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Learning from Labor Market Outcome Changes Overtime: A Study of a Panel of 4Ps Beneficiaries

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Abstract

This study analyzes the dynamic labor market outcomes of 4Ps beneficiaries, utilizing panel data from three waves of a Randomized Controlled Trial (RCT) cohort (2011, 2013, and 2017). Employing the categorization of Tabuga et al. (2021), labor market states were classified into stable, improving, worsening, and chronic categories. The study focused on four key labor market outcomes: work status, permanent work, full-time employment based on work hours, and full-time employment based on the desire for additional work. Ordered logistic regression was used to identify the correlates of these outcomes, considering individual, household, and community characteristics.

The study found that nearly half of the 4Ps beneficiaries consistently held jobs, but less than a third were in permanent employment. Most worked over 40 hours per week, and a significant majority were not seeking additional work. Key correlates influencing these outcomes included age, education, household head status, gender, solo parenthood, marital status, hunger experience, indigenous group membership, IRA per capita, and poverty incidence.

Based on these findings, the study recommends targeted interventions for vulnerable groups, enhanced education and skill development, broader economic and community development strategies, income improvement strategies, better public services support, addressing poverty and population density issues, and continuous monitoring and adaptation of policies. These recommendations aim to improve employment stability and overall economic well-being for 4Ps beneficiaries. Future research comparing these dynamics with the broader labor force could provide further insights.

Keywords: 4Ps, labor market outcomes, Philippines

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Aniceto C. Orbeta Jr., Anna Rita P. Vargas, and Aubrey D. Tabuga[1]

1. Introduction

Understanding the dynamics of the labor market outcome of the poor is important for several reasons. A better understanding of how the poor is engaged in the labor market can inform the design of targeted interventions for them. It can also uncover the poor's various barriers in gaining and maintaining employment. Employment has also been recognized as an important avenue for poverty alleviation and development. The World Development Report, for instance, describes the importance of jobs by stating, "development happens through jobs" (World Bank, 2013, p.3). Besides Tabuga et al. (2021), in the Philippines, no studies are known to the authors that deal with the labor market outcomes of the poor. This study addresses this gap.

This study extends the analysis in Tabuga et al. (2021) by identifying and measuring the role of individual, household, and community characteristics on the dynamics of labor market outcomes of 4Ps beneficiaries. We do so by exploiting the unique rich data set that followed a cohort of 4Ps beneficiaries who were the respondents of the first RCT impact evaluation in 2011 through the succeeding two impact evaluation waves in 2013 and 2017. The analyses went beyond describing the shifts in labor market outcomes across the three waves and modeled several labor market outcome dynamics as a function of these characteristics. Thus, the study quantifies the magnitude and direction of the correlations between labor market outcomes and individual, household, and community characteristics. It does not, however, measure the impact of the 4Ps on the labor market outcomes because the data collection was not designed for this and only covers 4Ps beneficiaries (Orbeta et al., 2021a).

The research aims to shed light on the factors affecting the dynamics of the labor market outcomes of poor households, i.e., 4Ps beneficiaries. More specifically, the specific objectives include: (1) understand the trends in the dynamics of labor market outcomes of the poor, particularly 4Ps beneficiaries, (2) identify and quantitatively measure the importance of the factors affecting the dynamics of the labor market outcomes of the poor, and (3) provide recommendations that could inform interventions designed to help the poor.

The study found that nearly half of the 4Ps beneficiaries consistently held jobs, though less than a third were in permanent employment. Most worked over 40 hours per week, and a significant majority were not seeking additional work. Key correlates influencing these outcomes included age, education, household head status, gender, solo parenthood, marital status, hunger experience, indigenous group membership, IRA per capita, and poverty incidence. It recommends targeted interventions for vulnerable groups, enhanced education and skill development, broader economic and community development strategies, income improvement strategies, better public services

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support, addressing poverty and population density issues, and continuous monitoring and adaptation of policies.

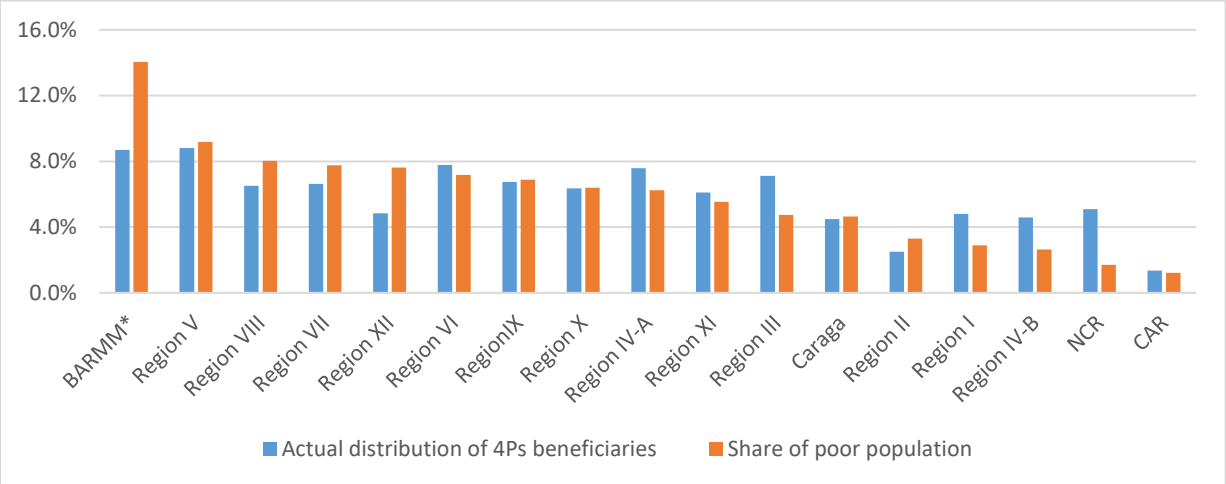
The paper is organized as follows. The next section offers a review of related literature. Section 3 discusses the methodology and data. The following section discusses the empirical results. Section 5 summarizes the paper and offers a list of recommendations.

2. Review of Related Literature

The Conditional Cash Transfer (CCT) program was first started to help families living in extreme poverty by providing them with regular cash transfers. To receive these grants, beneficiaries must satisfy specific conditions, such as education and healthcare commitments. The above fulfills two main concerns: 1) it can smooth consumption and address immediate monetary constraints, and 2) it prioritizes investment in human capital development, which can help break intergenerational poverty (Reyes and Tabuga 2012).

Brazil and Mexico launched their CCT program in the late 1990s. This example was soon followed by Asia, Africa, and other regions worldwide. As of December 2021, there were 4.09 million conditional cash transfer (4Ps) beneficiaries in the Philippines. Although the magnitude of the poor population is mainly concentrated in Visayas and Mindanao, it can be observed that close to half of the 4Ps beneficiaries (41.8%) are in Luzon (see Figure 1). In addition, the share of beneficiaries across the regions shows that they are distributed in a balanced way (ranging from 4 percent to 8 percent per region), except for Region II and Cordillera Administrative Region (CAR).

