# ECONOMIC FREEDOM AND HAPPINESS Daniel M. Gropper, Robert A. Lawson, and Jere T. Thorne Jr.

That liberty is necessary for greater happiness and a better life is a notion deeply rooted in the American sensibility. But is there a link between greater freedom and greater happiness across countries? In this article we explore this question by examining the empirical relationship between liberty, as measured by economic freedom, and happiness across more than 100 countries.

There is a now a large literature on human happiness and its measurement. There is even a journal fully dedicated to the study of happiness. Kahneman, Diener, and Schwartz (1999) offer discussions of the many interesting theoretical and methodological issues involved in studying happiness. Kahneman et al. (2004) and Kahneman and Krueger (2006) discuss the current attempts to measure happiness at the individual and societal level. Frey and Stutzer (2000) and Wilkinson (2007) offer interesting reviews and criticisms of the happiness literature in economics. Norberg (2010) outlines the motivations behind the development of some of the happiness measures and potential pitfalls in their use.

There is also a large literature on the concept and measurement of economic freedom (Gwartney and Lawson 2003). The Economic Freedom of the World (EFW) index (Gwartney and Lawson 2008) has spawned hundreds of scholarly articles on the impact of economic freedom on economic growth and other

*Cato Journal*, Vol. 31, No 2 (Spring/Summer 2011). Copyright © Cato Institute. All rights reserved.

Daniel M. Gropper is David and Meredith Luck Professor, Department of Finance, College of Business, Auburn University. Robert A. Lawson is Jerome M. Fullinwider Chair in Economic Freedom, O'Neil Center for Global Markets and Freedom, Cox School of Business, Southern Methodist University. Jere T. Thorne Jr. is with the Home Depot, and is a graduate of Auburn University.

indicators of human welfare (see, for example, Hall and Lawson 2011, de Haan et al. 2006, Lawson and Clark 2010, Scully 2002, Lawson and Roychoudhury 2010, Stroup 2008).

Early research tended to find that economic freedom was positively associated with happiness (Veenhoven 2000, Ovaska and Takashima 2006). More recent work, however, has been mixed. Bjornskov, Dreher, and Fischer (2010) argue that the association between measures of institutional quality (like freedom) and happiness are different between rich and poor countries. Ott (2010a, 2010b) contends that the relationship between government size (a component of economic freedom) and happiness is contingent on the quality of the governance. Verme (2009) provides a theoretical argument and empirical evidence that "freedom of choice" is a strong factor in determining happiness.

## Data, Model, and Results

While happiness research has advanced a great deal in the last decade, shortcomings in measurement remain. As Norberg (2010) notes, measures of happiness are less scientific and more subjective than measures of output, but some analysts still favor them in place of GDP to guide government policy. He points out that Bhutan used a Gross National Happiness index, created by the Centre for Bhutan Studies, as a way to excuse the government's failure to improve poor living standards, and even to justify repression of minorities in efforts to create a national identity.

Regardless of the motivations behind the development of happiness measures, we think it is worthwhile to examine the relationship between happiness and economic freedom, bearing in mind the limitations of the measures. We use three measures of happiness in our analysis. The first measure was originally gathered from Veenhoven's World Database of Happiness and was based primarily on the results from the World Values Survey (WVS); however, results from the Latinobarometer and Afrobarometer were also taken into consideration. The average reported life satisfaction (happiness) score for this sample was 6.16 (out of a possible 10), with a range of 3.0 (Burundi) to 8.19 (Denmark).

The second measure of subjective well being comes from the updated Happy Planet Index 2.0. Released in July 2009, the data from this study are almost entirely derived from an average of a comprehensive multinational survey performed by the Gallup Poll and the two most recent waves of the World Values Survey. The Gallup World Poll posed the same, commonly used question as in the World Values Survey: "All things considered, how satisfied are you with your life as a whole these days?" Responses were ranked on a scale of zero to ten. Zero was the least satisfied and ten was the most. The Gallup poll and WVS average produced 112 observations out of a total of 143 for the entire study. The remaining observations are unmatched countries from each study, respectively. The average score for this sample was 6.12, with a range of 2.4 (Tanzania) to 8.5 (Costa Rica). While any survey questions about how satisfied one is with life are subject to criticisms about reliability for any given person across different times, and particularly across different people in widely varying circumstances, they are nonetheless interesting to examine, and at this time, they represent the best data available.

The third measure of subjective well-being is simply a combination of subjective well-being and life expectancy at birth. This measure is created by dividing the responses to Gallup's life satisfaction survey by 10 and multiplying by the country's life expectancy. Referred to as "Happy Life Years," this measure serves to ensure that both subjective and objective elements of well-being are captured. It recognizes that a satisfying life is not ideal if it is very short, but also that a long life is not ideal if it is miserable. The average score for this sample was 43.62, with a range of 12.5 (Tanzania) to 66.7 (Costa Rica).

