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Measuring the Well-being of Farm Families with Income, Wealth and Consumption: A Canadian Perspective

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1

Introduction

- In Canada as well as internationally, there is a long-standing debate over how the economic well-being of rural and farm families has changed over time and how this well-being compares to the broader population.
- However, there is little consensus on how to best measure the economic well-being of farm families.
- Measuring accurately the economic well-being can provide an important indication of the quality of life for farm families.
- The Index of Economic Well-being developed by the Canadian Centre for the Study of Living Standards has suggested the economic well-being be measured as consumption flows, wealth stocks, income equality and economic security.
- This presentation focuses on the first three of the economic well-being measures.

11-072-dp

2

Purpose

- To examine the potential use and the empirical issues of three measures of economic well-being related to farm and rural families:
 - ❖ income
 - ❖ wealth
 - ❖ consumption
- To analyze differences between three measures of well-being at different parts of the distributions of income, wealth and consumption and benchmark the measures against all families in Canada.
- Because averages give a very limited view of the economic well-being, distributions are the focus of this presentation.
- Economic well-being can be measured in absolute or in relative terms. This presentation focuses on distributions which is a relative measure of well-being.

11-072-dp

3

Canadian Data Sources for Measuring Economic Well-being

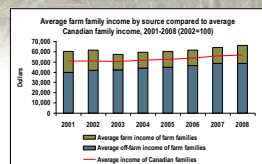
- The economic Well-being in Canada is measured in this analysis with both Survey and Administrative data sources:
 - Income Measure:
 - ❖ For all Canadian families: Survey of Labour and Income Dynamics (SLID)
 - ❖ For farm families: Canadian Farm Financial Database (CFFD)
 - Wealth measure:
 - ❖ For all Canadian families: Survey of Financial Securities (SFS)
 - ❖ For farm families: Farm Financial Survey (FFS)
 - Consumption Measure:
 - ❖ For all Canadian families and farm/rural families: Survey of Household Spending (SHS)

11-072-dp

4

Between 2001 and 2008, average farm family income was above that of all Canadian families by 13 to 21 percent.

- However, measuring the economic well-being based on average income of farm families and comparing these with all Canadian families may miss important differences across parts of the distribution of income.



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Income-based Measures of Well-being

5

Share of families below Low Income Measure (LIM) is generally higher for farm families.

- It is essential to look at the dispersion in family income which could provide a better indication of economic well-being across income levels.

	2001	2002	2003	2004	2005	2006	2007	2008
Farm families	11.3%	12.4%	14.8%	14.4%	14.4%	14.9%	15.1%	15.1%
All Canadian families	12.9%	13.4%	12.8%	12.7%	12.8%	12.4%	12.1%	12.7%

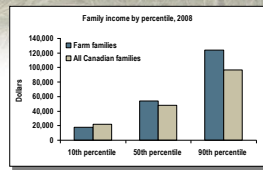
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Income-based Measures of Well-being

6

Farm families have a more dispersed distribution of income compared to all Canadian families.

- Although on average farm family income is higher than all Canadian, this is not true at the lower end.
- In 2008, family income of farm families, compared to all Canadian families, is higher at the mid-point of the distribution, but also is more dispersed—lower at the low end of the distribution and higher at the high end.



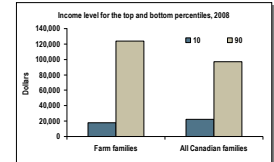
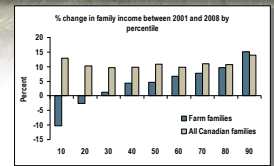
Income-based Measures of Well-being

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7

Inequality in the distribution of income is increasing for farm families compared to all Canadian families.

- While farm family income at the 10th and 20th percentiles has decreased from 2001 to 2008, it is improved at the other percentiles of the distribution.
- Income has grown for farm families at the 90th percentile more than all Canadian families.
- The income gap between the 10th and 90th percentiles for farm families has significantly increased relative to all Canadian families.



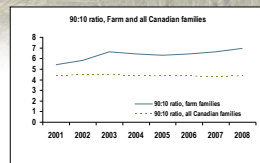
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8

The distance between the upper and lower tails of income distribution is increasing for farm families.

