

# Does Money Matter? Determining the Happiness of Canadians

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## Executive Summary

The objective of this report is to ascertain whether persons living in certain regions or cities in Canada experience higher levels of life satisfaction or happiness, and if so why? To address this question, the report uses micro-data from the Canadian Community Health Survey (CCHS) for 2007 and 2008. After a descriptive analysis of the data on happiness in Canada, the report identifies, through an econometric analysis of both individual and societal variables, the most statistically and economically significant determinants of individual happiness. It then uses this information to explain the variation in happiness at the provincial, CMA, and health region level, given the characteristics of the population in these geographical units. A key finding is that the most important reason for geographical variation in happiness in Canada is differences in the sense of belonging to local communities, which is generally higher in small CMAs, rural areas, and Atlantic Canada.

There is relatively little variation in average happiness in Canada both over time and across space. Statistic Canada's Canadian Community Health Survey has since 2003 provided estimates of the proportion of the population that consider themselves satisfied or very satisfied with their lives. In 2009, this proportion for the population 12 and over was 92.1 per cent, up from 91.4 per cent in 2008 (91.9 per cent in 2007, 91.8 per cent in 2005, and 91.3 per cent in 2003).

Based on a scale of 1 to 5, the average level of the happiness of the Canadian population 20 and over in 2007-8 was 4.26. At the provincial level, it ranged from a high of 4.33 in Prince Edward Island to a low of 4.23 in Ontario, a total range of 0.10 points (2.5 per cent) out of a potential maximum variation of four points. At the level of the 32 CMAs, average happiness ranged from a high of 4.37 in Sherbrooke, Quebec to a low of 4.15 in Toronto, Ontario, a range of 0.22 points or 5.5 per cent. At the level of the 121 health regions, average happiness ranged from a high of 4.42 in Kings County, Prince Edward Island to a low of 4.12 in the City of Toronto Health Unit, a range of 0.30 points or 7.5 per cent.

Based on 70,192 observations for Canada from the 2007 and 2008 CCHS, an equation was estimated, using happiness as the dependent variable and both individual and societal variables as independent variables. The individual level variables produced the most statistically significant results, and the largest coefficients. The societal variables added little explanatory power to the equations, were in most cases not statistically significant, and had small coefficients. It appears that happiness in Canada is primarily determined by the individual characteristics of the people in the population, not the average characteristics of the geographic unit in which the people live.

The following variables were found to be the most economically and statistically significant determinants of individual happiness in Canada:

- An individual's perceived mental health was measured on a scale from 1 (poor mental health) to 5 (excellent mental health). A one-unit increase from the average of perceived mental health for the Canadian population increases the proportion of individuals that are very satisfied with life by 17.0 percentage points. Said another way, for the average person the effect of a one-unit increase in mental health on happiness is equivalent to the effect of a 309 per cent increase in household income. Thus, perceived mental health has a very significant effect on individual happiness
- Perceived health status was also an economically significant determinant of happiness. A one-unit increase in health status (measured on a 5-point scale) increases the proportion of individuals that are very satisfied with life by 8.8 percentage points. Alternatively, a one-unit increase in health status is equivalent to a 157 per cent increase in household income for the average person on happiness.
- High levels of stress level were associated with lower life satisfaction. Specifically, a one-unit increase in stress (measured on a 5-point scale) decreases the proportion of individuals that are very satisfied by 7.7 percentage points. For the average person, this change in stress level is equivalent to the effect of a 136 per cent decrease in household income on happiness.
- An individual's sense of belonging to their local community was also an important determinant of individual life satisfaction. A one-unit increase in sense of belonging (measured on a 4-point scale) increases the proportion of individuals that are very satisfied with life by 6.5 percentage points. Relative to the effect of household income, a one-unit increase in sense of belonging is equivalent to a 116 per cent increase in income for the average person.
- We found that being unemployed has a negative impact on people's happiness. Relative to household income, moving from unemployment to employment has the same impact on happiness as a 151 per cent increase in income for the average person.
- Although household income was statistically significant at the one per cent level, it carries less economic significance for happiness. Specifically, a ten per cent increase in household income from the mean increases the proportion of individuals that are very satisfied with life by only 0.6 percentage points.
- At the societal level, average household income across a health region was found to be negatively associated with individual happiness. A ten per cent increase in the average household income of a health region (holding individual household

income constant) would decrease the proportion of individuals that are very satisfied by 0.7 percentage points. This suggests that relative income is slightly more important than individual income but overall, its effect is not profound. One caveat for this result is that due to lower variation in average household income across health regions compared to variation in individual income, the marginal effect is not as robust for the societal income measure.

- Marital status and immigration status were also found to be important determinants of individual happiness. Married persons are happier compared to people who have never been married. Recent immigrants are less happy compared to non-immigrants.

The regression results were used to calculate the expected happiness, that is the average happiness for an individual or group when all other variables for that individual or group assume average values. These expected happiness estimates were then compared to actual happiness estimates. In all cases, these controls reduced the variation to varying degrees between the categories with the highest and lowest average level of happiness. For example, the observed or actual estimates show a 1.92 point difference in happiness between the life satisfaction of those with poor mental health (2.65) and those with excellent mental health (4.57). But once all other factors such as income are controlled for the gap drops to 0.92 points. Nonetheless, this is still a very large gap and by far the greatest of any variable.

The next largest gap, again after controlling for all other variables, was for health (0.46 points between poor and excellent health), followed by stress (0.40 points between no stress and extreme stress), sense of belonging to the local community (0.25 points between very weak and very strong), household income (0.20 points between the bottom and top decile), marital status (0.18 points between married and never married), immigration status (0.13 points between non-immigrants and recent immigrants), and visible minority (0.09 points difference between visible minority and the majority). All other variables had variation in happiness between the top and bottom categories of 0.06 points or less, after controls were applied.

Geographical variation in happiness in Canada arises for two main sources: differences in the means of variables associated with life satisfaction and the importance of those variables in the life satisfaction regressions. To explain geographical variation, we derive weights for each variable based on the regression coefficient and use them to account for the deviation in happiness for each geographical unit from the national average. It was found that differences in the sense of belonging to the local community are the most important explanation for the geographic variation of happiness in Canada. Although sense of belonging was not the most economically significant variable in our models of life satisfaction, the variation in this variable across geographical units was quite large. For example, on a standardized scale from 1-5, sense of belonging ranged from a low of 3.22 in Quebec to a high of 3.81 in Newfoundland and Labrador at the provincial level. The range in means for this variable across provinces contributed to its ability to explain geographical variation in happiness. While mental health status was the most economically significant variable in our regression models, the differences in mean mental health status across provinces are small. British Columbia had the lowest mean

mental health status at 3.97 while Quebec had the highest mean mental health status at 4.16. This represents a range of 4.8 per cent compared to a range of 14.8 per cent for sense of belonging.

One of the key reasons for the limited geographical variation in happiness is that factors often offset one another. That is, although sense of belonging may be higher in one province, that province may also have a lower average mental health. Quebec is a good example as it has the lowest mean sense of belonging but the highest mean mental health status.

This report provides strong support for the recommendations of the Stiglitz Report, which was commissioned by President Nicolas Sarkozy of France and released in September 2009, to put greater emphasis on happiness relative to GDP in the development of public policy.