The economic freedom data for this study come from the EFW index (Gwartney and Lawson 2008). For over a decade, the EFW project has been devoted to measuring the degree of economic freedom for large numbers of countries. The EFW index uses personal choice (voluntary exchange), the freedom to enter and compete in markets, and protection of persons and property as core elements for evaluating a country's economic freedom. Each country is ranked on a scale of zero to ten. Ten is the highest degree of economic freedom and zero the lowest. Hong Kong scores the highest with a rating of 9.0 and the Democratic Republic of Congo is lowest at 3.8.

Table 1 reports the three happiness measures and the EFW index for all the countries included in our study. All data are for 2005. Table 2 presents detailed descriptions and sources for all the variables, and Table 3 provides summary statistics. Figure 1 illustrates the simple relationship between the EFW index and the Happy Life Years measure of happiness.

| Zountry<br>Albania<br>Algeria<br>Argentina<br>tustrialia<br>Anhainas<br>Sahrain<br>Sangladesh<br>Barbados | Happiness:<br>WVS<br>5.19<br>6.81<br>7.29<br>7.29<br>7.20<br>5.70<br>7.29 | Happiness:<br>Gallup<br>5.50<br>7.10<br>7.80<br>7.80<br>5.30 | Happiness:<br>Happy Life<br>Years<br>41.70<br>40.10<br>53.40<br>63.70<br>61.90<br>61.90<br>33.10 | Economic<br>Freedom<br>5.9<br>5.3<br>7.7<br>7.1<br>5.8<br>5.8<br>5.8<br>5.8 | GDP<br>per Capita<br>(\$1000s)<br>(\$1000s)<br>6.00<br>7.00<br>14.20<br>38.10<br>38.10<br>39.20<br>39.20<br>37.20<br>11.50<br>19.30 | GDP per Capita<br>$\times$ Economic<br>Freedom<br>35.40<br>37.80<br>75.26<br>300.99<br>301.84<br>200.20<br>264.12<br>8.70<br>111.94 |
|---|---|--|--|---|---|---|
| elgium<br>elize<br>anin<br>blivia<br>tswana<br>azil<br>agaria<br>urundi                                   | $\begin{array}{c} 7.29\\ 6.90\\ 5.49\\ 6.30\\ 3.00\end{array}$            | 7.60<br>6.60<br>6.50<br>7.60<br>2.50<br>2.90                 | $\begin{array}{c} 60.00\\ 50.20\\ 16.70\\ 54.30\\ 39.80\\ 14.30\end{array}$                      | 7.12<br>7.0<br>9.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0<br>0.0           | 37.50<br>8.60<br>1.50<br>4.50<br>13.30<br>10.10<br>0.40   | 270.00<br>60.20<br>8.70<br>91.77<br>85.14<br>2.00   |

|          |        |                   |       |        |       |          |                |                |            |         |        |            |         |                |         |       |             |         |       |         |        | pənu   |
|----------|--------|-------------------|-------|--------|-------|----------|----------------|----------------|------------|---------|--------|------------|---------|----------------|---------|-------|-------------|---------|-------|---------|--------|--------|
| 12.88    | 314.40 | 3.57              | 8.48  | 114.73 | 35.40 | 49.84    | 1.14           | 18.00          | 84.68      | 104.65  | 214.50 | 182.70     | 287.98  | 51.03          | 42.00   | 36.72 | 46.50       | 165.36  | 24.57 | 290.16  | 225.63 | contin |
| 2.30     | 39.30  | 0.70              | 1.60  | 14.90  | 6.00  | 8.90     | 0.30           | 4.00           | 11.60      | 16.10   | 28.60  | 26.10      | 37.40   | 8.10           | 7.50    | 5.40  | 6.20        | 21.20   | 3.90  | 37.20   | 32.70  |        |
| 5.6      | 8.0    | 5.1               | 5.3   | 7.7    | 5.9   | 5.6      | 3.8            | 4.5            | 7.30       | 6.5     | 7.5    | 7.0        | 7.7     | 6.3            | 5.6     | 6.8   | 7.5         | 7.8     | 6.3   | 7.8     | 6.9    |        |
| 19.60    | 64.00  | 17.60             | 27.00 | 49.20  | 48.60 | 53.00    | 18.00          | 19.70          | 66.70      | 48.30   | 56.60  | 52.00      | 62.90   | 54.20          | 48.00   | 47.20 | 47.60       | 40.10   |       | 63.30   | 56.60  |        |
| 3.90     | 8.00   | 4.00              | 5.40  | 6.30   | 6.70  | 7.30     | 3.90           | 3.60           | 8.50       | 6.40    | 7.20   | 6.90       | 8.10    | 7.60           | 6.40    | 6.70  | 6.70        | 5.60    |       | 8.00    | 7.10   |        |
| 5.10     | 7.59   | 4.89              | 4.50  | 6.51   | 6.30  | 7.20     | 3.30           | 5.70           | 7.50       | 5.91    | 6.90   | 6.39       | 8.19    | 6.99           | 5.61    | 4.80  | 6.60        | 5.10    | 6.69  | 7.71    | 6.60   |        |
| Cameroon | Canada | Central Afr. Rep. | Chad  | Chile  | China | Colombia | Congo, Dem. R. | Congo, Rep. of | Costa Rica | Croatia | Cyprus | Czech Rep. | Denmark | Dominican Rep. | Ecuador | Egypt | El Salvador | Estonia | Fiji  | Finland | France |        |

