MEASURING SUSTAINABLE DEVELOPMENT

APPLICATION OF THE GENUINE PROGRESS INDEX TO NOVA SCOTIA

PEACE & SECURITY
AN INTRODUCTORY
COMPARISON OF
GLACE BAY & KINGS COUNTY

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1. Introduction

In 2001, Genuine Progress Index (GPI) surveys were randomly sent to residents of the town Glace Bay and the region of Kings County, Nova Scotia. The purpose was to measure quality of life and overall well-being. 1708 surveys were returned from Glace Bay, and 1898 surveys were returned from Kings County. Overall, an extremely high response rate was achieved even though the surveys were very lengthy.

Glace Bay is a community on Cape Breton Island. It is home to approximately 19,000 people and is the fourth largest urban area in Atlantic Canada. Kings County is somewhat different. The region is about one hour away from the city of Halifax and is residence to approximately 50,000 people. This report examines the similarities and differences between Glace Bay and Kings County with regard to peace and security issues. We pay particular attention to the relationship between victimization rates, views on justice, views on current controversial issues like gun laws and marijuana legalization and other variables such as employment, income and education levels in Glace Bay and Kings County.

The two areas in our study represent contrasting profiles of rural communities. Glace Bay is heavily invested in the mining industry. The area has recently suffered a major economic setback with the closing of area coal mining operations. Kings County is one of the more affluent rural areas in Nova Scotia with a strong agricultural base, as well as active logging, fishing, manufacturing and service industries.

Between 2001 and 2003, these two communities were involved in the design and implementation of a comprehensive community survey in partnership with GPI Atlantic and several other partners. The purpose of the survey was to collect baseline data for the monitoring of community well being and progress. The questionnaire survey was comprehensive, examining a variety of topics including:

- Household demographics
- Labour Force Activity
- Health
- Core Values
- Care giving
- Voluntary Activity and Community Service
- Personal Security and Crime
- Ecological Footprint
- Time Use

This paper will first look at some simple demographics and descriptive statistics. Then a more concentrated examination of crime and attitudes towards the justice system is completed. A more detailed analysis on topics such as gun control, legalizing marijuana and fairness in the justice system reveals several interesting results. Finally we suggest several new areas of potential research and some readings for interested readers.
Despite the breadth of this overview we do come away with a few very precise bits of information. Higher levels of education are significantly related to views on the legalization of marijuana and tougher gun control laws. Respondents with higher levels of education seem to favour tighter gun control laws and support the legalization of marijuana.

There is clear difference between Glace Bay and Kings County when we look at the rates of victimization and views on marijuana legalization, the need for tougher gun control laws and the need for tougher sentencing. One very interesting result, that should be examined more closely in future research is the difference in victim behaviour after being victimized that exists between genders. Despite there being no significant difference between the gender of victims, females were more likely to alter their behaviour after being victimized than males. One can speculate reasons for this, and future research might consider an analysis of costs associated with these types of behavioural changes.

Employment status is, in general, not significantly correlated with views on justice, marijuana laws or gun laws. Only when Employment Status was categorized did greater detail emerge. Being a student was a significant predictor for all three dependent variables. Being a student was significantly correlated with views that a tougher stance on gun control was needed, that marijuana should be legalized and that justice system was fair to everyone.

Other than the significant relationship between being unemployed or retired and the view that marijuana should respectively be legalized or not, employment status did not play a statistically significant role for views on marijuana and gun laws as well as views on justice system fairness. Factors such as location, gender and education level seemed to play the largest role.

