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Dreams and small means: Career aspirations of children in the Philippine 4Ps Program

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Douglas Kurt Gregor C. Diola, and
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Abstract

This study examines the career aspirations of economically disadvantaged Filipino children participating in the Pantawid Pamilyang Pilipino Program (4Ps), the Philippines' flagship conditional cash transfer program. Using data from 9,958 children aged 10 to 25 collected through the Fourth Wave Impact Evaluation Survey, we document children's preferred occupations and analyze how these aspirations relate to individual, household, and program participation factors. Children in both 4Ps and non-4Ps households demonstrate ambitious career aspirations, predominantly targeting professional and service occupations that represent substantial upward mobility relative to their parents' current employment in elementary or agricultural work. These aspirations remain stable across ages 10 to 25, suggesting that children form career goals relatively early and maintain them through adolescence into early adulthood. Using regression discontinuity design, we find no detectable causal effect of 4Ps eligibility on children's career aspirations. Program participation does not influence the income levels associated with children's dream occupations, and the probability of aspiring to professional careers, or aspirations for service/sales work. These null findings are robust across multiple specifications, bandwidth choices, and outcome measures. Multinomial logit analysis reveals that parental aspirations are the dominant determinant of children's career goals, with coefficients far exceeding other factors in the model. When parents aspire for their child to become a professional, children are substantially more likely to hold professional aspirations themselves (coefficient = 3.167, $z = 24.06$). Gender also matters significantly: boys are much less likely to aspire to professional or service occupations. Individual characteristics such as grit and functional literacy show modest positive associations with professional aspirations, but their effects are small compared to parental influence. Our findings indicate that while 4Ps has been shown in prior evaluations to improve education outcomes, it does not expand children's career aspirations. Cash transfers alone may be insufficient on their own to reshape aspirations; additional interventions targeting parental knowledge and expectations, providing career information and guidance, and creating exposure to diverse role models may be necessary to broaden what disadvantaged children perceive as feasible career options for their futures.

Keywords: career aspirations, conditional cash transfer, 4Ps, Pantawid Pamilyang Pilipino Program, youth development, poverty, social protection, intergenerational mobility

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Dreams and Small Means: Career Aspirations of Children in the Philippine 4Ps Program

FINAL REPORT

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1 Introduction

Career aspirations play a critical role in shaping educational investments, occupational trajectories, and long-term economic mobility. While aspirations do not guarantee specific employment outcomes, they reflect children's sense of what is possible and influence the educational and skill investments they pursue. For children of low-income families, these aspirations are particularly important, as they can either promote social mobility or reinforce the cycle of intergenerational poverty. Understanding how economically disadvantaged children perceive their future opportunities and what factors shape these perceptions is essential for designing effective policies that support upward mobility.

Yet growing up in poverty may limit the aspirations children form. Research by Mullainathan and Shafir (2014) demonstrates that poverty restricts cognitive bandwidth, reducing one's ability to plan and make strategic, long-term investments. This "scarcity mindset" may constrain how children from poor households envision their future opportunities, potentially limiting their aspirations even when educational pathways are available. Consequently, effective anti-poverty policies must provide not only financial support but also interventions that actively broaden the range of careers children consider.

The Pantawid Pamilyang Pilipino Program (4Ps) offers a potential policy approach to addressing this challenge. Launched in 2008 and currently covering millions of poor households nationwide, the program provides conditional cash grants to poor families to improve their children's health, nutrition, and education outcomes. Operating on the theory that reducing immediate financial constraints while conditioning benefits on school attendance and health checkups will enable children to accumulate human capital, 4Ps aims to break the cycle of intergenerational poverty through sustained investments in the next generation.

The program offers multiple pathways through which it could influence children's career aspirations. Educational subsidies may keep children in school longer, expanding their awareness of different career possibilities. Cash grants may reduce financial pressure that would otherwise force children into early work, allowing them to consider longer educational paths and higher-skilled careers. Family Development Sessions² may change parental attitudes

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² The Family Development Sessions (FDS) consist of monthly group meetings attended by household grantees, most often mothers, with the aim of enhancing parenting practices and fostering greater engagement in the community (DSWD 2021)

about education and their children's futures, while Youth Development Sessions³ provide direct career information, encouragement, and peer support to children themselves.

Existing 4Ps program evaluations have focused primarily on short-term educational and health outcomes such as school enrollment, attendance, and anthropometric measures. While these studies have documented important impacts on human capital accumulation, they have not systematically examined how the program influences children's career aspirations and long-term occupational goals. This represents a significant knowledge gap, as aspirations may constitute an important intermediate outcome that mediates the relationship between program participation and ultimate labor market success.

We address this gap by providing a comprehensive analysis of career aspirations among 4Ps beneficiary children. Specifically, we examine what occupations children dream of pursuing, how these aspirations compare to their parents' current employment and aspirations for them, and whether program participation is associated with more ambitious career goals. Understanding these relationships is essential for assessing whether 4Ps is fulfilling its promise of breaking intergenerational poverty and identifying potential program enhancements that could better support children's long-term economic mobility.

We employ unique data from the 4th Wave Impact Evaluation (IE4) Survey of 4Ps, which collected information on career aspirations from 9,958 children 10 to 25 years old. This survey asked children directly about their dream job or occupation, providing rich data that were analyzed alongside household, community, and 4Ps program participation information. The survey employed a regression discontinuity design sampling strategy, interviewing households both above and below the program eligibility threshold. This design allows us to estimate the causal impact of program participation on career aspirations by comparing otherwise similar households that differ primarily in their eligibility status.

Our findings reveal several important patterns. Both 4Ps and non-4Ps children predominantly aspire to professional and service-oriented occupations, representing significant upward mobility aspirations compared to their parents' current employment in elementary or agricultural work. These aspirations remain stable across ages from 10 to 25, suggesting that career dreams are formed early and persist through adolescence and early adulthood. Parents' own aspirations for their children emerged as the strongest predictor of children's career goals, more important than household income, household composition, or program participation. We likewise find no significant causal effect of 4Ps participation on children's career aspirations, even when examining various dimensions such as aspiration type, income level of aspirations, or the gap between children's aspirations and their parents' current occupations.

These findings have important policy implications. While 4Ps has been successful in improving educational access and attainment, our results suggest it may not be effectively expanding children's career aspirations beyond what would occur without the program. This points to the potential value of complementary interventions focused specifically on aspiration formation, such as enhanced career guidance in YDS, exposure to diverse role models, connections with local industries, and improved information about labor market opportunities. The strong

³ The Youth Development Session (YDS) complements the FDS by providing an additional learning intervention for adolescent children from 4Ps households. It aims to equip adolescents with the skills and capacities needed to contribute to the overall well-being of their families. Participation in the YDS is voluntary and is not linked to compliance with 4Ps program conditions, although adolescent members of 4Ps households are encouraged to take part. (DSWD 2021)

influence of parental aspirations also suggests that interventions targeting parents' beliefs about their children's potential could be particularly effective.

The remainder of this paper is organized as follows. In Section 2, we review the theoretical framework on career aspiration formation, international evidence on conditional cash transfers and aspirations, and existing findings from the 4Ps evaluations. Section 3 presents our conceptual framework and describes the data and methods. In Section 4, we present descriptive findings on children's career aspirations, correlates of aspirations, and estimates the causal effect of program participation. Section 6 discusses the implications of our findings and concludes with policy recommendations.

2 Review of Related Literature

2.1. Theoretical Framework on Career Aspiration Formation

Career aspirations are an individual's hopes for the future, including their goals for education, occupation, income, and social status. Aspirations are not just personal preferences. They are shaped by a person's experiences and by observing others in their social environment (Ray 2002; Fruttero, Muller, and Calvo-González 2021). Appadurai (2004) describes this "capacity to aspire" as a navigational tool that helps connect immediate goals to broader cultural norms and social contexts.

Several theories explain how children develop career aspirations over time. The Theory of Circumscription and Compromise by Gottfredson (1981) suggests that children go through four stages: focusing on adult versus child roles (ages 3–5), focusing on gender roles (ages 6–8), focusing on social status (ages 9–13), and focusing on personal identity (ages 14 and older) (Brown 2002). In the third stage, children become aware of social status and their own abilities. This leads them to rule out jobs they see as having low prestige or being too difficult.

Howard and Walsh (2011) describe how children's thinking about careers evolves over time. Young children view jobs through "pure association," or simply as lists of activities. As they mature into adolescence, they develop "systemic interaction" thinking, understanding that career outcomes depend on personal traits, family support, and labor market conditions. Social Cognitive Career Theory emphasizes that career interests and choices are driven by self-efficacy (belief in one's own abilities) and outcome expectations (beliefs about what will happen if they pursue certain paths).

2.2. Aspirations in Disadvantaged Households

Children from poor households may form aspirations differently than wealthier children because their "aspirations window" is more limited. This window is shaped by the people a child sees as similar and whose achievements seem possible. Because poor children's social interactions are often limited to their immediate neighborhood, they may have less exposure to diverse role models. This leads to a narrower range of careers they see as possible (Fruttero, Muller, and Calvo-González 2021). Ray (2002) and Dalton, Ghosal, and Mani (2016) describe how poverty can lead to "aspirations failure." This happens when people fail to aspire to their full potential because the gap between their current situation and their desired future feels too wide to bridge.

Family differences reinforce these patterns. Archer, DeWitt, and Wong (2014) found that disadvantaged youth often develop beliefs that support staying in the same social class rather than moving up. High-status careers are viewed as "not for the likes of us." While middle-class

parents often practice actively building their children's skills and networks, working-class parents may take a more hands-off approach that relies on "natural growth." This leaves disadvantaged children with fewer resources to pursue elite careers, even when they have high ambitions.

Research reveals several patterns in how disadvantaged children form career aspirations. Studies using projective techniques⁴ found that while poor children are optimistic about their own futures, they see limited opportunities for other poor children. They associate poverty with discrimination and lack of educational access (Weinger 1998). Many disadvantaged youths want high-status professional careers, yet they are uncertain about reaching these goals. They often cite their own perceived academic weaknesses as the main barrier (Archer, DeWitt, and Wong 2014; Hoskins and Barker 2016).

Gender patterns also emerge in career aspiration formation. Girls often have a more detailed understanding of what success requires than boys do (Hill, Ramirez, and Dumka 2003). However, girls are more likely to aspire to traditionally female occupations like teaching or nursing, while boys more often aspire to fame-based careers or sports. Research in India found that having female leaders in villages raised the career aspirations and educational achievement of adolescent girls by changing what they saw as possible (Beaman et al. 2012). In contrast, parents in low-performing schools often provide little concrete guidance. They express strong hopes for their children's success but feel limited by their own life experiences. This creates a lack of concrete guidance in helping children form career goals (Usinger 2005; Diemer 2007).

These findings raise important questions about policy interventions. If poverty limits aspirations through reduced exposure to role models, less information about opportunities, and the mental burden of scarcity, can targeted programs break through these barriers? We turn next to evidence on whether conditional cash transfer programs can expand the aspirations of poor children and their families.

2.3. Evidence on CCTs and Aspirations

While evidence on the effects of conditional cash transfer programs on education, employment, and welfare outcomes is extensive, research on their impact on aspirations remains scarce. Most CCT evaluations have focused on measuring tangible outcomes such as school enrollment, test scores, and income, with less attention to psychological outcomes like aspirations, hope, or future orientation. This gap is important because aspirations may be a key pathway through which cash transfers influence long-term outcomes, that is, if programs improve education but fail to expand children's vision of career possibilities, their potential for promoting upward mobility may be constrained.

The most comprehensive evidence on CCTs and aspirations comes from Colombia's Familias en Acción program. García et al. (2019) used a difference-in-differences approach to analyze how program participation affected educational aspirations in poor households after more than one year of exposure. They found that parents were 11 percentage points more likely to aspire for their children to complete higher education, while children themselves were 20 percentage points more likely to aspire to higher education. These effects were particularly pronounced

⁴ The projective technique in Weinger's study (1998) involved showing children photographs of different types of houses (ranging from poor to wealthy homes), asking children to describe the people who might live in these houses, and asking about the career opportunities available to children living in these different homes

among the most socioeconomically disadvantaged households, suggesting that CCTs may be especially effective at raising aspirations among those at the lowest initial levels.

García et al. (2019) identified several mechanisms through which Familias en Acción may have increased educational aspirations. First, the cash transfers relaxed household budget constraints, leading parents to view education as a more feasible investment and therefore aspire to more education for their children. Second, the program included caregiving workshops and municipal assemblies that explicitly informed beneficiaries about the importance of education, potentially changing beliefs about education's value. Third, the program facilitated meetings between parents, teachers, and community leaders, exposing beneficiaries to influential figures who could shape aspirations through role modeling and information sharing.

Interestingly, these positive impacts contrast with findings from an earlier study of the same program. Contreras Suarez and Cameron (2016) found no impacts on parents' expectations for their children finishing secondary education and even a negative effect on the perceived probability of finishing tertiary education. García et al. (2019) attribute this discrepancy to changes in program design over time, noting that the early phase of Familias en Acción included information-delivery activities through workshops and assemblies that were later modified or eliminated. This suggests that specific design features, particularly components focused on information provision and social interaction, may be critical for generating impacts on aspirations.

Evidence from Mexico's Progresa program provides additional support for positive aspiration effects. Chiapa et al. (2012) found that the intervention increased parents' desire for their children to pursue more education. The effects were larger in households with young children and particularly where health clinic visits were mandatory, suggesting that interaction with professionals may play an important role in aspiration formation. Long-term follow-up studies of Progresa also show positive impacts on actual outcomes: childhood exposure to the program improved women's labor force participation by 21–38 percent and labor earnings by roughly 40 percent in early adulthood (Parker and Vogl 2021), suggesting that changes in aspirations may translate into improved economic outcomes.

Evidence from Indonesia's conditional cash transfer program provides further confirmation. Hartarto and Wardani (2021) found that program participation increased parental aspirations by approximately one additional year of schooling. This effect remained stable across various matching specifications, though the authors acknowledged limitations due to small sample size.

2.4. Mechanisms through which CCTs Influence Aspirations

CCTs can influence aspirations through several pathways. First, by reducing immediate financial pressures, cash transfers may relieve some of the mental burden of poverty as documented by Mullainathan and Shafir (2014), freeing up mental space for long-term planning and allowing families to think beyond immediate survival. This connects to Ray's (2002) theory of aspirations failure, where the gap between current circumstances and desired futures feels too wide to bridge. Cash transfers may make that gap feel more manageable. Second, by requiring behaviors like school attendance, CCTs may change how parents view the benefits of education and shift their beliefs about investing in schooling. Third, through group meetings and interactions with program staff, CCTs may provide new information about educational options and job opportunities. Fourth, by creating regular contact with schools and health centers, CCTs may expand families' social networks and expose them to people who can serve as role models or provide information about career possibilities.

Research beyond CCT programs supports the importance of role models for shaping aspirations. Beaman et al. (2012) showed that exposure to female leaders in randomly selected Indian village councils raised parents' aspirations for their daughters and closed the gender gap in adolescent aspirations. Bernard et al. (2014) documented how exposure to successful individuals shaped forward-looking behavior and aspirations in rural Ethiopia. Similarly, Macours and Vakis (2014) found that social interactions with local leaders, facilitated through a cash transfer program in Nicaragua, increased household investments in productive activities. These studies suggest that aspirations can be changed by both financial support and exposure to role models.

Despite this growing evidence, several important questions remain. First, most studies focus on educational aspirations rather than specific career aspirations. While education is important, the specific occupations that children aspire to may matter just as much for understanding their long-term economic outcomes. A child who aspires to complete high school might aim for very different occupations depending on their career goals, with very different earning potential and advancement opportunities.

Second, most evidence comes from Latin American countries, with only few from Asian contexts where labor markets, educational systems, and cultural norms may differ. Third, few studies examine whether aspiration effects differ by child age, gender, or other characteristics. Finally, the literature provides limited evidence on which specific program components work best at shaping aspirations, making it difficult to draw clear lessons for program design. The contrast between early and later phases of *Familias en Acción* suggest that design details matter, but we lack clear evidence on which components are essential.

These research gaps make examining the Philippine case important. Although 4Ps resembles Latin American CCTs in design, it operates in a different context. The answer to whether it produces similar career aspiration effects is unclear.

2.5. Evidence from Philippine 4Ps Evaluations

The Pantawid Pamilyang Pilipino Program has been subject to multiple impact evaluations since its inception in 2008. These evaluations have consistently documented positive effects on educational outcomes, which are the most direct targets of the program's education grants. However, the evidence on aspirational and motivational outcomes has been more mixed and limited.

The first impact evaluation, conducted in 2012, found that 4Ps was generally meeting its objective of keeping poor children in school, with strong positive impacts on school enrollment among children aged 3 to 11 years (DSWD and World Bank 2014). However, the evaluation suggested that improving educational outcomes for older children might require additional measures beyond the standard program components, such as expanding age coverage, increasing grant amounts for older students to match the higher opportunity costs of their time, and implementing parallel supply-side interventions to enhance educational access and quality in underserved areas.

The second impact evaluation in 2014 applied regression discontinuity design methodology to further assess the program's impact (DSWD 2014). While positive enrollment effects were observed among children aged 12 to 15, the study also found improvements in school attendance for younger children aged 3 to 5. Dropout rates for 12- to 15-year-olds declined in some specifications, suggesting that the program was helping to keep older children in school during critical transition points. The evaluation also found that 4Ps households allocated more

resources to education-related expenses, particularly school uniforms and clothing, indicating that the cash grants were being used as intended and were not entirely crowding out households' own educational investments.

The third impact evaluation in 2021 reaffirmed these positive educational effects, showing that 4Ps beneficiary children had higher average monthly school expenditures compared to non-beneficiaries (Orbeta, Melad, and Araos 2021). The consistency of educational impacts across three evaluations using different methodologies provides strong evidence that the program successfully promotes school participation and investment in children's education.

Beyond direct educational effects, the second evaluation examined parental aspirations for their children's future. The findings suggested that program participation encourages parents to aspire for better educational outcomes, aligning with the program's goal of breaking the intergenerational cycle of poverty by shifting family attitudes toward human capital investment (DSWD 2014). This aspirational shift is theoretically important, as parental aspirations have been shown in other contexts to be strong predictors of children's actual educational attainment and career outcomes.

However, the third evaluation found more nuanced results. While parental aspirations for their children's education did not differ significantly between 4Ps and non-4Ps households on average, parents of 4Ps beneficiaries reported higher expectations regarding the completion of different education levels compared to earlier evaluations (Orbeta, Melad, and Araos 2021). Some analyses, though not robust across all sample sizes, showed statistically significant impacts on parents' belief that their children would have a better future. This suggests that the program may be shaping hope and long-term expectations even if it has not significantly shifted the specific educational levels parents aspire to for their children.

The inconsistency in findings on parental aspirations across evaluations mirrors the pattern observed in Colombia's Familias en Acción, where results varied with program design changes. This suggests that impacts on aspirations may be sensitive to implementation details or measurement approaches in ways that impacts on school enrollment are not.