Figure 1. Distribution of 4Ps beneficiaries and poor families by region (percent to total)



Note: *Share of poor population captures ARMM data
Source: 1/ DSWD (as of December 31, 2021); 2/ Philippine Statistics Authority (2018 FIES)

Generally, the program has worked well in the first few years of implementation, with significant progress in the education outcomes of children (e.g., lower dropout rates, increased years of schooling) as well as improvements in beneficiaries' health and well-being (e.g., better nutrition, reduced child and maternal mortality rates) (Orbeta et al. 2021b; Kendal et al. 2016; Rasella et al. 2013). Another concern, however, involves measuring the long-term impact on human development.

This component is important to examine as it would help break the continuous cycle of poverty in families. According to Baird et al. (2019), for a program to have sustained effect, there should be an increase in an individual's asset stock, such as human, physical, and social asset, that can provide significant returns in the future. A study by Millán et al. (2019) summarized the long-term impact of CCT on children beneficiaries from various research. The results show a positive trend for higher levels of schooling; however, results are still unclear for labor market outcomes, namely for labor force participation and income levels (see Table 1). Based on the economic model of labor supply, a sudden increase in cash windfall would cause individuals to work less and spend more time for leisure (Baird et al. 2018). This, however, was not observed in the case of CCT beneficiaries. For Mexico and Ecuador, studies show no significant evidence that cash transfers disincentivize work (Fiszbein and Schady 2009).

Table 1. Long-term impact of select CCT programs on youth beneficiaries

Country	CCT Program	Higher levels of schooling	Labor force participation	Income
Mexico	Progresa	Positive impact	Mixed results	Not available
Colombia	Familias en Acción	Positive impact	Positive impact (for females)	Not available
Nicaragua	Red de Protección Social	Positive impact (for males)	Positive impact	Positive impact
Honduras	PRAF-II*	Positive impact	No significant impact	No significant impact

**PRAF-II – Programa de Asignacion Familiar-II*

Note: Exposure to the program began during school age, while impact was measured in the early adulthood of the beneficiaries.

Source: Millán et al. (2019, pg 142)

Results from an impact evaluation of the 4Ps on beneficiary households support the general literature that CCTs do not encourage dependency among beneficiaries. A study by Orbeta et al. (2021b) shows that cash grants do not disincentivize beneficiaries from seeking work. It was also discovered that individuals tended to work more and for longer hours per week, according to the empirical findings by Araos et al. (2020). The study found that 4Ps beneficiaries are casually employed, although lack of education and qualifications and lower availability of jobs in rural areas hinder them from securing permanent employment (Araos et al. 2020).

Another study by Tabuga et al. (2021) noted that there is a significant difference between the sexes when it comes to labor market participation. Due to long-standing gender roles, females tend to do more unpaid work as compared to males, which can negatively affect their decision to participate in the labor force. In contrast, males have higher labor force participation, although there is an observed lack of job security (Tabuga et al. 2021). Despite efforts to improve individual welfare regarding education and health outcomes, external factors like lack of economic opportunities serve as constraints for many CCT beneficiaries.

Findings both within and beyond the country have shown the effect that conditional cash transfer (CCT) programs such as the 4Ps could have on beneficiaries' labor outcomes and work-seeking behaviors. Most studies find that conditional cash transfers have little to no effect on working time (Baird, McKenzie, and Ozler, 2018). Banerjee et al. (2015) supported this result by examining the relationship between CCTs and labor supply through randomized controlled trials of cash transfer programs across six developing countries (including the Philippines).

However, some studies show that windfall income from CCTs may induce labor participation. Vera Cossio (2017) used the timing and eligibility criteria of a CCT program in Bolivia and found that the cash transfers encouraged labor market engagement, particularly among women. Cossio's model explains this by introducing fixed costs of labor market entry in his model, thus illustrating how CCTs allow individuals to overcome the initial financial hurdles of finding employment. Findings from CGE simulations of cash transfers from social safety nets in Egypt also showed a positive relation between CCTs and labor supply, particularly in the education and health sector, which employs skilled and semi-skilled workers (Helmy et al. 2018).

Another study from Turin, Italy, explored the difference in labor supply effects that come from CCTs compared to unconditional cash transfers, with the condition for this particular setup being that parents must attend labor market mentoring programs. Findings from the study showed a significant increase in the labor participation of fathers, though the effect on mothers was negligible (Del Boca, Pronzato, and Sorrenti 2020). The result of this research is interesting, as it implies behavioral differences with regard to labor participation of male and female beneficiaries of CCTs.

Turning to studies on the dynamics of labor market outcomes among low-wage workers shows interesting patterns. Butcher and Schanzenback (2018) using the Current Population Survey data find that poor individuals eligible for the Supplemental Nutrition Assistance Program (SNAP) and Medicaid benefits, although the majority worked substantially, have low wages, grow less, and are more volatile than those in higher "middle-class" occupations. Donovan et al. (2020), utilizing labor force surveys from 42 countries covering developed and developing countries, find that labor market flows such as employment-exit rates, job-finding rates, and job-to-job transitions in the poorest countries are two to three times higher than those in richest countries. The negative relationship between employment exits and tenure also declines faster in poorer countries. Finally, the positive relationship between wage and tenure was also found to be steeper in poorer countries. Sochet and Rangraj (2004), analyzing the labor market experience of low-wage workers using the 1996 longitudinal panel of the Survey of Income and Program Participation (SIPP) covering the periods 1995 and 2000, find that the wage progression of those who are continuously employed is greater than those who are employed less.

3. Methodology and Data

We defined categories based on the continuity or change in individuals' labor market outcomes across the survey years to model dynamics in labor market outcomes. We adopted the categorization in Tabuga et al. (2021), which classifies changes in states into four categories, namely, (a) stable, (b) improving, (c) worsening, and (d) chronic. Stable refers to those staying in

the best possible position through the survey waves. The improving category is for those initially in the poor state and moved to the better state in the next period. The worsening category is for those who initially are in a better state but have found themselves in a worse state in the next period. The chronic category refers to those who could not move out of the poor state from one period to the next. This categorization reflects an ordered categorization with the stable category as the highest ranked, followed by improving, then worsening, and finally, the chronic category.

3.1 Methodology

To identify the significant correlates of the outcomes of interest, we use multivariate regression that allows us to control for variables expected to influence the outcomes of interest. Given the ordered nature of the changes in the labor market outcomes, our empirical strategy employs order logit regression. The ordered logistic regression, also known as the proportional odds model, is particularly suited for analyzing ordinal data where the categories have a natural ordering, but the distances between categories are not assumed to be equal.

The general form of the ordered logistic regression can be expressed as the odds that the outcome is less than or equal to j versus greater than j given X shown in Equation 1 (Long and Freeze 2014).