2. Demographics and Descriptive Statistics

We begin our examination of the data with brief overview of some of the more general and stylized statistics. Tables 1 through 6 examine variable such as gender, age, household earnings, education levels and employment status. We did not note a significance difference in the gender distribution of respondents in the two locations is present. (Table and Figure 1)

We did note a significance difference in the age distribution of respondents in the two locations. The Kings County sample contained a larger proportion in their late thirties, early forties and a smaller proportion in their early twenties. (Table and Figure 2)

Table 1. Gender of Respondents (in percentage)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42.6</td>
<td>44.6</td>
</tr>
<tr>
<td>Female</td>
<td>57.1</td>
<td>54.6</td>
</tr>
<tr>
<td>No response</td>
<td>0.2</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 1.739  p<0.187
Figure 1. Gender of Respondents (in percentage)

Table 2. Age Groups of Respondents (in percentage)

<table>
<thead>
<tr>
<th>Age</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>3.5</td>
<td>5.5</td>
</tr>
<tr>
<td>20-24</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td>25-34</td>
<td>10.6</td>
<td>10.0</td>
</tr>
<tr>
<td>35-44</td>
<td>19.4</td>
<td>24.6</td>
</tr>
<tr>
<td>45-54</td>
<td>24.4</td>
<td>22.7</td>
</tr>
<tr>
<td>55-64</td>
<td>16.2</td>
<td>15.9</td>
</tr>
<tr>
<td>65+</td>
<td>19.7</td>
<td>17.8</td>
</tr>
<tr>
<td>No response</td>
<td>0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 42.494  p<0.000

Figure 2. Age Groups of Respondents (in percentage)
There was also a significant difference in the income distribution of the two sets of respondents, with a substantially larger proportion of Glace Bay residents in the lower income brackets. We note especially the percentage of residents with household incomes $50,000 or greater. (Table and Figure 3)

Table 3. Total Household Income Brackets of Respondents (in percentage)

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10,000</td>
<td>6.7</td>
<td>4.2</td>
</tr>
<tr>
<td>10,000 - 19,999</td>
<td>18.5</td>
<td>9.0</td>
</tr>
<tr>
<td>20,000 - 34,999</td>
<td>26.5</td>
<td>19.2</td>
</tr>
<tr>
<td>35,000 - 49,999</td>
<td>17.9</td>
<td>20.5</td>
</tr>
<tr>
<td>50,000 or greater</td>
<td>20.2</td>
<td>41.1</td>
</tr>
<tr>
<td>No Response</td>
<td>10.01</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 255.064  p<0.000

For education levels we observe that Glace Bay respondents also had a substantially lower proportion of respondents with higher levels of educational attainment. In Glace Bay almost sixty percent of the respondents did not have more than a high school education. For Kings County this figure is just over forty percent. (Table and Figure 4)
Table 4. Highest Level of Education Attained by Respondents (in percentage)

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary to Eight</td>
<td>10.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Grade Nine to Twelve</td>
<td>49.6</td>
<td>36.7</td>
</tr>
<tr>
<td>Community College</td>
<td>18.8</td>
<td>21.1</td>
</tr>
<tr>
<td>University Degree</td>
<td>10.5</td>
<td>17.3</td>
</tr>
<tr>
<td>Other</td>
<td>9.5</td>
<td>9.1</td>
</tr>
<tr>
<td>No response</td>
<td>1.3</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 86.312  p<0.000

Figure 4. Highest Level of Education Attained by Respondents (in percentage)

Employment status for respondents in Glace Bay was also significantly different than in Kings County. Glace Bay had a substantially lower proportion of respondents employed and a substantially higher level of respondents that were retired. We note a key difference in the percentage of respondent reporting “unemployed” in Glace Bay and Kings County. (Table and Figure 5)

Table 5. Employment Status of Respondents (in percentage)

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>34.3</td>
<td>49.7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>10.9</td>
<td>3.7</td>
</tr>
<tr>
<td>Student</td>
<td>6.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Homemaker</td>
<td>14.1</td>
<td>12.4</td>
</tr>
<tr>
<td>Retired</td>
<td>29.7</td>
<td>23.3</td>
</tr>
<tr>
<td>Other</td>
<td>4.0</td>
<td>3.3</td>
</tr>
<tr>
<td>No response</td>
<td>0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 132.094  p<0.000
Kings County respondents also had a substantially higher proportion of respondents that were married or living common law and a significantly lower proportion of respondents that have never been married. This may be linked to the age distribution. (Table and Figure 6)

Table 6. Marital Status of Respondents (in percentage)