An important contribution of the third evaluation was its examination of socio-behavioral outcomes, particularly grit and determination. These non-cognitive skills are increasingly recognized as important predictors of academic and labor market success. The evaluation found that beneficiary children demonstrated greater grit compared to non-beneficiaries, especially in school-related challenges (Orbeta, Melad, and Araos 2021). A higher proportion of 4Ps children reported completing schoolwork before playing or resting, reflecting stronger perseverance and self-discipline. The evaluation documented higher overall grit scores among beneficiaries using validated psychological scales.

Given the potential implications of these findings for long-term educational and labor market outcomes, the study recommended further research into how 4Ps fosters the development of these socio-emotional skills. If the program successfully builds both educational attainment and the persistence needed to translate that education into career success, its long-term impacts could be substantial.

Despite the knowledge contributions of the past program evaluations, a significant research gap remains. We know little about how 4Ps influences children's own career aspirations and occupational goals. While international evidence suggests that CCT programs can affect educational aspirations, fewer studies have examined their role in shaping children's long-term

vision for their careers and adult work lives. This distinction is important because breaking the cycle of poverty depends not only on educational attainment but also on labor market success and occupational mobility.

Two children with the same level of education may pursue very different careers with different earning potential and advancement opportunities. Understanding whether and how 4Ps influences these career aspirations is crucial for assessing the program's potential to promote intergenerational mobility. If the program keeps children in school longer but does not expand their sense of what occupations are possible or desirable, its ability to break poverty cycles may still be limited.

Moreover, understanding children's own aspirations (rather than just parental aspirations) is important because children themselves will make the ultimate decisions about educational investments and career paths as they mature. If program impact on parental aspirations do not translate into changed aspirations among children themselves, the pathway from program participation to long-term mobility may be weakened.

This study addresses this gap by providing the first comprehensive analysis of career aspirations among 4Ps beneficiary children. We examine what occupations children dream of pursuing, how these aspirations compare to their parents' current employment and aspirations for them, and whether program participation is associated with more ambitious or different career goals. In doing so, we contribute both to the international literature on CCTs and aspirations and to understanding of the Philippine 4Ps program's full range of impacts.

3 Data and Methodology

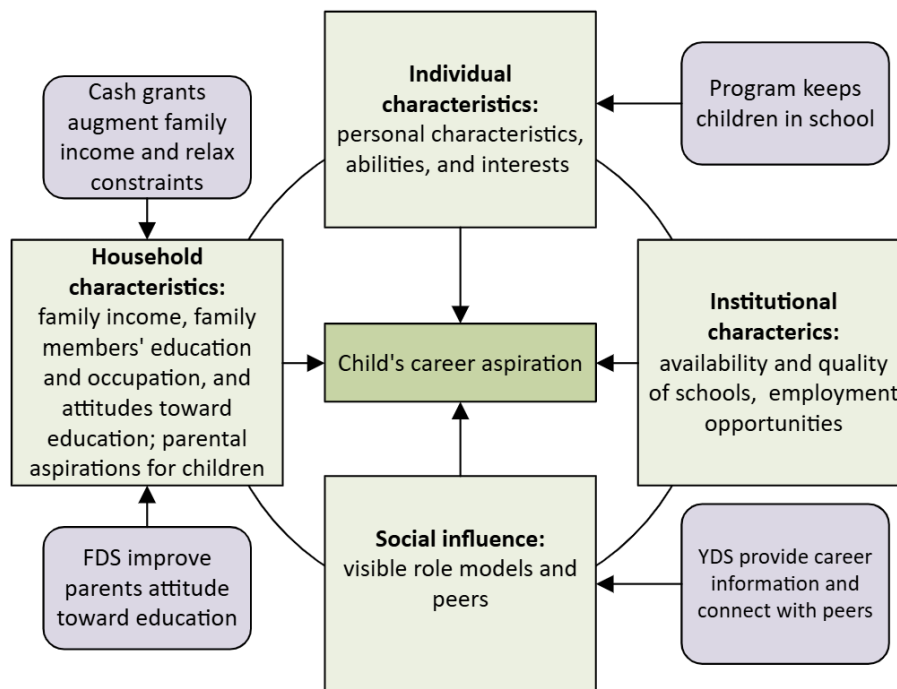
3.1. Conceptual Framework

Our analysis is grounded in a conceptual framework that recognizes career aspirations as products of multiple influences operating at different levels. At the individual level, a child's personal characteristics, cognitive and non-cognitive abilities, educational experiences, and interests naturally shape what careers they consider possible or desirable. Children with strong academic performance may aspire to professions requiring extensive education, while those with specific talents or interests may gravitate toward careers that allow them to exercise those abilities.

At the household level, family characteristics create an environment that either expands or constrains a child's vision of possible futures. Parental education and occupation serve as both informational inputs and role models by showing children concrete examples of what work looks like and what is attainable for people from their background. Household income affects the feasibility of pursuing different career paths, particularly those requiring extended education. Parental attitudes toward education and their aspirations for their children may directly shape what children believe is expected or possible for them. Research has consistently shown that parental aspirations are among the strongest predictors of children's educational and occupational outcomes.

At the community level, the availability of quality schools determines access to the education necessary for high-skilled careers. Local employment opportunities and the visible success of community members in different occupations provide concrete examples of what is achievable and shape children's understanding of the labor market. Peers and role models in the community can expand or limit children's sense of what is normal or attainable for people like them.

Figure 1. Conceptual Framework



Source: Authors' design

Within this multi-level framework, we conceptualize the 4Ps program as potentially influencing career aspirations through three main pathways. First, through the education pathway, the program's educational subsidies and school attendance requirements keep children in school longer, potentially expanding their awareness of different career possibilities and their qualifications for skilled occupations. Extended schooling may expose children to more information about careers, provide them with skills needed for higher-level work, and connect them with teachers and counselors who can provide career guidance.

Second, through the income pathway, additional household income from cash grants may reduce financial pressure that would otherwise force children into early work or limit their educational investments. By easing financial constraints, the program may allow families to take a longer-term view and invest in career paths that require extended education but offer better prospects. The income may also reduce the psychological stress of poverty, freeing up cognitive resources for future planning as described by Mullainathan and Shafir's scarcity framework.

Third, through the information pathway, program components beyond cash transfers may directly provide information and shape attitudes about future possibilities. Family Development Sessions attended by parents may change parental attitudes about the value of education and their aspirations and expectations for their children's futures. Youth Development Sessions may provide direct career information and encouragement to children, expose them to discussions about future possibilities, and help them develop goal setting and planning skills. These sessions may also create peer effects, as children hear about other participants' aspirations and plans.

This framework guides our empirical analysis in several ways. First, it suggests that any analysis of program impacts on aspirations must account for the many individual, household,

and community factors that also influence aspirations. Second, it implies that the program's effect may operate through multiple channels, and that understanding these mechanisms requires examining not just whether the program affects aspirations but how it does so. Third, it highlights that even if the program shows no overall effect on aspirations, this could mask offsetting effects through different pathways or heterogeneous effects for different subgroups.

3.2. *Data Source and Sample*

We utilize data from the IE4 survey of the 4Ps, conducted in 2024. The survey employed a regression discontinuity design, interviewing households both above and below the program eligibility threshold based on their poverty assessment scores from the DSWD's National Household Targeting System for Poverty Reduction (NHTS or 'Listahanan'). This design allows for causal inference about program impacts by comparing otherwise similar households that differ primarily in their program eligibility status.

An important feature of this survey was a direct question about career aspirations. Children aged 10 to 25 were asked in Filipino: "*Ano ang iyong pangarap na trabaho o hanapbuhay?*" (What is your dream job or occupation?) We selected this age range because children below age 10 may not have well-formed career aspirations, while including young adults up to age 25 allows us to examine whether aspirations persist as these youth enter the labor market.

This open-ended question allowed children to express their aspirations in their own words rather than selecting from predetermined categories. While this approach captures the full range of children's aspirations without imposing researcher assumptions, it requires substantial data processing to standardize and code the diverse responses for analysis.

The survey collected extensive additional data that allows us to examine the correlates of career aspirations. The main household questionnaire, Module A, gathered comprehensive socioeconomic data including household composition, labor force participation, social service utilization, economic difficulties, and detailed income and expenditure information. This module also included cognitive assessments using Raven's Progressive Matrices and functional literacy tests for both children and adults, providing measures of cognitive ability that may influence career aspirations.

Module C focused specifically on children, collecting detailed information on school participation for children aged 6 to 25 and labor participation for those aged 10 to 25. This module captured not only current educational and work status but also educational history and experiences. Importantly, responses could come from either the child's guardian or the child themselves, with the survey instrument designed to capture the most accurate information possible. This module is where the career aspiration question was embedded, alongside questions about current educational attainment and activities.

Module I measured cognitive and non-cognitive indicators for both children and adults using validated psychological scales. This included measures of grit, perseverance, self-control, and other socio-emotional skills that previous research has linked to both educational success and labor market outcomes. These measures allow us to examine whether children with stronger non-cognitive skills have different aspiration patterns and whether the program's documented impacts on grit translate into different career aspirations.

Module H collected barangay-level characteristics and supply-side indicators in the study areas. This module provides important context about the local educational and health service

environment that may influence both program implementation and children's developmental outcomes.

3.3. Data processing

The open-ended career aspiration responses required substantial processing to create usable variables for analysis. We implemented a multi-stage coding process to categorize occupations.

First, we coded all occupation responses using the 2022 Philippine Standard Occupational Classification (PSOC), which provides a standardized taxonomy of occupations in the Philippines. The PSOC organizes occupations hierarchically into major groups, sub-major groups, minor groups, and unit groups. For our descriptive analysis, we primarily use the major group classification, which includes ten broad categories: managers; professionals; technicians and associate professionals; clerical support workers; service and sales workers; skilled agricultural, forestry, and fishery workers; craft and related trades workers; plant and machine operators and assemblers; elementary occupations; and armed forces occupations.

The coding process involved careful review of the verbatim responses and assignment to the most appropriate PSOC category. When responses provided sufficient detail, we coded to more specific sub-major or minor group levels. However, many responses were general (for example, simply stating 'teacher' or 'nurse' without specialization), so the major group classification provides the most consistent level for analysis. We made some adjustments to the standard PSOC categories based on the level of detail available in the data and to ensure meaningful groupings for analysis.

To move beyond categorical classifications and create a continuous measure of aspiration level, we matched each child's stated career aspiration to the average daily basic pay earned by workers in that occupation. We used data from the Family Income and Expenditure Survey (FIES) pooled across 2018, 2021, and 2023. Using multiple years of FIES data provided estimates of average occupational earnings that are less sensitive to year-specific shocks or measurement errors.

This indicator provides a market-based measure of the economic value of different occupations. Professional and managerial occupations have the highest average earnings, while elementary and agricultural occupations have the lowest. By assigning each child's aspiration with a corresponding average income from FIES data, we examined whether 4Ps participation is associated with aspiring to higher-earning occupations.

For children already working, we compared their current occupation to their stated aspiration to identify gaps between current employment and career goals. This is particularly relevant for older youth in the sample who may have entered the labor market while still maintaining aspirations for different careers in the future. Understanding these gaps helps identify whether youth are in occupations below their aspirations or are successfully pursuing their dream careers.

3.4. Analysis

Our analytical strategy proceeds through several stages, each addressing different research objectives. We begin with descriptive analysis to document the career aspirations of children in both 4Ps and non-4Ps households. This includes tabulating the frequency of different occupation categories, examining how aspirations vary by child age and gender, comparing

children's aspirations with their parents' current occupations and parental aspirations for their children, as well as comparing children's current employment with their stated aspirations.

The descriptive analysis serves multiple purposes. First, it provides a profile of what economically disadvantaged Filipino children aspire to become, contributing to knowledge about career aspirations in this population. Second, it allows us to assess the alignment or misalignment between children's aspirations, parental aspirations, and current household circumstances. This can reveal whether aspirations represent realistic extensions of family trajectories or deviations from parental circumstances. Third, by comparing aspiration patterns between 4Ps and non-4Ps children descriptively before conducting causal analysis, we can identify differences that warrant more rigorous examination.

To obtain credible causal estimates of the program's effect on career aspirations, we employ a regression discontinuity design that exploits the program's eligibility rules. Households are eligible for 4Ps if their poverty score from the Listahanan assessment falls below a specific threshold. This creates a discontinuity in the probability of program participation at the threshold. By comparing households just below the threshold (eligible) to those just above it (ineligible), we can estimate the causal effect of program eligibility on outcomes, assuming that households on either side of the threshold are otherwise similar except for their eligibility status.

The RDD analysis examines multiple outcome measures to capture different dimensions of career aspirations. The primary outcome is the average daily basic pay associated with the child's aspired occupation (log transformed), which provides a continuous measure of the income level of aspirations. Secondary outcomes include the probability of aspiring to a professional occupation, the probability of aspiring to service and sales work, and other jobs. By examining multiple outcomes, we can assess whether the program affects not just the income level but also the type of careers children aspire to.

We initially considered using a local randomization (LR) framework for RDD inference, which treats assignment as approximately random within narrow windows around the threshold. However, our analytical sample is a subset of the original RDD sample as designed in the sampling framework. Balance tests across a range of symmetric windows around the cutoff indicate that while individual covariates are generally balanced, joint balance tests reject the null of random assignment for most window sizes. This suggests limited support for a strict local randomization design. Consequently, our analysis primarily relies on continuity-based RDD estimates.

We implement the RDD using local linear regression following the procedures developed by Calonico, Cattaneo, and Titiunik (2014) and implemented in the `rdrobust` package (Cattaneo, Idrobo, and Titiunik 2020). The running variable is the poverty score centered at the eligibility threshold. For each outcome, we estimate the treatment effect using local linear regressions fitted separately on each side of the cutoff, allowing the slope of the relationship between the running variable and outcome to differ for eligible and ineligible households. The impact estimate is the difference in the intercepts of these two regression lines at the threshold, which represents the causal effect of crossing the eligibility threshold under the identifying assumptions.

The basic RDD specification is:

$$Y_{ic_h} = \alpha + \tau D_h + \beta_1 X_h + \beta_2 (X_h \times D_h) + \varepsilon_{ic_h}$$

where Y_{ic_h} is the outcome for child i in household h in community c ; D_h is an indicator equal to 1 if household h 's poverty score is below the eligibility threshold (eligible) and 0 otherwise (ineligible); X_h is the running variable (poverty score centered at the threshold); $X_h \times D_h$ is the interaction term allowing different slopes on either side of the threshold; and τ is the treatment effect of interest, representing the causal impact of eligibility on aspirations. The error term ε_{ic_h} was clustered at the barangay level to account for within-community correlation.

More formally, the local linear RDD estimator can be expressed as:

$$\hat{\tau} = \lim_{c \downarrow} E[Y|X=c] - \lim_{c \uparrow} E[Y|X=c]$$

where c is the eligibility threshold, and the limits from below and above represent the expected outcomes for households just below and just above the threshold, respectively. In practice, these limits are estimated using weighted local linear regressions within a bandwidth h on each side of the threshold:

$$Y_i = \alpha^+ + \beta^+(X_i - c) + \varepsilon_i \quad \text{for } X_i \geq c \text{ (ineligible)}$$

$$Y_i = \alpha^- + \beta^-(X_i - c) + \varepsilon_i \quad \text{for } X_i < c \text{ (eligible)}$$

The treatment effect is estimated as $\hat{\tau} = \alpha^- - \alpha^+$, the difference in the intercepts at the threshold.

Bandwidth selection is a critical choice in RDD estimation, as it determines which observations are included in the analysis and thus affects both the bias and variance of the estimates. We follow the data-driven bandwidth selection procedure proposed by Calonico, Cattaneo, and Titiunik (2014, 2018), which selects the optimal bandwidth by minimizing the mean squared error of the point estimator. This approach balances the bias from using observations far from the threshold against the variance from using too few observations. The `rdrobust` package implements this bandwidth selector and we report results using these optimal bandwidths as our main specification.

To assess the sensitivity of our results to bandwidth choice, we also report estimates using bandwidths at 50%, 75%, 125%, and 150% of the optimal bandwidth. This allows us to examine whether the estimated effects are stable across different local windows around the threshold or are sensitive to the specific bandwidth chosen. We use triangular kernel weights, which assign higher weight to observations closer to the threshold, as recommended by Cattaneo, Idrobo, and Titiunik (2020) for their boundary optimality properties. We also conduct further robustness checks by including covariates as controls to improve precision and assess whether treatment effects are robust to conditioning on observables.

Following the causal analysis using RDD, we conduct multinomial logit regression to examine the correlates of career aspirations. We estimate models where the dependent variable is the child's aspired occupation category, classified into three groups: (1) Professional occupations, (2) Service and sales workers, and (3) Others (base category,

including managers, technicians, clerical workers, agricultural workers, craft workers, plant operators, and elementary occupations). The key independent variables include child characteristics such as age, gender, current employment and enrollment status, and non-cognitive skills (grit index); household characteristics including parental aspirations for the child, household head's occupation, per capita income, and social pension beneficiary status; program-related variables such as 4Ps participation and attendance at parenting sessions; and community characteristics such as urban or rural location and functional literacy levels.

For the multinomial logit specification, we estimate:

$$\Pr(Y_{ihc} = j) = \exp(X_{ihc}\beta_j) / \sum_k \exp(X_{ihc}\beta_k)$$

where Y_{ihc} is the occupation category aspired to by child i in household h in community c ; j indexes the occupation categories ($j = 1$ for Professional, $j = 2$ for Service/Sales, $j = 3$ for Others); X_{ihc} is a vector of child, household, and community characteristics; and β_j represents the coefficients for category j relative to the base category. Standard errors are clustered at the barangay level to account for within-community correlation.

These regression models allow us to identify which factors are associated with different types of aspirations, holding other factors constant. However, because many variables are potentially endogenous, we interpret these associations as correlations rather than causal relationships. For example, parental aspirations and household income are likely correlated with unobservable characteristics that also affect children's career goals. The multinomial logit results complement our regression discontinuity analysis, which provides causal estimates of program effects, by revealing the broader constellation of factors associated with aspiration formation.

3.5. Description of Sample

While the full survey collected data from 6,887 households across the Philippines, we focus on 9,958 children aged 10 to 25 from 5,357 of these households. Table 1 presents the distribution of sample households by Listahanan eligibility status (below or above the threshold) and 4Ps payment status. Of the 5,357 households in our analytical sample, 2,519 (47%) were below the eligibility threshold (eligible or treated group) and 2,838 (53%) were above the threshold (ineligible or comparison group).