Equation 1. General form of the ordered logistic regression

$$\ln\left(\frac{P(Y \leq j|X)}{P(Y > j|X)}\right) = \alpha_j - \beta X + \epsilon$$

where:
Y = the ordinal dependent variable
j = indexes the ordered categories of Y
X= vector of independent variables
β = vector of coefficients to be estimated, and
α_j =the threshold parameters (or cut points) for each j-th category of the dependent variable.

Thus, given the independent variables, the model estimates the probability of the dependent variable falling into or below a particular category. The coefficients are interpreted in terms of odds ratios. A positive coefficient indicates that a unit increase in the independent variable means the odds of the dependent variable being in the higher category increase by the value of the coefficient, holding other variables constant. The overall fit of the model is passed by the pseudo R-squared.

The key assumption of the model is the proportional odds assumption. It assumes that the relationship between each pair of outcomes is statistically the same regardless of the category level, i.e., β is the same for all levels. The estimations use the ologit routine in Stata.

3.2 Data

The study uses the primary data from the three waves of surveys accompanying the impact evaluation (IE) of the 4Ps program – known as the RCT cohort survey. The survey was done in

three different years (2011, 2013, and 2017) and acquired information from households registered as 4Ps beneficiaries. Wave 1 conducted a randomized control trial and collected information from households in the starting areas (Set 1) of the 4Ps program's poorest municipalities. A total of 130 barangays were identified as study sites in the following provinces: 1) Mountain Province; 2) Occidental Mindoro; 3) Negros Oriental; and 4) Lanao del Norte. These barangays were randomly selected into treatment and control areas, at 65 barangays each. Ten sample households were then randomly selected from each barangay forming the treatment and control groups (DSWD and World Bank, 2014). The treatment households were exposed to the program starting in 2009, while the exposure of the control group was, by design, purposely delayed until 18 months after the Wave 1 survey in 2011. Records of the program show the control households started to receive program intervention in February 2012 (DSWD 2015).

The Wave 2 RCT cohort survey interviewed the Wave 1 RCT sample household again in 2013 (see Table 2). In the Wave 3 RCT survey in 2017, the target number of households was increased to 2,500 to increase the power of the sample to measure the treatment effects of time-critical investments during the first 1,000 days of life (Orbeta et al., 2021a). The sample was still confined to the original 130 barangays, but the eligibility criteria of the additional sample households were expanded to include households having children born during the window between April 2009 and April 2013. The actual number of interviewed households was 2,265.

Table 2. RCT Cohort Sample

Wave (year)	Respondents
Wave 1 (2011)	Study sites: 130 barangays in 8 municipalities and 4 provinces were randomly assigned into treatment and control or 65 barangays each. Sample HH: 10 households were randomly selected per barangay based on defined eligibility status, namely (a) poor households (PMT score below threshold), (b) have children aged 0-14 or have pregnant mothers at the time of assessment. There were 704 households interviewed in the treatment barangays and 714 in the control barangays, or a total of 1,418 households.
Wave 2 (2013)	Study sites: Same as Wave 1 Sample HH: Same as Wave 1
Wave 3 (2017)	Study sites: Same as Wave 1 Sample HH: To increase the power of the sample, the number of interviewed households was increased to 2,265. The criterion for selecting additional households was having at least one child born between April 2009 and April 2013.

Source: Author's compilations based on DSWD and World Bank (2014), DSWD (2015), Orbeta et al. (2021a), and Tabuga et al. (2021).

We exploit the availability of the panel data of 4Ps beneficiary households that have been followed since the first impact evaluation in 2011, the second in 2013, and the third in 2017. To create the panel data, the above data sets (IE Wave 1, 2, and 3) were processed by matching households and household members present in all three waves. This was previously done by Tabuga et al. (2021) and will be utilized again in this study to further investigate the nuances of 4Ps labor outcomes. The panel data consists of beneficiary households and their members belonging to the working-age population, specifically those aged 17 and above. A total of 431 households and 836 members were identified in the panel dataset covering 2011, 2013, and 2017 (See Table 3).

Table 3. Distribution of households and members in the impact evaluation panel data

Province	Municipality	Number of households	Number of household members
Mountain Province	Paracelis	28	61
	Sadanga	35	74
Occidental Mindoro	Paluan	33	64
	Santa Cruz	44	82
Negros Oriental	Basay	27	50
	Jimalalud	91	184
Lanao del Norte	Lala	93	179
	Salvador	80	142

Source: Tabuga et al. (2021)

The study is interested in looking at the labor market state of 4Ps households. Based on this, the data created can measure four labor market outcomes, namely, (a) change in the work status, (b) change in the nature of work, i.e. being permanent or temporary, (c) change in full-employment status based on hours of work defined as working at least 40 hours per week, and (d) change in full-employment status based on not wanting additional work.

In addition to the panel data, community variables at the municipal level were also included in the analysis. We utilized readily available secondary data from government sources (i.e., Philippine Statistics Authority [PSA], Department of Finance [DOF]) to complement existing individual-level variables. Specifically, we used the internal revenue allotment, population count and density, and poverty incidence (see Table 4). The purpose is to provide additional analysis concerning the external contextual factors affecting the labor market outcomes of beneficiaries.

Table 4. Information on community-level variables

Data	Source	Description
Population	PSA-CPH	Total population by sampled municipality (2010 and 2015). To compute the estimated population for specific years, the population growth formula $P_t=P_o*\exp(rt)$ was used where P_t= population at time t, P_o=population at previous date, r is the estimated population growth rate from the two population censuses (2010 and 2015).

Population density	PSA-CPH	Persons per square kilometer (2015)
Internal revenue allotment	DOF-BLGF	Budget allocated to local government from national revenue (2011, 2013, 2015, 2017)
Poverty incidence	PSA-SAE	Poverty incidence by sampled municipality (2009, 2012, and 2015)

Note: CPH – Census of Population and Housing; SAE – Small Area Estimate; BLGF – Bureau of Local Government Finance
Source: Author's compilation

4. Results

4.1 Descriptive Statistics

Table 5 provides descriptive statistics for a range of independent variables using a combined sample of 1,613 observations.

The average age in the sample is 36 years. The ages range from a minimum of 17 to a maximum of 60 years. About 22 percent of the sample are high school graduates or higher. A large majority (90%) of the sample are married. Approximately 38 percent of the sample households have experienced hunger in the last three months. About 43 percent of the sample are heads of their households. Slightly more than half of the sample, 51 percent are female. The average household size in the sample is 6.78. The size ranges from 3 to 20 members. Only two percent of the sample are solo parents. A sizable portion (77%) of the sample households have children aged 0-5 years. Around 17 percent of the sample are members of Indigenous Peoples. About seven percent of the sample have a disabled member in the household.