## ECONOMIC FREEDOM

| H             | APPINESS, ECON    | T<br>omic Freedo     | ABLE 1 (cont.)<br>M, AND GDP 1    | )<br>der Capita, f           | 3Y COUNTRY,                    | 2005                                    |
|---------------|-------------------|----------------------|-----------------------------------|------------------------------|--------------------------------|---|
| Country       | Happiness:<br>WVS | Happiness:<br>Gallup | Happiness:<br>Happy Life<br>Years | Economic<br>Freedom<br>Index | GDP<br>per Capita<br>(\$1000s) | GDP per Capita<br>× Economic<br>Freedom |
| Gabon         | 6.21              |                      |                                   | 5.6                          | 14.40                          | 80.64                                   |
| Germany       | 7.20              | 7.20                 | 56.80                             | 7.7                          | 34.80                          | 267.96                                  |
| Ghana         | 6.21              | 4.70                 | 28.00                             | 6.4                          | 1.50                           | 9.60                                    |
| Greece        | 6.30              | 6.80                 | 54.00                             | 6.8                          | 32.00                          | 217.60                                  |
| Guatemala     | 6.99              | 7.40                 | 51.80                             | 7.1                          | 5.20                           | 36.92                                   |
| Guinea-Bissau | 5.40              |                      |                                   | 5.3                          | 0.60                           | 3.18                                    |
| Guyana        | 7.20              | 6.50                 | 42.60                             | 6.4                          | 3.90                           | 24.96                                   |
| Haiti         | 5.49              | 5.20                 | 30.80                             | 5.8                          | 1.30                           | 7.54                                    |
| Honduras      | 7.20              | 7.00                 | 48.70                             | 6.5                          | 4.40                           | 28.60                                   |
| Hong Kong     | 6.60              | 7.20                 | 58.60                             | 9.0                          | 43.80                          | 394.20                                  |
| Hungary       | 5.70              | 5.70                 | 41.80                             | 7.6                          | 19.80                          | 150.48                                  |
| Iceland       | 7.80              | 7.80                 | 63.90                             | 7.8                          | 39.90                          | 311.22                                  |
| India         | 5.40              | 5.50                 | 35.10                             | 6.7                          | 2.80                           | 18.76                                   |
| Indonesia     | 6.60              | 5.70                 | 39.50                             | 6.4                          | 3.90                           | 24.96                                   |
| Iran          | 6.00              | 5.60                 | 39.50                             | 6.5                          | 12.80                          | 83.20                                   |
| Ireland       | 7.59              | 8.10                 | 63.80                             | 7.9                          | 46.20                          | 364.98                                  |
| Israel        | 6.69              | 7.10                 | 56.80                             | 7.4                          | 28.20                          | 208.68                                  |

| 99.40<br>24.00<br>5.50<br>314.34<br>231.57<br>18.27<br>18.27<br>cont | $\begin{array}{c} 14.20 \\ 5.40 \\ 1.10 \\ 27.90 \\ 2.90 \end{array}$ | 7.0<br>6.4<br>6.3<br>8.3<br>8.3 | 58.30<br>39.70<br>23.20<br>61.10<br>62.30<br>51.00 | 7.70<br>5.60<br>5.30<br>7.70<br>7.10 | 6.90<br>5.61<br>6.51<br>7.49<br>7.41<br>6.30 |
|--|---|---------------------------------|--|--------------------------------------|--|
| 34.20<br>5.50<br>314.34  | 1.10<br>1.10<br>40.30   | 0.7<br>0.0<br>8                 | 23.20<br>33.30<br>61 10                            | 4.00<br>5.30<br>7 70                 | 5.49<br>7.50                                 |
| 24.00<br>34 56   | 4.00<br>7.40  | 6.0<br>6.1                      | 39.70<br>93.90                                     | 5.60<br>A 50                         | 5.61<br>6 द1                                 |
| 99.40  | 14.20   | 7.0                             | 58.30  | 7.70                                 | 6.90   |
| 91.96  | 12.10   | 7.6                             |  |                                      | 3.51   |
| 171.82   | 24.20   | 7.1                             | 56.00  | 7.10                                 | 7.50   |
| 6.60   | 1.20  | 5.5<br>.5                       | 20.00  | 3.80                                 | 5.31   |
| 104.04   | 15.30   | 6.8                             | 48.60  | 6.60                                 | .41  |
| 4.40   | 0.80  | 5.5<br>.5                       | 20.60  | 4.40                                 | .59  |
| 5.80   | 1.00  | 5.8                             | 21.80  | 3.70                                 | 6.79   |
| 624.47   | 81.10   | 7.7                             | 60.10  | 7.70                                 | .59  |
| 127.44   | 17.70   | 7.2                             | 41.80  | 5.80                                 | 1.71   |
| 129.94   | 17.80   | 7.30                            | 39.10  | 5.40                                 | .71  |
| 424.76   | 57.40   | 7.4                             | 51.60  | 6.70                                 | .20  |
| 11.04  | 1.60  | 6.9                             | 19.10  | 3.70                                 | .61  |
| 34.50  | 5.00  | 6.9                             | 43.10  | 6.00                                 | .10  |
| 253.08   | 34.20   | 7.4                             | 55.60  | 6.80                                 | .21  |
| 51.80  | 7.40  | 7.0                             | 48.50  | 6.70                                 | 66.  |
| 213.90   | 31.00   | 6.9                             | 55.70  | 6.90                                 | .90  |