Table 1. Distribution of Sample Households by Listahanan Eligibility Status and 4Ps Payment Status

Listahanan 1 Category	Never Paid		Paid at least Once ¹		Total
Above threshold/ineligible	2,530	(0.891)	308	(0.109)	2,838
Below threshold/eligible	73	(0.029)	2,446	(0.971)	2,519
Total	2,603	(0.486)	2,754	(0.514)	5,357

Note: 1/Paid for at least one monitoring period based on administrative records provided by the DSWD

2/ Parentheses show proportion of L1 category by payment status

The table demonstrates a strong first stage relationship between eligibility and program participation, which is critical for the validity of our regression discontinuity design (see also graphical representation in Appendix Figure E). Among eligible households (below threshold), 97.1% received 4Ps payments at least once, compared to only 10.9% of ineligible households (above threshold). This sharp discontinuity in treatment assignment at the eligibility cutoff

provides the quasi-experimental variation we exploit to estimate causal effects. The small proportion of ineligible households receiving payment (10.9%) likely reflects measurement error in poverty assessment scores, successful appeals, or changes in household circumstances over time. Similarly, the 2.9% of eligible households that never received payment may reflect program implementation challenges or households declining to participate for various reasons.

Our analytical sample of 9,958 children includes 5,218 from eligible households (treated group) and 4,740 from ineligible households (comparison group). This provides a reasonably balanced comparison between the two groups. The sample spans the full age range from 10 to 25 years and includes representation from urban and rural areas, different regions of the Philippines, and varying poverty levels near the program eligibility threshold.

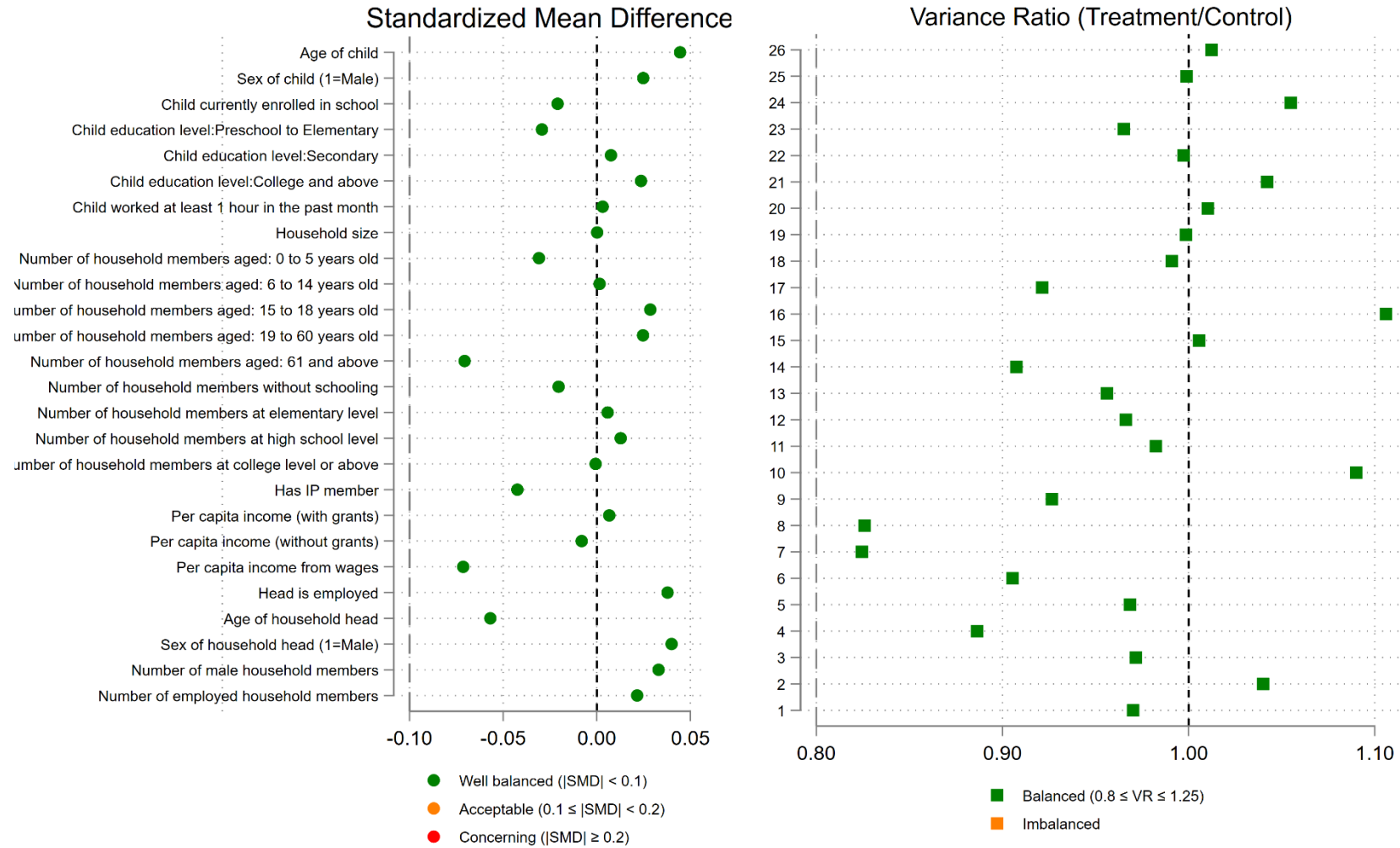
To provide context for interpreting our results and to validate our regression discontinuity design, we examine the characteristics of children and households in our sample. Table A in the Appendix presents summary statistics for key child and household characteristics, comparing the eligible or treated group with the ineligible or comparison group.

The children in our sample have an average age of approximately 16 years, with similar age distributions across both groups. Appendix Figure A shows the age distribution of children by eligibility status and sex. The distributions peak around ages 15-16 years and overlap closely between eligible and ineligible groups within each sex category, indicating acceptable age balance. Just over half (50-52%) of children in the sample are male. Most children remain enrolled in school (89-90%), with the majority at the secondary level (59%). About 17-18% have reached college level, while 24-25% are still in preschool or elementary education. Only 7% of children worked at least one hour in the past month.

Turning to household characteristics, the average household has approximately 5 members. The typical household includes about one child 6-14 years old, 0.7 children 15-18 years old, and 2.4 adults 19-60 years old. Educational attainment within households is relatively low: on average, households have 1.7 members at elementary level and 2.9 members at high school level, with only 1.1 members having reached college level or above. About 7-9% of households have at least one reported Indigenous People (IP) member. Household heads in the sample are on average 51 years old, with about 70% being male. Approximately 75-76% of household heads are employed.

To test similarity between the treated and comparison groups in terms of these characteristics, Figure 2 presents a balance test using standardized mean differences (SMD) and variance ratios between the two groups. The results demonstrate balance for most variables. The vast majority of characteristics show standardized mean differences well below 0.1 (indicated by green markers), which is the conventional threshold for good balance. Variance ratios also cluster around 1.0 for most variables, indicating similar dispersion of characteristics across groups. A few variables show slightly larger differences, but these remain within acceptable ranges and are likely due to chance variation given the large number of comparisons.

Figure 2. Balance of Child and Household Characteristics by Treatment Status



4 Results and Discussion

4.1. Distribution of Career Aspirations by Occupation Group

The career aspirations of children in our sample reveal strong preferences for certain occupation categories. Table 2 presents the distribution of career aspirations by major occupation groups, comparing children from eligible (4Ps) and ineligible (non-4Ps) households. The distribution shows both similarities and subtle but statistically significant differences between the two groups.

Table 2. Distribution of Career Aspirations by Major Occupation Group: 4Ps vs Non-4Ps Children

Occupation Group	All		4Ps		Non-4Ps		Diff (pp)
	n	(%)	n	(%)	n	(%)	
Professionals	4,706	47.3	2,251	46.5	2,455	47.9	-1.40
Service and Sales Workers	2,906	29.2	1,438	29.7	1,468	28.7	1.06
Armed Forces Occupations	607	6.1	311	6.4	296	5.8	0.65
Plant and Machine Operators and Assemblers	540	5.4	256	5.3	284	5.5	-0.25
Managers	457	4.6	225	4.7	232	4.5	0.12
Technicians and Associate Professionals	341	3.4	141	2.9	200	3.9	-0.99
Clerical Support Workers	190	1.9	96	2.0	94	1.8	0.15
Craft and Related Trades Workers	143	1.4	79	1.6	64	1.2	0.38
Elementary Occupations	35	0.4	19	0.4	16	0.3	0.08
Skilled Agricultural, Forestry and Fishery Workers	33	0.3	21	0.4	12	0.2	0.20
Total	9,958	100.0	4,837	100.0	5,121	100.0	

Note: Percentages may not sum to exactly 100% due to rounding. Diff (pp) = Percentage point difference (4Ps % minus Non-4Ps %). Chi-square test: $\chi^2 = 17.51$, $df = 9$, $p = 0.042$.

The most notable finding is the dominant role of professional occupations in children's aspirations. Nearly half of all children (47.3%) aspire to professional careers, which includes occupations such as teachers, nurses, engineers, and doctors. This category is the most popular across both groups, though slightly less common among 4Ps children (46.5%) than non-4Ps children (47.9%). The strong preference for professional careers reflects the high social status and relatively good earning potential associated with these occupations, as well as their visibility in communities and media.

Service and sales work represents the second most common aspiration, accounting for 29.2% of all responses. This category includes occupations such as police officers, security guards, salespeople, and service workers. Interestingly, 4Ps children are slightly more likely to aspire to service and sales occupations (29.7%) compared to non-4Ps children (28.7%), a difference of 1.06 percentage points. This may reflect greater familiarity with these occupations in poor communities or different perceptions of which careers are accessible.

The remaining occupation categories each account for less than 10% of aspirations. Armed forces occupations attract 6.1% of children, with slightly higher interest among 4Ps children (6.4%) than non-4Ps children (5.8%). Plant and machine operators (5.4%), managers (4.6%), and technicians and associate professionals (3.4%) each represent modest shares of aspirations. Notably, technicians and associate professionals are less common among 4Ps children (2.9%) than non-4Ps children (3.9%), a difference of 0.99 percentage points.

Very few children aspire to elementary occupations (0.4%) or skilled agricultural work (0.3%), despite these being common employment categories for their parents. This dramatic difference between parental occupations and children's aspirations demonstrates strong desires for upward mobility. The near absence of agricultural aspirations is particularly noteworthy given that many families in the sample likely engage in agricultural activities. This suggests that children view agriculture as offering limited opportunities for advancement or economic security.

A chi-square test examining whether the distribution of aspirations differs between 4Ps and non-4Ps children yields a statistically significant result ($\chi^2 = 17.51$, $df = 9$, $p = 0.042$). While statistically significant, the substantive differences are modest. The largest differences are the 1.40 percentage point lower share of professional aspirations among 4Ps children and the 1.06 percentage point higher share of service and sales aspirations. These small differences suggest that program participation is not considerably influencing the types of careers children aspire to, though it may be producing subtle shifts in aspiration patterns.

Beyond examining the distribution across occupation categories, we assessed the concentration of aspirations using the Herfindahl Index (H), which ranges from 0 (perfect diversity) to 1 (perfect concentration). The index for ineligible (non-4Ps) children is 0.323, compared to 0.316 for eligible (4Ps) children, indicating very similar levels of concentration. Converting these to "effective number of occupation groups" ($1/H$) yields 3.10 for ineligible children and 3.17 for eligible children, meaning aspirations in both groups concentrate in roughly three occupation categories rather than spreading evenly across all ten available options. This concentration confirms that both groups channel their aspirations heavily into professional and service occupations. The nearly identical diversity measures (difference of 0.007 in H) indicate that program eligibility is not meaningfully associated with broader or narrower career consideration.

The occupation categories where eligible and ineligible children differ most are service and sales workers (1.1 percentage points higher among eligible children), professionals (1.4 percentage points lower among eligible children), and technicians and associate professionals (1.0 percentage points lower among eligible children). The higher representation of eligible children in service and sales work, armed forces occupations (0.6 percentage points), and craft trades (0.4 percentage points) offset their lower representation in professional categories. These differences, while statistically significant in aggregate, represent modest shifts in the distribution rather than fundamental differences in aspiration patterns.

4.1.1. Top Ten Career Aspirations

While the previous analysis examined broad occupation categories, a more detailed look at specific occupations reveals which particular careers dominate children's aspirations. Figure 3 presents the top 10 most frequently mentioned dream jobs, showing the percentage of children in each group who aspire to each occupation.

Police officer emerges as the single most popular career aspiration, mentioned by 29.3% of eligible (4Ps) children and 28.6% of ineligible (non-4Ps) children. This occupation represents nearly three in ten children's dream jobs. The appeal of police work likely reflects multiple factors: high visibility in communities, clear pathways to entry through the Philippine National Police recruitment process, perceived job security through government employment, and the social respect associated with law enforcement. The similar popularity across both groups

suggests that these factors resonate equally with children regardless of household eligibility status.

Teaching professionals rank as the second most common aspiration, mentioned by 26.8% of eligible children and 28.9% of ineligible children. The appeal of teaching careers could reflect visibility as children interact daily with teachers. Teaching is slightly more popular among ineligible children, contributing to their higher overall professional aspiration rate noted earlier.

Nursing professionals represent the third major category, attracting 9.4% of eligible children and 8.0% of ineligible children. The prominence of nursing aspirations reflects both domestic and international labor market realities. The Philippines is a major source country for nurses globally, and children are likely aware of the opportunities for overseas employment and relatively high earnings associated with nursing careers. The visibility of nurses in local health facilities, particularly through families' interactions with the health system as part of 4Ps conditionalities, may also contribute to nursing's appeal.

Commissioned armed forces officers attract 8.1% of eligible children and 7.3% of ineligible children, making military careers the fourth most popular aspiration category. This complements the high interest in police work, suggesting that uniformed government service holds broad appeal. Military careers offer structured advancement, benefits, and social prestige similar to police work, while also providing opportunities for specialized technical training.

The remaining occupations in the top 10 each attract between 3.5% and 6.5% of children. Ship deck crews and related workers (6.5% eligible, 6.8% ineligible) represent aspirations toward maritime employment, an important sector in the Philippines given its geography and the prevalence of overseas Filipino workers in the maritime industry. Engineering professionals (6.0% eligible, 6.1% ineligible) and medical doctors (3.5% for both groups) reflect interest in high-status professional careers requiring extensive education. Travel attendants and stewards (4.9% eligible, 4.6% ineligible) and business services managers (4.0% eligible, 3.8% ineligible) suggest awareness of service sector opportunities.

Chefs represent the tenth most common aspiration, mentioned by 1.6% of eligible children and 2.4% of ineligible children. This serves as a natural breakpoint, as aspirations become much more dispersed beyond the top 10, with hundreds of different occupations mentioned by small numbers of children.

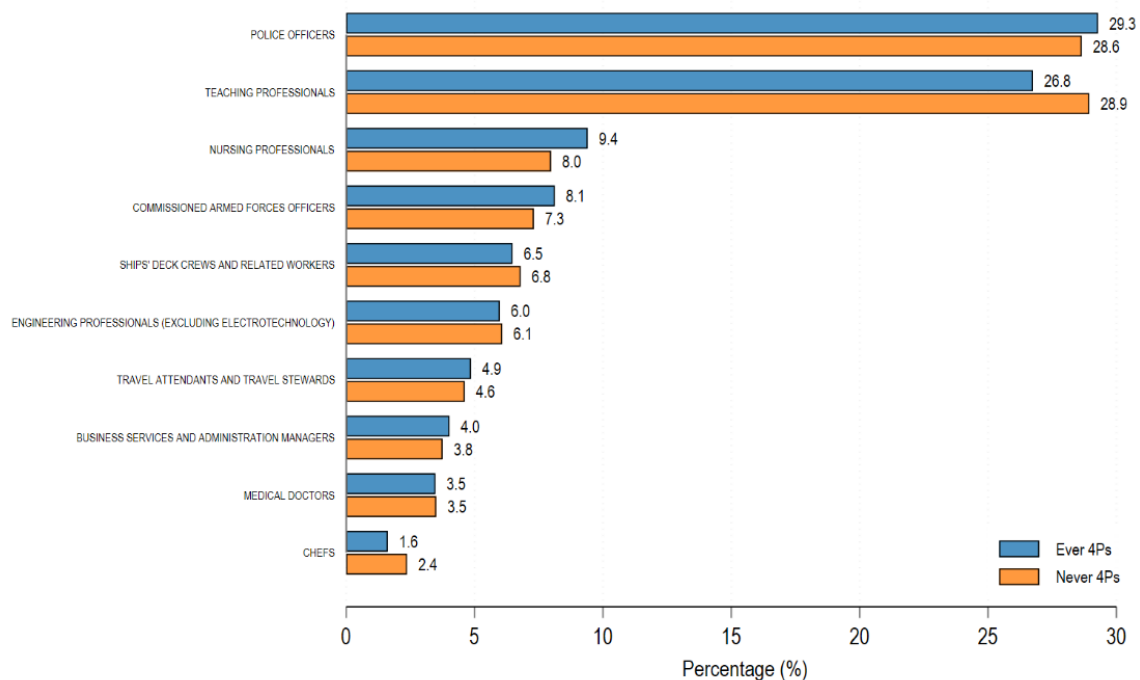
The concentration of aspirations in a relatively small number of occupations is notable, similar to earlier observations. The top two occupations alone (police officers and teaching professionals) account for over half of all career aspirations. The top five occupations represent more than 70% of responses. This concentration suggests that children's awareness of career options may be limited to the most visible occupations in their communities and media. While the earlier analysis showed strong desires for professional careers generally, this more detailed examination reveals that those aspirations are channeled toward a narrow set of specific professions.

The similarity in aspiration patterns between eligible and ineligible children extends to specific occupations. The rank ordering is nearly identical across groups, and the percentage differences are modest for most occupations. The largest difference is for teaching (2.1 percentage points higher among ineligible children) and police work (0.7 percentage points higher among eligible children). These small differences reinforce the earlier finding that program eligibility is

associated with statistically significant but substantively modest differences in career aspirations.

The specific occupations that dominate aspirations share several characteristics: they are visible in communities, have clear entry requirements and pathways, offer government employment or stable private sector jobs, and carry social prestige. Notably absent from the top 10 are entrepreneurial aspirations, private sector business careers outside of management, and most technical or vocational occupations. This pattern suggests that children's aspirations are shaped primarily by the occupations they observe directly rather than by comprehensive information about the full range of labor market opportunities available to them.

Figure 3. Top 10 Most Common Career Aspirations by Specific Occupation



Note: Percentages show proportion of children in each group aspiring to each occupation. Blue bars represent eligible (4Ps) children; orange bars represent ineligible (non-4Ps) children. N = 9,958 children aged 10-25 years. Source of basic data: IE4 Survey

The distribution of children's career aspirations contrasts with actual labor market demand. Table 3 presents the top 10 most in-demand occupations in the Philippine labor market based on job postings in the first half of 2025. The most sought-after positions include accounting (11.81% of job postings), information and communication technology (11.14%), sales (10.10%), and call center and customer service roles (9.98%). These occupations collectively represent the backbone of the Philippines' growing service economy and business process outsourcing sector.

