The Human Development Index: How do Puerto Ricans Measure Up?

Research Brief

By Raúl Segura and Kurt Birson

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This study is based on an adaptation of the Human Development Index, which allows us to disaggregate distinct racial and ethnic groups within the United States population. It reveals that Puerto Ricans ranked higher than Hispanics in general for 2010 but lagged behind the United States population in terms of education and income levels.

In 1990, the United Nations produced its first report using a new measure called the Human Development Index (HDI). The index was created with a specific purpose in mind: “putting people back at the center of the development process in terms of economic debate, policy and advocacy,” highlighting the idea that “people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone.”

The HDI was created as a tool to compare the relative human-capital characteristics and living standards across distinct populations.

The HDI is a composite statistic that measures well-being in nations across the world in three basic dimensions of human development: a long and healthy life, access to education and a decent standard of living. The health dimension is measured by life expectancy at birth; living standard is measured by Gross National Income per capita; access to education is measured by a combination of two indicators: school enrollment for individuals 3 years and older and the level of educational attainment for the population 25 years and older. The resulting calculations produce a figure between 0 and 1, which can effectively be used to rank countries based on their development score. Indeed, the index revealed some surprising results about a country’s performance that otherwise may have not been evident.

Figure 1. Human Development Index

Source: US Census Bureau ACS, 2010, 1-year estimates
We adapted the concept of the Human Development Index in order to gain a new perspective on the Puerto Rican experience in the United States as it relates to other racial and ethnic groups. By applying the same methodologies used by the United Nations, we produced a disaggregated version of Human Development Index in the United States in order to make observations about where a particular group stands in terms of the Human Development criteria. The standard aggregated index has the effect of masking stark differences that may exist among groups within a country’s population.

This study represents the first attempt to estimate a Human Development Index in the United States that disaggregates the Puerto Rican living on the U.S. mainland from the all-Latino population in the U.S. Previous applications of the Human Development Index to the United States that did not disaggregate the Puerto Rican community provided an incomplete picture of demographic characteristics. According to the 2010 American Community Survey, nearly 4.7 million Puerto Ricans were residing in the mainland United States, representing more than 9 percent of the overall Hispanic population.

**Human Development Index**

In terms of overall development, this composite Human Development Index placed Puerto Ricans in the middle of the five racial and ethnic groups typically used for social, economic, cultural and political analysis, but six points below the national average (Figure 1). With a score of .86, Puerto Ricans ranked higher than both non-Hispanic blacks (.84) and all Hispanics as a group (.85), but below the national average (.88), for whites (.89), and Asians (.91). Puerto Ricans fared well in the health index due to their high scores for life expectancy at birth, and in general outperformed the Hispanic population. However, Puerto Ricans experienced substantial deficiencies relative to others in terms of educational attainment and earnings potential, scoring among the lowest of the groups considered for the education and income indices.

![Figure 2. International HDI Rankings, compared to U.S racial/ethnic groups](image)

Source: Human Development Report 2010, author’s calculations based on ACS 2010 data

*Note: the United Nations calculates HDI for United States using per-capita GNI*

One of the advantages of using the Human Development Index lies in its composition. As a standardized measure of well-being, we can use the index to compare the relative human development characteristics of the groups in this study to other diverse groups around the world.

Scoring .86 on the Human Development Index, Puerto Ricans residing in the United States in 2010 had
similar human-capital characteristics as an average citizen of Spain (ranked 20th out of 186 countries considered) and slightly above someone living in Italy or Greece (ranked 22nd respectively) (Figure 2). Hispanics in the United States were roughly on par with Luxembourg and Austria (24th and 25th). With an HDI of .84, non-Hispanic blacks were comparable to citizens of Singapore (27th in the world) or the Czech Republic (28th in the world). Hispanics in the United States ranked much higher than individuals residing in Latin American countries.

Mexico had the highest ranking of these, at 56th in the world, a .75 HDI score. Other Hispanic migrant-sending countries, like the Dominican Republic, Guatemala, and El Salvador, were all classified in the United Nations’ Human Development Report as countries with medium human development, and HDI scores between .50 and .66.

While still ranking among countries with levels of very high human development, Puerto Ricans, Hispanics, and non-Hispanic blacks fell well below the overall rank for the United States, which had the 4th highest Human Development Index score in the world for 2010. At the same time, non-Hispanic whites had a human development level comparable to citizens of Ireland or Lichtenstein (4th and 5th in the world), and Asian Americans experienced human development on par with those of Australia or New Zealand (2nd and 3rd in the world). In 2010, Norway ranked number one in the world based on its human development score.

Components of the Index: Health, Education, and Income

Life Expectancy and the Health Index

The analysis of data centered on measures for life expectancy yielded unexpected results. We find that Puerto Ricans in the United States live on average 78.34 years - two years more than the non-Hispanic white population, five years more than the non-Hispanic black population, and one year above the national average of 77.34 (Figure 3). Puerto Rican life expectancy was

![Figure 3. Average life expectancy (years)](source: U.S. Census Bureau, ACS 2010, 1-year estimates)

![Figure 4. Health Index by Ethnicity](source: Mortality data from Vital Statistics, and ACS-2010, 1 year estimates)
similar to, but slightly lower than Hispanics as a whole. Studies attribute the surprisingly high life expectancy of Hispanics to several factors, including differences in dietary habits and migration patterns (Turra and Elo, 2008; Abraido-Lanza, et al., 1999; Blue and Fenelon, 2011). Asians measured highest for life expectancy, on average living 81.5 years.

Puerto Ricans and Hispanics in general ranked among the highest in the nation using the health index, scoring .92 and .94, respectively (Figure 4). The two groups trailed only Asians, who scored .97, above the national score of .91. In contrast, both non-Hispanic whites and non-Hispanic blacks, with scores of .89 and .84 respectively, ranked below other ethnic groups and the national average.