## ECONOMIC FREEDOM

| HAP              | PINESS, ECON      | T<br>omic Freedo:    | ABLE 1 (cont.)<br>M, and GDP f    | er Capita, i                 | by Country,                    | 2005                                    |
|------------------|-------------------|----------------------|-----------------------------------|------------------------------|--------------------------------|---|
| Country          | Happiness:<br>WVS | Happiness:<br>Gallup | Happiness:<br>Happy Life<br>Years | Economic<br>Freedom<br>Index | GDP<br>per Capita<br>(\$1000s) | GDP per Capita<br>× Economic<br>Freedom |
| Niger<br>Nigeria | 4.50<br>5.49      | 3.80<br>4.80         | 21.00<br>22.20                    | ы<br>5.3<br>7.3              | 0.70<br>2.30                   | 3.71<br>13.11                           |
| Norway           | 7.41              | 8.10                 | 64.60                             | 7.4                          | 55.20                          | 408.48                                  |
| Oman             | 7.29              |                      |                                   | 7.9                          | 20.20                          | 159.58                                  |
| Pakistan         | 4.29              | 5.60                 | 36.20                             | 5.8                          | 2.60                           | 15.08                                   |
| Panama           | 7.20              | 7.80                 | 58.50                             | 7.2                          | 11.60                          | 83.52                                   |
| Pap. New Guinea  | 6.30              |                      |                                   | 6.3                          | 2.20                           | 13.86                                   |
| Paraguay         | 6.51              | 6.90                 | 49.00                             | 6.3                          | 4.20                           | 26.46                                   |
| Peru             | 5.61              | 5.90                 | 41.70                             | 7.1                          | 8.40                           | 59.64                                   |
| Philippines      | 6.39              | 5.50                 | 38.90                             | 6.5                          | 3.30                           | 21.45                                   |
| Poland           | 5.91              | 6.50                 | 48.70                             | 6.8                          | 17.30                          | 117.64                                  |
| Portugal         | 6.09              | 5.90                 | 45.50                             | 7.30                         | 22.00                          | 160.60                                  |
| Romania          | 5.19              | 5.90                 | 42.60                             | 6.3                          | 12.20                          | 76.86                                   |
| Russia           | 4.29              | 5.90                 | 38.10                             | 5.5                          | 15.80                          | 86.90                                   |
| Rwanda           | 4.41              | 4.20                 | 19.10                             | 5.1                          | 0.90                           | 4.59                                    |
| Senegal          | 5.61              | 4.50                 | 27.90                             | 6.1                          | 1.60                           | 9.76                                    |
| Sierra Leone     | 5.01              | 3.60                 | 14.80                             | 5.5                          | 0.70                           | 3.85                                    |
| Singapore        | 6.90              | 7.10                 | 56.50                             | 8.6                          | 52.00                          | 447.20                                  |