Regarding community characteristics, the average per capita IRA (Internal Revenue Allotment) in the sample communities is 2,264. The range is from 1,209 to 5,065. The average population density is 218 people per square kilometer. The density ranges from 27 to 476. The average poverty incidence in the sample is 46 percent. The range is from 30 percent to 68 percent.

Table 5. Descriptive Statistics of Independent Variables

Variable	Observation	Mean	Std. dev.	Min	Max
Age	1,613	36.10	9.61	17	60
HS graduate	1,613	0.22	0.42	0	1
Married	1,613	0.90	0.30	0	1
Experience hunger	1,613	0.38	0.49	0	1
Household Head	1,613	0.43	0.50	0	1
Female	1,613	0.51	0.50	0	1
Household Size	1,613	6.78	2.25	3	20
Solo Parent	1,613	0.02	0.16	0	1
With children 0-5 years	1,613	0.77	0.42	0	1
IP member	1,613	0.17	0.38	0	1
With disabled member	1,613	0.07	0.26	0	1

IRA per capita	1,613	2,264	1,070	1,209	5,065
Population density	1,613	218	158	27	476
Poverty incidence	1,613	46	10	30	68

4.2 Correlates of the Dynamics of Work Status

This section looked at the correlations between improving work status and individual, household, and community characteristics. Individual characteristics include age and its square to capture the non-linear effects of age, education, civil status, sex, being a household head, and being a solo parent. The household characteristics include a member experiencing hunger in the last three months, household size, presence of young children 0 to 5 years old, and having a disabled member. Community variables include the Internal Revenue Allotment per capita of the municipality, population density in person per square kilometers, and the most proximate poverty incidence estimate for the province, e.g., 2009 for 2011 and 2012 for 2013.

We follow the classification in Tabuga et al. (2021), classifying the changes in work status into four, namely, (a) stable, (b) improving, (c) worsening, and (d) chronic. Stable includes individuals who were working in both successive waves of the survey. Improving includes individuals who were not working in the early round but found work in the succeeding round. Worsening are individuals working in the earlier round but not the succeeding round. Finally, chronic are individuals who were not working in both survey rounds. As in Tabuga et al. (2021), we divided the three waves of the 4Ps RCT cohort surveys into two episodes, namely, (a) 2011 and 2013 and (b) 2013 and 2017. In addition, we also stacked the data to cover both episodes in one estimation.

Table 6 shows the frequency of the work status categories by episode. The chronic category shows a slight decrease in frequency over time. It starts at 25.5 percent in the 2011 & 2013 period, decreases marginally to 24.3 percent in the 2013 & 2017 period, and averages at 24.9 percent. This suggests a relatively stable presence of chronic work status over these periods. There is a notable increase in the worsening category. It begins at 9.1 percent in 2011 & 2013 and more than doubled to 19.5 percent in 2013 & 2017. The average for both is 14.5 percent, indicating a significant overall increase in worsening work status across the entire timeframe. The improving status category shows a decline over time. It starts at 14.3 percent in the 2011 & 2013 period and decreases to 10.5 percent in the 2013 & 2017 period. The average for both episodes is 12.3 percent, suggesting a moderate decrease in improving work status across the years. Finally, the largest category, stable, shows a slight decrease. It begins at 51.1 percent in the 2011 & 2013 period and decreases to 45.7 percent in the 2013 & 2017 period. The average for both has a frequency of 48.3 percent, indicating that, despite a slight decline, the largest group remained stable throughout the periods. In summary, the table suggests a slight overall decrease in chronic and stable work statuses, a significant increase in worsening statuses, and a moderate decrease in improving statuses over the observed periods. This data indicates the dynamics in the work environment or labor market of 4Ps beneficiaries during these years.

Table 6. Work Status Frequencies

Status	2011 & 2013	2013 & 2017	Both
Chronic	25.5	24.3	24.9
Worsening	9.1	19.5	14.5
Improving	14.3	10.5	12.3
Stable	51.1	45.7	48.3

Source: Author's computation

In modeling the dynamics of work status, we considered these categories as ordered, with stable as the highest category, followed by improving, worsening, and chronic, respectively. Thus, we use an ordered logit regression to model the dynamics. For correlates, we used individual, household, and community characteristics.

Table 7 presents the results of an ordered logistic regression analysis examining the correlates of work status dynamics across three groups: 2011 & 2013, 2013 & 2017, and a combined period labeled "Both". The dependent variable is work status stability, as described earlier, and independent variables include individual, household, and community characteristics. The coefficients are presented along with t-statistics in parentheses. Statistical significance is indicated by asterisks, with * $p<0.05$, ** $p<0.01$, and *** $p<0.001$. The sample size is 783 for 2011 & 2013, 830 for 2013 & 2017, and 1,613 for the combined period.

Age shows a positive relationship with improving work status, particularly in the later period (2013 & 2017) and the combined period, as indicated by the significant coefficients (0.1942 and 0.1670, respectively). These coefficients indicate that for every additional year, the log-odds from the lower to the next higher-level increase by 0.1942 in 2013 and 2017, and 0.1670 in the combined period. The negative coefficients for Age Squared suggest a diminishing effect of age on improving work status over time. Higher education (HS grade or higher) is positively correlated with improving work status in the 2011 & 2013 period and the combined period, but not significantly in the 2013 & 2017 period. The log-odds of improving work status increase by 0.5085 for the 2011 and 2013 period and 0.3221 for the combined period as one moves to being a high school graduate or higher. Being married does not show a statistically significant correlation with improving work status in any of the periods. Experiencing hunger shows a negative but not statistically significant relationship with improving work status. Being the household head positively correlates with improving work status in the 2011 & 2013 and combined periods, increasing log-odds of improving work status by 1.1528 and 0.5511, respectively. Being female is significantly negatively correlated with improving work status across all periods, with estimates of -2.1495, -2.2378, and -2.1173 for 2011 and 2013, 2013 and 2017 and combined periods, respectively, indicating by how much the log-odds decline for females. Being a female head of the household does not show a significant correlation with improving work status. Household size does not significantly influence improving work status. Being a solo parent positively correlates with improving work status, especially in the combined period, providing estimates of 2.1899, 1.4642, and 1.5386 for periods 2011 and 2013, 2013 and 2017, and combined, respectively. Having young children 0 to 5 years old shows a positive but not statistically significant correlation with improving work status. However, the interaction term between having young children and being female is negatively correlated with improving work status in the combined period, giving estimates of -0.5458.

Membership in an indigenous group positively correlates with improving work status in the combined period with an estimate of improving the log-odds by 0.4524. Having a disabled household member does not show a significant correlation with improving work status. The IRA per capita positively correlates with improving work status in the 2013 & 2017 period. Population density shows a positive correlation with improving work status in the 2013 & 2017 period but is not significant in other periods. Poverty incidence does not show a significant correlation with improving work status.

In summary, the analysis reveals significant factors like age, education, being the household head, gender, and being a solo parent as influential correlates in improving work status. The impact of these factors varies across different time periods, indicating changing dynamics in the labor market and societal structures affecting improving work status.

