

Demographic Characteristics as Determinants of Poverty among Informal Food Vendors (IFV) in Camarines Sur, Bicol Region, Philippines

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ABSTRACT

The paper assessed the socio-demographic profile of informal food vendors and its associated influence on their economic status. The respondents were categorized as poor or non-poor based on their annual per capita income. Information gathered from 200 vendors through direct interview were analyzed using descriptive statistics such as frequency counts, weighted means, percentages, Chi-square test, effect size, and probit regression model. Results showed that the respondents are at their productive age. Most of them are married females who have reached secondary level. The effect size and chi-square test demonstrated a small significant association between household size to the economic status of the vendors respectively. Additionally, Probit analysis revealed that the relationship of household size to the economic status of the vendors was negatively significant. On the other hand, educational attainment was positively significant thus, attaining an additional education or years of training may reduce poverty among informal food vendors. To achieve this, the Technical Education and Skills Development Authority (TESDA) could offer entrepreneurial and technical education programs. These initiatives may encompass vocational training, such as food processing and food handling, as well as business management courses focused on areas like product development and marketing, importantly for women.

Keywords: demographic characteristics, informal food vendors, poverty, probit regression model

INTRODUCTION

To eradicate poverty is one of the Sustainable Development Goals (SDGs). According to [4], poverty can be defined as a lack of money or the inability to attain a variety of well-being-related goals. Basic requirements including clothes, fuel, light, water, housing, transportation, communication, health, and education, as well as domestic tasks and personal care, are a few examples of these characteristics. Furthermore, poverty is sometimes closely associated with inequity and is often correlated with vulnerabilities and social exclusion [12]. Thus, it is deemed necessary to understand its causes among various demographic groups.

An individual or family's income is compared to a set of poverty criteria or a poverty line to determine their level of poverty. The poverty line determines the amount of money required to meet everyone's essential needs for food and non-food items. It also acted as an impartial yardstick for separating the so-called "poor" from the "non-poor" [2]. During the first quarter of 2018, the nation's poverty threshold level was PhP 10,481. A family of five requires this much money each month to cover both their basic food demands and non-food needs. No less than PhP 7,337, on average, is required of this sum to satisfy the family's basic dietary demands or the so-called "food threshold". This covers 70% of the overall threshold level value for this time period. Additionally, 16.1 percent of Filipinos experienced poverty during this time. This focuses on the portion of families that are deemed poor and whose income is below the poverty line [4].

According to studies, economic status—that is, being poor or not—can be used to evaluate poverty, with a collection of demographic characteristics serving as the explanatory variables [15]. Using household demographic data, [10] conducted micro-level assessments of the causes and features of poverty. The

married families in the study by [16] had the highest poverty headcount index of 0.434. According to [11] the impact of family size on economic status is also determined to be negatively significant.

Reference [1] showed families with more dependents tend to experience poverty with greater complexity and they are likely to be in worse financial condition than those with fewer members [11], [14]. The association between age and monetary status is also anticipated to be unfavorable since older people are likely to be less able to accumulate the necessary assets or resources to get out of poverty [13]. In terms of sex, women are bound to make lower incomes because of their dedication to multitasking, which includes providing for the needs of the family and juggling reproductive responsibilities. On the other hand, the acquisition of a greater degree of education will bring higher levels of welfare, therefore those who spend a lot of time in school are more likely to have better financial standing [14].

Although the literature on poverty is quite rich, the importance of household demographic characteristics in reducing poverty among informal food vendors cannot be overstated. Informal food vendors include small businesses that offer fresh or cooked foodstuffs as well as small dealers and service providers [6]. In urban areas specifically, informal food vending plays a big role in providing food. Reference [9] however, noted that this category is frequently characterized by high rates of poverty and low income per capita.

Hence, the study seeks to determine if the socio-demographic factors actually affect the economic status of informal food vendors given the various statuses investigated. There is no study that currently exists that examines the impact of socio-demographic profile on the economic condition of informal food vendors in the province of Camarines Sur, Bicol Region, Philippines. Camarines Sur province has a poverty rate of 21.0 percent, which is greater than the national rate of 16.6 percent in 2018. By studying the demographic characteristics as determinants of poverty among informal food vendors, this research helps in understanding the dynamics of poverty among these members of the society.

Similarly, to provide a basis for policy recommendations on improving the welfare of the sector, the study aimed to quantify the relationship of the socio-demographic profile to poverty and examine the factors that contribute to poverty among informal food vendors in Camarines Sur. Specifically, it aimed to 1) compare the differences in the demographic characteristics of poor and non-poor informal food vendors, and 2) analyze the factors that influence the economic status of informal food vendors.

METHODOLOGY

The Study Area

The study was conducted in the three municipalities in the province of Camarines Sur, Philippines namely Calabanga, Pili, and Naga City where most of the informal food vendors selling cooked and uncooked foods are prevalent. These areas represent spaces such as rural, urban, and peri-urban respectively.

Data Sampling and Collection Methods

The study utilized primary cross-sectional data from 200 Informal Food Vendors (IFV) collected in the year 2018. The respondents were randomly selected using a 95% confidence interval, 10% precision, and 50% prevalence. The triangulation method was used through direct interviews using a pre-tested, and well-structured questionnaire. Key informant interviews with key local officials were also conducted.

Methods of Analysis

The study utilized descriptive and quantitative methods. An illustrative method was used in discussing the comparison of socio-demographic characteristics between poor and non-poor. Frequency counts, weighted means, and percentages were used in describing the demographic profile of the informal food vendors. The

chi-square test and effect size were used to analyze the relationship and the degree of association between the dependent and independent variables.