| 20 21.90 157.68 157.68 | .0 29.50 177.00 | .7 10.00 67.00 | 26.00 $26.00$ $187.20$ | 245.60 $245.66$ | .8 4.30 24.94 | [.4 38.50 284.90 | .2 $40.90$ $335.38$ | .4 4.80 25.92 | 229.68 31.90 229.68 | 1.30 8.32  | .7 8.50 56.95 | 0.90 $0.90$ $4.50$ | .6 18.60 122.76 | .2 7.90 48.98 | 12.00 $74.40$ | 1.10 7.04 |           | <b>5</b> 40.00 300.00 | 36.60 $296.46$ | .0 $47.00$ $376.00$ | .7 12.20 81.74 | 6 13.50 62.10 | 10.00<br>10.00 |
|------------------------|-----------------|----------------|------------------------|-----------------|---------------|------------------|---------------------|---------------|---------------------|------------|---------------|--------------------|-----------------|---------------|---------------|-----------|-----------|-----------------------|----------------|---------------------|----------------|---------------|----------------|
| 9 45.10 7              | 54.20 6.        | 25.20 6.       | 9.10 7.                | 61.20 7.        | 38.60 5       | 63.20 7.         | ) 62.60 8.          | ) 43.40 5     | — 7.                | ) 12.50 6. | () 43.50 6.   | 15.20 5.           | ) 46.30 6.      | ) 43.30 6.    | 39.40 6.      | 22.30 6.  | 35.90 5   | 56.20 7               | 58.60 8.       | ) 61.20 8.          | 51.20 6.       | 50.40 4       | 17 50 G        |
| 5.40 6.10              | 6.60 7.00       | 5.70 5.00      | 5.79 6.30              | 09.7 7.60       | 6.09 5.40     | 7.71 7.90        | 8.19 7.70           | 5.10 5.90     | 09.9                | 5.49 2.40  | 6.51 6.30     | 4.89 2.60          | 6.90 6.70       | 6.39 5.90     | 5.31 5.50     | 4.71 4.50 | 3.60 5.30 | 4.59 7.20             | 7.11 7.40      | 7.41 7.90           | 6.30 6.80      | 7.41 6.90     | 4.80 4.30      |
| Slovak Rep             | Slovenia        | South Africa   | South Korea            | Spain           | Sri Lanka     | Sweden           | Switzerland         | Syria         | Taiwan              | Tanzania   | Thailand      | Togo               | Trinidad & Tob. | Tunisia       | Turkey        | Uganda    | Ukraine   | Unit. Arab Em.        | United Kingdom | United States       | Uruguay        | Venezuela     | Zamhia         |

#### Economic Freedom

| ES                                    | Sources     | Abdallah et al. (2009)<br>www.happyplanetindex.org/public-data/<br>files/happy-planet-index-2-0.pdf  | New Economics Foundation (2006)<br>www.happyplanetindex.org/public-data/<br>files/happy-planet-index-first-global.pdf  | Abdallah et al. (2009)<br>www.happyplanetindex.org/public-data/<br>files/happy-planet-index-2-0.pdf  | e Gwartney and Lawson (2008)<br>www.freetheworld.com<br>World Bank, World Development<br>Indicators<br>http://databank.worldbank.org/ddp/<br>home.do?Step512&id54&CNO52  |
|---------------------------------------|-------------|--|--|--|--|
| TABLE 2<br>Definitions and Data Sourc | Definitions | Self-reported level of happiness compiled and<br>estimated by the New Economics Foundation<br>from multiple sources including the World Values<br>Survey (WVS). Scores range from 0 (low) to | <sup>10</sup> (high).<br>Self-reported level of happiness gathered by Gallup in<br>2006. All answers to the question: "All things<br>considered, how satisfied are you with your life<br>as a whole these days?" Scores range from 0 (low) | to 10 (high).<br>A combination of a country's self-reported level of<br>happiness and its citizens' current life expectancy at<br>birth and is used here as a proxy for health. Since<br>good health is often associated with happiness and<br>subjective data regarding life satisfaction can often | fall under some degree of scrutiny, the combination<br>of the two accomplishes both the task of providing a<br>little objectivity in the measurement and capturing<br>some degree of long-term satisfaction with life.<br>Using a scale from 1 to 10, the EFW index measures th<br>degree of economic freedom in the nation.<br>This variable measures a nation's gross domestic<br>product per capita. The variable is adjusted for<br>purchasing power parity and is expressed in 1,000s<br>of U.S. dollars. |
|                                       |             | Happiness: WVS   | Happiness: Gallup  | Happiness: Happy<br>Life Years   | Economic Freedom<br>of the World Index<br>GDP per Capita   |

|                                      |     |       |        |         |         | Std.  |
|--------------------------------------|-----|-------|--------|---------|---------|-------|
| Variable                             | Ν   | Mean  | Median | Minimum | Maximum | Dev.  |
| Happiness:<br>WVS                    | 119 | 6.17  | 6.3    | 3.00    | 8.19    | 1.10  |
| Happiness:<br>Gallup                 | 110 | 6.12  | 6.4    | 2.40    | 8.50    | 1.41  |
| Happiness:<br>Happy<br>Life<br>Years | 110 | 43.62 | 46.75  | 12.50   | 66.70   | 14.91 |
| Economic<br>Freedom<br>Index         | 120 | 6.65  | 6.65   | 3.8     | 9.0     | 0.96  |
| GDP per<br>Capita                    | 120 | 16.52 | 11.80  | 0.30    | 81.10   | 16.01 |

TABLE 3Summary Statistics





We use the following model to examine the relationship between measured happiness and freedom:

(1) 
$$H_{i} = f(EF_{i}, GDPPC_{i}, EF_{i} \cdot GDPPC_{i})$$

where  $H_j$  is the measured level of happiness for a country,  $EF_j$  is the EFW index for the respective country, and  $GDPPC_j$  represents GDP per capita. Including GDP per capita is justified because previous research has shown that happiness depends on the level of development (Easterlin 2001). We include an interaction term because the impact of economic freedom on happiness may be contingent on the level of development and vice versa.