Comparing children's aspirations (Figure 3) with labor market demand (Table 3) reveals significant mismatches. While nearly 30% of children aspire to become police officers, law enforcement represents only a small fraction of available employment opportunities. Similarly, teaching professionals, the second most popular aspiration among children, face limited absorption capacity as the number of teaching positions is constrained by school budgets and

student-teacher ratio policies. In contrast, accounting and ICT positions, which together account for nearly 23% of job demand, rarely appear in children's stated aspirations.

The occupations that dominate labor market demand require specific technical skills and certifications that may not be well understood by children in our sample. Information and communication technology roles require programming skills, database management expertise, or technical support capabilities. Accounting positions require professional certification and specialized training in financial systems. Call center and customer service work, while more accessible, requires strong English communication skills and often specific training in customer relationship management systems.

Table 3. Top 10 Most In-Demand Jobs in the Philippine Labor Market (January to June, 2025)

Rank	Occupation Category	Share of Job Postings (%)
1	Accounting	11.81
2	Information & Communication Technology	11.14
3	Sales	10.1
4	Call Center & Customer Service	9.98
5	Manufacturing, Transport & Logistics	8.12
6	Administration & Office Support	6.43
7	Retail & Consumer Products	5.4
8	Marketing & Communications	5.09
9	Human Resources & Recruitment	5.09
10	Engineering	4.74

Source: JobStreet Philippines, H1 2025. Note: Percentages represent share of total job postings on major job platforms.

Several factors may explain this aspiration-demand mismatch. First, the occupations children aspire to are highly visible in their communities and daily lives. Children interact with teachers and police officers regularly, making these careers tangible and understandable. In contrast, ICT professionals, accountants, and call center workers may be less visible in poor communities, even though these occupations offer substantial employment opportunities. Second, children may lack detailed information about the skills required for high-demand occupations and the pathways to acquire those skills. Third, the aspirations children express may reflect idealized notions of occupation prestige rather than practical consideration of labor market opportunities.

This mismatch has important implications for education and career guidance policies. If children aspire primarily to occupations with limited absorption capacity while remaining unaware of growing sectors with substantial demand, many may face difficulties translating their aspirations into actual employment. The concentration of aspirations in a narrow set of occupations, combined with limited awareness of high-demand fields, suggests that career information and guidance interventions could play a valuable role in helping youth make informed decisions about their educational investments and career paths.

Notably, engineering appears in both children's aspirations (6.0-6.1% of children) and labor market demand (4.74% of job postings), suggesting some alignment in this area. However,

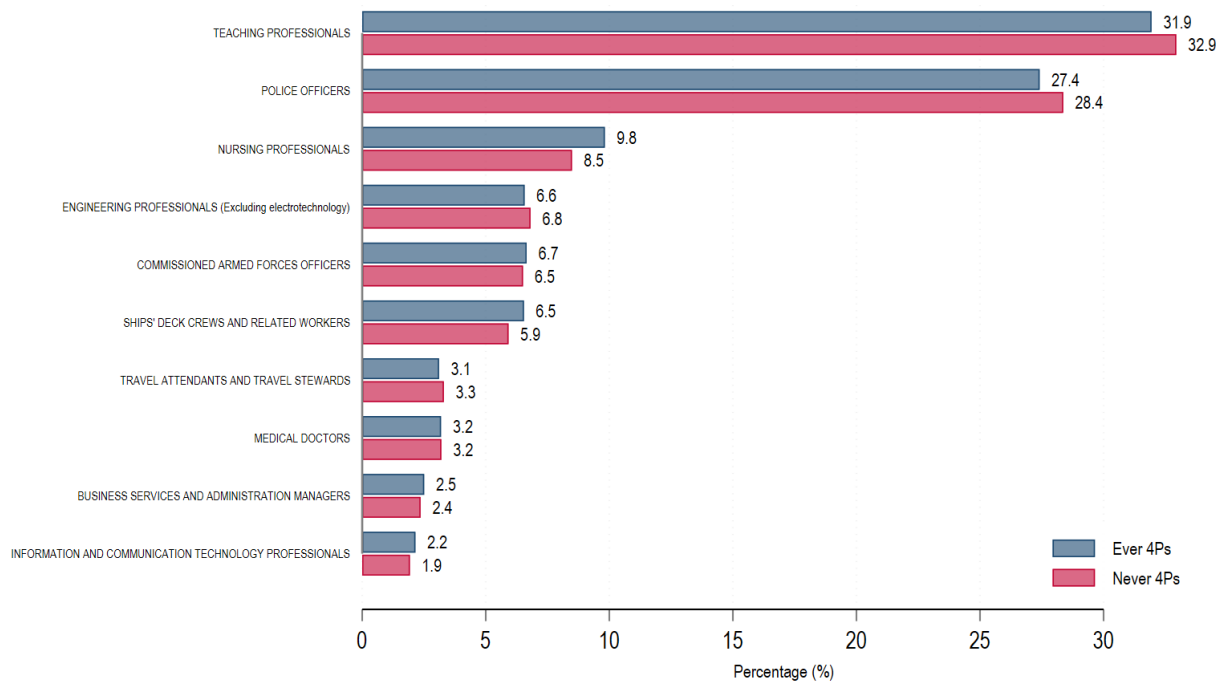
even for engineering, the specific types of engineering skills demanded by the market (such as software engineering, data engineering, or industrial engineering) may differ from what children envision when they express engineering aspirations.

The data suggest that while children from both eligible and ineligible households demonstrate ambitious career aspirations, these aspirations may not be well calibrated to actual labor market opportunities. Bridging this gap would require not just keeping children in school longer through programs like 4Ps, but also providing career information, exposure to diverse occupations, and guidance on the skills and qualifications required for high-demand fields. Without such interventions, even children who successfully complete their education may struggle to find employment aligned with their aspirations or may need to significantly adjust their career goals as they enter the labor market.

Parents' aspirations for their children show a similar distribution to children's own aspirations, with concentration in professional and service occupations. The alignment between parental and child aspirations suggests that children's career goals are influenced by parental expectations and encouragement. The data reveals both alignment and divergence in aspiration patterns. Among children who aspire to service and sales work, a portion have parents who aspire for them to enter professional occupations, which may reflect parental preferences for higher-status careers. Similarly, some children aspire to professional work while their parents envision service occupations for them, which could indicate children's exposure to information or role models beyond the household.

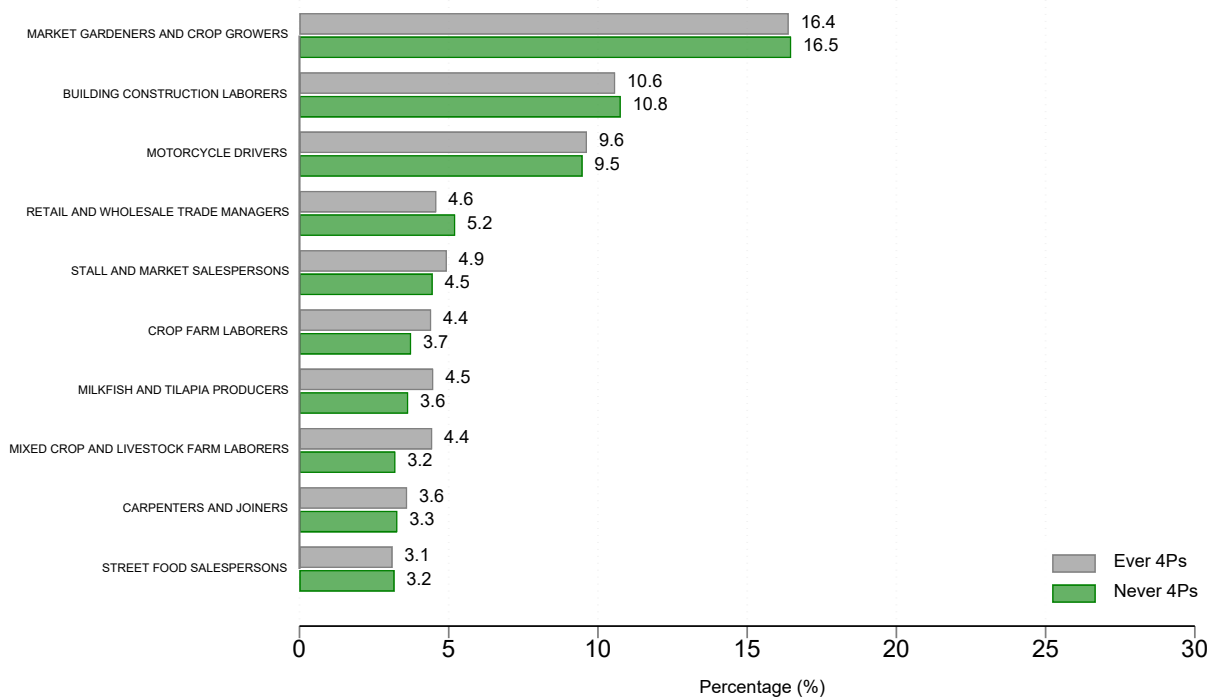
The contrast between children's aspirations and household heads' current occupations is more substantial. While children concentrate on aspirations in professional and service work, household heads work predominantly in elementary occupations (such as domestic work, cleaning, or manual labor) and agricultural work. This gap between current parental employment and children's aspirations indicates a desire for upward mobility across both eligible and ineligible households. The aspirations of children to achieve different occupational outcomes than their parents appear common in this population, regardless of program participation status.

Figure 4. Top 10 Most Common Career Aspirations of Parents for their Children by Specific Occupation



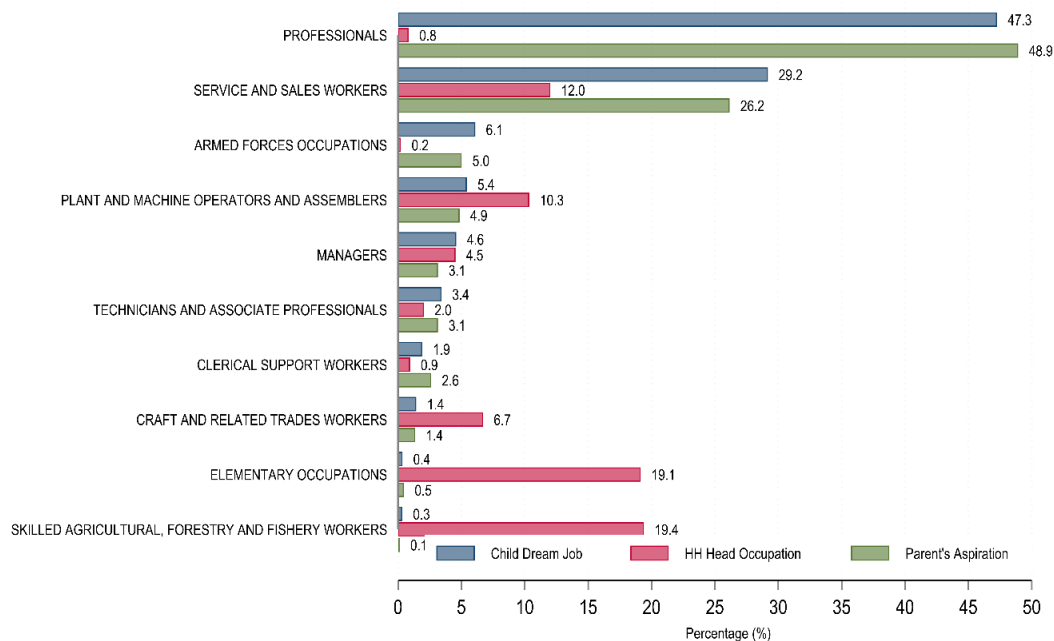
Source of basic data: IE4 Survey

Figure 5. Top 10 Most Common Occupations of Household Heads



Source of basic data: IE4 Survey

Figure 6. Career Aspirations of Children, Parent’s Career Aspiration for their Children, and Current Household Occupation by Major Occupation Group



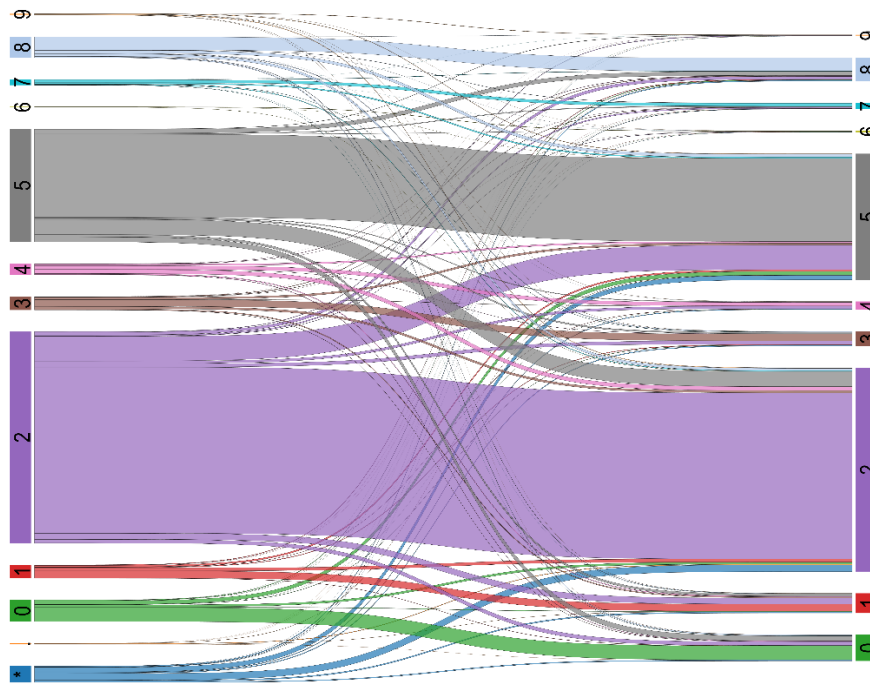
Source of basic data: IE4 Survey

To further illustrate intergenerational patterns, Figures 7 and 8 present Sankey diagrams to visualize how parental contexts relate to children's career aspirations. Figure 7 shows the relationship between what parents want for their children and what children want for themselves. The large flows along the diagonal show that parents and children often agree, especially for professionals (category 2) and service and sales workers (category 5). However, the diagram also shows cross-flows where children's goals differ from parental expectations. Some children whose parents want them to become professionals aspire instead to service occupations, while others aim for professional work even when their parents envision service careers. These patterns suggest that parental expectations shape children's goals, but children also develop aspirations through peers, schools, and role models outside the household.

Figure 8 shows a stronger pattern of upward mobility by comparing what household heads currently do with what their children aspire to become. Large flows move from elementary occupations (category 9) and service and sales workers (category 5) on the left toward professionals (category 2) and service and sales workers (category 5) on the right. Children whose parents work in elementary occupations overwhelmingly aspire to higher-status work. The minimal flows toward elementary occupations (category 9) or skilled agricultural workers (category 6) on the right demonstrate children's strong preferences for upward mobility. Few children aspire to work similar to their parents' current jobs when parents are in elementary or agricultural sectors.

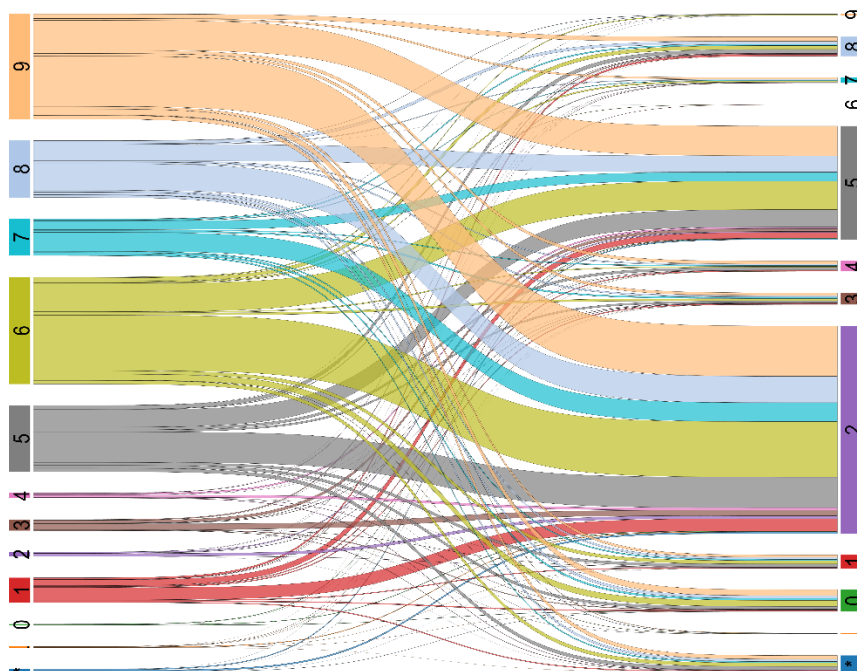
These patterns confirm that mobility aspirations are common regardless of household eligibility status. The flows from parental contexts to children's aspirations look similar across the sample, showing that the desire for children to achieve better outcomes than their parents applies broadly. The concentration of flows toward professionals and service and sales workers, regardless of where parents start, shows that children focus their mobility aspirations on a narrow set of occupations they see as offering advancement and better economic prospects.

Figure 7. Flow of Career Aspirations from Parents to Children



Note: Flow width represents number of children. Occupation codes: 1=Managers, 2=Professionals, 3=Technicians, 4=Clerical, 5=Service/Sales, 6=Agriculture, 7=Craft Trades, 8=Operators, 9=Elementary, 0=Armed Forces, * =Missing/No data. N=9,958.

Figure 8. Flow from Household Head's Current Occupation to Children's Career Aspirations



Note: Flow width represents number of children. Occupation codes: 1=Managers, 2=Professionals, 3=Technicians, 4=Clerical, 5=Service/Sales, 6=Agriculture, 7=Craft Trades, 8=Operators, 9=Elementary, 0=Armed Forces, * =Missing/No data. N=9,958.

4.1.2. Alignment Between Current Employment and Aspirations

For children who are already employed, we can examine the relationship between their current occupation and their stated career aspiration. Figure 9 presents a Sankey diagram showing the flow from current occupation (left side) to aspired occupation (right side) for employed youth in the sample. The width of each flow represents the number of youth moving from one occupation category to another, with colors corresponding to occupation groups following the PSOC major classification system.

