cliffs, N.J.: Prentice Hall, 1975); Fred Dahms, "Small Town and Village Ontario," Ontario Geography 16 (1980): 19-32.

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