

**Pantawid Pamilyang Pilipino Program:  
A Stimulus to Local Economic Growth?<sup>1</sup>  
(Integrative Report)<sup>2</sup>**

**A. Background**

**1. The Pantawid Pamilyang Pilipino Program (herein referred in this paper as the Pantawid or 4Ps) is a flagship social protection cum poverty alleviation measure of the Aquino administration.**<sup>3</sup> Patterned after conditional cash transfers (CCT) developed and implemented in countries like Brazil and Mexico, the program provides cash grants to the extremely poor and most vulnerable households on the condition that they keep their children of ages 0 to 18 years healthy and attend school regularly while pregnant women avail of maternal health services.

**2. Pantawid plays three key roles in the government's development agenda:** First, the conditionalities attached to the cash grants enable the poor and vulnerable households in society to build and invest on the human capital resources of their children and the youth. This is intended to break the inter-generational transmission of poverty at household and national levels. Second, providing the Pantawid beneficiaries with stable and reliable financial support secures a safety net for the poor, preventing them from sliding further to a more impoverished state<sup>4</sup>. And third, Pantawid has also been instrumental in helping the country fulfill its commitments under the United Nations Millennium Development Goals (MDGs) of eradicating poverty and hunger, achieving universal primary education, promoting gender equality, reducing child mortality and improving maternal health care.

**3. The Department of Social Welfare and Development (DSWD) is the lead agency that oversees the implementation of the Pantawid.** Pantawid was pilot tested in February 2007 with 6,000 poor household beneficiaries from selected 4 municipalities and 2 cities. It is now implemented on a nationwide basis covering all provinces in the country. The cash grant for education amounted to PHP300 per month and per child of 0-14 years old. The education assistance was for 10 months of the school year and for a maximum of three children per household. In addition, the health and nutrition assistance was PHP500 per month per household. In June 2014, the Expanded CCT was

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<sup>1</sup>Submitted by Lourdes S. Adriano, Team Leader of the Study on Pantawid's Impact on the Local Economy.

<sup>2</sup>Annex 1 is the definition of terms contained in this report. Each of the sub-economic reports has a glossary/definition of terms appended to them.

<sup>3</sup>Pantawid was actually launched during the Macapagal-Arroyo administration at a limited scale. Its scaled up implementation to cover all provinces in the country occurred during the Aquino administration.

<sup>4</sup>Blattman and Ralston (2015) noted the poor farming households in other countries implementing a similar cash transfer program are able to buy rudimentary farm equipment from their savings and increase their farm productivity in view of expectations of future income streams from the program.

implemented, extending the age coverage from 0–14 to 0–18 years old and increased the education grant for children in high school from P300 to P500.<sup>5</sup>

4. Provision of the cash grants to eligible beneficiaries was contingent on their children being enrolled in school and maintaining an attendance of at least 85 percent of class days every month. Additionally, children aged 5 and below must get regular preventive health checkups and vaccines while those aged 6 to 14 must receive deworming pills twice a year. Pregnant women beneficiaries must avail themselves of pre- and post-natal care, while parents are required to attend family development sessions, which include topics on responsible parenting, health and nutrition.

**5. Beneficiaries of the program were selected applying a two-stage process.** First, through a geographic targeting that identifies the poorest municipalities on the basis of the poverty incidence which applied the official provincial poverty threshold. And second, through the proxy means test (PMT) method. The PMT predicts household income using observable and verifiable variables that are highly correlated with income. Eligible beneficiaries are indigent households with children of schooling age (0-18 years) and pregnant mothers.<sup>6</sup> The information management system that identifies who and where the poor are nationwide is referred to as the National Household Targeting System for Poverty Reduction (NHTS-PR, or *Listahanan*). Recently, the government has allotted PhP1.9 billion to update this database through a second round of assessment of the targeted 15.3 million households from which it is envisaged that the bottom 40 percent of the income echelon can be systematically identified.<sup>7</sup>

**6. By design, beneficiaries of Pantawid exclude specific types of households such as households with no children from 0-14 years old, homeless families, and unmarried families with disabilities.** However, pressure from various interest groups has modified and expanded the list of eligible beneficiaries (grouped as the modified CCT) to include: (i) families in need of special protection, (ii) homeless and street families, and (iii) poor families with children between 15 and 18 years old to enable them to complete high school. The cash grant may also be disadvantageous to some ultra poor families who

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<sup>5</sup> The expansion of the coverage from 14 years old to 18 years was a response to an evidence based study of Reyes et. al. (2013) which showed that an expansion of the Pantawid's coverage to include 15-18 years old would motivate poor children from this age group to finish high school. Further, the study noted that a high school graduate's average daily wage is 40 percent higher than an elementary graduate.