Binary Probit Regression Model

The probit model was applied in analyzing relationships between discrete dependent variables (0=poor, 1=non-poor) and a set of non-stochastic explanatory variables (i.e., socio-economic), and a vector of unknown parameters. The maximum likelihood method provides estimates of the coefficients [7] as cited in [3] who demonstrated the use of the probit model to evaluate whether there was a relationship between the explanatory and the dependent variables. The maximum likelihood probit estimate used to analyze the demographic factors of the informal food vendors that contribute to their economic status is expressed in its implicit form as follows:

$$\text{Econ Stat} = \beta_0 + \beta_{X_1} \text{Age} + \beta_{X_2} \text{Sex} + \beta_{X_3} \text{Mar Stat} + \beta_{X_4} \text{Educ} + \beta_{X_5} \text{Housiz} + \mu$$

Where: Economic status (0=poor; 1=non-poor); X_1 = age of informal food vendor (in years); X_2 =sex (0=male, 1=female); X_3 =marital status (1=married, 0 otherwise); X_4 =level of formal education (number of years spent in school); X_5 =household size (number of individuals in the household); μ =error term.

RESULTS AND DISCUSSION

Comparison of the Socio-demographic characteristics and economic status of the respondents

Table 1 presents the comparison between the poor and non-poor vendors. Poor and non-poor vendors were categorized by comparing the respondent's annual per capita income against the annual per capita threshold level of the province in 2018 amounting to PhP 24,271. Those whose income fell below the poverty line were considered poor. Table 1 also shows the comparison of the informal food vendor's socio-demographic characteristics to their economic status.

Based on the results, the average age of the vendors who are considered poor is around 43 years old while those who are non-poor is 46 years old. This implies that both vendors are still in their economically productive age and can accumulate resources decreasing their chance of becoming poor (Majeed, 2015). In terms of sex, the poor female vendors represent 84 percent while 85 percent of the non-poor vendors are female. This implies that the informal food vendors in the province are mostly composed of women. This infers further that selling both raw and prepared foodstuffs in open spaces and locally established trading environments is an important livelihood typically for women. Reference [5] found that the sector is often dominated by women despite their pluriactivity. Furthermore, 90 percent of the non-poor and 89 percent of the poor are married. Both poor and non-poor vendors have reached an average of seven to eight years in school or secondary level. This may explain their reason for engaging in the informal food business as a result of having no formal employment. Lastly, the average number of household members is 5 for non-poor and around 7 members for poor vendors. Table 1 also shows that household size is significant at a 1 percent level with a small ($es=-0.38$) association with economic status. This implies that having a huge family size increases the chance of being poor. That is other things remain constant, an additional person in the household reduces per capita consumption [11], [14].

Table I. Comparison of socio-demographic characteristics between poor and non-poor

| CHARACTERISTICS | ECONOMIC STATUS | | CHI-SQUARE STAT (P-VALUE) | EFFECT SIZE |
|-----------------|-----------------|----------|---------------------------|-------------|
| | POOR | NON-POOR | | |
| Age | 42.87 | 46.44 | 51.48 ^{ns} | 0.14 |

| | | | | |
|------------------------|------|------|---------------------|-------|
| Sex | 0.84 | 0.85 | 0.05 ^{ns} | 0.02 |
| Marital Status | 0.89 | 0.90 | 0.02 ^{ns} | 0.01 |
| Educational Attainment | 7.18 | 7.86 | 18.34 ^{ns} | 0.11 |
| Household size | 6.96 | 5.05 | 35.51 ^{**} | -0.38 |

**Significant at 1%, *significant at 5%, ns-not significant

Determinants of Economic Status Among Informal Food Vendors

The results in Table 2 indicate that the educational attainment of the vendors was positively significant at a 5 percent level with a coefficient equal to 0.06 (se=0.03), implying that attaining an additional year of education or training, increases the tendency to improve his or her economic status. This also suggests that educated vendors might have more entrepreneurial skills or knowledge in adopting techniques that improve their profitability. Reference [14] had similar findings that the maximum level of education among any adult is consistently positive and significant in alleviating the poverty or economic status of the household and provides higher levels of welfare. On the other hand, household size was negatively significant at 1 percent level with a coefficient of -0.22 (se=0.04). This result confirmed the findings of [11], and [14] that household size consistently has a negative and statistically significant relationship with per capita consumption.

Table II. Probit estimates of the demographic factors affecting the economic status of informal food vendors

| VARIABLE | COEFFICIENT | STANDARD ERROR | P-VALUE |
|------------------------|-------------|----------------|---------|
| Intercept | 0.70 | 0.68 | 0.31 |
| Age | 0.01 | 0.01 | 0.25 |
| Sex | 0.11 | 0.27 | 0.68 |
| Marital Status | 0.03 | 0.32 | 0.93 |
| Educational attainment | 0.06* | 0.03 | 0.04 |
| Household size | -0.22** | 0.04 | 0.00 |

**Significant at 1%, *significant at 5%

CONCLUSIONS

Household size and educational attainment remain significant factors in the economic status of informal food vendors. Having a negatively significant relationship, increasing the number of family members could exacerbate the economic status among informal food vendors. On the other hand, having a positively significant relationship, attaining an additional education or years of training may improve the economic status among informal food vendors. Reference [8] found that the informal food vendors in Camarines Sur lacks the visionary skills of an entrepreneur as well as innovativeness, and creativity. Thus attaining an additional education or years of training may reduce poverty among informal food vendors. To achieve this, the Technical Education and Skills Development Authority (TESDA) could offer entrepreneurial and technical education programs. These initiatives may encompass vocational training, such as food processing and food handling, as well as business management courses focused on areas like product development and marketing, importantly for women.

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