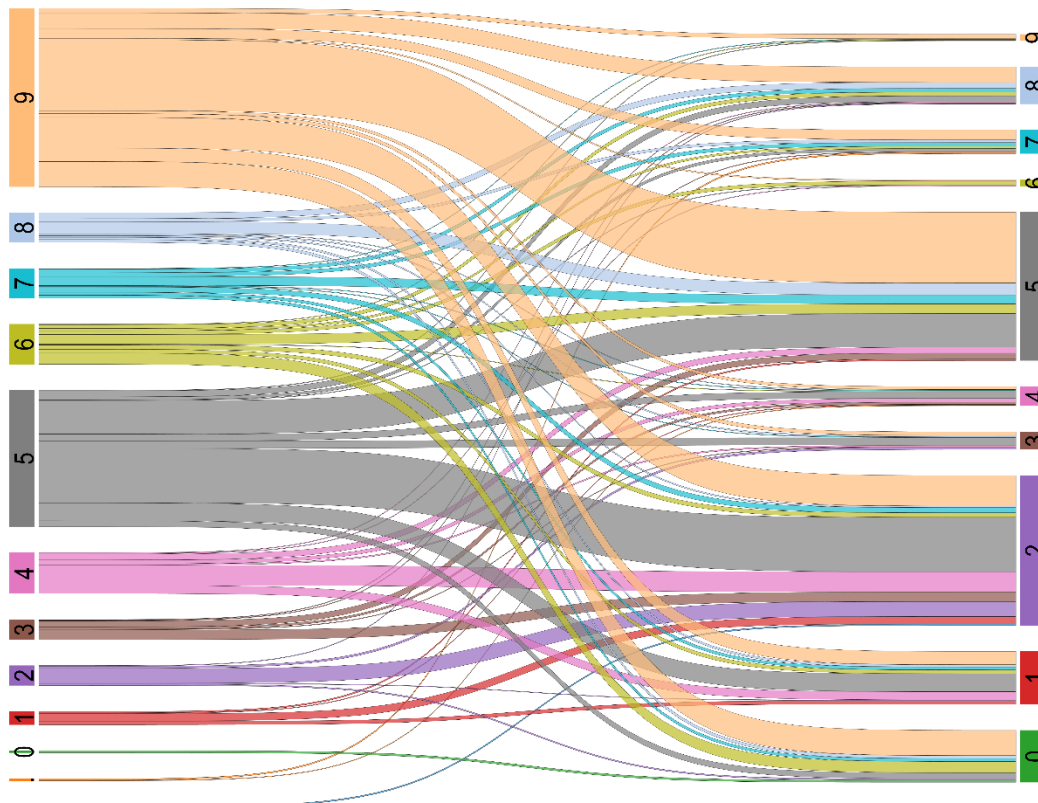
The diagram reveals substantial occupational mobility aspirations among employed youth. The largest current employment categories are elementary occupations (category 9, shown in orange) and service and sales workers (category 5, shown in gray), which together account for the majority of employed youth. However, the flows from these categories show strong aspirations for upward mobility. Youth currently in elementary occupations aspire predominantly to professional occupations (category 2, shown in purple) and service and sales work (category 5), with relatively few wishing to remain in elementary work. Similarly, those currently employed in service and sales positions show diverse aspirations, with substantial flows toward professional occupations.

Professional occupations (category 2) receive the largest inflows from multiple current employment categories, appearing as the dominant destination on the right side of the diagram. This convergence toward professional aspirations occurs regardless of current employment, whether youth are working in elementary occupations, agricultural work, craft trades, or service positions. The diagram shows relatively thin flows representing youth who aspire to remain in their current occupation category, indicated by the flows that connect the same color on both sides. This suggests that most employed youth view their current work as temporary or as a stepping stone rather than their ultimate career destination.

The pattern of flows also reveals limited aspiration toward certain occupation categories despite their presence in the labor market. Agricultural work (category 6, shown in yellow-green), craft trades (category 7, shown in cyan), and elementary occupations (category 9) receive relatively few inflows on the right side, indicating that few youth aspire to these occupations regardless of their current employment. Armed forces occupations (category 0, shown in green) and plant and machine operators (category 8, shown in blue) show moderate inflows, attracting some youth from various current employment categories but representing smaller aspiration flows compared to professional and service occupations.

This considerable mismatch between current employment and career aspirations has important implications. It suggests that the employment pathways many youth are currently following may not lead to their desired careers, potentially requiring significant occupational transitions in the future. Whether employed youth successfully navigate these transitions, or whether aspirations converge toward current employment over time, would require longitudinal data following youth across multiple years. Understanding the drivers of occupational mobility and aspiration adjustment represents an important direction for future research.

Figure 9. Flow of Current Jobs of Employed Children to Career Aspirations



Note: Flow width represents number of children. Occupation codes: 1=Managers, 2=Professionals, 3=Technicians, 4=Clerical, 5=Service/Sales, 6=Agriculture, 7=Craft Trades, 8=Operators, 9=Elementary, 0=Armed Forces. N=690

4.1.3. Variation in Aspirations by Age and Gender

Career aspirations remain consistent across age groups from 10 to 25 years old. Figure 10 shows the distribution of aspirations by major occupation category for four age groups: early adolescence (10-14 years old), middle to late adolescence (15-18 years old), early adulthood (19-22 years old), and mid-twenties (23-25 years old). Professional occupations dominate aspirations across all age groups, accounting for approximately 45-50% of responses in each category. Service and sales workers consistently rank as the second most common aspiration, representing roughly 25-30% of responses across all ages.

The ordering of occupation categories remains stable across the four age groups. After professionals and service and sales workers, the next most common aspirations are plant and machine operators and armed forces occupations, each attracting 5-8% of responses across age groups. Managers, technicians and associate professionals, clerical support workers, and craft trade workers each represent smaller but consistent shares across ages. Elementary occupations and skilled agricultural workers consistently attract the lowest shares of aspirations, typically less than 1% in each age group.

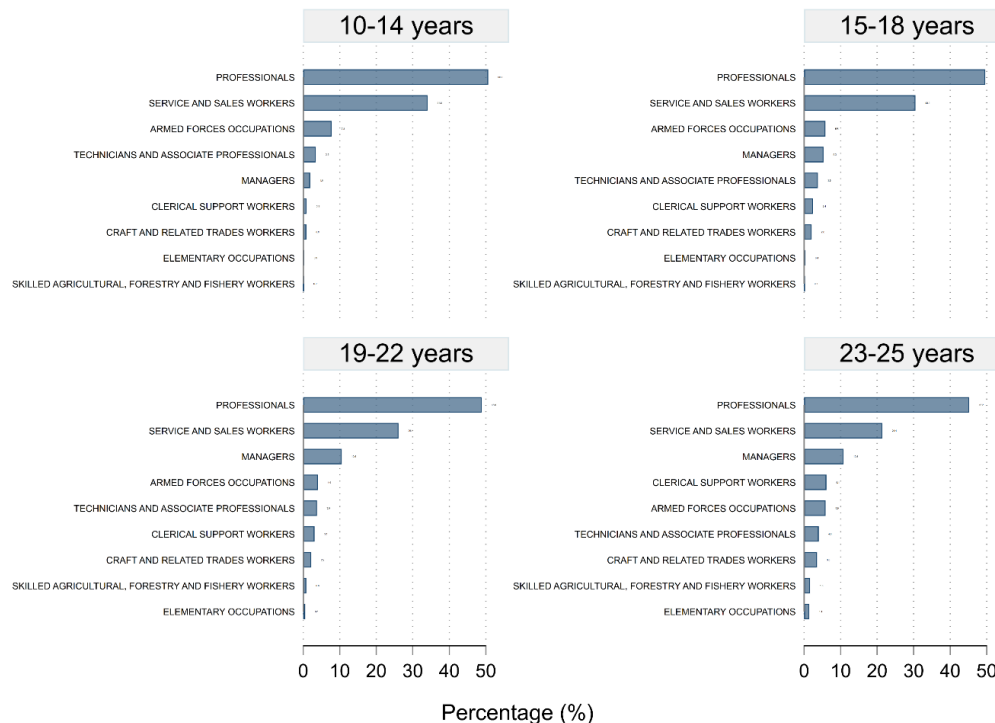
Some modest age-related patterns emerge. Among older youth (19-25 years), managerial aspirations show slightly higher representation compared to younger children, possibly reflecting greater awareness of career hierarchies or management as a career path. Armed

forces occupations appear more popular among younger children (10-14 years) than among those in their twenties. However, these differences are small compared to the overall stability in aspiration patterns.

The consistency in aspirations across age groups has important implications. It suggests that career preferences form relatively early in childhood and remain stable through adolescence and into early adulthood. Children as young as 10-14 years old already focus their aspirations in the same occupation categories as those in their twenties. This stability indicates that aspirations are not substantially revised as young people gain more education, work experience, or exposure to labor market realities. The persistence of aspiration patterns suggests that interventions aimed at broadening career awareness may need to reach children at young ages, as aspirations appear to crystallize early rather than evolving substantially with maturity.

The age consistency also implies that the limited diversity in career aspirations observed in the overall sample is not primarily a function of younger children having less developed career awareness. Even older youth who have completed or nearly completed their education maintain similar aspiration patterns to younger children. This suggests that the concentration of aspirations in professional and service occupations reflects persistent preferences or constraints that are not resolved simply through aging or additional education. However, whether these stable aspirations reflect realistic assessments of opportunities or represent aspirations that will require adjustment as youth enter the labor market needs to be further studied.

Figure 10. Distribution of Career Aspirations by Age Group



Note: Each panel shows the percentage of children in that age group aspiring to each occupation category. Percentages within each age group sum to 100%. Sample sizes: 10-14 years (n=2,941), 15-18 years (n=4,234), 19-22 years (n=2,038), 23-25 years (n=745).

Source of basic data: IE4 Survey

Career aspirations show substantial gender differences, reflecting both societal occupational segregation and differential exposure to role models. Figure 11 displays the percentage point difference between females and males for each major occupation category, while Table 4 presents the top 10 specific occupations for each sex. These patterns reveal that boys and girls growing up in similar poverty circumstances develop quite different career aspirations.

The largest gender difference appears in professional occupations, where females are 39.1 percentage points more likely to aspire to this category than males. This difference is driven primarily by teaching and nursing, two female-dominated professions. Teaching professionals rank first among females (36.3%) but only fourth among males (8.4%). Nursing professionals attract 12.6% of females but only 1.4% of males, making it the second most popular aspiration for females while barely appearing in the male top 10. The prominence of teaching and nursing in female aspirations reflects both the visible presence of women in these professions and longstanding associations between caring work and femininity.

Conversely, males show much higher aspirations toward occupations traditionally associated with masculinity. Service and sales workers are 21.0 percentage points more popular among males, driven largely by police work. Police officers represent the top aspiration for males (35.4%) compared to third for females (9.8%). Armed forces occupations are 9.8 percentage points more popular among males, with commissioned officers ranking second for males (10.9%) but not appearing in the female top 10 occupation. Plant and machine operators are 9.5 percentage points more popular among males, and craft trades are 2.2 percentage points higher. Ships' deck crews rank third for males (9.7%) but do not appear in the female top 10 occupation, reflecting both gender segregation in maritime work and the male-dominated nature of overseas Filipino worker recruitment in this sector.

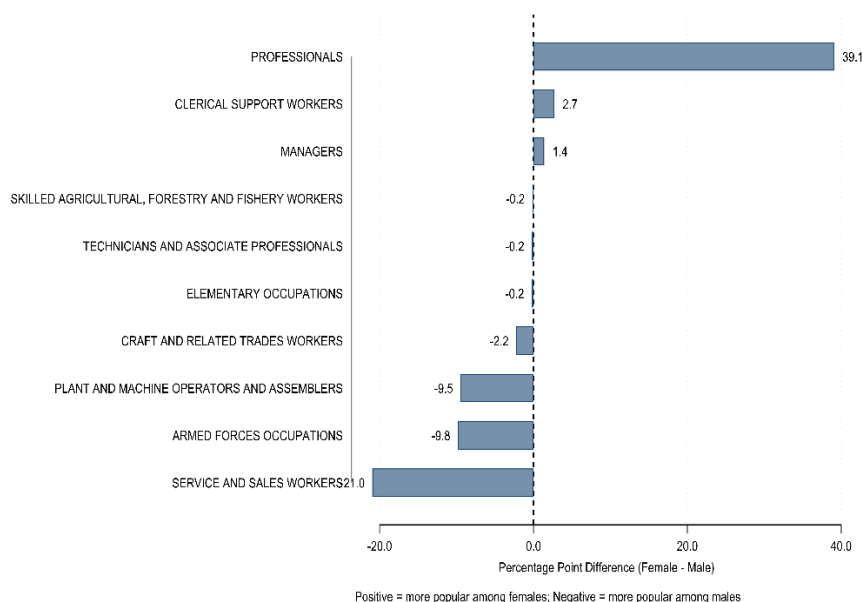
Some occupations show more balanced gender appeal. Business services and administration managers appear in the top 10 occupation for both sexes, ranking sixth for both males (2.8%) and females (3.3%). Engineering professionals appear in the top 10 occupation for both groups, though more popular among males (6.7%) than females (2.7%). Medical doctors also attract both sexes, ranking eighth for males (1.6%) and fifth for females (3.9%). These patterns suggest that some high-status professional occupations are perceived as accessible to both sexes, though engineering maintains a male skew while medicine shows slight female preference.

The gender patterns in aspirations closely mirror actual occupational segregation in the Philippine labor market. Teaching and nursing are heavily female-dominated professions, while police, military, and maritime work are predominantly male. The fact that children's aspirations reproduce these patterns suggests that they observe and internalize existing gender divisions in the labor market. Children may form aspirations based on the sex composition of occupations they observe around them, leading to self-selection into gender-typical careers even before encountering formal barriers.

These gender differences have implications for how 4Ps and similar programs might affect labor market outcomes. If the program successfully helps children achieve their aspirations, boys and girls would flow into different occupations, potentially reinforcing existing patterns of occupational segregation. The concentration of female aspirations in teaching and nursing, combined with limited absorption capacity in these professions, suggests that girls may face challenges translating aspirations into employment. Similarly, the male focus in police and military work implies competition for a limited number of uniformed service positions. Efforts to broaden career aspirations might need to address gender-specific patterns, exposing boys to

caring professions and girls to technical and protective service occupations beyond the narrow set currently dominating their aspirations.

Figure 11. Gender Differences in Career Aspirations by Occupation Category



Note: Bars show percentage point difference between females and males (female % minus male %). Positive values indicate occupation is more popular among females; negative values indicate more popular among males. N = 4,867 females, 5,091 males

Table 4. Top 10 Career Aspirations by Sex

Rank	Males	N	%	Females	N	%
1	Police Officers	1,802	35.4	Teaching Professionals	1,766	36.3
2	Commissioned Armed Forces Officers	555	10.9	Nursing Professionals	611	12.6
3	Ships' Deck Crews and Related Workers	495	9.7	Police Officers	479	9.8
4	Teaching Professionals	430	8.4	Travel Attendants and Travel Stewards	352	7.2
5	Engineering Professionals	342	6.7	Medical Doctors	191	3.9
6	Business Services and Administration Managers	143	2.8	Business Services and Administration Managers	163	3.3
7	Firefighters	111	2.2	Engineering Professionals	133	2.7
8	Medical Doctors	84	1.6	Accountants	120	2.5
9	ICT Professionals	81	1.6	Chefs	95	2.0
10	Nursing Professionals	72	1.4	Architects, Planners, Surveyors and Designers	55	1.1

Note: Sample includes 5,091 males and 4,867 females aged 10-25 years. Percentages based on total within each sex category.

4.1.4. Income Levels of Career Aspirations

The career aspirations children express vary substantially in their associated income levels, reflecting the wide range of occupations mentioned. Using FIES data to assign average incomes to each occupation, we find that aspirations span from low-income elementary and agricultural occupations earning under 400 pesos per day to high-income armed forces and service occupations earning over 1,300 pesos per day. Armed forces occupations, service and sales workers, and technicians command the highest average earnings, while elementary occupations (such as domestic workers and laborers) and agricultural work earn the lowest.

Figure 12 presents the average daily basic pay for each major occupation group based on FIES data pooled across 2018, 2021, and 2023. The income hierarchy across occupations is substantial, with a range of over 1,000 pesos per day between the highest and lowest-earning groups. Armed forces occupations command the highest average earnings at approximately 1,389 pesos per day, followed closely by service and sales workers at 1,330 pesos. Technicians and associate professionals earn around 1,227 pesos per day, while managers earn approximately 1,220 pesos. Professionals, which attract nearly half of children's aspirations, are associated with average earnings of 1,071 pesos per day, placing them in the middle of the income distribution.

The middle to lower tier of occupations shows progressively declining incomes. Plant and machine operators earn approximately 682 pesos per day, while clerical support workers earn around 646 pesos. Craft and related trades workers earn roughly 504 pesos per day. These occupation groups span a moderate income range and represent various employment options across skill levels.

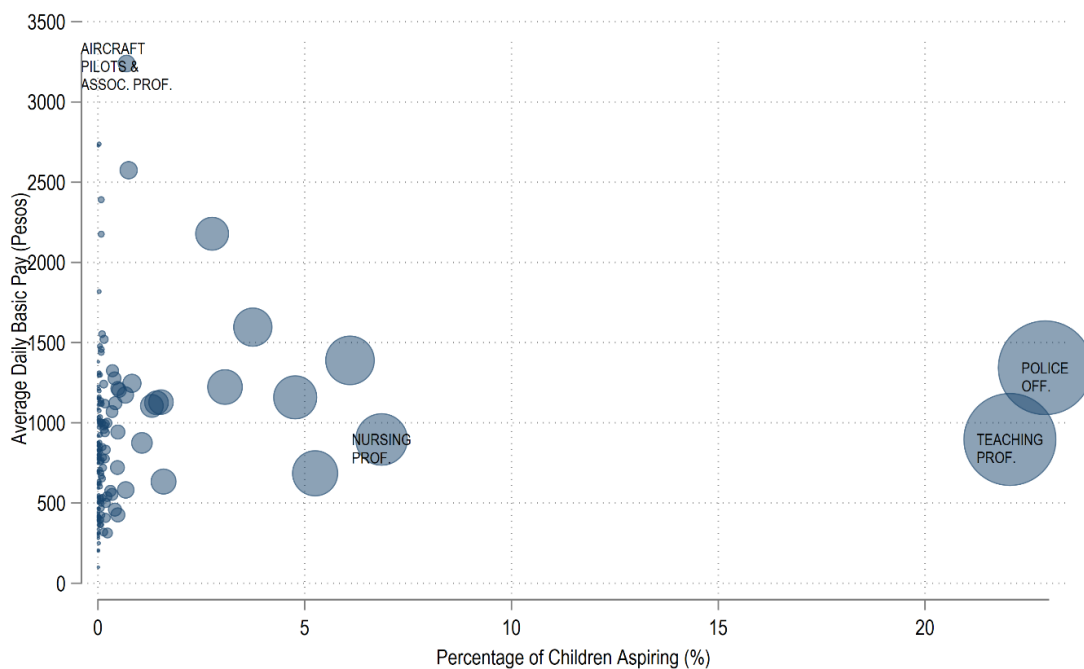
At the lower end of the income distribution are elementary occupations (approximately 360 pesos per day) and skilled agricultural, forestry and fishery workers (about 316 pesos per day). The substantial gap between these occupations and the highest-earning groups underscores the economic stakes of occupational choice. Children who aspire to armed forces or service occupations are aiming for income levels more than four times higher than those associated with elementary or agricultural work, reflecting strong desires for upward mobility. Notably, the most popular aspiration category (professionals) falls in the middle of the income distribution rather than at the top, suggesting that factors beyond earnings potential drive aspiration formation.

