



A BROADER PERSPECTIVE OF MEASURING THE WELL-BEING OF RURAL FARM AND NON-FARM HOUSEHOLDS



Fabrice Nimpagaritse and David Culver
Agriculture and Agri-Food Canada

INTRODUCTION

The concept of well-being refers to a dynamic process that gives people a sense of how their lives are evolving. Although, it has multidimensional aspects, it is traditionally measured by economic indicators, such as the level of income, incidence of low income and wealth. Economic indicators provide ways to evaluate how the benefits of national product are distributed across society. However, those measures have limitations in what they intend to measure.

As with many other countries, the measurement of well-being in rural farm and non-farm households in Canada is often associated with measurements of income. However, income measurements present several limitations as measure of well-being. For example, in the Canadian agricultural sector, there exist tax measures that allow agriculture producers to use cash accounting methods to report their income. Such measures provide significant benefits to producers but the reported income can distort financial indicators based solely on income. Furthermore, some studies, (Frey and Stutzer, 2002), have shown that once a certain level of income is reached; additional income is not equally followed by an increase in the overall well-being.

The concept of well-being is to a large extent subjective and not easily measurable. Nevertheless, there are some universal measurable needs which are internationally recognized that should be met in order to lead to a good life. The universality of need rests upon the belief that if they are not satisfied, harm of some objective kind will result.

Harm is defined as fundamental disablement in the pursuit of one's vision of good or an impediment to successful social participation.^{1, 2} The non-economic aspects of the well-being, such as health, education, better housing, etc, are as important as many economic measures and can be interconnected with economic indicators. Together, both economic and non-economic indicators can provide an enhanced comprehensive description of the well-being of society and individuals as well as measuring progress over time.

The paper provides a broader discussion on the well-being and how different areas of the well-being are interconnected.

The first section presents the traditional family income indicator as measure of well-being. The second section provides an overview of limitations of such indicator. Lastly, the third section gives examples of measurable domains where more data could be collected to support research on farm and rural household well-being.

FAMILY INCOME MEASURES IN CANADA

In Canada as in many developed countries, a significant amount of work has been undertaken to understand and examine the income levels among different socio-groups, such as farm families, rural or urban families. As such, extensive and rich systems for gathering data have been developed, from cross-sectional to longitudinal data sources.

Data on income levels is heavily associated to the well-being as it provides information on the capabilities of households and individuals to meet their needs.

During the five-year period 2002 to 2006, farm families reported income levels slightly lower than urban non-farm, but higher than rural non-farm families.

¹ DES Gasper, *Subjective and Objective well-being in relation to economic inputs: Puzzles and responses*, 2009.

² Doyal and Cough, *Theory of Human Need*, 1997.

TABLE 1

AVERAGE AND MEDIAN TOTAL FAMILY INCOME, 2002-2006		
	Average	Median
Farm families	\$70,340	\$54,370
Rural non-farm families	\$62,720	\$52,200
Urban families	\$76,060	\$59,120

Source: Cally Dhaliwal and Dave Culver. *The distribution of income of farm, rural and urban families in Canada: An analysis using Longitudinal Tax data 1992-2006.*

The difference between the mean and median income levels provides some indication of the distribution of income. A larger difference between the average and median income levels indicates that there are high levels of income that influence the overall average for the family type.

In Canada, farm and urban families reported larger differences between average and median family income than rural non-farm families.

LIMITATIONS OF INCOME BASED INDICATORS TO THE WELL-BEING MEASUREMENT

This section outlines some of the limitations of only using income based indicators as measures of well-being.

There is no consensus on the measurement of low income

In Canada, there are three low income indicators encompassing two major approaches. The absolute approach involves the specification of a basket of goods and services and the calculation of how much it would cost to purchase that basket. The relative approach looks at income relative to other families. Each of the indicators provides different perspectives of low income.

Low income measures (LIM)

Low Income Measures (LIM) are defined as 50% of median adjusted family income. There is no geographical component in LIM, i.e. the measure is not adjusted for rural/urban differences in costs

of living. However, LIMs take into account family size and its composition by using an equivalence scale. Instead of implicitly assuming equal costs for additional family members, the equivalence scale is a set of decreasing factors assigned to the first member, the second member, and so on.