- The 90:10 income ratio is much higher for farm families (6.94 relative to 4.38) than all Canadian families and the gap is widening.



The 90:10 represents the ratio of income at the 90th and 10th percentile.

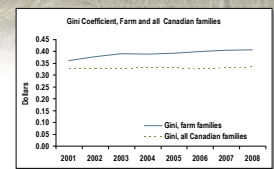
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9

Income levels are more dispersed among farm families, as reflected also in consistently higher Gini coefficients, than among all Canadian families.

- The Gini for farm families rose from 0.360 in 2001 to 0.406 in 2008, implying widening income inequality, whereas the Gini for all Canadian families rose from 0.328 in 2001 to 0.335 in 2008.



Income-based Measures of Well-being

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10

Wealth is also an important part of measuring well-being of farm families.

- When current-year income is temporarily low, wealth provides a source of assets to borrow against during temporary income shortfalls.
- Wealth generally is more stable than income.
- Wealth, which can be viewed as providing a degree of economic security, is at least as important to economic well-being as income.
- Wealth is also important in the well-being of families in retirement.

Wealth-based Measures of Well-being

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11

Mean and median wealth of farm families are significantly more than that of all Canadian families.

- In 2005, median wealth of farm families was more than four times the estimated median wealth of all Canadian families.
- A large share of family wealth in the farm sector is in farmland, which increased substantially in value relative to other assets.
- As with income, the mean and median wealth give only limited view of economic well-being.

Mean and Median Wealth, Farm Families (in 2002 dollars)		
	1999	2005
Mean \$	788,914	968,172
Median \$	510,226	577,370

Mean and Median Wealth, All Canadian Families (in 2002 dollars)		
	1999	2005
Mean \$	239,238	340,308
Median \$	115,016	141,389

Wealth-based Measures of Well-being

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12

In contrast to all Canadian families, wealth is more evenly distributed among farm families.

- For the 90:10, wealth ratio is significantly lower for farm than all Canadian families. Wealth is very concentrated at the top end of the distribution for all Canadian families.
- The Gini coefficients in 2005 were 0.524 for farm families and 0.657 for all Canadian families, suggesting that wealth levels is less disparate among farm families.

Wealth Distribution, Farm Families (in 2002 dollars)

	1999	2005
90:10	10.74	12.33
Gini	0.494	0.524

Wealth Distribution, All Canadian Families (in 2002 dollars)

	1999	2005
90:10	\$91.27	\$69.00
Gini	0.619	0.657

The 90:10 represents the ratio of wealth at the 90th and 10th percentiles.

Wealth-based Measures of Well-being

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13

The greater equality in farm family wealth distribution is also reflected in the wealth shares by percentiles.

- Relative to all Canadian families, the 10th, 20th, 30th, 40th, 50th, 60th, and 70th percentiles of farm family wealth distribution have higher total wealth shares, and the last two quantiles have a lower total wealth share.
- In contrast to income, the last quantile of all Canadian families had negative wealth share and farm families had positive wealth share.

Wealth Share, Farm Families by Percentile (in 2002 dollars)

%	1999	2005
10th	1.11	0.9
20th	2.01	2.25
30th	3.74	5.36
40th	12.02	11.46
50th	16.93	16.75

Wealth Share, All Canadian Families by Percentile (in 2002 dollars)

%	1999	2005
10th	-0.28	-0.26
20th	0.2	0.12
30th	3.76	3.24
40th	6.07	5.36
50th	20.25	18.54

Wealth share represents the Quantile group share of total family wealth.

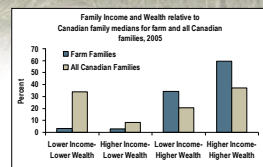
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14

A better measure of well-being can be achieved by combining wealth and income.

- For all Canadian families, income and wealth are positively correlated: one-third of the low-income group had low wealth and more than one-third of the high-income group had high wealth.
- The pattern is significantly different for low-income farm families: virtually all of them (34 percent) had high wealth, suggesting that for many, their wealth provides a source of assets to borrow against during temporary income shortfalls.