Figure 12. Average Daily Basic Pay by Major Occupation Group



Note: Average daily basic pay from Family Income and Expenditure Survey (FIES) 2018, 2021, and 2023, matched to Philippine Standard Occupational Classification (PSOC) major groups. Occupation groups ordered from highest to lowest average income.

Figure 13. Relationship Between Popularity and Income of Career Aspirations



Note: Each bubble represents one occupation. Bubble size proportional to number of children aspiring. Top 3 most popular occupations (labeled inside bubbles) and top 3 highest income occupations (labeled above bubbles) are shown. N=9,958 children aged 10-25 years.

Figure 13 presents a bubble chart showing the relationship between the popularity of career aspirations (percentage of children aspiring) and their associated income levels (average daily basic pay). Each bubble represents a specific occupation, with bubble size proportional to the number of children aspiring to that career. The most popular aspirations (police officers, teaching professionals, and nursing professionals) are labeled inside the bubbles, while the highest-income aspirations (aircraft pilot and associated professionals) are labeled above their respective bubbles.

The graph reveals a weak relationship between popularity and income. The two most popular aspirations (police officers and teaching professionals, together accounting for over half of all children) are associated with moderate incomes around 1,000-1,100 pesos per day. These aspirations are neither the highest-paying nor the lowest-paying options. High-income occupations such as aircraft pilots, physicists and geologists, and legal professionals attract very few children, appearing as small bubbles on the left side of the graph despite offering incomes above 3,000 pesos per day.

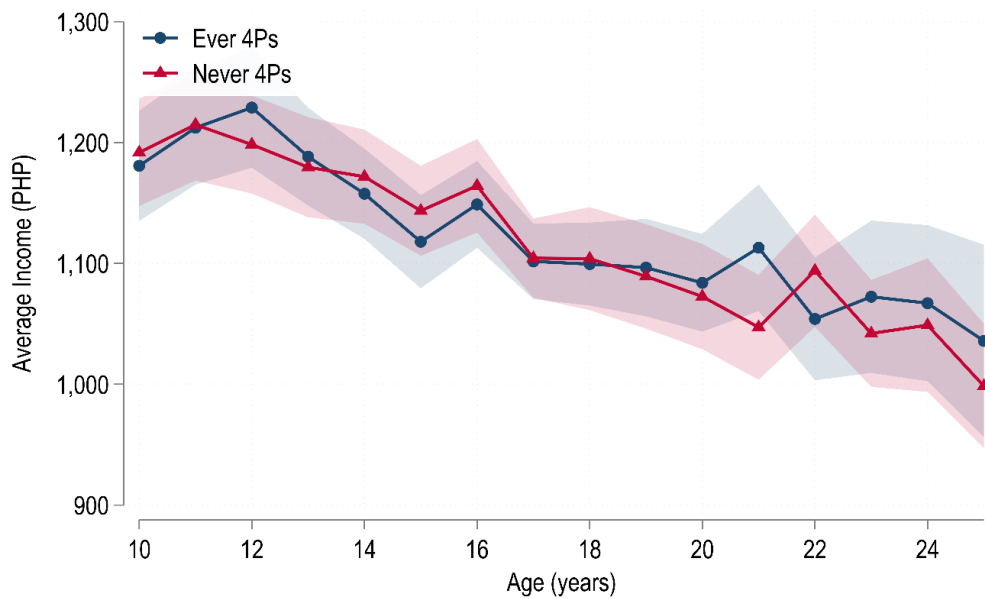
This pattern suggests that income potential is not the primary driver of aspiration formation. If children were primarily motivated by earnings, we would expect to see larger bubbles concentrated in the upper portion of the graph. Instead, popularity clusters around moderate-income occupations that offer other attractive features such as social prestige, job security through government employment, or high visibility in communities. The disconnect between income and popularity has important implications: many children aspire to occupations where supply may exceed demand, while potentially lucrative careers remain relatively unknown or unappealing.

Table 5 and Figure 14 present the average income level associated with career aspirations across the full age range from 10 to 25 years, separately for eligible and ineligible children. The line graph with shaded 95% confidence intervals reveals a general downward trend in aspiration income levels as children age. Both groups show similar patterns: younger children (ages 10-14) have aspirations associated with average incomes around 1,190-1,220 pesos per day, while older youth (ages 23-25) aspire to occupations earning approximately 1,000-1,060 pesos per day. This represents a decline of roughly 150-190 pesos across the age range.

The downward trend is not entirely linear, however. Both groups show a slight uptick around age 11-12, reaching the highest average aspiration incomes (approximately 1,220-1,230 pesos), before declining through adolescence and early adulthood. The decline is most pronounced between ages 12 and 17, after which aspiration income levels stabilize at lower levels. The overlapping confidence intervals (shaded areas) throughout the age range indicate that the differences between eligible and ineligible children at each age are not statistically significant, suggesting that program participation does not alter how aspirations evolve with age.

The downward trend may reflect several processes. Older youth who are closer to entering the labor market may develop more realistic aspirations as they gain information about actual job requirements, educational barriers, and labor market opportunities. The peak at ages 11-12 might represent an age of maximum optimism before adolescents begin to internalize constraints. Alternatively, the pattern could partly reflect cohort effects if younger children have been exposed to different information or role models than their older counterparts. Regardless of mechanism, the consistency of the pattern across both eligible and ineligible groups indicates that program participation does not substantially influence how children adjust their aspiration income levels as they mature.

Figure 14. Average Income of Career Aspirations by Age Group



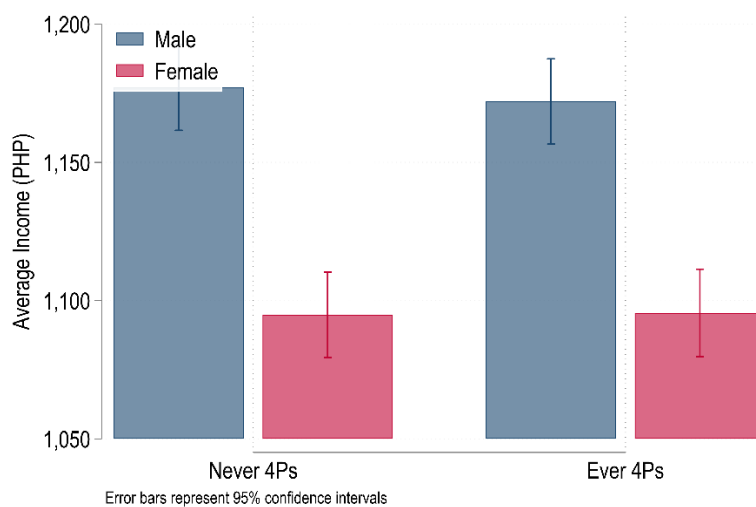
Note: Chart shows average daily basic pay associated with aspirations for each age group, separately for eligible (4Ps) and ineligible (non-4Ps) children. Error bars show 95% confidence intervals

Table 5. Average Income of Career Aspirations by Age Group and 4Ps Status

Age group	4Ps		Non-4Ps	
	Average income (PHP)	N	Average income (PHP)	N
10-14	1,193	1,766	1,191	1,999
15-18	1,117	1,727	1,131	1,792
19-22	1,089	943	1,077	916
23-25	1,062	401	1,033	414

Note: Mean = average daily basic pay in pesos associated with career aspirations.

Figure 15. Average Income of Career Aspirations by Sex and 4Ps Status



Note: Bar chart shows average daily basic pay associated with aspirations for males and females, separately for eligible (4Ps) and ineligible (non-4Ps) children. Error bars show 95% confidence intervals.

Figure 15 reveal a clear gender gap in the income levels associated with career aspirations. Males' aspirations are associated with average daily earnings of approximately 1,175 pesos, while females' aspirations correspond to about 1,095 pesos per day, a difference of roughly 80 pesos or 7%. This gap is statistically significant and appears in both eligible and ineligible groups with nearly identical magnitudes. The similarity of the gender gap across 4Ps status indicates that program participation does not reduce this disparity.

The gender gap in aspiration income levels directly reflects the gendered patterns of occupation aspirations documented earlier. Males' concentration in police work, armed forces, and technical occupations (which tend to pay moderately well) and females' concentration in teaching and nursing (which pay less than many male-dominated occupations) produces this income differential. The gap suggests that even among children from similarly disadvantaged backgrounds, gender differences in aspirations may contribute to reproducing gender wage gaps in the next generation.

Importantly, the lack of difference between eligible and ineligible children within each gender category indicates that program participation is not associated with shifting aspirations toward higher or lower earning occupations. Both eligible males and ineligible males aspire to occupations with similar average earnings (1,172 vs 1,177 pesos), and the same holds for females (1,096 vs 1,095 pesos). This consistency across 4Ps status provides descriptive evidence that program eligibility does not substantially alter the income level of career aspirations, a finding we examine more rigorously using regression discontinuity design in subsequent analyses.

4.2. Causal Analysis of Program Effects

4.2.1. Validation of RDD Design

Before presenting the main RDD results, we conduct several tests to validate the design's identifying assumptions. The first critical check examines whether there is manipulation of the running variable near the eligibility threshold. Such manipulation would occur if households could adjust their responses to the Listahanan poverty assessment to ensure they fall just below the eligibility threshold. We test for this using the McCrary (2008) density test, which examines whether there is discontinuous bunching in the distribution of the poverty score at the threshold.

The McCrary test results (Appendix Figure B), provide no evidence of manipulation consistent with strategic sorting. The distribution of the poverty score appears smooth through the threshold, with no unusual spike in density just below the cutoff. The formal test yields a log difference in densities of -0.138 (SE = 0.044). Although this estimate indicates slightly higher density just below the cutoff than just above, the density remains smooth through the threshold with no visible excess mass at the eligibility boundary.

The absence of strategic manipulation is credible in this context because the Proxy Means Test (PMT) formula and eligibility threshold are not public information. Households do not know the precise algorithm used to calculate their poverty score or the cutoff value that determines eligibility. The PMT is proprietary to the Department of Social Welfare and Development, and data are collected by trained enumerators through household visits and direct observation rather than self-reporting. Without knowledge of the scoring formula or threshold, households cannot strategically position themselves to ensure eligibility.

The second critical validation examines whether predetermined baseline characteristics are balanced across the eligibility threshold. In a valid RDD design, variables determined before program assignment should evolve smoothly through the threshold with no discontinuous jumps. We test this for numerous predetermined characteristics including child age, sex, household size, household head's age and education, dwelling characteristics, and indigenous people's status. We estimate the RDD specification using each covariate as the outcome and test whether there is a significant discontinuity at the threshold. The absence of systematic discontinuities in baseline covariates supports the continuity-based RDD framework, suggesting that households on either side of the threshold are comparable in their observable pre-treatment characteristics.

Additionally, we conduct local randomization tests to assess balance in a neighborhood around the threshold. Using rank-sum tests and binomial probability tests across various window sizes (Appendix Figure D), we examine whether covariate distributions differ between eligible and ineligible households. As discussed in the analytical strategy section, while individual covariates generally show balance near the threshold, joint balance tests indicate limited support for a strict local randomization framework. This confirms our reliance on continuity-based RDD inference as the primary approach.

The third validation check verifies a strong first-stage relationship between crossing the eligibility threshold and actual program participation. Appendix Figure E presents the proportion of households receiving 4Ps benefits as a function of the poverty score. The figure shows a discontinuous increase in program participation at the eligibility threshold, confirming that the eligibility rules are meaningfully enforced and provide sufficient variation to detect treatment effects.

Taken together, these validation tests support the key identifying assumptions of the RDD design. The absence of manipulation, the balance of baseline covariates across the threshold, and the strong first-stage relationship provide confidence that any discontinuities observed in career aspiration outcomes can be credibly attributed to the causal effect of 4Ps eligibility.

4.2.2. RDD Results on Career Aspirations

We present regression discontinuity estimates of the effect of 4Ps eligibility on children's career aspirations. The analysis uses local polynomial regression with MSE-optimal bandwidth selection and triangular kernel weights. Standard errors are clustered at the barangay level to account for within-community correlation. We examine multiple outcomes including the income level associated with aspirations (both logged and in levels [PhP values]) and the probability of aspiring to specific occupation categories. Tables 6 and 7 present the main results and bandwidth sensitivity analysis, respectively

Table 6. RDD Estimates: Main Specifications

Specification	Outcome	Coefficient	Std Error	P-value	95% CI	Bandwidth	N
Main (Linear)	Log Income	-0.002	(0.021)	0.939	[-0.042, 0.039]	563.5	6,263
Main (Linear)	Income Level	-19.12	(27.72)	0.490	[-73.45, 35.21]	499.0	5,764
With Covariates	Log Income	0.008	(0.018)	0.669	[-0.028, 0.044]	813.3	7,334
Quadratic	Log Income	-0.008	(0.027)	0.759	[-0.061, 0.044]	711.6	7,105
Main (Linear)	Professional	0.014	(0.025)	0.585	[-0.036, 0.063]	699.2	7,038
Main (Linear)	Service/Sales	-0.012	(0.025)	0.639	[-0.060, 0.037]	607.3	6,507

Note: Estimates from local polynomial regression discontinuity design using MSE-optimal bandwidth selection. Standard errors (in parentheses) clustered at barangay level. Log Income is $\ln(\text{average daily basic pay})$. Income Level is in pesos per day. Professional and Service/Sales are binary indicators. Covariates specification includes child age, sex, education levels (primary, secondary, tertiary), household size, and urban/rural location. All specifications use triangular kernel weights and local linear regression ($p=1$), except Quadratic which uses $p=2$.

Table 6 presents the main RDD estimates across six specifications. The primary finding is that 4Ps eligibility has no statistically significant effect on any measure of career aspirations. For the main outcome (log aspiration income) the point estimate is -0.002 (SE = 0.021, $p = 0.939$), indicating essentially zero effect. This null result is robust across alternative specifications. When using income in levels rather than logs, the estimate is -19.12 pesos per day (SE = 27.72, $p = 0.490$), again statistically indistinguishable from zero. Including baseline covariates to improve precision yields a coefficient of 0.008 (SE = 0.018, $p = 0.669$), while a quadratic specification produces an estimate of -0.008 (SE = 0.027, $p = 0.759$). All point estimates are small in magnitude, and none approach conventional significance levels.

Similarly, we find no effects on the probability of aspiring to specific occupation categories. The effect on aspiring to professional occupations is 0.014 (SE = 0.025, $p = 0.585$), meaning eligible children are 1.4 percentage points more likely to aspire to professional work, though this difference is not statistically significant. For service and sales occupations, the estimate is -0.012 (SE = 0.025, $p = 0.639$). These small, imprecise estimates suggest the program does not substantially shift children away from or toward any particular occupation category.

The consistency of null results across all specifications strengthens confidence that the absence of effects is not an artifact of modeling choices. Whether measuring aspirations as continuous income levels or as categorical occupation choices, and whether using different polynomial orders or controlling for baseline characteristics, we consistently find no evidence that 4Ps eligibility causally affects children's career aspirations. The optimal bandwidths range from approximately 500 to 813 pesos around the threshold, providing sample sizes of 5,764 to 7,334 children, giving adequate statistical power to detect moderate effects if they existed.

4.2.3. Bandwidth Sensitivity Analysis

A critical concern in RDD estimation is sensitivity to bandwidth choice. While MSE-optimal bandwidth selection provides a data-driven approach, examining results across alternative bandwidths helps assess whether findings depend on this choice. Table 7 presents estimates for log aspiration income using bandwidths ranging from 50% to 150% of the MSE-optimal bandwidth.

Table 7. Bandwidth Sensitivity Analysis

Bandwidth	BW (PHP)	Coefficient	Std Error	P-value	95% CI	N
50%	281.7	0.012	(0.028)	0.671	[-0.043, 0.067]	3,735
75%	422.6	0.004	(0.023)	0.862	[-0.041, 0.049]	5,050
100%	563.5	-0.002	(0.021)	0.939	[-0.042, 0.039]	6,263
125%	704.4	-0.005	(0.019)	0.782	[-0.042, 0.032]	7,037
150%	845.2	-0.007	(0.018)	0.685	[-0.042, 0.028]	7,731

Note: Outcome is log aspiration income. Each row presents estimates using a bandwidth that is a multiple of the MSE-optimal bandwidth (563.5 PhP). Standard errors (in parentheses) clustered at barangay level. All specifications use local linear regression ($p=1$) with triangular kernel weights.

Table 7 demonstrates that the null finding is highly robust to bandwidth choice. Across all five bandwidths tested, point estimates remain very close to zero, ranging from -0.002 to 0.012. None of these estimates approaches statistical significance, with p-values consistently exceeding 0.65. The confidence intervals at different bandwidths all include zero and span similar ranges, indicating that the precision of estimates improves only modestly with larger sample sizes.

Narrower bandwidths (50% and 75%) produce slightly larger standard errors due to reduced sample sizes but yield qualitatively identical conclusions. Wider bandwidths (125% and 150%) incorporate more observations farther from the threshold, where the continuity assumption may be weaker, yet still produce estimates centered near zero. This stability across bandwidths provides strong evidence that the absence of treatment effects is not an artifact of the particular bandwidth chosen by the MSE-optimal procedure.

4.2.4. Conclusion

The regression discontinuity estimates provide consistent evidence that 4Ps eligibility has no causal effect on children's career aspirations. This null finding holds across multiple outcome measures (income levels, occupation categories), alternative specifications (linear, quadratic, with covariates), and different bandwidth choices. The estimates are precise enough to rule out economically meaningful effects, and the results are robust to various modeling decisions.

This absence of effects on aspirations contrasts with the program's documented impacts on educational attainment and health outcomes. While 4Ps successfully keeps children in school longer and improves their physical wellbeing, it does not appear to alter their perceptions of what careers are possible or desirable. This pattern suggests that aspirations may be shaped by factors beyond immediate household resources such as information about occupations, role models, or deeply ingrained beliefs about social mobility that the cash transfer program does not address.

The null results have important policy implications. If policymakers aim to broaden career horizons or raise aspirations among disadvantaged children, cash transfers alone may be insufficient. Complementary interventions might include career counseling, mentorship programs, exposure to diverse occupations, or information campaigns about educational and career pathways. Understanding why aspirations remain unchanged despite improvements in human capital accumulation represents an important avenue for future research and program design.

4.3. Correlates of Career Aspirations

While the RDD analysis found no causal effect of program participation, the multivariate regression analysis of correlates reveals several factors that are associated with different types of career aspirations. These associations should be interpreted cautiously as they may reflect selection and reverse causation rather than causal effects. Nevertheless, they provide suggestive evidence about the determinants of aspirations in this population.

Table 8 presents multinomial logit estimates examining the determinants of children's career aspirations, comparing aspirations for professional occupations and service/sales work relative to all other occupation categories. The model demonstrates strong explanatory power with a pseudo R-squared of 0.377 and a highly significant Wald chi-square statistic ($\chi^2(32) = 2127.29$, $p < 0.001$), indicating that the covariates collectively explain substantial variation in aspiration choices. Standard errors are clustered at the barangay level (265 clusters) to account for within-community correlation.