Table 7. Ordered Logit: Improvement in Work Status

Variables	2011 & 2013	2013 & 2017	Both
Age	0.0618	0.1942***	0.1670***
	(0.90)	(3.34)	(3.88)
Age Squared	-0.0001	-0.0024**	-0.0019***
	(-0.15)	(-3.22)	(-3.38)
HS Grad or higher	0.5085*	0.2006	0.3221*
	(2.54)	(1.11)	(2.43)
Married	0.3415	0.3966	0.3181
	(0.83)	(1.09)	(1.20)
Experience hunger	-0.2428	-0.0834	-0.1704
	(-1.43)	(-0.54)	(-1.53)
Household Head	1.1528**	0.1698	0.5511*
	(3.10)	(0.53)	(2.33)
Female	-2.1495***	-2.2378***	-2.1173***
	(-4.75)	(-6.04)	(-7.52)
Female Head	-0.6855	-0.0020	-0.3029
	(-1.37)	(-0.00)	(-0.93)
Household size	-0.0211	-0.0415	-0.0244
	(-0.54)	(-1.13)	(-0.94)
Solo Parent	2.1899**	1.4642**	1.5386***

	(2.88)	(2.95)	(3.80)
With Children 0-5	0.5474	0.0558	0.2816
	(1.52)	(0.22)	(1.36)
With children 0-5 and female	-0.7459	-0.3694	-0.5458*
	(-1.74)	(-1.14)	(-2.15)
Member of IP	0.3654	0.4374	0.4524**
	(1.45)	(1.85)	(2.68)
With disabled	0.2313	-0.1643	0.1884
	(0.84)	(-0.48)	(0.90)
Per capita IRA	0.0000	0.0004**	0.0001
	(0.11)	(2.69)	(1.27)
Population density	-0.0015	0.0018*	-0.0000
	(-1.16)	(2.01)	(-0.03)
Poverty incidence	-0.0066	0.0131	0.0027
	(-0.39)	(1.41)	(0.36)
/			
cut1	-0.7194	3.2346*	1.5809
	(-0.42)	(2.56)	(1.72)
cut2	-0.0413	4.4300***	2.5266**
	(-0.02)	(3.49)	(2.75)
cut3	1.0083	5.0151***	3.2802***
	(0.59)	(3.94)	(3.56)
N	783	830	1613

t statistics in parentheses

* p<0.05 ** p<0.01 *** p<0.001

Source: Author's computation

4.3 Correlates of the Dynamics of Permanent Work Status

In this section, we turn to the dynamics of having permanent work. Like in earlier analysis, the variables include individual, household, and community characteristics identified in the earlier analysis.

We also categorized the transitions into (a) stable, (b) improving, (c) worsening, and (d) chronic. The chronic category includes individuals not in permanent work in both years of each period. The worsening category refers to individuals who moved from permanent in the earlier waver to non-permanent work status in the succeeding wave. The improving category includes those who transitioned from non-permanent in the earlier wave to permanent work status in the succeeding wave. Finally, the stable category includes individuals who were in permanent work in both years of each period. Table 8 shows the frequencies of each category in the 2011 and 2013 waves, the 2013 and 2017 waves, and the combined one labeled as "both." The table shows a slight decrease in the chronic category over time, from 24.5 percent in 2011 & 2013 to 21.09 percent in 2013 & 2017. The combined frequency for both periods is 22.69 percent, indicating a moderate prevalence of chronic non-permanent work status across the entire timeframe. In the case of the worsening category, the frequency increased from 19.8 percent in 2011 & 2013 to 24.78 percent in 2013 & 2017. The combined frequency is 22.45 percent, suggesting a notable incidence of worsening work status over the years. For the improving category, the frequencies are relatively stable, with 22.77 percent in 2011 & 2013 and 24.78 percent in 2013 & 2017. The combined frequency is 23.84 percent, indicating a consistent movement of individuals into permanent work status across the periods. Finally, the stable category shows a slight decrease, from 32.92 percent in 2011 & 2013 to 29.35 percent in 2013 & 2017. The combined frequency for both periods is 31.02 percent, suggesting that many individuals remained in permanent work status throughout the years. In summary, there is a slight overall decrease in both the chronic and stable categories, an increase in the worsening category, and a relatively stable improving category.

Table 8. Frequencies in permanent work status

Status	2011 & 2013	2013 & 2017	Both
Chronic	24.50	21.09	22.69
Worsening	19.80	24.78	22.45
Improving	22.77	24.78	23.84
Stable	32.92	29.35	31.02

Source: Author's computation

We turn to the correlates of the dynamics of having permanent employment. Again, we used ordered logistic regression. The estimation results are shown in Table 9. The sample size is 404 for 2011 & 2013, 460 for 2013 & 2017, and 864 for the combined sample.

The coefficients for age are negative but not statistically significant in any period, suggesting a limited direct impact of age on the likelihood of having permanent work status. Age squared shows a positive coefficient in all periods indicating a possible non-linear relationship but is also not statistically significant in the combined period. Higher education is significantly positively correlated with having permanent work status, especially in the 2013 & 2017 period, showing an increase of 0.8961 and 0.5155 in the combined period increase in the log-odds of improving permanent work status for a shift into high school or higher compared to having lower education. Being married is positively correlated with having permanent work status in the 2011 & 2013 period and the combined period, with statistically significant coefficients of 1.0624 and 0.7373, respectively. A member experiencing hunger in the last three months shows a negative correlation with having permanent work status in the 2011 & 2013 period (-0.6071) and the combined period

(-0.2758), suggesting that experiencing hunger is associated with a lower likelihood of having permanent work status. Being the household head does not show a statistically significant correlation with permanent work status in any period. The coefficient for females is positive in all periods but not statistically significant, indicating a limited impact of gender on having permanent work status. Being a female head of the household also does not show a significant correlation with having permanent work status. Larger household size shows a positive but not consistently significant correlation with having permanent work status. Being a solo parent shows a positive correlation in the 2011 and 2013 period but a negative correlation in the 2013 and 2017 period, though these are not statistically significant. The presence of young children 0 to 5 years old does not significantly correlate with permanent work status. The interaction term between the presence of young children and being female does not show a significant correlation with having permanent work status. Membership in an indigenous group positively correlates with permanent work status, especially in the 2011 & 2013 (1.0836) and combined periods (0.6087). Having disabled members in the household does not show a significant correlation with having permanent work status. The IRA per capita shows a negative correlation with having permanent work status in the 2013 & 2017 period and the combined period – an odd result because having more revenues should result in more economic activity that should have led to better labor market outcomes. Population density negatively correlates with having permanent work status in the 2013 & 2017 period and the combined period but is not significant in the 2011 & 2013 period. Finally, poverty incidence shows a positive correlation in the 2011 & 2013 period but a negative correlation in the 2013 & 2017 periods, though these are not statistically significant.