For the purpose of calculation LIMs, the oldest person in the family receives a factor 1, the 2nd and all family members of 16 years old over receive a factor of 0.4. Those under age of 16 receive a factor of 3.

LIMs have been produced by Statistics Canada since 1991, and are available back to 1980. LIM uses data from tax records (T1 family file) and is mostly used for international comparisons.

TABLE 2

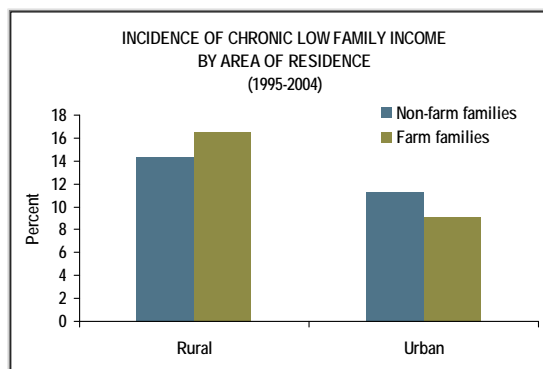
**AFTER TAX LOW INCOME MEASURE, COUPLE FAMILIES
CANADA, 2006**

Family with no children	\$49,600
Family with 1 child	\$65,800
Family with 2 children	\$73,000
Family with 3 children	\$70,900

Source: Statistics Canada, CANSIM Table 111-0015.

In rural areas, a slightly higher percentage of farm families have experienced chronic low income compared to non-farm families. Conversely, in urban areas, a slightly percentage of non-farm families experienced chronic³ low income. The difference between rural and urban would have been smaller if the cost of living was taken into account.

FIGURE 1



Source: Characteristics of Canadian farm families with chronic Low Family Income, AAFC 2007.

³ Experienced low income 5 or more times out of the ten year period.

Low income cutoffs (LICO)

A low income cutoff is an income threshold below which a family is likely to spend significantly more of its income on food, shelter and clothing than the average family. Statistics Canada has produced the low income cutoffs and their associated rates since the 1960s.

LICOs are produced from the Survey of Household Spending and focuses mainly on expenses on food, shelter and clothing because at the heart of the low income cutoffs is how a family is able meet basic needs. LICOs are differentiated by community size of residence and family size. In general, LICOs are higher in urban areas compared to rural areas. The larger the family size, the larger the difference.

TABLE 3

AFTER TAX LOW INCOME CUTOFFS, CANADA, 2007		
	Rural Areas	Urban Areas (Population 500,000 and over)
1 person	\$11,745	\$17,954
2 persons	\$14,295	\$21,851
3 persons	\$17,800	\$27,210
4 persons	\$22,206	\$33,946
5 persons	\$25,287	\$38,655
6 persons	\$28,044	\$42,869
7 persons +	\$30,801	\$47,084

Source: Statistics Canada, CANSIM Table 202-0801.

The Canada's report on Spending Patterns in Canada shows that urban households spent \$24,570 on food, shelter and clothing in 2007 compared to \$18,670 for rural households.

TABLE 4

SPENDING PATTERNS IN CANADA, RURAL AND URBAN HOUSEHOLDS, 2007			
	Canada	Urban Households	Rural Households
Total current consumption	49,766	50,487	44,172
Food	7,305	7,392	6,633
Shelter	13,643	14,124	9,911
Clothing	2,948	3,054	2,126
Consumption included in LICO	23,896	24,570	18,670
Household operation	3,287	3,301	3,182
Household furnishings and equipment	1,964	1,982	1,828
Transportation	9,395	9,322	9,964
Health care	1,932	1,910	2,105
Personal care	1,167	1,198	924
Recreation	3,976	3,998	3,810
Reading materials and other printed matter	260	267	206
Education	1,017	1,066	640
Other Expenses	2,872	2,873	2,843

Market Basket Measure (MBM)

The MBM estimates the cost of a specific basket of goods and services generally purchased from disposable family income. Those include food, shelter, clothing and footwear, transportation and personal care, household needs, furniture, recreation and other special expenses.

The MBM disposable family income is the income remaining after all mandatory payroll deductions⁴ as well as supplementary health plans and union dues; child support and alimony payments made to another family; out-of-pocket spending on child care; and non-insured but medically-prescribed health-related expenses.