The most striking finding is the strong gender pattern in aspirations. Male children are significantly less likely to aspire to professional occupations (coef = -0.989, $p < 0.001$) and service/sales work (coef = -0.283, $p = 0.010$) compared to other occupations. These large negative coefficients suggest that boys have fundamentally different aspiration profiles than girls, concentrating more heavily in other occupation categories such as craft trades, plant operation, and agricultural work. This gender divergence in aspirations may reflect both labor market realities, where women predominate in service sectors, and sociocultural norms about gender-appropriate careers that children internalize from an early age.

Children who are currently employed show significantly lower probability of aspiring to professional work (coef = -0.796, $p < 0.001$) and marginally lower probability for service/sales (coef = -0.407, $p = 0.059$). Early employment often signals economic necessity and channels children into continuation of current work patterns rather than aspirations for educational advancement. Age shows a small but significant negative effect on professional aspirations (coef = -0.001, $p = 0.029$), suggesting that as children grow older, their career goals may become more constrained by perceived opportunities. Current school enrollment shows no significant association with aspirations in either category, indicating that simply being in school does not automatically translate to higher occupational goals.

The results reveal highly significant positive patterns of intergenerational aspiration transmission. When parents aspire for their child to become a professional, children are substantially more likely to aspire to professional work themselves (coef = 3.167, $p < 0.001$), with this being the largest coefficient in the entire model. This demonstrates strong alignment between parental aspirations and children's own career goals. Similarly, children whose parents aspire to service/sales careers for them show elevated aspirations for both professional work (coef = 1.412, $p < 0.001$) and especially for service/sales occupations (coef = 3.127, $p < 0.001$).

These large positive coefficients indicate that parental aspirations are among the most powerful predictors of children's career goals in the model. The magnitude of these effects, with z-statistics exceeding 20 for some coefficients, suggests that parents play a central role in shaping what children believe is possible and desirable for their futures. When parents aspire to service/sales careers, children are also more likely to aspire to professional work (coef = 1.630, $p < 0.001$), suggesting that parental engagement with career planning, regardless of the specific career envisioned, may broadly elevate children's aspirational horizons.

Table 8. Multinomial Logit Regression: Determinants of Career Aspirations

Variable	Coef.	SE	z	P> z	[95% Conf. Interval]
Panel A: Professional Aspiration (vs. Others)					
Age (squared)	-0.001**	(0.000)	-2.19	0.029	[-0.002, 0.000]
Male	-0.989***	(0.090)	-10.98	0.000	[-1.166, -0.813]
Currently employed	-0.796***	(0.186)	-4.27	0.000	[-1.161, -0.430]
Currently enrolled	0.112	(0.222)	0.50	0.615	[-0.323, 0.546]
Parent aspires: Professional	3.167***	(0.132)	24.06	0.000	[2.909, 3.425]
Parent aspires: Service/Sales	1.412***	(0.138)	10.23	0.000	[1.142, 1.683]
HH head occupation: Professional	0.103	(0.433)	0.24	0.812	[-0.745, 0.951]
HH head occupation: Service/Sales	-0.240**	(0.120)	-2.00	0.046	[-0.475, -0.005]
4Ps beneficiary	0.059	(0.088)	0.67	0.504	[-0.114, 0.233]
Aspiration income (log)	0.986***	(0.191)	5.17	0.000	[0.612, 1.359]
Social pension beneficiary	-0.161	(0.102)	-1.58	0.114	[-0.361, 0.039]
Attended parenting session	-0.259**	(0.107)	-2.42	0.016	[-0.469, -0.049]
Functional literacy (full)	0.390*	(0.203)	1.92	0.055	[-0.008, 0.787]
Grit index	0.051***	(0.015)	3.45	0.001	[0.022, 0.079]
Received school award	-0.621*	(0.349)	-1.78	0.075	[-1.304, 0.062]
Urban barangay	0.018	(0.112)	0.16	0.872	[-0.201, 0.237]
Constant	-7.075***	(1.391)	-5.08	0.000	[-9.803, -4.346]
Panel B: Service/Sales Aspiration (vs. Others)					
Age (squared)	-0.001	(0.000)	-1.52	0.128	[-0.002, 0.000]
Male	-0.283***	(0.110)	-2.58	0.010	[-0.498, -0.068]
Currently employed	-0.407*	(0.215)	-1.89	0.059	[-0.829, 0.015]
Currently enrolled	0.130	(0.247)	0.52	0.601	[-0.356, 0.614]
Parent aspires: Professional	1.630***	(0.166)	9.80	0.000	[1.304, 1.955]
Parent aspires: Service/Sales	3.127***	(0.152)	20.63	0.000	[2.830, 3.424]
HH head occupation: Professional	-0.647	(0.430)	-1.51	0.132	[-1.489, 0.195]
HH head occupation: Service/Sales	-0.149	(0.133)	-1.11	0.265	[-0.410, 0.113]
4Ps beneficiary	0.163*	(0.096)	1.70	0.090	[-0.025, 0.351]
Aspiration income (log)	3.478***	(0.273)	12.75	0.000	[2.944, 4.013]
Social pension beneficiary	-0.069	(0.108)	-0.64	0.521	[-0.280, 0.142]
Attended parenting session	-0.079	(0.106)	-0.75	0.455	[-0.286, 0.128]
Functional literacy (full)	0.247	(0.233)	1.06	0.291	[-0.211, 0.704]
Grit index	-0.001	(0.016)	-0.03	0.975	[-0.033, 0.032]
Received school award	0.063	(0.309)	0.20	0.839	[-0.543, 0.668]
Urban barangay	0.075	(0.109)	0.69	0.491	[-0.138, 0.288]
Constant	-25.875***	(2.001)	-12.93	0.000	[-29.797, -21.952]
Model Statistics					
Observations			5,873		
Wald chi2(32)			2127.29		
Prob > chi2			0.0000		
Pseudo R ²			0.3765		
Log pseudolikelihood			-3839.7916		
Number of clusters (barangays)			265		

Note: Multinomial logit regression estimates with base outcome = Others (category 3). Robust standard errors (in parentheses) clustered at barangay level (265 clusters). Dependent variable is child's aspired occupation category. *** p<0.01, ** p<0.05, * p<0.10.

Household head occupation shows more complex patterns. For professional aspirations, having a household head in professional work shows no significant effect (coef = 0.103, $p = 0.812$), while having a household head in service/sales work shows a negative association (coef = -0.240, $p = 0.046$). For service/sales aspirations, household head occupation shows no significant effects. This suggests that actual family experience with occupations may matter less than parental aspirations and expectations in shaping children's goals.

The 4Ps cash transfer program shows no significant association with professional aspirations (coef = 0.059, $p = 0.504$) but a marginally significant positive effect on service/sales aspirations (coef = 0.163, $p = 0.090$). This may suggest that the program may have modest effects on redirecting aspirations toward service-sector work, which typically requires less educational investment than professional careers. This pattern is consistent with the RDD findings of no effect on aspiration income levels.

Attending parenting sessions shows a significant negative association with professional aspirations (coef = -0.259, $p = 0.016$), which is unexpected and may reflect selection into session attendance or unobserved characteristics of families who participate. Social protection program beneficiary status shows no significant effects in either model, indicating that the presence of elderly dependents receiving transfers does not alter children's career goals.

The aspiration income variable, representing the expected income associated with the child's stated career goal, shows strong positive associations with both professional (coef = 0.986, $p < 0.001$) and especially service/sales categories (coef = 3.478, $p < 0.001$). The particularly large coefficient for service/sales aspirations suggests considerable income heterogeneity within that broad category, with children who name high-income service occupations being much more likely to fall into this category versus others.

Grit, a measure of perseverance and sustained effort toward long-term goals, shows a significant positive association with professional aspirations (coef = 0.051, $p = 0.001$) but no effect on service/sales aspirations (coef = -0.001, $p = 0.975$). This indicates that children with stronger non-cognitive skills are specifically more likely to aim for careers requiring extended education and training. Functional literacy shows a marginally significant positive effect on professional aspirations (coef = 0.390, $p = 0.055$), further supporting the role of cognitive foundations in shaping these aspirational goals.

Receiving school awards shows a marginally significant negative association with professional aspirations (coef = -0.621, $p = 0.075$). This counterintuitive finding may indicate that high-achieving students in disadvantaged communities aspire to occupations where success seems more immediately attainable, or that award receipt occurs more frequently for children in lower-quality schools where professional role models are scarce. Urban location shows no significant effects in either model, suggesting that rural-urban differences in aspiration formation may operate through other measured variables.

Overall, the multinomial logit results paint a picture of aspiration formation shaped predominantly by parental aspirations, gender, employment status, and individual characteristics like grit and literacy. The large coefficients on parental aspirations highlight that what parents envision for their children is the single most powerful determinant of children's own career goals. This strong intergenerational transmission suggests that interventions targeting parental expectations and knowledge about educational and career pathways could be highly effective in broadening children's career outlook.

The weak effects of the 4Ps program align with the null RDD findings, confirming that cash transfers alone do not substantially reshape career horizons. The strong predictive power of grit and literacy indicates that investments in foundational skills represent important levers for expanding what children believe is possible for their futures. However, these effects are modest compared to the dominant influence of parental aspirations.

These findings suggest that interventions aimed at broadening aspirations should prioritize working with parents to raise their expectations and provide them with information about educational pathways and career opportunities. Complementary components might include addressing gender norms, providing diverse role models, developing non-cognitive skills, and creating structured pathways connecting current circumstances to future careers. The central role of parental aspirations in shaping children's goals represents both a challenge and an opportunity for policy interventions seeking to expand opportunity for disadvantaged children.

5 Discussions and Policy Implications

5.1. Interpretation of Findings

Our findings reveal a complex picture of career aspirations among economically disadvantaged Filipino youth. Children in both 4Ps and non-4Ps households demonstrate ambitious career aspirations, predominantly targeting professional and service occupations that represent substantial upward mobility relative to their parents' current employment in elementary or agricultural work. These aspirations remain stable across ages 10 to 25, suggesting that children form career goals relatively early and maintain them through adolescence and into early adulthood.

The regression discontinuity estimates provide consistent evidence that 4Ps eligibility has no causal effect on children's career aspirations. This null finding holds across income levels associated with aspirations, occupation categories (professional vs. service/sales), alternative specifications (linear, quadratic, with covariates), and different bandwidth choices. The estimates are precise enough to rule out economically meaningful effects, and the results are robust to various modeling decisions.

This absence of program effects on aspirations contrasts with the program's documented success at improving school enrollment and attendance. Keeping children in school longer does not appear to translate into expanded or more ambitious career goals. This suggests that educational access, while necessary, may be insufficient to broaden career horizons if that schooling lacks explicit career guidance, exposure to diverse career paths, or connections with role models.

The multinomial logit analysis reveals that parental aspirations are the single most powerful determinant of children's career goals. When parents aspire for their child to become a professional, children are substantially more likely to aspire to professional work themselves. Similarly, parental aspirations for service/sales careers strongly predict children's own service/sales aspirations. These patterns demonstrate strong intergenerational transmission of aspirations, suggesting that what parents envision for their children fundamentally shapes what children envision for themselves.

Beyond parental influence, gender emerges as a critical factor. Boys are significantly less likely to aspire to professional occupations or service/sales work, instead concentrating in other occupation categories such as craft trades, plant operation, and agricultural work. This gender

divergence likely reflects both labor market realities and sociocultural norms about appropriate careers that children internalize early.

Children's human capital and non-cognitive skills also matter. Grit shows a significant positive association with professional aspirations, indicating that children with stronger perseverance and sustained effort are more likely to aim for careers requiring extended education. Functional literacy shows a marginally significant positive effect, supporting the role of cognitive foundations in shaping aspirational goals.

The weak effects of 4Ps in both the RDD and multinomial logit analyses confirm that cash transfers alone do not substantially reshape career horizons. The program shows no effect on professional aspirations and only a marginal effect on service/sales aspirations. This suggests modest redirection toward intermediate-skill service occupations but no fundamental broadening of career possibilities.

5.2. Comparison with International Evidence

Our null finding contrasts with some international evidence showing positive impacts of CCT programs on aspirations. Studies of Colombian and Mexican programs found significant effects on parental and children's educational aspirations. Several factors may explain these differences.

First, we examine career aspirations specifically rather than general educational aspirations. Career aspirations may be harder to shift because they require detailed knowledge about specific occupations, their requirements, and their prospects. Parents might believe their child should complete high school without having a clear sense of what career that education would lead to.

Second, programs that found positive aspiration effects included specific design features that may be critical but are less prominent in 4Ps. Early Familias en Acción included caregiving workshops and municipal assemblies that explicitly discussed education and exposed parents to community leaders and professionals. These information-rich, socially interactive components may have been key to changing aspirations. If 4Ps' Family and Youth Development Sessions are less intensive or delivered by facilitators with less expertise, they may be less effective.

Third, context matters. Labor market structure, educational systems, and social mobility patterns differ substantially between the Philippines and Latin America. If Philippine families perceive fewer opportunities for upward mobility through education or face more barriers to translating educational attainment into career advancement, cash transfer programs may be less effective regardless of their specific features.

5.3. Policy Recommendations

Based on our findings, we offer recommendations for enhancing 4Ps and designing complementary interventions to better support children's career development.

1. Enhance Family Development Sessions with career-focused content

Given that parental aspirations are the strongest predictor of children's career goals, interventions targeting parents' knowledge and expectations could be particularly effective. Family Development Sessions should incorporate modules specifically

designed to raise parents' awareness of diverse career paths and help them support their children's career development.

These modules should provide specific information about different occupations, their requirements, earnings, and growth prospects. Sessions could include presentations from individuals from similar backgrounds who have achieved career advancement, providing concrete role models. Content should also address perceived barriers such as costs of higher education, providing information about scholarships, financial aid, and alternative pathways to careers.

Importantly, sessions should help parents understand their critical role in shaping aspirations. Given the large coefficients on parental aspirations in our analysis, even modest shifts in what parents envision for their children could substantially affect children's own career goals.

2. Expand and strengthen Youth Development Sessions with career mentoring

While parental influence is dominant, direct interventions with youth are also needed. Youth Development Sessions should be expanded to include substantial career mentoring, goal-setting, and labor market information. These sessions should help youth understand the full range of career possibilities, not just those visible in their immediate communities.

Sessions should help youth align aspirations with realistic pathways and labor market demand. The goal is not to lower aspirations but to make them actionable, helping youth identify concrete next steps required to reach their goals. Sessions could also create opportunities for peer learning and support, as peer effects in aspiration formation can be powerful.

Given the significant gender differences in aspirations, sessions should explicitly address how gender norms may constrain career choices and provide examples of individuals who have succeeded in non-traditional careers for their gender.

3. Address information gaps through partnerships and exposure programs

Limited exposure to diverse career possibilities likely constrains aspirations. The program should develop partnerships with schools, local industries, universities, and professional organizations to create opportunities for youth to learn about and experience different careers firsthand.

These partnerships could facilitate workplace visits, job shadowing, internships, or mentorship relationships. For example, local businesses could host youth visitors; universities could offer campus visits; professional associations could provide mentors. Digital platforms and technology could also play a role, particularly for youth in rural areas with limited local access to diverse career examples.

4. Strengthen non-cognitive skill development

Our finding that grit significantly predicts professional aspirations suggests that interventions developing perseverance and sustained effort could help expand children's career horizons. While the effect size is modest compared to parental aspirations, non-cognitive skills represent a malleable target for intervention.

Existing Youth Development Sessions could incorporate structured activities that build grit, goal-setting abilities, and growth mindset. These could include setting and working toward long-term goals, learning from setbacks, and developing strategies for sustained effort.

5. Conduct further research on aspiration mechanisms and intervention effectiveness

Important questions remain about how aspirations form and change. Future research should examine whether the program influences aspirations through hypothesized pathways of education, income, or information using detailed data on participation intensity, particularly attendance at Family and Youth Development Sessions.

Longitudinal research following youth over time would be valuable for understanding how aspirations evolve and whether they predict actual career outcomes. Experimental evaluations of specific aspiration-focused interventions would help identify what works. For example, randomly assigning communities to receive enhanced career guidance while others receive standard programming would provide causal evidence on whether this enhancement expands aspirations and improves outcomes.

5.4. Limitations and Future Research

This study has several limitations. First, our career aspiration measure comes from a single question about dream jobs. While informative, it does not capture how confident youth are in their aspirations, how committed they are to pursuing them, or whether they have concrete plans.

Second, our cross-sectional data provide only a snapshot of aspirations at one point in time. We cannot observe how aspirations have changed during program participation or how they will evolve in the future.

Third, while the RDD design provides credible causal estimates, it examines households near the eligibility threshold, which may not be representative of all participants. Effects could differ for households far below the threshold or those with very long participation.

Fourth, our income-based measure of aspiration quality relies on average wages matched to broad occupation categories. This provides a reasonable proxy for economic level but does not capture other dimensions of career quality such as working conditions, job security, or personal fulfillment.

Finally, this study focuses on aspirations as outcomes themselves, but the ultimate policy interest is in actual career outcomes and economic mobility. While aspirations are theoretically important, we do not test whether higher or better-aligned aspirations lead to better outcomes in this population.

6 Conclusions

We provide the first comprehensive analysis of career aspirations among economically disadvantaged Filipino youth in the 4Ps program. Using data on 9,958 children aged 10 to 25 who were asked about their dream occupations, we document what careers youth aspire to pursue, how these aspirations vary, and whether program participation influences career goals.

Our central finding is that 4Ps participation has no detectable causal effect on children's career aspirations. Despite the program's success at improving school enrollment and attendance, it

we find no detectable effect on career goals. This null effect is robust across measures, specifications, and estimation approaches.

The multinomial logit analysis reveals that parental aspirations are the dominant determinant of children's career goals, with coefficients far exceeding other factors. This strong intergenerational transmission suggests that what parents envision fundamentally shapes what children envision for themselves. Gender, employment status, and individual characteristics like grit and literacy also matter, but their effects are modest compared to parental influence.

These findings point to a missed opportunity. While 4Ps successfully addresses material constraints that prevent children from accumulating human capital, it does little to actively expand children's and parents' sense of what careers are possible. Simply keeping children in school longer may not broaden horizons if schooling lacks explicit career guidance, exposure to diverse paths, and connections with role models.

The findings suggest several policy implications. Cash transfers and education subsidies are necessary but insufficient to break poverty cycles if not coupled with interventions that actively expand aspirations. The extraordinarily large effects of parental aspirations suggest that programs targeting parental knowledge and expectations could be highly effective. The 4Ps program could be strengthened by enhancing Family and Youth Development Sessions to focus explicitly on career guidance and by developing partnerships that expose youth to diverse possibilities.