Our specification is quite parsimonious and critics might easily suggest other variables that could matter for national happiness. However, most of the potential control variables correlate highly with either economic freedom, GDP per capita, or both. For example, inflation may matter, but that is a component part of the economic freedom index. Unemployment may matter, but as Feldman (2007) shows, countries with less economic freedom exhibit greater unemployment. Life expectancy, democracy, and many other indicators are also highly correlated with both economic freedom and GDP per capita. Thus, we argue that the included variables of economic freedom and GDP per capita are likely to capture most of the variation associated with any omitted variables. Finally, there are often major tradeoffs with data quality and sample size when including more control variables. In any case, we are not necessarily arguing that there is a direct causal relationship between economic freedom, GDP per capita, and the happiness variables. Nevertheless, the results provide some insights about the contrast between the nature and characteristics of rich market-oriented economies and those dominated by government regulation and planning.

Table 4 presents the regression results. Regressions (1), (3), and (5) omit the interaction term between economic freedom and GDP per capita. Regardless of the happiness metric used or the specification, the results are consistent in showing a positive association between economic freedom and GDP per capita and happiness. According to regression (3) for example, we find that a one standard deviation increase in the economic freedom index corresponds to a one-third standard deviation improvement in the

|                            |                          | T<br>Regres               | ABLE 4<br>sion Result       | S                           |  |  |
|----------------------------|--------------------------|---------------------------|-----------------------------|-----------------------------|--|--|
| Variable                   | Happiness:<br>WVS<br>(1) | Happiness:<br>WVS<br>(2)  | Happiness:<br>Gallup<br>(3) | Happiness:<br>Gallup<br>(4) | Happiness:<br>Happy Life<br>Years<br>(5) | Happiness:<br>Happy Life<br>Years<br>(6) |
| Intercept                  | 3.191***                 | $2.107^{**}$              | 2.278***                    | 0.248                       | 2.509                                    | $-18.830^{**}$                           |
|                            | (4.597)                  | (2.591)                   | (2.660)                     | (0.263)                     | (.302)                                   | (-2.089)                                 |
| Economic Freedom           | $0.389^{***}$            | $0.548^{***}$             | 0.488***                    | $0.783^{***}$               | $5.096^{***}$                            | $8.200^{***}$                            |
|                            | (3.361)                  | (4.187)                   | (3.408)                     | (5.145)                     | (3.676)                                  | (5.641)                                  |
| GDP per Capita             | 0.024***                 | $0.143^{***}$             | $0.037^{***}$               | $0.272^{***}$               | $0.449^{***}$                            | 2.921***                                 |
|                            | (3.361)                  | (2.891)                   | (4.395)                     | (4.665)                     | (5.461)                                  | (5.235)                                  |
| GDP · EFW                  |                          | $-0.016^{**}$<br>(-2.430) |                             | $-0.032^{***}$<br>(-4.065)  |  | -0.332***<br>(-4.472)                    |
| $\frac{N}{Mdj. R^2}$       | 118                      | 118                       | 109                         | 109                         | 109                                      | 109                                      |
|                            | .398                     | .422                      | .497                        | .561                        | .577                                     | .641                                     |
| NOTES: t-statistics in par | entheses; ** indice      | ates significance a       | t the 5 percent le          | evel; ***indicates          | significance at the                      | e 1 percent level.                       |

#### Economic Freedom

happiness score.\* A similar magnitude increase in GDP per capita yields an increase in happiness of about 0.4 of a standard deviation. Regressions (2), (4), and (5) include the  $EF_j \cdot GDPPC_j$  interaction term. The negative sign on the interaction coefficient indicates that the impact of the one variable diminishes as the other variable increases.

Table 5, using results from regression (4) in Table 4, shows the impact of a one standard deviation increase in economic freedom on happiness at different levels of GDP per capita, as well as the impact of a one standard deviation increase in GDP per capita on happiness at different levels of economic freedom. For poorer countries, additional economic freedom appears to improve happiness, but for very rich countries additional economic freedom actually correlates with less happiness. These results appear to be consistent with those of Bjornskov, Dreher, and Fischer (2010). Similarly, higher GDP per capita has a more beneficial impact on countries with lower economic freedom, and as economic freedom increases, the impact of GDP per capita on happiness diminishes, though it remains positive.

Of course, to the extent economic freedom is a causal factor in contributing to GDP per capita (Hanke and Waters 1997; Gwartney, Holcombe, and Lawson 2004, 2006), these results understate the true impact of economic freedom. The likely endogeneity of GDP per capita is not an issue that we will address in detail here. If increased economic freedom causes GDP per capita to increase, as it almost certainly does, then additional economic freedom will have a direct impact on happiness, up to a certain point, and an indirect effect operating through increased GDP per capita.