To summarize, the analysis reveals several factors such as education, marital status, experiencing hunger, and membership in an indigenous group as influential in determining the likelihood of permanent work status. An unexpected result is that IRA per capita negatively correlates with the possibility of permanent work status.

Table 9. Ordered Logit: Improvement in nature of work

Variables	2011 &2013	2013 & 2017	Both
Age	-0.0916	-0.0093	-0.0604
	(-1.10)	(-0.12)	(-1.06)
Age Squared	0.0012	0.0004	0.0010
	(1.13)	(0.44)	(1.35)
HS Grad or higher	0.1106	0.8961***	0.5155**
	(0.46)	(4.14)	(3.27)
Married	1.0624*	0.6968	0.7373*
	(1.98)	(1.63)	(2.24)
Experience hunger	-0.6071**	-0.0634	-0.2758*
	(-2.98)	(-0.33)	(-2.04)

Household Head	0.1649	0.0370	0.1275
	(0.51)	(0.13)	(0.61)
Female	0.7088	0.4334	0.6140
	(1.27)	(0.97)	(1.79)
Female Head	-0.4804	0.3492	-0.0404
	(-0.67)	(0.57)	(-0.09)
Household size	0.0558	0.0807	0.0599
	(1.22)	(1.88)	(1.96)
Solo Parent	0.9885	-0.7517	-0.1103
	(1.04)	(-1.18)	(-0.21)
With Children 0-5	-0.2985	0.0488	0.0156
	(-0.97)	(0.21)	(0.09)
With children 0-5 and female	-0.2590	-0.0259	-0.1762
	(-0.46)	(-0.06)	(-0.50)
Member of IP	1.0836***	0.2467	0.6087**
	(3.79)	(0.97)	(3.28)
With disabled	0.0584	0.0689	0.0403
	(0.20)	(0.17)	(0.17)
Per capita IRA	0.0001	-0.0004*	-0.0003*
	(0.26)	(-1.96)	(-1.98)
Population density	0.0006	-0.0017	-0.0015
	(0.41)	(-1.64)	(-1.90)
Poverty incidence	0.0356	-0.0182	-0.0038
	(1.84)	(-1.62)	(-0.43)
/			
cut1	0.3794	-1.6614	-1.7741
	(0.19)	(-1.04)	(-1.52)
cut2	1.3634	-0.4128	-0.6785
	(0.68)	(-0.26)	(-0.58)

cut3	2.3875	0.7180	0.3779
	(1.18)	(0.45)	(0.32)
N	404	460	864

t statistics in parentheses
* p<0.05 ** p<0.01 *** p<0.001
Source: Author's computation

4.4 Correlates of Dynamics of Full-time Work Based on Work Hours

In this section, we analyze the correlates of the dynamics of being in full-time work based on work hours. Here, we consider a person as employed full-time if he works at least 40 hours a week. Like in earlier analysis, we defined four transition categories, namely, (a) stable, (b) improving, (c) worsening, and (d) chronic. The chronic category includes individuals who were not in full-time work in both years of each period. The worsening category is for individuals who moved from full-time to non-full-time work status. The improving category includes those who transitioned from non-full time to full-time work status. The stable category is for individuals in this category who were in full-time work in both years of each period.

We start by describing the trends in the composition of the four categories across the three waves of the 4Ps cohort survey. Then we discuss the individual, household and community variables correlates with the dynamics of full-time employment.

Table 10 shows the frequencies for each category across survey waves 2011 and 2013 and waves 2013 and 2017. For the chronic category, the frequency is 0 percent for 2011 & 2013, indicating no chronic cases in this period. However, it increases to 0.48 percent in 2013 & 2017. The combined frequency for both periods is 0.25 percent, suggesting a very low overall prevalence of chronic non-full-time work status. For the worsening category, the frequency increased from 3.02 percent in 2011 & 2013 to 5.18 percent in 2013 & 2017. The combined frequency is 4.13 percent, indicating a moderate incidence of worsening work status over the years. The improving category, the frequencies are relatively stable, with 2.52 percent in 2011 & 2013 and 2.41 percent in 2013 & 2017. The combined frequency is 2.46 percent, indicating a consistent but small movement of individuals into full-time work status across the periods. Finally, the stable category is the largest category, with a slight decrease from 94.46 percent in 2011 & 2013 to 91.93 percent in 2013 & 2017. The combined frequency for both periods is 93.17 percent, suggesting that a significant majority of individuals remained in full-time work status throughout the years. In summary, the table shows that the vast majority of individuals maintained a stable full-time work status over the periods studied. There is a very low occurrence of chronic non-full-time work status and a slight increase in the worsening category. The improving category remains relatively stable but small in proportion.

Table 10. Full-time status based on hours frequencies

Status	2011 & 2013	2013 & 2017	Both
Chronic	0.00	0.48	0.25
Worsening	3.02	5.18	4.13
Improving	2.52	2.41	2.46
Stable	94.46	91.93	93.17

Source: Author's computation

We now turn to the ordered logit regression estimation results shown in Table 11. The coefficient for age is negative and becomes statistically significant in the 2013 & 2017 period and the combined period, suggesting that the likelihood of being in full-time work decreases with age in these periods. Age squared has a positive coefficient, significant in the same periods, indicating a non-linear relationship where the effect of age on full-time work status diminishes at higher ages. Higher education does not show a statistically significant correlation with being in full-time work in any of the periods. Being married does not show a statistically significant correlation with being in full-time work in any of the periods. Experiencing hunger does not show a statistically significant correlation with being in full-time work in any of the periods. Being the household head does not show a statistically significant correlation with being in full-time work. Being female is positively correlated with being in full-time work in the combined period, with the coefficient being statistically significant. Being a female head of the household does not show a significant correlation with being in full-time work. Larger household size shows a negative but not consistently significant correlation with being in full-time work. Being a solo parent shows a negative correlation with being in full-time work, but it is not statistically significant in the 2011 & 2013 period. The presence of young children 0 to 5 years old does not show a significant correlation with being in full-time work. The interaction of the presence of young children and being female does not show a significant correlation with being in full-time work. Membership in an indigenous group is positively correlated with being in full-time work in the 2011 & 2013 period, with the coefficient being statistically significant. Having a disabled person in the household is negatively correlated with being in full-time work in the combined period, with the coefficient being statistically significant. The IRA per capita shows a negative correlation with being in full-time work in all periods, with the coefficients being statistically significant. Population density shows a negative correlation with being in full-time work in the 2013 & 2017 period and the combined period, with the coefficients being statistically significant. Poverty incidence shows a negative correlation with being in full-time work in the 2013 & 2017 period and the combined period, with the coefficients being statistically significant.

Summarizing the preceding, the analysis reveals several factors such as age, gender, membership in an indigenous group, having a disabled person in the household, per capita IRA, and population density as influential in determining the likelihood of being in full-time work. The impact of these factors varies across different time periods, indicating changing dynamics in the labor market and societal structures affecting full-time employment status.