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never married</td>
<td>19.6</td>
<td>13.7</td>
</tr>
<tr>
<td>Married/Common law</td>
<td>60.0</td>
<td>72.8</td>
</tr>
<tr>
<td>Divorced/separated</td>
<td>9.9</td>
<td>7.3</td>
</tr>
<tr>
<td>Widowed</td>
<td>9.9</td>
<td>5.1</td>
</tr>
<tr>
<td>No response</td>
<td>0.6</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 76.360  p<0.000
3. Analysing Crime and Attitudes

Next, we turn our attention to a more specific analysis of crime and attitudes towards the justice system. First we note a most basic statistic; have you been a victim of crime in the past 60 months? Respondents from Kings County had a significantly higher rate of victimization then respondents from Glace Bay. The rate in Kings County is almost double that of Glace Bay. (Table and Figure 7)

<table>
<thead>
<tr>
<th>Victim</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7.8</td>
<td>14.6</td>
</tr>
<tr>
<td>No</td>
<td>92.2</td>
<td>85.4</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 40.429  p<0.000  
Number of Valid Cases = 3529

However, when queried about whether or not their business was victimized, the results are less conclusive. We note the relatively small sample size and the time difference (12 months verses 60 months). For business victimization, there is not a significant difference between Kings County and Glace Bay. (Table and Figure 8)

<table>
<thead>
<tr>
<th>Victimized</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>23.5</td>
<td>16.5</td>
</tr>
<tr>
<td>No</td>
<td>76.5</td>
<td>83.5</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 1.726  p<0.189  
Number of Valid Cases = 292
Of interest in this survey, were individuals’ opinions about various “headline” news stories. Respondents for Kings County were significantly more against the need for tougher gun control laws. (Table and Figure 9)

With regards to legalizing marijuana, Kings County respondents had a significantly higher approval compared to Glace Bay. In Glace Bay 21.3% of the respondents either agreed or strongly agreed, while in Kings County that figure was 26.7%. (Table and Figure 10)

Kings County and Glace Bay respondents also differed on their beliefs that tougher sentences are needed for sentencing. Over 71% of Glace Bay respondents agreed or strongly agreed while in Kings County that number was 66.2%. (Table and Figure 11)

When it came to the gender of crime victimization over the last 60 months we noted no significant difference between male and female. (Table and Figure 12)

However, despite the information about the gender of crime victimization we observed a significant difference in victim behavioural change. Over 38% of females changed their behaviour after being victimized, while only 31.1% of males did likewise. (Table and Figure 13)

Table 9. Tougher Gun Control Laws

<table>
<thead>
<tr>
<th></th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>5.6</td>
<td>10.1</td>
</tr>
<tr>
<td>Disagree</td>
<td>7.6</td>
<td>18.1</td>
</tr>
<tr>
<td>Neutral</td>
<td>17.6</td>
<td>23.2</td>
</tr>
<tr>
<td>Agree</td>
<td>36.3</td>
<td>25.9</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>32.9</td>
<td>22.8</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 169.929  p<0.000
Number of Valid Cases = 3447
Figure 9. Tougher Gun Control Laws

![Graph showing the comparison between Glace Bay and Kings County for Tougher Gun Control Laws]

Table 10. Legalize Marijuana

<table>
<thead>
<tr>
<th>Legalize Marijuana</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>24.7</td>
<td>22.2</td>
</tr>
<tr>
<td>Disagree</td>
<td>24.2</td>
<td>21.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>29.7</td>
<td>30.1</td>
</tr>
<tr>
<td>Agree</td>
<td>12.7</td>
<td>17.4</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>8.6</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 19.586   p<0.001
Number of Valid Cases = 3449

Figure 10. Legalize Marijuana

![Graph showing the comparison between Glace Bay and Kings County for Legalize Marijuana]
Table 11. Need Tougher Sentences

<table>
<thead>
<tr>
<th>Tougher Sentences</th>
<th>Glace Bay</th>
<th>Kings County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Disagree</td>
<td>8.7</td>
<td>10.9</td>
</tr>
<tr>
<td>Neutral</td>
<td>16.0</td>
<td>19.1</td>
</tr>
<tr>
<td>Agree</td>
<td>45.3</td>
<td>45.5</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>25.8</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 19.423   \( p<0.001 \)
Number of Valid Cases = 3435