Wealth-based Measures of Well-being

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15

Consumption-based measure of well-being gives an indication of families' assessment of their overall financial position and prospects.

- Income may reflect fluctuations that have little impact on living standards.
- Wealth provides economic security, particularly, when there are temporary declines in income. Therefore, wealth is probably important and its inclusion changes the picture of the economic well-being of families.
- When families face temporary increases or decreases in income relative to long-term income expectations, they tend to smooth consumption relative to variable income in order to maintain a standard of living linked to their long-term income expectations.

Consumption-based Measures of Well-being

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16

Mean and median consumption of farm families are comparable to those of all Canadian families.

- In 2006, the estimate of mean farm family consumption is slightly lower. This is largely due to the lower cost of living in rural areas.

Mean and Median equivalent-income and equivalent-consumption by Percentile, Rural/Farm families, 2006

	Family equivalent-income	Family equivalent-consumption
Mean \$	35,819	28,246
Median \$	20,122	24,617

Mean and Median equivalent-income and equivalent-consumption by Percentile, All Canadian families, 2006

	Family equivalent-income	Family equivalent-consumption
Mean \$	31,947	30,354
Median \$	27,326	26,903

Consumption-based Measures of Well-being

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17

Distribution of consumption among farm families display patterns comparable to all Canadian families.

- For farm families, the 90:10 consumption ratio is lower than income ratio, suggesting that consumption is less dispersed (unequal) than income for farm families comparing to all Canadian families.
- The Gini coefficient based on consumption measure was lower for farm families than the Gini based on income measure. This also reflects much less inequality for farm families based on consumption measure.

Distributions of rural/farm families equivalent-income and equivalent-consumption by Percentile, 2006

	Family equivalent-income	Family equivalent-consumption
90:10	6.01	3.95
Gini	0.391	0.262

Distributions of all Canadian families equivalent-income and equivalent-consumption by Percentile, 2006

	Family equivalent-income	Family equivalent-consumption
90:10	4.11	3.45
Gini	0.317	0.274

Consumption-based Measures of Well-being

11-072-dp

18

Less disparity based on consumption is also reflected in consumption share of the farm families.

- Total consumption shares for farm families are also quite similar to Canadian families in 2006, particularly for the low end (10th and 20th percentiles) of distribution.

Shares of family equivalent-consumption by Percentile, 2006

%	Family equivalent consumption, Rural / Farm families	Family equivalent consumption, All Canadian families
10 th	3.16	3.77
20 th	5.27	5.28
50 th	8.27	8.31
80 th	12.89	12.24
90 th	15.37	14.57

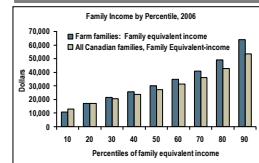
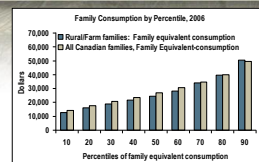
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19

In contrast to income, distribution of consumption appears to be similar for farm and all Canadian families.

- The net effect of considerably higher income, but a lower tendency to consume as income increases, is that the farm family distribution of consumption is very similar to that for all Canadian families.



Consumption-based Measures of Well-being

11-072-dp

20

Conclusion

- Three individual measures of economic well-being provide different pictures of farm families' well-being.
- This study reveals that farm families tend to have a more unequal income distribution relative to all Canadian families.
- However, wealth distribution is more equal for farm families relative to all Canadian families.
- The results show that incomes are more dispersed than consumption for farm families.
- To evaluate farm family well-being, measures of both income and consumption for rural and farm families are needed.

11-072-dp

21

Key messages

- In measuring economic well-being, it is important that measure goes beyond averages or medians. Means and medians give a very limited view of the economic well-being.
- Need to look beyond income to assess economic well-being of farm families.
- Virtually all low-income farm families had relatively high wealth.
- Consumption data can provide an important measure of well-being.
- Improvements in Canadian consumption data is important for measuring well-being of farm families and should be further developed.

11-072-dp

22

- Please send your questions or comments to

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11-072-dp

23



11-072-dp

24