Statistically speaking, economic freedom and GDP per capita go hand in hand. The simple correlation coefficient between the EFW index and GDP per capita is 70.1 percent. See Figure 2 for a scatterplot and regression line between the two variables.

From Table 5, we see that a one standard deviation increase in the EFW index corresponds to a 0.24 unit increase in the happiness index (when evaluated at the mean level of GDP per capita).

 $<sup>^{\</sup>circ}$ A one standard deviation improvement in the economic freedom rating is about one unit on the EFW index scale, roughly the difference between the United States (8.0) and Mexico (7.0). A one-third standard deviation in the happiness score is nearly a half point on that scale, roughly the difference between the United States (7.9) and the United Kingdom (7.4).

| Тн                | f Impact o                    | TA<br>FCONOMIC FREEDIC  | ABLE 5<br>DM and GD             | P per Capita on H   | APPINESS  |
|-------------------|-------------------------------|---|---------------------------------|---|---|
| TTT T             |                               |   |                                 |   |   |
|                   | Level of<br>GDP per<br>Capita | Impact of 1 Standard<br>Deviation Increase<br>in Economic Freedom<br>on Happiness Score<br>at Different Levels<br>of GDP per Capita | Level of<br>Economic<br>Freedom | Impact of 1 Standard<br>Deviation increase in<br>GDP per Capita at<br>Different Levels of<br>Economic Freedom | Impact of a Simultaneous<br>Increase of 1 Standard<br>Deviation in Both<br>Economic Freedom<br>and GDP per Capita<br>at Different Levels<br>of Economic Freedom<br>and GDP per Capita |
| 1 S.D. below Mean | 0.51                          | 0.73  | 5.66                            | 1.46  | 2.19  |
| Mean              | 16.52                         | 0.24  | 6.62                            | 0.97  | 1.21  |
| 1 S.D. above Mean | 32.53                         | -0.25   | 7.57                            | 0.48  | 0.23  |
|                   |                               |   |                                 |   |   |

#### Economic Freedom

However, for every one standardized unit increase in the EFW index, the regression line in Figure 2 shows an approximately \$11,000 increase in GDP per capita. By our calculations, this could generate an increase in happiness of an additional 0.60 units. Thus, the combined effect of a standardized unit increase in the EFW index on the happiness index is perhaps as large as 0.84 when one includes the indirect channel through GDP per capita.

To further illustrate the effects of greater freedom on happiness, we examine a couple of specific cases. The final column in Table 5 shows that the effect of a simultaneous increase in both economic freedom and GDP per capita on happiness appears to be positive throughout the relevant range of data.

Our results stand in contrast to some earlier authors, such as Layard (2003: 17) who stated that "once a country has over \$15,000 per head, its level of happiness appears to be independent of its income per head." In a similar conclusion, Frey and Stutzer (2002: 416) note, "Income provides happiness at low levels of

#### FIGURE 2

SIMPLE CORRELATION BETWEEN ECONOMIC FREEDOM AND GDP PER CAPITA



252

development but once a threshold (around \$10,000) is reached, the average income level in a country has little effect on average subjective well-being."

Consider Sweden, which is both a high-income country (GDP per capita of \$38,500) and, notwithstanding its welfare state reputation, a reasonably market-oriented economy (EFW rating of 7.4). If Sweden were to increase its economic freedom to the level of the United States (EFW rating of 8.0), the projected impact on happiness in Sweden would be slightly negative. However, if the increase in economic freedom in Sweden also yielded a GDP per capita akin to that of the United States (\$47,000), then the net impact on Swedish happiness would be slightly positive.

What is more striking, and perhaps more hopeful, is the impact of increasing freedom on less free and poorer nations. If Mexico (GDP per capita of \$14,200 and EFW rating of 7.0) were to simultaneously increase economic freedom and GDP per capita to that of the United States, the impact would be 1.9 units on the happiness (Gallup) scale—more than a full standard deviation increase in happiness.

Alternatively using the coefficient estimates from regression (6) in Table 4, we find that if Sweden and Mexico each achieved the same levels of economic freedom and GDP per capita as the United States, the predicted improvement in Happy Life Years would be 1.2 and 7.2, respectively.

## Conclusion

Using the best available data for a sample of well over 100 countries, this article finds a positive relationship between national levels of happiness and economic freedom. GDP per capita also exerts a strong positive influence on happiness. The statistical impact of both economic freedom and GDP per capita appears to diminish as the other increases, but the combined effect of simultaneously increasing both economic freedom and GDP per capita, particularly for poorer and less free nations, is positive. Around the world, freer people generally are wealthier, live longer, and are happier.

# References

Abdallah, S.; Thompson, S.; Michaelson, J.; Marks, N.; and Steuer, N. (2009) The (Un)Happy Planet Index 2.0. Why Good Lives Don't Have to Cost the Earth. London: New Economics Foundation.