**Educational Attainment and the Education Index**

Access to education is a critical determinant of long-term well-being, and is essential to individual freedom, self-determination and self-sufficiency. Puerto Ricans scored second from the lowest of the groups considered on the educational index (Figure 5). At .83, this was a full seven points below the index score for the population as a whole, though four points higher than the index for Hispanics at .79. The educational index for Puerto Ricans is affected by the general educational profile of the Puerto Rican population, as discussed below (Table 1).

<table>
<thead>
<tr>
<th>Mean years of schooling</th>
<th>Expected years of schooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>12.9</td>
</tr>
<tr>
<td>Non-Hispanic Whites</td>
<td>13.7</td>
</tr>
<tr>
<td>Non-Hispanic Blacks</td>
<td>12.4</td>
</tr>
<tr>
<td>Asians</td>
<td>13.7</td>
</tr>
<tr>
<td>Hispanics</td>
<td>11.0</td>
</tr>
<tr>
<td>Puerto Ricans</td>
<td>11.9</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, ACS 2010, 1-year estimates

A large percentage of Puerto Ricans have relatively low educational attainment. Table 2 shows the educational attainment in the United States for individuals 25 years of age or older. In 2010, 55.3 percent of Puerto Ricans had a high school education or less and more than a quarter had not completed high school. In the same year, 38 percent of non-Hispanic whites and 31 percent of Asians had a high school diploma. Sixteen percent of Puerto Ricans had earned a college degree compared to the national average of 28.3 percent. Still, Puerto Ricans performed better than the Hispanic population as a whole, for whom nearly two-thirds had attained a high school education or less.

As a result of these disparities, the mean years and expected years of schooling for Puerto Ricans were
one full year below those for the population as a whole. The mean years of schooling for Puerto Ricans, 11.9, was slightly higher than the mean for Hispanics, 11.0, but lower than for all other ethnic groups (Table 1). The expected years of schooling for Puerto Ricans followed a similar pattern, with Puerto Ricans at 15 and Hispanics at 14.8. Both were below those of all other racial groups, averaging between 16 and 17 years.

**Earnings and the Income Index**

![Figure 6. Total Person's Earnings per capita in the U.S. by Ethnicity](image)

As with the education index, Puerto Ricans and Hispanics in general ranked the lowest on the Income index. This component of the HDI was derived from total individual earnings per capita. With a value of $32,841, Puerto Ricans’ per capita individual earnings were far below those of non-Hispanic whites ($44,290) and Asians ($49,480), but above the non-Hispanic blacks ($31,374) and all Hispanics ($28,095) (Figure 6).

As a result, Puerto Ricans scored .82 in the income index, which was four points below that of non-Hispanic whites, and six points below Asians (.86 and .88, respectively) (Figure 7). Puerto Ricans scored higher on
the income index than non-Hispanic blacks (.81) and all Hispanics (.79).

The relatively low level of educational attainment undoubtedly plays a key role in lowering the earning potential of Puerto Ricans and Hispanics overall. According to calculations of Census Bureau data for 2010 (Table 3), Puerto Ricans working full-time with less than a high school education could expect to earn approximately $30,000 a year less than their counterpart with a bachelor’s degree, and $50,000 a year less than individuals with a graduate degree. Having a high school degree decreases the difference by $5,000.

Conclusions
These results highlight the inequalities in human capital and social well-being between Puerto Ricans and other groups in the United States, emphasizing the continued need for solutions to reduce these gaps. The application of the disaggregated Human Development Index represents a useful and complementary tool that can be used by a variety of stakeholders – including policy makers, advocacy groups, researchers and individuals - to have a more comprehensive understanding of the challenges and opportunities that distinct communities face.

Notes
1 United Nations Development Program – The Human Development Index. [Accessed Online 5.3.13]
2 The HDI is the geometric mean of normalized indices measuring achievements in each dimension. For a full elaboration of the method and its rationale, see any of the Human Development Reports and Klugman, Rodriguez, and Choi (2011).
3 Ranked 2nd in the world, Australia ranked higher than the United States, despite having a large migrant and indigenous population.
4 Author’s calculations based on published one-year estimates of the 2010 American Community Survey.
6 These authors consider the hypothesis of the healthy migrant effect, attributing low mortality among immigrants due to a possible tendency for sick immigrants to return to their home country before death and a possible tendency for new immigrants to be unusually healthy compared to the rest of the home-country population.
7 Authors calculations based on published one-year estimates of the 2010 American Community Survey.

References

Table 3. Earnings by educational attainment for full-time, year-round workers (U.S. dollars)

<table>
<thead>
<tr>
<th></th>
<th>Puerto Ricans</th>
<th>Non-Hispanic Whites</th>
<th>Non-Hispanic Blacks</th>
<th>Hispanic</th>
<th>Asians</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>29,588</td>
<td>35,167</td>
<td>27,829</td>
<td>25,592</td>
<td>29,130</td>
<td>29,270</td>
</tr>
<tr>
<td>High school or equiv.</td>
<td>35,556</td>
<td>40,418</td>
<td>32,669</td>
<td>31,143</td>
<td>33,651</td>
<td>37,717</td>
</tr>
<tr>
<td>Some college</td>
<td>42,179</td>
<td>48,097</td>
<td>38,805</td>
<td>38,901</td>
<td>43,939</td>
<td>45,512</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>58,130</td>
<td>73,663</td>
<td>55,727</td>
<td>56,117</td>
<td>66,623</td>
<td>70,131</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>83,924</td>
<td>103,314</td>
<td>75,677</td>
<td>82,780</td>
<td>102,281</td>
<td>99,704</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, ACS 2010, 1-year estimates