More broadly, our research contributes to understanding how poverty affects psychological factors like aspirations. Poor children maintain ambitious career aspirations despite their circumstances, suggesting poverty has not entirely constrained their sense of possibility. However, the difficulty of expanding these aspirations through cash transfers highlights how aspiration formation appears strongly shaped by family contexts.

As the country continues investing in social protection and human capital development, understanding the pathway from poverty to mobility becomes increasingly important. Education and health investments create the foundation for advancement, but they must be complemented by interventions that help youth envision better futures and understand how to reach them. Only by addressing both material and psychological constraints can programs like 4Ps maximize their potential to transform lives and break intergenerational cycles of disadvantage.

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Appendices

Figure A. Age Distribution of Sample by Treatment Group and Sex

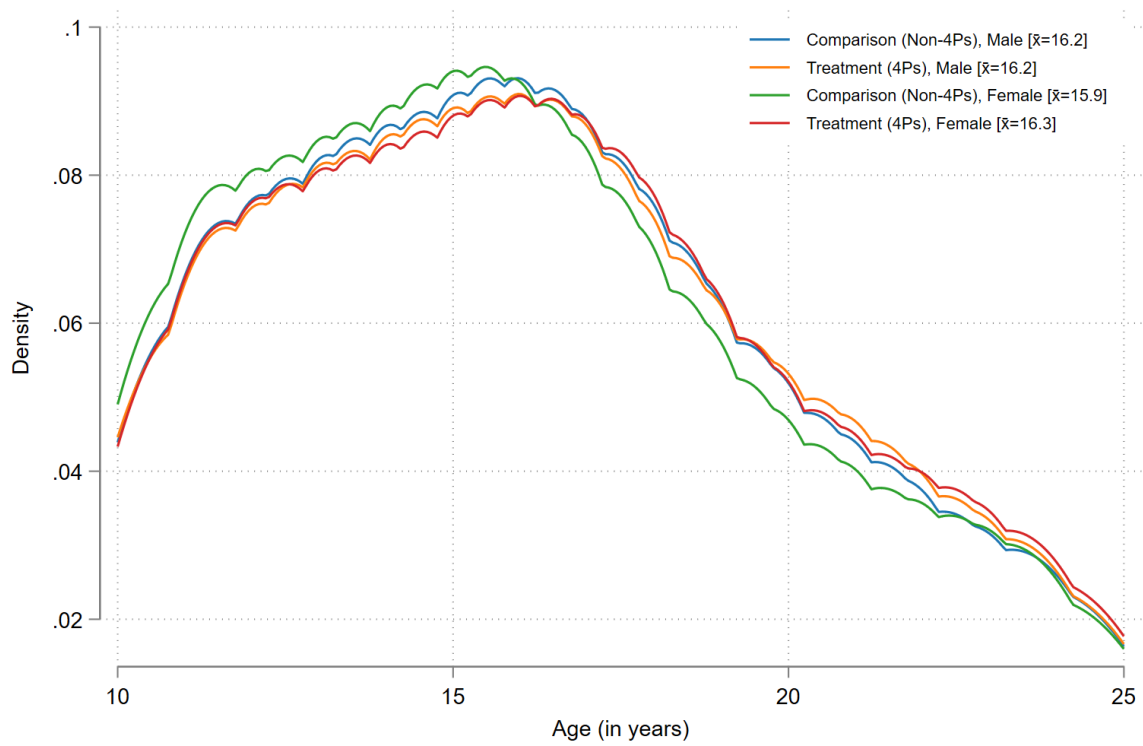


Table A. Child and Household Characteristics

Characteristics	Non-4Ps		4Ps		Covariate Balance	
	Mean	SD	Mean	SD	SMD	VR
<i>Child characteristics</i>						
Age	16.05	3.94	16.22	3.97	0.04	1.01
Sex (1=Male)	0.50	0.50	0.52	0.50	0.02	1.00
Currently enrolled in school	0.90	0.30	0.89	0.31	-0.02	1.05
Education Level						
<i>Preschool to Elementary</i>	0.25	0.43	0.24	0.42	-0.03	0.97
<i>Secondary</i>	0.58	0.49	0.59	0.49	0.01	1.00
<i>College and above</i>	0.17	0.37	0.18	0.38	0.02	1.04
Worked at least one hr in the past month	0.07	0.26	0.07	0.26	0.00	1.01
<i>Household characteristics</i>						
Household size	4.81	1.96	4.81	1.96	0.00	1.00
Number of household members by age:						
0 to 5 years old	0.28	0.57	0.26	0.57	-0.03	0.99
6 to 14 years old	1.06	1.13	1.06	1.08	0.00	0.92
15 to 18 years old	0.68	0.73	0.70	0.77	0.03	1.11
19 to 60 years old	2.38	1.36	2.41	1.36	0.02	1.01
61 and above	0.40	0.65	0.36	0.62	-0.07	0.91
Number of household members:						
without schooling	0.26	0.57	0.25	0.56	-0.02	0.96
at elementary level	1.73	1.53	1.74	1.50	0.01	0.97
at high school level	2.88	1.68	2.90	1.67	0.01	0.98
at college level or above	1.10	1.40	1.10	1.46	-0.00	1.09
Has IP member	0.09	0.27	0.07	0.26	-0.04	0.93
Head is employed	0.74	0.43	0.76	0.42	0.04	0.97
Age of household head	16.05	3.94	16.22	3.97	0.04	1.01
Sex of household head (1=Male)	0.68	0.46	0.70	0.46	0.04	0.97
Number of male household members	2.61	1.42	2.66	1.45	0.03	1.04
Number of employed household members	1.73	1.07	1.75	1.05	0.02	0.97

Validation of RDD Assumptions

Figure B presents the McCrary (2008) density test for manipulation of the running variable around the eligibility threshold. The graph displays the estimated density of the poverty score distribution with the vertical dashed line indicating the eligibility cutoff at zero. Each circle represents the number of observations in a given bin, while the solid lines show fitted densities on either side of the threshold.

Visual inspection reveals no apparent discontinuity in the density at the threshold (Figure C). The distribution appears smooth across the cutoff, with observations distributed continuously on both sides. The formal McCrary test confirms this impression: the estimated log difference in densities at the threshold is -0.138 ($SE = 0.044$, $p = 0.002$). While this estimate is statistically significant, the negative sign indicates slightly higher density just above the threshold rather than below it, which is opposite to what strategic manipulation would produce. If households were manipulating scores to gain eligibility, we would expect excess density just below the threshold, not above it.

The absence of manipulation is particularly credible because the PMT formula and threshold used for 4Ps eligibility are not public information. Households do not know the exact formula used to calculate their poverty score, nor the precise cutoff value that determines eligibility. The PMT algorithm is proprietary to the Department of Social Welfare and Development, and data are collected by trained enumerators through household visits and direct observation rather than self-reporting. Without knowledge of the scoring formula or threshold, households cannot strategically position themselves near the cutoff.

However, balance tests across a range of symmetric windows around the cutoff indicate that while individual covariates are generally balanced, joint balance tests reject the null of random assignment for most window sizes (Figure D). This suggests limited support for a strict local randomization design. Consequently, the analysis primarily relies on continuity-based RDD estimates, with LR-based results interpreted as robustness checks.

Figure E presents the first-stage relationship between eligibility and program participation. The figure shows a sharp and substantial discontinuity at the eligibility threshold, with program participation rates dropping from approximately 90% among eligible households (left of the cutoff) to nearly 0% among ineligible households (right of the cutoff). This discontinuous jump of roughly 90 percentage points confirms that the eligibility rules are strongly enforced and that crossing the threshold has a large causal effect on the probability of receiving 4Ps benefits. The strong first stage provides sufficient statistical power to detect treatment effects on career aspirations and validates the use of eligibility as an instrument for actual program participation.

Figure B. McCrary Density Test

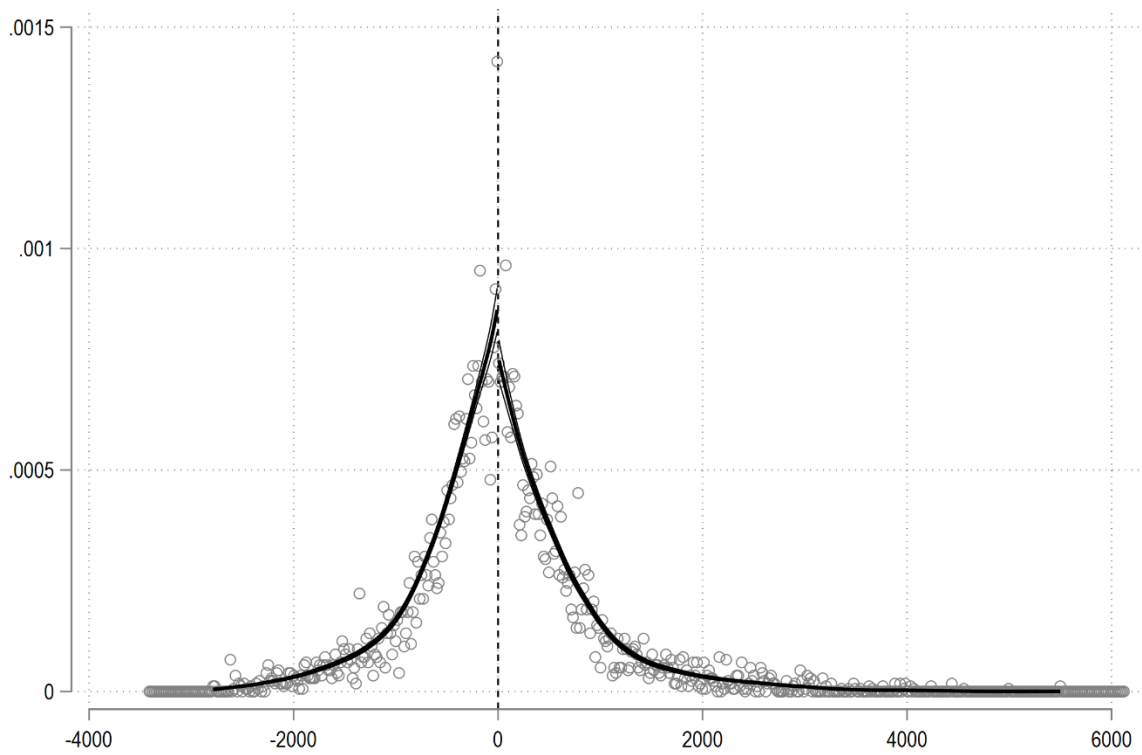


Figure C. Distribution of Household by Running Variable (PMT Score)

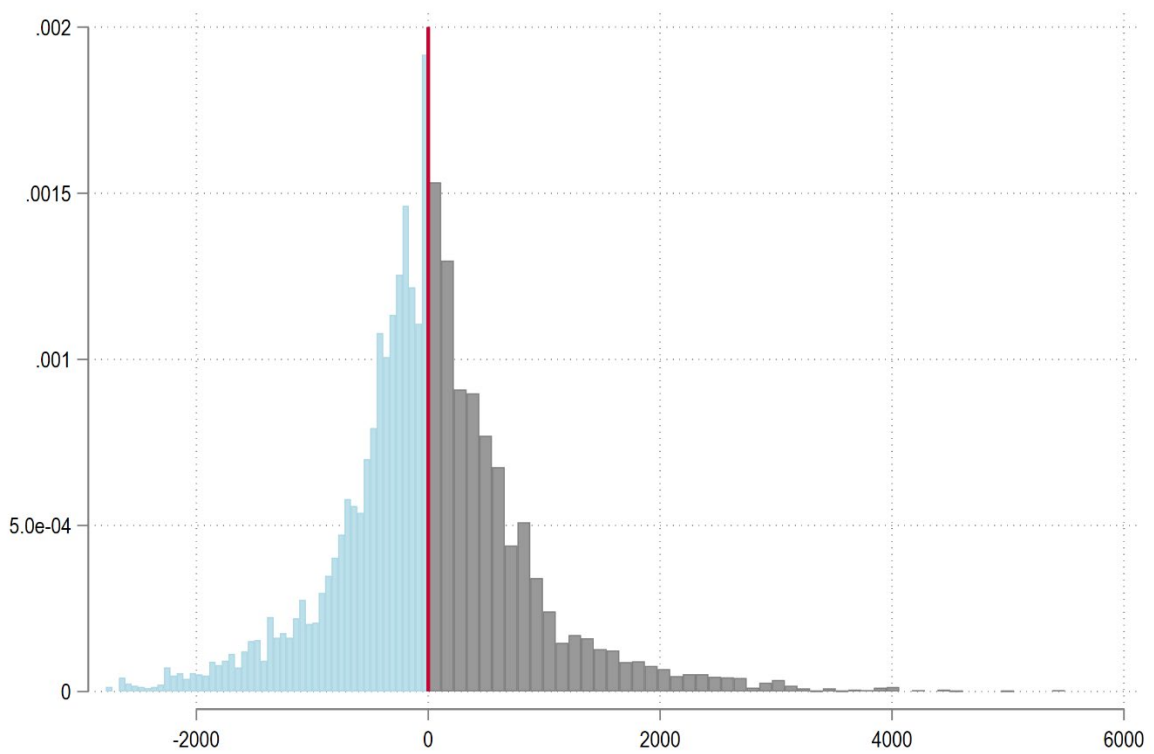


Figure D. Balance test by estimation window

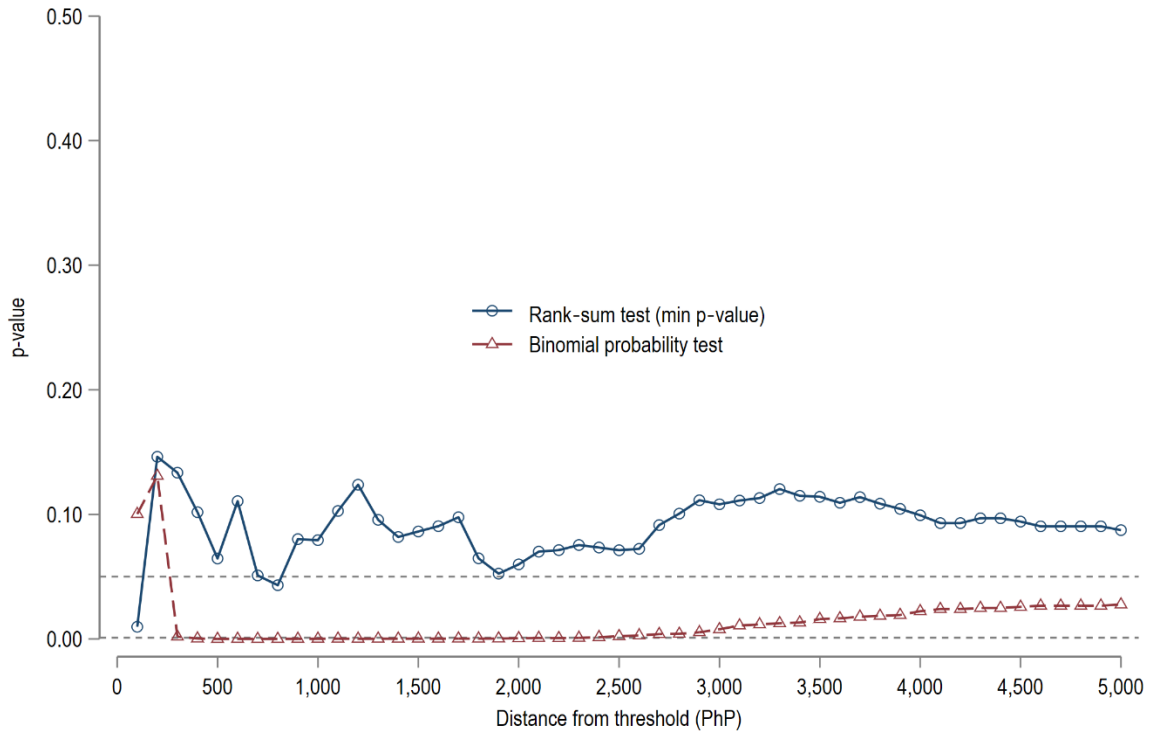
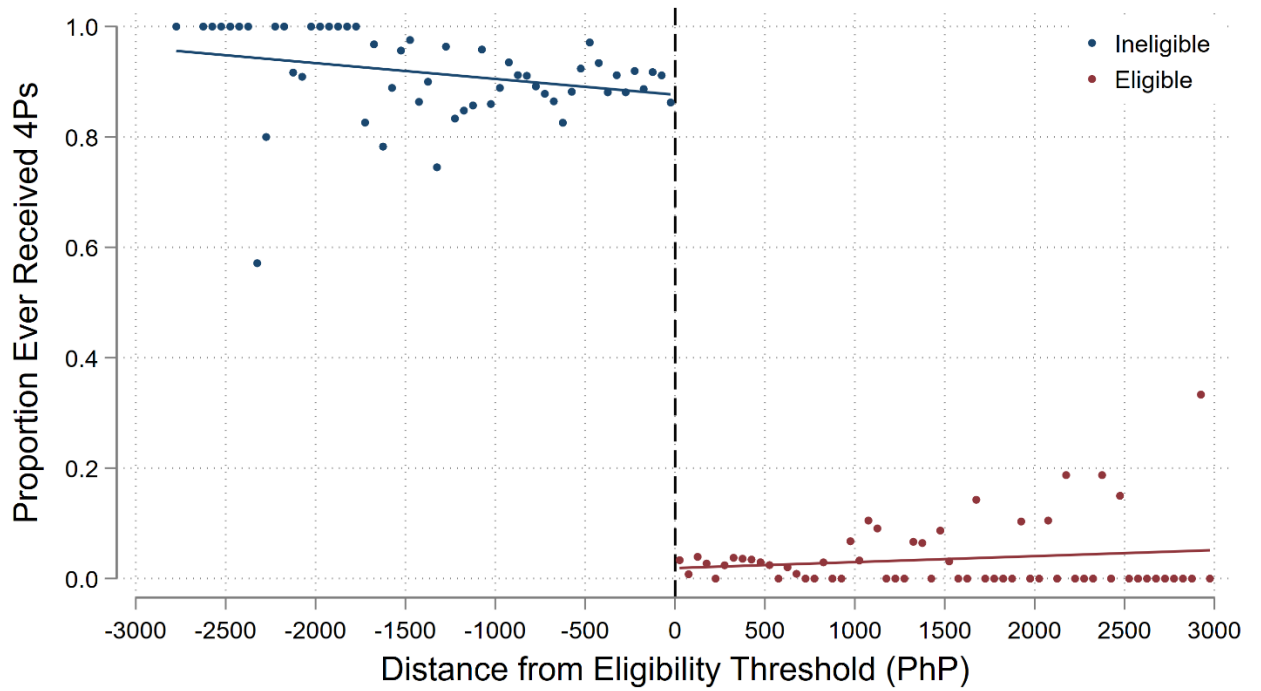


Figure E. Program Participation by Eligibility



Note: Each point represents the mean participation rate within 50 PhP bins.
 Sample restricted to households within 3,000 PhP of threshold.
 Vertical line indicates eligibility cutoff.