Figure 11. Need Tougher Sentences

![Bar Chart](image)

Table 12. Gender and Victimization

<table>
<thead>
<tr>
<th>Gender</th>
<th>A victim of crime in past 60 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Male</td>
<td>11.9</td>
</tr>
<tr>
<td>Female</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 0.784   \( p<0.376 \)
Number of Valid Cases = 3521
Figure 12. Gender and Victimization

![Bar chart showing gender and victimization]

Table 13. Gender and Victim Behaviour Change

<table>
<thead>
<tr>
<th>Gender</th>
<th>Change of behaviour due to crime</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30.1</td>
<td>69.9</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>38.3</td>
<td>61.7</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 2.858   p<0.091
Number of Valid Cases = 379

Figure 13. Gender and Victim Behaviour Change

![Bar chart showing gender and victim behaviour change]

![Bar chart showing gender and victim behaviour change]
When asked if, in their opinion, the justice system is fair to everyone, 51.6% of male respondents either disagreed or strongly disagreed. For females this number was 44.2%. We noted this as a significant difference. (Table and Figure 14)

Table 14. Gender and Justice System Fairness

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16.4</td>
<td>35.2</td>
<td>20.4</td>
<td>23.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Female</td>
<td>9.3</td>
<td>34.9</td>
<td>27.0</td>
<td>24.6</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 48.769   p<0.000  
Number of Valid Cases = 3418

Figure 14. Gender and Justice System Fairness

As was the case with the opinion of “justice system fairness” males had significantly different responses to the idea of needing tougher gun control laws. For males, 40.7% disagreed with the need for tougher gun laws. For females, this number was only 13.1%. (Table and Figure 15)

Table 15. Gender and Tougher Gun Laws

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>12.6</td>
<td>18.1</td>
<td>21.3</td>
<td>26.0</td>
<td>22.1</td>
</tr>
<tr>
<td>Female</td>
<td>4.2</td>
<td>8.9</td>
<td>19.7</td>
<td>35.0</td>
<td>32.3</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 185.861   p<0.000  
Number of Valid Cases = 3441
Male and female respondents again held significantly different views on whether marijuana should be legalized. Only 20.1% of females agreed or strongly agreed with having marijuana legalized. For male respondents 29.0% felt similar. (Table and Figure 16)

Next we want to examine how employment status and education levels breakdown over the support of some of these contentious issues. We have a general significant difference but point out the support for tougher gun control laws is relatively higher for respondents who are unemployed and homemakers. (Table and Figure 17)

For the legalization of marijuana another significant difference is present amongst the various employment statuses. Significantly more respondents who were either unemployed or a student supported the legalization of marijuana. Hom makers and retirees were the least supportive. (Table and Figure 18)

We did not note a significant difference between education level when it came to the need for tougher gun control laws. (Table and Figure 19)

However, education level amongst respondents does seem to play a significant role when it comes to the legalization of marijuana. Most notable is that respondents with highest levels of education in either grammar or high school (50.6% and 47.4 respectively) are significantly more opposed to the legalization of marijuana then individuals with either college or university education (41.5% and 42.6% respectively). (Table and Figure 20)
Table 16. Gender and Marijuana Legalization

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Marijuana should be legalized</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>22.2</td>
<td>20.7</td>
<td>28.1</td>
<td>17.3</td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>24.4</td>
<td>24.1</td>
<td>31.4</td>
<td>13.3</td>
<td>6.8</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 41.197   p<0.000  
Number of Valid Cases = 3443

Figure 16. Gender and Marijuana Legalization

![Bar chart showing gender differences in marijuana legalization attitudes.]