- Bjornskov, C.; Dreher, A.; and Fischer, J.A.V. (2010) "Cross-Country Determinants of Life Satisfaction: Exploring Different Determinants across Groups in Society." *Social Choice and Welfare* 30 (1): 119–73.
- De Haan, J.; Lundstrom, S.; and Sturm, J. E. (2006) "Market-Oriented Institutions and Policies and Economic Growth: A Critical Survey." *Journal of Economic Surveys* 20 (2): 157–91.
- Easterlin, R. (2001) "Income and Happiness: Toward a Unified Theory." *Economic Journal* 111(July): 465–84.
- Feldman, H. (2007) "Economic Freedom and Unemployment around the World." Southern Economic Journal 74 (1): 158–76.
- Frey, B. S., and Stutzer, A. (2002) "What Can Economists Learn from Happiness Research?" *Journal of Economic Literature* 40 (2): 402–35.
- Gwartney, J.; Holcombe, R. G.; and Lawson, R. A. (2004) "Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth." *Cato Journal* 24 (3): 205–33.
  - \_\_\_\_\_ (2006) "Institutions and the Impact of Investment on Growth." *Kyklos* 59 (2): 255–73.
- Gwartney, J. and Lawson, R. A. (2003) "The Concept and Measurement of Economic Freedom." *European Journal of Political Economy* 19 (3): 405–30.
  - \_\_\_\_\_ (2008) *Economic Freedom of the World*. Vancouver: Fraser Institute.
- Hall, J., and Lawson, R. A. (eds.) (2011) *Economic Freedom: Causes* and Consequences. Hauppauge, N.Y.: Nova Science.
- Hanke, S. H., and Walters, S. 1997. "Economic Freedom, Prosperity, and Equality: A Survey." *Cato Journal* 17 (2): 117–46.
- Kahneman, D.; Diener, E.; and Schwartz, N. (eds) (1999) Wellbeing: Foundations of Hedonic Psychology. New York: Russell Sage Foundation.
- Kahneman, D., and Krueger, A. B. (2006) "Developments in the Measurement of Subjective Well-Being." *Journal of Economic Perspectives* 20 (1): 3–24.
- Kahneman, D.; Krueger, A. B.; Schkade, D.; Schwarz, N.; and Stone, A. (2004) "Toward National Well-Being Accounts." American Economic Review 94 (2): 429–34.
- Lawson, R. A., and Clark, J. R. (2010) "Examining the Hayek-Friedman Hypothesis on Economic and Political Freedom." *Journal of Economic Behavior and Organization* 74 (3): 230–39.

- Lawson, R. A., and Roychoudhury, S. (2010) "Economic Freedom and Sovereign Credit Ratings and Default Risk." *Journal of Financial Economic Policy* 2 (2): 149–62.
- Layard, R. (2003) "Happiness: Has Social Science a Clue?" London School of Economics, Lionel Robbins Memorial Lectures 2002/3. Available at http://cep.lse.ac.uk/events/lectures/layard/ RL030303.pdf.
- New Economics Foundation (2006) *The (Un)Happy Planet Index: An Index of Human Well-Being and Environmental Impact.* London: New Economics Foundation.
- Norberg, J. (2010) "GDP and Its Enemies: the Questionable Search for a Happiness Index." *CES Policy Brief.* Brussels: Centre for European Studies.
- Ott, J. C. (2010a) "Good Governance and Happiness in Nations: Technical Quality Precedes Democracy and Quality Beats Size." *Journal of Happiness Studies* 11 (3): 353–68.
  - (2010b) "Greater Happiness for a Greater Number: Some Non-Controversial Options for Governments." *Journal of Happiness Studies* 11 (5): 631–47.
- Ovaska, T., and Takashima, R. (2006) "Economic Policy and the Level of Self-Perceived Well-Being: An International Comparison." *Journal of Socio-Economics* 35 (2): 308–25.
- Scully, G. W. (2002) "Economic Freedom, Government Policy and the Trade-Off between Equity and Economic Growth." *Public Choice* 113 (1–2): 77–96.
- Stroup, M. D. (2008) "Separating the Influence of Capitalism and Democracy on Women's Well-Being." *Journal of Economic Behavior and Organization* 67 (3–4): 560–72.
- Veenhoven, R. (2000) "Freedom and Happiness: A Comparative Study in 44 Nations in the Early 1990s." In E. Diener and E. M. Suh (eds.) Culture and Subjective Well-Being. Cambridge, Mass.: MIT Press.
- Verme, P. (2009) "Freedom, Happiness and Control." Journal of Economic Behavior and Organization 71 (2): 146–61.
- Wilkinson, W. (2007) "In Pursuit of Happiness Research: Is It Reliable? What Does It Imply for Policy?" Cato Policy Analysis, No. 590. Washington: Cato Institute.