Families that do not have sufficient income to purchase the basket are identified as having low-income.

In addition to the expenses included in LICO, Canada's report on Spending Patterns in Canada provides information on spending on some goods and services included in MBM. The indicator provides another perspective of low income profiles in Canada.

Income does not reflect the wealth of farm families

Income alone may not be indicative of the ability of families to sustain a certain consumption level, particularly for farm families. Those families tend to experience highly variable farm income while the farm net worth is increasing most of the time. A composite measure that encompasses both incomes and wealth is utilized to provide a more comprehensive picture of the economic well-being of farm families in comparison to other social groups.

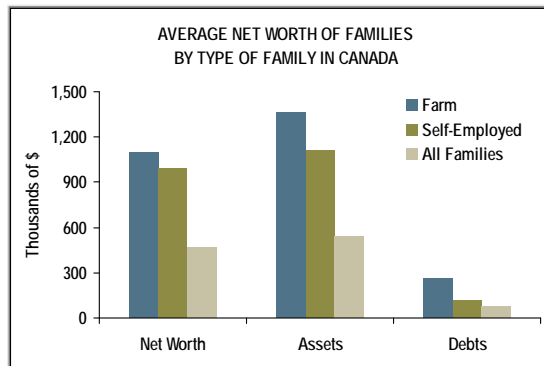
Farm families and self-employed families report substantial high net worth compared to the average Canadian family. In 2005, the average net worth of farm families was \$1,102,000, while

⁴ Those include the personal portion of payroll taxes; contributions to employer-sponsored pension plans, union dues.

that of all families was \$463,000. For families whose main income earner was self-employed⁵, average family net worth was \$991,000 in 2005. Employer Pension Plans valued on a termination basis are included in assets and net worth of families.

Debt levels are similar for families with non-farm self-employment compared to farm families, though net worth is much higher for farm families.

FIGURE 2

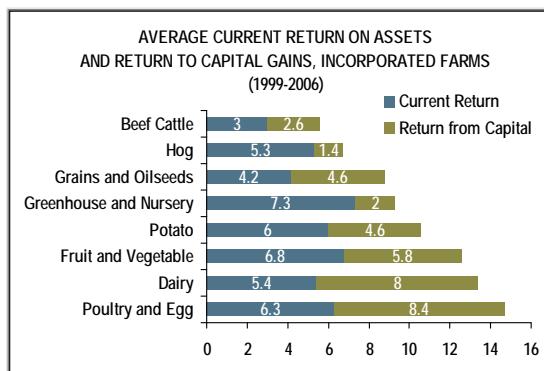


Note: For farm families, assets include the market value of their share of farm business and personal assets.

Source: Statistics Canada, Survey of Financial Security and Farm Financial Survey (2005 reference year).

In addition, it is important to note that agriculture is different from many other natural resource-based industries in that farmland for the most part does not depreciate in value over time. As well, for those in supply managed sectors, quota accounts for a larger share of farm assets and has increased significantly over the last decades. As such, most farm families can realize significant returns from capital gains as a result of the sale of farmland and quotas.

FIGURE 3



Source: Statistics Canada, Corporate Tax Database.

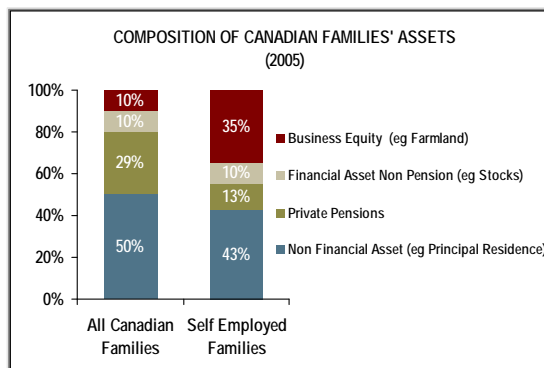
⁵ Self-employed identified by main job of major income earner.

For example, the average return on capital gain for corporate poultry/egg and dairy farms surpassed the average current return for the 1999-2006 period. This was mainly due to the appreciation of land and production quotas. Again, it should be noted that capital gains are not available for current consumption as they are only realized upon the sale of the asset.