Table 17. Employment Status and Tougher Gun Laws

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Gun control laws need to be tougher</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>8.2</td>
<td>14.1</td>
<td>20.9</td>
<td>29.7</td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>6.0</td>
<td>12.3</td>
<td>21.0</td>
<td>30.2</td>
<td>30.6</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>5.3</td>
<td>10.6</td>
<td>24.3</td>
<td>32.7</td>
<td>27.0</td>
<td></td>
</tr>
<tr>
<td>Homemaker</td>
<td>5.6</td>
<td>9.1</td>
<td>19.0</td>
<td>33.8</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>9.0</td>
<td>12.9</td>
<td>19.8</td>
<td>32.0</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>12.8</td>
<td>15.2</td>
<td>16.0</td>
<td>28.0</td>
<td>28.0</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 33.008   p<0.034  
Number of Valid Cases = 3434
Figure 17. Employment Status and Tougher Gun Laws

![Bar chart showing employment status vs. tougher gun laws opinion]

Table 18. Employment Status and Legalizing Marijuana

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>20.3</td>
<td>21.7</td>
<td>32.4</td>
<td>16.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>21.0</td>
<td>14.7</td>
<td>32.1</td>
<td>13.5</td>
<td>18.7</td>
</tr>
<tr>
<td>Student</td>
<td>15.9</td>
<td>18.6</td>
<td>29.6</td>
<td>16.8</td>
<td>19.0</td>
</tr>
<tr>
<td>Homemaker</td>
<td>27.0</td>
<td>24.8</td>
<td>29.8</td>
<td>12.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Retired</td>
<td>29.4</td>
<td>26.5</td>
<td>25.3</td>
<td>12.6</td>
<td>6.3</td>
</tr>
<tr>
<td>Other</td>
<td>23.4</td>
<td>20.2</td>
<td>29.0</td>
<td>19.4</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 130.476  p<0.000  
Number of Valid Cases = 3435

Figure 18. Employment Status and Legalizing Marijuana

![Bar chart showing employment status vs. legalizing marijuana opinion]
Table 19. Education Level and Tougher Gun Laws

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary – Gr. 8</td>
<td>9.1</td>
<td>11.7</td>
<td>16.7</td>
<td>31.8</td>
<td>30.7</td>
</tr>
<tr>
<td>Gr. 9 –12</td>
<td>8.2</td>
<td>13.0</td>
<td>18.8</td>
<td>30.9</td>
<td>29.1</td>
</tr>
<tr>
<td>College</td>
<td>7.3</td>
<td>13.1</td>
<td>22.7</td>
<td>30.1</td>
<td>26.8</td>
</tr>
<tr>
<td>University</td>
<td>7.0</td>
<td>12.6</td>
<td>22.4</td>
<td>32.5</td>
<td>25.5</td>
</tr>
<tr>
<td>Other</td>
<td>7.5</td>
<td>12.5</td>
<td>20.6</td>
<td>33.1</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 12.654  p<0.698
Number of Valid Cases = 3249

Figure 19. Education Level and Tougher Gun Laws

Table 20. Education Level and Legalizing Marijuana

<table>
<thead>
<tr>
<th>Gender</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary – Gr. 8</td>
<td>31.4</td>
<td>29.2</td>
<td>18.2</td>
<td>12.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Gr. 9 –12</td>
<td>24.2</td>
<td>23.2</td>
<td>29.4</td>
<td>12.8</td>
<td>10.3</td>
</tr>
<tr>
<td>College</td>
<td>22.0</td>
<td>19.5</td>
<td>34.6</td>
<td>15.4</td>
<td>8.5</td>
</tr>
<tr>
<td>University</td>
<td>19.0</td>
<td>23.6</td>
<td>28.7</td>
<td>19.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Other</td>
<td>22.4</td>
<td>19.3</td>
<td>34.3</td>
<td>19.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Pearson Chi-Square = 67.932  p<0.000
Number of Valid Cases = 3251
4. Views on Justice

In this final section we examine the attitudes towards some of the more contentious social issues currently being discussed using binary logistic regression analysis. For Tables 21 through 26 we converted the dependent variable scale by setting a response of Strongly Disagree, Disagree to “1.0” and Neutral, Agree and Strongly Agree to “0.0”. For the first regression our dependent variable was Justice System Fairness – is the justice system fair to everyone.