Table 11. Ordered logit: Improvement in full employment (hours)

Variables	2011 & 2013	2013 & 2017	Both
Age	-0.1552	-0.3064*	-0.2310*
	(-0.99)	(-2.09)	(-2.20)
Age Squared	0.0022	0.0040*	0.0031*
	(1.05)	(2.09)	(2.21)
HS Grad or higher	0.0832	-0.1568	-0.0591
	(0.20)	(-0.49)	(-0.23)
Married	-0.2740	-0.1654	-0.2136
	(-0.31)	(-0.23)	(-0.39)
Experience hunger	0.2940	0.5095	0.4189
	(0.83)	(1.57)	(1.79)
Household Head	0.0426	0.1556	0.1471
	(0.07)	(0.34)	(0.40)
Female	2.1406	1.1089	1.4480*
	(1.77)	(1.48)	(2.33)
Female Head	-0.4734	-0.7311	-0.7140
	(-0.41)	(-0.91)	(-1.10)
Household size	-0.0834	-0.0339	-0.0571
	(-1.16)	(-0.50)	(-1.18)
Solo Parent	-0.9946	-0.8711	-0.9155
	(-0.66)	(-1.01)	(-1.24)
With Children 0-5	0.5928	-0.4083	-0.0493
	(1.11)	(-0.94)	(-0.15)
With children 0-5 and female	-0.9271	0.0843	-0.2243
	(-0.79)	(0.12)	(-0.38)
Member of IP	0.9648*	0.3263	0.5894
	(1.97)	(0.80)	(1.92)
With disabled	-0.6637	-0.8533	-0.6999*

	(-1.50)	(-1.68)	(-2.15)
Per capita IRA	-0.0009*	-0.0012***	-0.0011***
	(-2.57)	(-4.03)	(-5.67)
Population density	-0.0013	-0.0060**	-0.0047***
	(-0.48)	(-3.21)	(-3.33)
Poverty incidence	-0.0482	-0.0440*	-0.0473***
	(-1.39)	(-2.50)	(-3.51)
/			
cut1	-10.2011**	-17.3512***	-15.9695***
	(-2.84)	(-5.63)	(-7.39)
cut2	-9.5298**	-14.7790***	-12.9910***
	(-2.66)	(-4.86)	(-6.18)
cut3		-14.3713***	-12.4868***
		(-4.73)	(-5.95)
N	794	830	1624

t statistics in parentheses
* p<0.05 ** p<0.01 *** p<0.001
Source: Author's computation

4.4 Correlates of Dynamics of Full-time Work Based on Looking for Additional Work

Another way to measure full-time employment is to base it on the desire for additional work. We use this definition in this section.

The four categories are defined as follows: (a) the chronic category includes individuals who wanted additional work in both years of each period; (b) the worsening category refers to individuals who did not want additional work in the earlier year but wanted it in the succeeding year; (c) the improving category are those who wanted additional work in the earlier year but did not want it in the succeeding year; and (d) the stable category are those who were in full-time work and did not want additional work in both periods.

Table 12 shows the frequencies of each category across the survey waves 2011 and 2013, 2013 and 2017 and the combination of both. The chronic category shows that the frequency slightly decreases from 3.26 percent in 2011 & 2013 to 2.70 percent in 2013 & 2017. The combined frequency for both periods is 2.96 percent, indicating a relatively low but consistent presence of individuals chronically seeking additional work. The worsening category shows a notable increase from 11.03 percent in 2011 & 2013 to 18.43 percent in 2013 & 2017. The combined frequency is 14.93 percent, suggesting a significant rise in the number of individuals whose work status

worsened in terms of not wanting additional work. The frequency in the improving category remains stable at 13.03 percent across both individual periods and the combined period, indicating a consistent rate of improvement in work status regarding the desire for additional work. Finally, the stable category shows a decrease from 72.68 percent in 2011 & 2013 to 65.84 percent in 2013 & 2017. The combined frequency for both periods is 69.08 percent, suggesting that a majority of individuals remained stable in their lack of desire for additional work, though there is a slight overall decline. In summary, the table shows a majority of individuals consistently not wanting additional work, indicating stability in their full-time work status. However, there is a noticeable increase in those whose situation worsened (wanting additional work when they previously did not) and a stable proportion of individuals who improved (no longer wanting additional work when they previously did). The slight decrease in the stable category and the increase in the worsening category could reflect changing economic conditions or shifts in job satisfaction and work-life balance preferences over these periods.

Table 12. Frequencies of full-time status based on wanting additional work

Status	2011 & 2013	2013 & 2017	Both
Chronic	3.26	2.70	2.96
Worsening	11.03	18.43	14.93
Improving	13.03	13.03	13.03
Stable	72.68	65.84	69.08

Source: Author's computation

Turning now to the correlates of full-time employment based on wanting additional work, Table 13 shows the estimation results. The coefficient for age is negative in all periods but only statistically significant in the combined period, suggesting a slight decrease in the likelihood of being in full-time work (without wanting additional work) as age increases. The positive coefficient for age squared, significant in the combined period, indicates a non-linear relationship, with the effect of age diminishing at higher ages. Higher education shows a positive but not statistically significant correlation with being in full-time work in any of the periods. Being married shows a significant negative correlation with being in full-time work in the 2013 & 2017 period and the combined period, suggesting that married individuals were more likely to want additional work during these times. Experiencing hunger does not show a statistically significant correlation with being in full-time work in any of the periods. Being the household head shows a positive correlation in the 2013 & 2017 period but is not consistently significant across all periods. Being female is positively correlated with being in full-time work in the 2013 & 2017 period and the combined period, with the coefficients being statistically significant. Being a female head of the household shows a significant negative correlation with being in full-time work in the 2013 & 2017 period. Larger household size shows a negative correlation in the 2013 & 2017 period but is not consistently significant across all periods. Being a solo parent shows a significant negative correlation with being in full-time work in the 2013 & 2017 period and the combined period. The presence of young children 0 to 5 years old in the household does not show a significant correlation with being in full-time work. The interaction between the presence of young children and being female does not show a significant correlation with being in full-time work. Membership in an

indigenous group does not show a significant correlation with being in full-time work. Having a disabled person in the household shows a negative correlation in the 2013 & 2017 period and the combined period but is not consistently significant. Per capital IRA shows a negative correlation with being in full-time work in the 2013 & 2017 period and the combined period, with the coefficients being statistically significant. Population density shows a negative correlation in the 2013 & 2017 period but is not consistently significant across all periods. Poverty incidence shows a negative correlation in the 2013 & 2017 period and the combined period, with the coefficients being statistically significant. To summarize, the analysis reveals several factors such as age, marital status, gender, being a solo parent, per capita IRA, and poverty incidence as influential in determining the likelihood of being in full-time work without wanting additional work. The impact of these factors varies across different time periods, indicating changing dynamics in the labor market and societal structures affecting full-time employment status.