In general, the wealth of self-employed families is higher compared to other non-self-employed families. For self-employed, business equity represents a significant share of wealth. In 2005, business equity accounted for 35% of the assets of self-employed Canadian families compared to only 10% of all Canadian families.

As a result, while self-employed families have higher wealth compared to other families, a significant share of it cannot be liquidated for consumption without compromising future earnings.

FIGURE 4

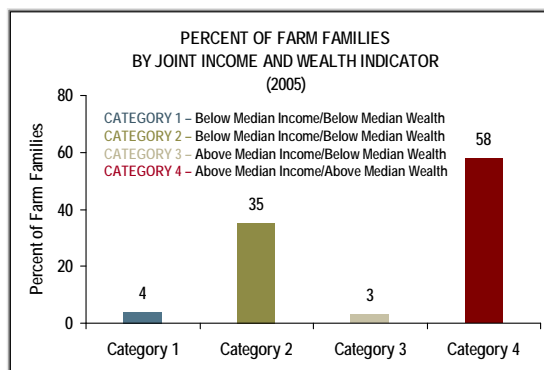


Source: Statistics Canada, Survey of Financial Security, 2005.

Income-wealth indicator

Overall, the income-wealth indicator shows that in 2005, the majority of farm families were in the above median income/above median wealth category. In addition, those with below median income had above median wealth. Only 4% of farm families had both below median income and median wealth.

FIGURE 5



Source: Statistics Canada, Farm Financial Survey, AAFC calculations 2005.

Income measurement issues

Income in kind

Income in kind, which represents the value of food produced and consumed on the farm is included in aggregate farm income but not usually taken into account when measuring farm family income. In Canada, farm income in kind has been declining but is still substantial. In 2008, total value of farm income in kind was estimated at over \$40 million⁶.

Other types of income in kind

In addition, the usage of several items overlap between personal and business usage (e.g. car, fuel, electricity etc.) for farm families. The deduction of business expenses may include personal expenses. Hence, their income may not be fully comparable with other employed families.

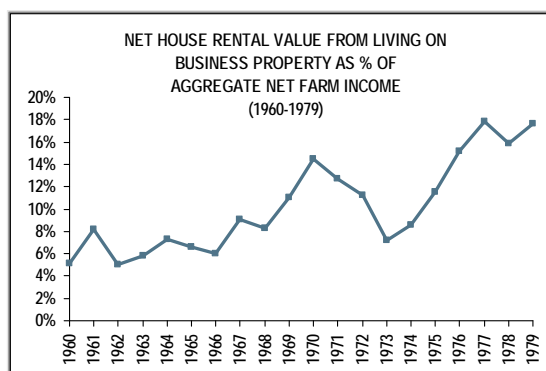
For example, in the study "Farm Income in Canada", George L. Brinkman⁷ argues that farmers typically treat their home as part of their business by including home ownership expenses (e.g. home repairs, mortgage interest and taxes etc.) in the calculation of taxable income instead of treating them as consumption expenses as do most of other employed families. Brinkman

⁶ Statistics Canada, CANSIM Table 002-0012.

⁷ Professor Emeritus, Faculty of Food, Agricultural Resource Economics, University of Guelph.

estimated that, in 1979, the net house rental value from living on business property⁸ at over \$800 million or 17.6% of aggregate net farm income.

FIGURE 6



Source: George L. Brinkman, *Farm Incomes in Canada*.

Tax benefits

Canadian farms benefit from certain tax measures not available to all business. For example, agriculture producers have the flexibility to report income tax using cash or accrual accounting methods. Over 80% agriculture producers report their income on the cash basis, as the method can allow them to mitigate variability of tax liabilities.

For example, in 2007, average farm income, measured on accrual basis, for prairie grain producers was \$188,501 compared to \$29,434 on the cash basis.

Canadian agriculture producers benefit from other tax expenditures that are not usually taken into account to measure farm income. The 2009 Canada's report on Tax expenditures and evaluations shows for example that for unincorporated farms, the lifetime capital gains exemption for unincorporated farm/fishing property was valued at \$365 million in 2009.