Table 21. Justice System Fairness

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>0.072</td>
<td>0.072</td>
<td>0.313</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.340</td>
<td>0.067</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>0.070</td>
<td>0.027</td>
<td>0.009</td>
</tr>
<tr>
<td>Marital Status</td>
<td>-0.125</td>
<td>0.059</td>
<td>0.033</td>
</tr>
<tr>
<td>Employment Status</td>
<td>-0.038</td>
<td>0.024</td>
<td>0.113</td>
</tr>
<tr>
<td>Education Level</td>
<td>0.167</td>
<td>0.034</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>-0.018</td>
<td>0.010</td>
<td>0.078</td>
</tr>
</tbody>
</table>

Number of Observations: 2987  Cox & Snell R-square: 0.020
Nagelkerke R-square: 0.026  -2 Log Likelihood: 4081.512
Chi-square(7): 59.349  Prob. > Chi-square: 0.000

Our results indicate that all variables except Location and Employment Status are significant predictors of Justice System Fairness. Notable is the sign of estimated coefficients for Education Level and Household Earnings. For example, there is a significant positive relationship between respondents reporting a higher household earnings level and respondents reporting that they
think the justice system is fair to everyone. This is just the opposite for education levels. Higher education levels are significantly related to thinking the justice system is not fair to everyone.

For the legalization of marijuana we converted the dependent variable scale by setting a response of Strongly Disagree, Disagree to “1.0” and Neutral, Agree and Strongly Agree to “0.0”. For the regression our dependent variable was Legalize Marijuana – marijuana should be legalized.

**Table 22. Legalize Marijuana**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>-0.295</td>
<td>0.072</td>
<td>0.000</td>
</tr>
<tr>
<td>Gender</td>
<td>0.131</td>
<td>0.064</td>
<td>0.041</td>
</tr>
<tr>
<td>Age</td>
<td>0.092</td>
<td>0.022</td>
<td>0.000</td>
</tr>
<tr>
<td>Employment Status</td>
<td>0.031</td>
<td>0.024</td>
<td>0.199</td>
</tr>
<tr>
<td>Education Level</td>
<td>-0.150</td>
<td>0.034</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>-0.012</td>
<td>0.010</td>
<td>0.222</td>
</tr>
</tbody>
</table>

Number of Observations: 3016  
Cox & Snell R-square: 0.033  
Nagelkerke R-square: 0.044  
-2 Log Likelihood: 4080.998  
Chi-square(6): 100.066  
Prob. > Chi-square: 0.000

Again, Employment Status is not a significant predictor, and for legalizing marijuana, Household Earnings is not as well. However, Education Level remains a significant predictor on views about legalizing marijuana. Higher education levels are significantly correlated with the view that current marijuana laws should be relaxed.

For the dependent variable, Tougher Guns Laws – should we have more strict guns laws in place we refer to Tables 23 and 24.

**Table 23. Tougher Gun Laws**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>0.711</td>
<td>0.091</td>
<td>0.000</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.309</td>
<td>0.086</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>0.002</td>
<td>0.027</td>
<td>0.940</td>
</tr>
<tr>
<td>Employment Status</td>
<td>-0.020</td>
<td>0.030</td>
<td>0.492</td>
</tr>
<tr>
<td>Education Level</td>
<td>-0.145</td>
<td>0.044</td>
<td>0.001</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>-0.004</td>
<td>0.013</td>
<td>0.745</td>
</tr>
</tbody>
</table>

Number of Observations: 3008  
Cox & Snell R-square: 0.351  
Nagelkerke R-square: 0.468  
-2 Log Likelihood: 2870.456  
Chi-square(6): 1299.517  
Prob. > Chi-square: 0.000