Table 13. Ordered Logit: Improvement in full employment (additional work)

Variables	2011 &2013	2013 & 2017	Both
Age	-0.1092	-0.1485	-0.1215
	(-0.99)	(-1.45)	(-1.65)
Age Squared	0.0014	0.0020	0.0016
	(0.96)	(1.55)	(1.74)
HS Grad or higher	0.2946	0.3445	0.3228
	(0.93)	(1.30)	(1.62)
Married	0.1037	-1.6429**	-1.0132*
	(0.14)	(-2.64)	(-2.20)
Experience hunger	-0.2628	0.0691	-0.0117
	(-1.06)	(0.29)	(-0.07)
Household Head	-0.2982	0.3977	0.1888
	(-0.64)	(1.16)	(0.70)
Female	1.2935	1.4193*	1.3240**
	(1.41)	(2.31)	(2.65)
Female Head	0.3441	-1.4482*	-0.8802
	(0.32)	(-2.00)	(-1.52)
Household size	0.0215	-0.0906	-0.0417
	(0.37)	(-1.67)	(-1.09)

Solo Parent	-1.5314	-1.9469**	-1.6924**
	(-1.30)	(-2.64)	(-2.83)
With Children 0-5	0.0014	0.2115	0.2084
	(0.00)	(0.78)	(0.97)
With children 0-5 and female	-0.4143	-0.0658	-0.1628
	(-0.45)	(-0.11)	(-0.33)
Member of IP	-0.1888	-0.3819	-0.2828
	(-0.59)	(-1.31)	(-1.34)
With disabled	-0.3971	-0.8182	-0.4363
	(-1.16)	(-1.81)	(-1.66)
Per capita IRA	0.0003	-0.0009***	-0.0005***
	(0.95)	(-3.95)	(-3.45)
Population density	0.0035	-0.0029*	-0.0012
	(1.96)	(-2.22)	(-1.26)
Poverty incidence	0.0342	-0.0329*	-0.0178
	(1.47)	(-2.49)	(-1.69)
/			
cut1	-2.6995	-12.3237***	-8.9188***
	(-1.07)	(-5.64)	(-5.78)
cut2	-1.0614	-9.8897***	-6.8798***
	(-0.42)	(-4.60)	(-4.51)
cut3	-0.2022	-9.1482***	-6.1090***
	(-0.08)	(-4.27)	(-4.02)
N	399	445	844

t statistics in parentheses

* p<0.05 ** p<0.01 *** p<0.001

Source: Author's computation

5. Summary and Recommendations

5.1 Summary

This study has comprehensively analyzed the dynamic labor market outcomes of 4Ps beneficiaries using data from three waves of an RCT cohort (2011, 2013, and 2017). Adopting the categorization framework of Tabuga et al. (2021), we classified changes in labor market states into four categories: stable, improving, worsening, and chronic. The analysis spanned four key labor market outcomes: dynamics of work status, permanent work, full-time employment based on work hours, and full-time employment based on the desire for additional work. Ordered logistic regression was employed to identify the correlates of these outcomes among individual, household, and community characteristics.

Dynamics of Work Status. The largest group (48%) for this outcome had a stable work status, indicating consistent employment. A significant group (25%) were chronically unemployed. There was an increase in worsening status and a decrease in improving status over time. The ordered logit regression results show that influential correlates included age, education, household head status, gender, and solo parenthood.

Dynamics of Having Permanent Work. For this outcome, the stable category was the largest (31%), but the shares of the other categories were close. A slight decrease in chronic and stable categories and an increase in worsening status were observed. The key correlates for this outcome were education, marital status, hunger experience, and indigenous group membership. The unexpected result is that IRA per capita negatively correlates with permanent work status.

Dynamics of Full-time Employment Based on Work Hours. A vast majority (93%) for this outcome maintained stable full-time work status. Thus, work hours-wise, almost all 4Ps beneficiaries are in full-time employment. Low chronic non-full-time work status and a slight increase in worsening status were noted. The significant factors for this outcome are age, gender, indigenous group membership, household disability, IRA per capita, and population density were significant factors.

Dynamics of Full-time Employment Based on Wanting Additional Work. The trends across the survey waves showed that most individuals (69%) did not desire additional work. There was an increase in those wanting additional work and a stable proportion improving. The ordered logit regression results show that the influential factors included age, marital status, gender, solo parenthood, IRA per capita, and poverty incidence.

Thus, the three waves of the surveys showed that while almost half of the 4Ps beneficiaries are always working, less than a third are in permanent employment. Most work more than 40 hours per week, and more than two-thirds are not seeking additional work lending evidence to the old adage that "the poor cannot afford to be unemployed" (De dios and Dinglasan, 2015).

5.2 Recommendations

Based on the observed patterns, the following recommendations are proposed:

1. **Targeted Interventions for Vulnerable Groups**: Tailor programs to address the needs of chronically unemployed individuals, solo parents, and those in worsening work status categories. Special attention is needed for married individuals and those from indigenous groups.

2. **Education and Skill Development**: Enhancing education and skill development can positively impact work status and the likelihood of securing permanent work. Continuously offering learning opportunities targeting existing work and livelihood opportunities should be provided.

3. **Economic and Community Development**: The unexpected negative correlation of IRA per capita with permanent and full-time work status suggests a need for broader economic development strategies at the community level. These include infrastructure development, investment in local businesses, and community-based projects.

4. **Income improvement strategies**. The study shows that most 4Ps beneficiaries work full-time based on hours worked or not wanting additional work. What is needed is a set of interventions that will improve their income per time worked or the quality of the work. The lessons from the Sustainable Livelihood Program (see Orbeta et al., 2020) should inform strategies in this area.

5. **Better services support**. Since two-thirds are not in permanent employment, which would not have employment benefits, they will benefit from strengthening publicly funded education, training, health, and social protection services.

6. **Addressing Poverty and Population Density Issues**: Given the impact of poverty incidence and population density on full-time employment status, urban planning and poverty alleviation measures should be prioritized.

7. **Continuous Monitoring and Adaptation**: The labor market is dynamic, and policies should be adaptable to changing conditions. Regularly monitoring labor market trends is essential to adjust programs and interventions promptly.

By implementing these recommendations, there is potential to enhance the labor market outcomes for 4Ps beneficiaries, leading to improved employment stability and overall economic well-being.

When similar panel data is available for the entire labor force, it would be instructive to compare the results of the labor market outcome dynamics of the poor, e.g., 4Ps beneficiaries, found in this study and the rest of the labor force. Further studies implementing qualitative techniques can also enhance our understanding of the dynamics of labor market outcomes of the poor for purposes of formulating better quality jobs for them. The design of national labor surveys must also be enhanced to adequately capture the nuances of current labor market conditions in the presence of new work arrangements.

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