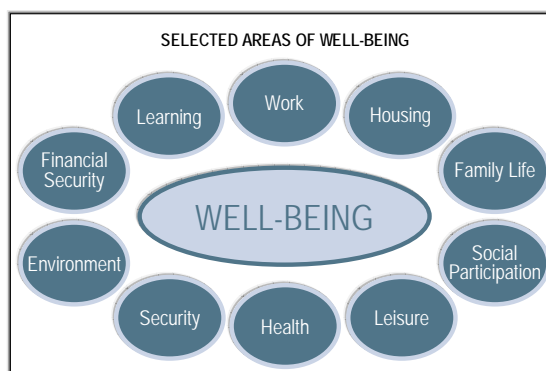
⁸ Assume that 85% of the house value is for non-farm usage.

INDICATORS OF WELL-BEING IN CANADA

Economic indicators cover one area of the well-being. While the measures of economic well-being continue to evolve, we should also focus on collecting and understanding other measurable domains of well-being and their interconnection. A broader set of well-being indicators can be important to both governments and individuals. This section discusses selected non-financial measures of well-being.

In Canada, information on various aspects of Canadians life is gathered regularly in order to monitor changes in their living conditions and to assess the overall well-being of Canadians over time.

FIGURE 7



Source: Human Resources and Skills Development, Indicators of Well-being in Canada.

As illustrated in figure 7, the level of well-being is made up by various domains that cannot be solely approximated through economic indicators. Areas of well-being range from the need for an adequate income to meet basic needs to people's social involvement and interaction with others. Deprivation in one area can have significant impacts on the overall well-being of individuals and households.

Housing

A safe comfortable place to live is fundamental to our sense of well-being

One basic need for individuals is housing. A house that is too costly, in bad shape, or overcrowded can be a large burden on budget and can cause health problem to its occupants. In Canada, the Canadian Mortgage and Housing Corporation gathers such information. Data shows that between 1996 and 2006, the proportion of Canadian households in core housing need⁹ declined 3% to 12.7%. Renters were likely in core housing needs than homeowners. In addition, data shows that rural households were better housed than urban households in part because rural households were more likely to be homeowners. The indicator is positively correlated with the level of income.

TABLE 5

HOUSING CONDITIONS OF URBAN AND RURAL HOUSEHOLDS, 1996		
	Rural	Urban
Percent of Households above housing standards	73%	67%
Percent of Households below housing standards	27%	33%
- Below one housing standard	23%	28%
- Below affordability standard only	11%	19%
- Below adequacy standard only	9%	5%
- Below suitability standard only	4%	4%
- Below multiple housing standard	3%	5%

Source: Canadian Mortgage and Housing Corporation (CMHC). *Special studies on 1996 Census data.*

Other indicators for housing may include the number of homeless shelters and beds, housing starts etc.

⁹ Core housing need refers to households which are unable to afford shelter that meets adequacy, suitability, and affordability norms. The norms have been adjusted over time to reflect the housing expectations of Canadians. Affordability, one of the elements used to determine core housing need, is recognized as a maximum of 30% of the household income spent on shelter.

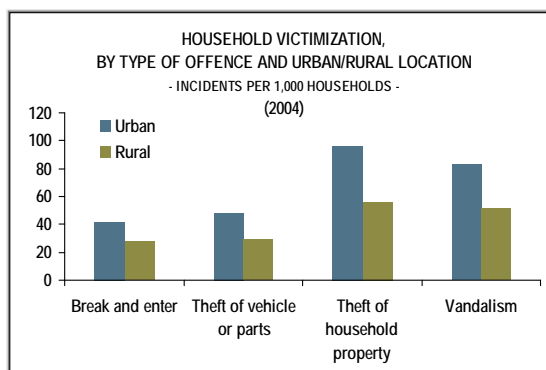
Security

Perception of safety and protection from harm is a key supporting pillar to the well-being

Crimes rate is one of the indicators of people's security. All other things being equal, residents of communities with high crime rates do not enjoy the same quality of life as those in more safe neighborhoods.

In Canada, the 2004 general social survey on victimization showed that households in urban areas had high crimes rates compared to those located in rural areas. Overall there were 269 incidents per 1,000 households in urban areas, compared to a rate of 164 in rural. This may be partly explained by the fact that rural dwellers were likely to look after each other than urban dwellers; 75% versus 87%.