We note in particular the significance of Education Level and its sign. As the education level of the respondents increase so to does their agreement with the need for tougher gun control laws. We categorize both Education Level and Employment Status in Table 24 below.
Table 24. Tougher Gun Laws (categorized employment and education)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>0.793</td>
<td>0.097</td>
<td>0.000</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.330</td>
<td>0.100</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>-0.045</td>
<td>0.034</td>
<td>0.188</td>
</tr>
<tr>
<td>Unemployed</td>
<td>-0.206</td>
<td>0.190</td>
<td>0.278</td>
</tr>
<tr>
<td>Student</td>
<td>-0.821</td>
<td>0.251</td>
<td>0.001</td>
</tr>
<tr>
<td>Homemaker</td>
<td>0.290</td>
<td>0.177</td>
<td>0.102</td>
</tr>
<tr>
<td>Retired</td>
<td>-0.030</td>
<td>0.152</td>
<td>0.841</td>
</tr>
<tr>
<td>Other (Empl. Status)</td>
<td>0.384</td>
<td>0.239</td>
<td>0.107</td>
</tr>
<tr>
<td>Grade 9-12</td>
<td>-0.254</td>
<td>0.162</td>
<td>0.117</td>
</tr>
<tr>
<td>College</td>
<td>-0.407</td>
<td>0.186</td>
<td>0.029</td>
</tr>
<tr>
<td>University</td>
<td>-0.669</td>
<td>0.207</td>
<td>0.001</td>
</tr>
<tr>
<td>Other (Education)</td>
<td>-0.351</td>
<td>0.218</td>
<td>0.107</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>0.004</td>
<td>0.013</td>
<td>0.762</td>
</tr>
</tbody>
</table>

Number of Observations: 3008  
Cox & Snell R-square: 0.356
Nagelkerke R-square: 0.474
-2 Log Likelihood: 2847.359
Chi-square (13): 1322.695
Prob. > Chi-square: 0.000

Interestingly, being a student, particularly in college or university plays a key role in the predictability of views on gun control laws. We are interested in examining the legalization of marijuana and views on justice system fairness with employment status and education levels categorized. The results are found in Tables 25 and 26 below.

Table 25. Legalize Marijuana (categorized employment and education)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>-0.208</td>
<td>0.075</td>
<td>0.006</td>
</tr>
<tr>
<td>Gender</td>
<td>0.267</td>
<td>0.075</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>0.066</td>
<td>0.027</td>
<td>0.016</td>
</tr>
<tr>
<td>Unemployed</td>
<td>-0.408</td>
<td>0.151</td>
<td>0.007</td>
</tr>
<tr>
<td>Student</td>
<td>-0.356</td>
<td>0.183</td>
<td>0.052</td>
</tr>
<tr>
<td>Homemaker</td>
<td>0.126</td>
<td>0.129</td>
<td>0.327</td>
</tr>
<tr>
<td>Retired</td>
<td>0.238</td>
<td>0.121</td>
<td>0.049</td>
</tr>
<tr>
<td>Other (Empl. Status)</td>
<td>-0.053</td>
<td>0.206</td>
<td>0.798</td>
</tr>
<tr>
<td>Grade 9-12</td>
<td>-0.555</td>
<td>0.138</td>
<td>0.000</td>
</tr>
<tr>
<td>College</td>
<td>-0.751</td>
<td>0.155</td>
<td>0.000</td>
</tr>
<tr>
<td>University</td>
<td>-0.651</td>
<td>0.170</td>
<td>0.000</td>
</tr>
<tr>
<td>Other (Education)</td>
<td>-0.796</td>
<td>0.179</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>-0.008</td>
<td>0.011</td>
<td>0.427</td>
</tr>
</tbody>
</table>

Number of Observations: 3016  
Cox & Snell R-square: 0.044
Nagelkerke R-square: 0.059
-2 Log Likelihood: 4181.064
Chi-square (13): 135.850
Prob. > Chi-square: 0.000
Similar to Table 22 above we note no significant changes in the sign or magnitude of the location, age, gender and household income variables. We note the significance of education levels and employment statuses such as unemployment, student and retired. More education, unemployment and being a student are all significantly correlated with favouring the legalization of marijuana.

Again when we examine views on the fairness of the justice system for all respondents we obtain similar results to those found in Table 21 above.

