Employed and out of the labor force elderly in Puerto Rico: Differences in demographic, social, and economic characteristics

Vivianna M. De Jesús-Monge, M.S., PhD.


Abstract: Objectives. 1) To compare demographic, social, and economic characteristics among employed and out of labor force elderly. 2) To explore the relationship between personal total income and specific incomes.

Methods. The analysis realized was descriptive and inferential, including cross tabulations, descriptive statistics, correlations, and regression.

Results. Nearly 90% is out of the labor force and 10% is employed. With regard to demographic characteristics, employed elderly is younger and male. As for social characteristics, there is a greater percent of employed elders who are married, with higher education, and without disability. With regard to the economic characteristics, there is a greater percent of employed elders classified as non-poor and with higher income.

Conclusions. There is relationship between salary income and total income for employed elders, a relationship between total income and poverty status for both subpopulations, and retirement income contributes strongly to explaining the income of out of labor force elderly.

Key words: labor force, elderly, Puerto Rico

Introduction

Few studies had taken into consideration the differences among the employed and out of labor force elderly. Employment is an important factor because it could result in having higher income that in turn could place them above the poverty level.

Methods

The analysis realized was descriptive and inferential, including cross tabulations, descriptive statistics, correlations, and regression. The studied population is the 60

1 Poster presented at the Southern Demographic Association Annual Meeting, in Galveston, Texas, on October 2009
2 Demographer. Graduated from the Graduate Program in Demography, Department of Social Sciences, Graduate School of Public Health, Medical Sciences Campus, University of Puerto Rico. Email: vivianna.dejesus@gmail.com
years and older persons living in households in Puerto Rico, using the 2007 Puerto Rico Community Survey Sample.

Results

Figure 1. Percent distribution of employment status

![Bar chart showing employment status distribution]

Figure 2. Median age

<table>
<thead>
<tr>
<th></th>
<th>Employed</th>
<th>Out of labor force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age</td>
<td>63 years</td>
<td>70 years</td>
</tr>
</tbody>
</table>
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![Figure 3. Percent distribution of gender by employment status](image)

![Figure 4. Percent distribution of marital status by employment status](image)

![Figure 5. Percent distribution of educational attainment by employment status](image)
Figure 6. Percent distribution of disability status by employment status

Figure 7. Percent distribution of poverty status by employment status

Figure 8. Median incomes

<table>
<thead>
<tr>
<th></th>
<th>Employed</th>
<th>Out of labor force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal total income</td>
<td>$18,607.20</td>
<td>$6,609.12</td>
</tr>
<tr>
<td>Social Security</td>
<td>$0.00</td>
<td>$5,388.97</td>
</tr>
<tr>
<td>Wages or salary</td>
<td>$12,201.44</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
Correlation between wages or salary income and personal total income

- Employed elderly
  - Using Pearson correlation coefficient, there was a strong, positive correlation between the two variables \( r=0.683, n=76,730, p<0.0005 \), with high levels of wages or salary income with high levels of personal total income.

Correlation between personal total income and poverty status value

- Employed poor elderly
  - Using Pearson correlation coefficient, there was a strong, positive correlation between the two variables \( r=0.560, n=14,147, p<0.0005 \), with high levels of personal total income with high levels of poverty status value.

- Employed non-poor elderly
  - Using Pearson correlation coefficient, there was a strong, positive correlation between the two variables \( r=0.596, n=62,583, p<0.0005 \), with high levels of personal total income with high levels of poverty status value.

Correlation between personal total income and poverty status value (cont.)

- Out of labor force poor elderly
  - Using Pearson correlation coefficient, there was a strong, positive correlation between the two variables \( r=0.630, n=301,452, p<0.0005 \), with high levels of personal total income with high levels of poverty status value.

- Out of labor force non-poor elderly
  - Using Pearson correlation coefficient, there was a moderate, positive correlation between the two variables \( r=0.430, n=550,263, p<0.0005 \), with high levels of personal total income with high levels of poverty status value.
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CONCLUSIONS

- With regard to demographic characteristics, employment in the older population is related to being younger and male.
- As for social characteristics, employment in the elderly is related to being married, having higher education, and not having disability.
- With regard to economic characteristics, employment in the elders is related to being above the poverty level and having higher income.
- Life events, such as retirement from the labor force, can increase the risk of the elder of being poor.
- Employed elderly
  - Personal total income is related to wages or salary income.
  - As personal total income increases, poverty status value increases.
- Out of labor force elderly
  - Personal total income is related to retirement income.
  - As personal total income increases, poverty status value increases.
Employed and out of the labor force elderly in Puerto Rico: Differences in demographic, social, and economic characteristics

Vivianna Margarita De Jesús-Monge, M.Sc.
University of Puerto Rico
University of Salamanca, Spain

Introduction
- Few studies have taken into consideration the differences among the employed and out of labor force elderly.
- Employment is an important factor because it could result in having a higher income that in turn could place them above the poverty level.

Objectives
- Compare demographic, social, and economic characteristics among employed and out of labor force elderly.
- Explore the relationship between personal total income and specific income sources.

Methodology
- The analysis utilized was descriptive and inferential, including consolidations, descriptive statistics, correlations, and regressions.
- The study population in the 60+ years old of persons living in the eastern part of Puerto Rico, using the 2007 Puerto Rico Community Survey Sample.

Results

Figure 1. Percent distribution of employment status

Figure 2. Median age

Figure 3. Percent distribution of gender by employment status

Figure 4. Percent distribution of marital status by employment status

Figure 5. Percent distribution of educational attainment by employment status

Figure 6. Percent distribution of disability status by employment status

Figure 7. Percent distribution of poverty status by employment status

Figure 8. Median income

Correlation between personal total income and poverty status value (cont.)
- Employment income: $18,607.20 $6,809.12
- Social Security: $3,00 $3,108.97
- Wages or salary: $12,701.44 $8,08

Correlation between wages or salary income and personal total income
- Employment income: Using Pearson correlation coefficient, there was a strong positive correlation between the two variables ($r = 0.65, p < 0.001$, with high levels of wages or salary income, $r = 0.15, p = 0.001$), with high levels of personal total income and high levels of poverty status value.

Conclusions
- Employment is a significant factor in reducing poverty levels.
- Education and social security also play a role, but to a lesser extent.
- Wages or salary income is more strongly correlated with personal total income.

Regression between Social Security income, retirement income and personal total income
- Employment income: Using standard multiple regression, the model explains 71% of the variance in personal total income ($R^2 = 0.68, F = 0.00, p = 0.005$)
- Retirement income: The model explains 89% of the variance in personal total income ($R^2 = 0.89, F = 0.00, p = 0.005$)
- Social Security income: The model explains 78% of the variance in personal total income ($R^2 = 0.78, F = 0.00, p = 0.005$)
- Wages or salary income: The model explains 75% of the variance in personal total income ($R^2 = 0.75, F = 0.00, p = 0.005$)

Conclusions (cont.)
- Employment income: Using Pearson correlation coefficient, there was a strong positive correlation between the two variables ($r = 0.65, p < 0.001$, with high levels of wages or salary income, $r = 0.15, p = 0.001$), with high levels of personal total income and high levels of poverty status value.