FIGURE 8



Source: M. Gannon and K. Mihorean, "Criminal Victimization in Canada, 2004", Juristat, Vol. 25, No 7. Ottawa: Statistics Canada, 2006 (Cat No 85-002-XIE).

The survey showed also that crimes rates increase with household income in both rural and urban regions.

Health

Health has considerable impact on many aspects of people's life and their overall well-being

Good health is also a key aspect of overall well-being.

Canada produces detailed health statistics from administrative sources and surveys. A comparison of health indicators between rural and urban residents can be made. Data from the Canadian community health survey shows that overall a lower proportion of Canadians in rural and small towns rated their health as excellent compared to national average and those in urban areas. While the prevalence of certain diseases such as diabetes were similar, rural residents were likely to present several high health risk factors associated to poor health (obesity, smoking etc.) than urban.

TABLE 6

SELECTED HEALTH INDICATORS IN URBAN AND RURAL AREAS CANADA, 2001		
	Urban	Rural areas (outside CMA)
Excellent self-rated health	29%	20%
Obese, BMI 30.0 +	27%	40%
Daily or occasionally smoker	22%	32%
Arthritis	13%	18%

Source: Canadian Community Health Survey, Rural and Small Town Canada Analysis Bulletin, vol. 4, no. 6.

Moreover, data shows that there were only half as many physicians per 1,000 populations in rural and small towns Canada as in larger urban centers, but two thirds of rural and small town Canadians lived within 5 km of a physician.

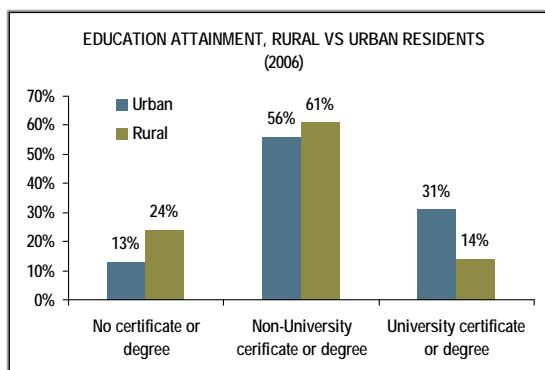
The prevalence of certain types of work may have an impact of the health of population. In 2007, 32 individuals out of 1,000 employed in manufacture industry reported injury from work in comparison to 14 individuals out of 1,000 in agriculture, hunting and fishing industry. These types of industries are mainly concentrated in rural region. The financial services industry reported the lowest rate in 2007. On the other hand, the type of work that involves physical activity may be beneficial to the health status of employees. In metropolitan regions where “desk-work” is more prevalent, the rate of physical inactivity is higher than in non-metro adjacent regions which are mainly rural regions.

Education

Education provides knowledge and opens the door to new opportunities that can improve one's living standard

Education is positively linked to many aspects of peoples' lives such as income, health status, social participation, work etc. Better educated people can improve community's capacity to attract or generate economic opportunities and to translate those opportunities into higher-valued employment. Therefore, an uneven distribution of skills across regions may reinforce an uneven pattern of well-being. On the other hand, lack of opportunities for skilled workers can discourage people from continuing education. According to the 2006 census, 24% of rural population aged between 25-64 years old had no diploma in comparison to 13% in urban areas. In addition, 14% of the same population in rural area had a university certificate or diploma compared to 31% in urban areas. Rural areas often lack high skilled job opportunities and out-migration may be an alternative option for skilled rural population.

FIGURE 9



Source: Statistics Canada, Census of Population, 2006.

SUMMARY

Well-being is a broad and dynamic concept that encompasses various disciplines. Although it is to a large degree a subjective notion, there are universal requirements that need to be met in order to lead to a high level of well-being. Mostly, well-being has been measured through economic indicators such as income. As shown in this paper, income presents several limitations as measure of well-being. Non-economic indicators in the area of education, health, quality of housing, security etc. are other important domains of well-being in addition to the ones approximated through income.

In the context of measuring the well-being of farm and rural households, data in those areas should be collected and presented along with economic indicators to provide a comprehensive picture of the well-being.

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