Table 26. Justice System Fairness (categorized employment and education)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimated Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>0.091</td>
<td>0.074</td>
<td>0.220</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.387</td>
<td>0.074</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>-0.019</td>
<td>0.027</td>
<td>0.487</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.130</td>
<td>0.146</td>
<td>0.372</td>
</tr>
<tr>
<td>Student</td>
<td>-0.406</td>
<td>0.179</td>
<td>0.024</td>
</tr>
<tr>
<td>Homemaker</td>
<td>0.051</td>
<td>0.129</td>
<td>0.690</td>
</tr>
<tr>
<td>Retired</td>
<td>-0.108</td>
<td>0.121</td>
<td>0.374</td>
</tr>
<tr>
<td>Other (Empl. Status)</td>
<td>0.090</td>
<td>0.205</td>
<td>0.659</td>
</tr>
<tr>
<td>Grade 9-12</td>
<td>0.322</td>
<td>0.135</td>
<td>0.017</td>
</tr>
<tr>
<td>College</td>
<td>0.483</td>
<td>0.153</td>
<td>0.002</td>
</tr>
<tr>
<td>University</td>
<td>0.612</td>
<td>0.168</td>
<td>0.000</td>
</tr>
<tr>
<td>Other (Education)</td>
<td>0.770</td>
<td>0.177</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Earnings</td>
<td>-0.013</td>
<td>0.011</td>
<td>0.233</td>
</tr>
</tbody>
</table>

All results are similar in sign and magnitude to those in Table 21 above. One particular difference is the significance of Student in the categorization of employment status. Being a student is significantly and positively related to the view that the justice system is fair to everyone. This however contrasts with the significance of the Education Level variables. More education is significantly correlated with the view that the justice system is not fair for everyone.

5. Conclusions and Extensions

Notwithstanding the breadth of this overview we do come away with a few very precise bits of information. Higher levels of education are significantly correlated with views on the legalization of marijuana, justice system fairness and tougher gun control laws. Respondents with higher levels of education were significantly more in favour of tighter gun control laws and the legalization of marijuana. As well, higher education levels are significantly correlated with
views that the justice system is not fair to everyone. These results took into account, location, age, gender, household income and employment status.

There is a clear difference between Glace Bay and Kings County when we look at the rates of victimization and views on marijuana legalization, the need for tougher gun control laws and the need for tougher sentencing. Respondents in Glace Bay are significantly more supportive of the need for tougher gun laws, significantly more against the idea of legalizing marijuana and significantly more in favour of the need for tougher sentencing. However, respondents in Kings County were almost twice as likely to have been a victim of crime in the past sixty months when compared to respondents in Glace Bay.

One very interesting result, that should be examined more closely in future research is the difference in victim behaviour after being victimized. Despite there being no significant difference between the gender of victims, females were more likely to alter their behaviour after being victimized than males. One can speculate reasons for this, and future research might consider an analysis of the costs associated with these types of behavioural changes.

Associated with this result was a continuous level of significant difference between genders on different opinions about crime. Females viewed the justice system as fair to everyone significantly more than males. Females were more in favour of stricter gun laws and not nearly as supportive when it came to legalizing marijuana.

Employment status was, in general, not significantly correlated with views on justice, marijuana laws or gun laws. Only when Employment Status was categorized did greater detail emerge. Being a student was a significant predictor for all three dependent variables. Being a student was significantly correlated with views that a tougher stance on gun control was needed, that marijuana should be legalized and that justice system was fair to everyone.

Other than the significant relationship between being unemployed or retired and the view that marijuana should (respectively) be legalized or not, employment status did not play a statistically significant role for views on marijuana and gun laws as well as views on justice system fairness. Factors such as location, gender and education level seemed to play the largest role.

Somewhat surprising was the general lack of significant correlation between attitudes towards crime and household income. For legalizing marijuana, the need for tougher gun laws and views on the fairness of the justice system, household income was not significantly correlated.

The data provided by the 2001 Genuine Progress Index (GPI) surveys is simply outstanding. Such a rich database can and should be studied for years. Such extensions might include:

- Costs of crime
- Analysis of what a “Just” society
- Prescription medication and crime
- Youth crime and justice
- Work place crime and white-collar crime
6. Other Suggested Readings