<sup>6</sup> There are three categories of beneficiaries and conditional cash transfer grants: beneficiaries under the National Household Targeting System for Poverty-Reduction, the expanded CCT grantees or children from impoverished households aged 15-18 years old, and the modified CCT to cover victims of natural and man-made disasters who lost homes and means of livelihood.

<sup>7</sup> The updating of the NHTS-PR commenced in March 2015 and was scheduled to be completed by January 2016 (Office of the President 2015). It should be able to weed out the inclusion and exclusion errors through a two-staged process of analysis: refined PMT and the second stage screener that requires the posting in conspicuous places of the initial list of poor families for validation of the communities where they supposedly reside.

have children aged 0 to less than 4 years as their financial support provides only PhP500 monthly for health coverage.

**7. The government puts premium in improving the well being especially of the extremely poor and most vulnerable.** Social services budget of the public sector has more than doubled between 2010 and 2015 (from PhP416 billion in 2010 to PhP953 billion by 2015), or from 28 percent of the government budget in 2010 up to 37 percent in 2015 (Department of Budget and Management, DBM 2015). Pantawid in 2015 comprised 58 percent of DSWD's budget. This is more than a six-fold increase from its 2010 budget, and in 2015 the program constituted 6 percent of the total social services budget of the government. Undeniably, the government's prioritization of strengthening social services delivery contributed to the decline in poverty incidence from 27.9 percent in the first semester of 2012 to 25.8 percent in the first semester of 2014 (Office of the President 2015). This is equivalent to around 504,408 individuals getting out of poverty.

**8. The proposed 2016 budget for Pantawid reveals a 3 percent decline from the previous year's outlay.** The main reason for this is the graduation of the first batch of senior high school 4Ps beneficiaries numbering 333,673, a 99 percent success rate of graduates from the total senior high school batch of Pantawid beneficiaries. For SY 2015–2016, the number of beneficiaries in high school increased to 1.845 million as of June 2015.

**9. Noting the importance of the quick delivery of cash grants to beneficiaries, the government expanded the channels for the timely delivery of the financial support.** From the over-the-counter and cash card transactions in LANDBANK before this Administration, beneficiaries can now also get their grants through rural banks, cooperatives, and remittance and money transfer shops (i.e., Globe's cash pick-up service GCASH REMIT outlets, M Lhuillier, and LBC Express, Inc.).

10. Household graduates from the Pantawid are currently linked to another DSWD program called the Sustainable Livelihood Program (DSWD website).<sup>8</sup> The aim of this program is to jumpstart microenterprise activities and skills training for employment for the ultra poor and its major beneficiaries are the graduates from the Program, although

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<sup>8</sup> Other social protection measures of DSWD are the: (i) KALAHI-CIDSS National Community-Driven Development Project, which seeks to empower communities in accessing services and participating in local planning, budgeting and implementation. This program will support 6,735 community projects that cater to 1.5 million poor households; (ii) Social pensions for indigent senior citizens, which allocates a monthly social pension of P500 to 939,609 indigent senior citizens aged 65 years and above; and (iii) the Supplemental Feeding Program, which is part of the government's Early Childhood Care and Development program, is a food supplementation program that will give hot meals to children during snack-/mealtime in school five days a week for 120 days.

individuals belonging to marginal and vulnerable groups are also eligible for support though non-Pantawid beneficiaries.

***a) Impact Assessments of Pantawid***

**11. Pantawid has been designed to embed a monitoring and evaluation (M&E) system that is receptive to rigorous and empirical-based analysis** that measures its impact on its target education and health outcomes for the children and youth of the extremely poor and vulnerable households. To date, it has undergone two waves of large-scale evaluation assessments. The first assessment (referred as Wave 1 study) focused on the initial municipalities where the Pantawid was scaled up in 2008 and 2009. Wave 1 covered 3,743 households in 7 provinces, and the survey was conducted in October/November 2011. The second assessment (Wave 2 study) had a total of 5,041 households from 26 provinces and data collection was conducted between October and December 2013. What differentiates the two studies is the methodological approach they employed. Wave 1 applied the randomized control trials (RCT) method, while Wave 2 used the regression discontinuity design (RDD). The RCT-based impact measurement compared Pantawid beneficiaries who have been registered in the program for at least 2.5 years (the treatment group) with respondents from the same localities who are as equally as poor as the Pantawid household beneficiaries but did not receive the 4Ps cash grants (control group).<sup>9</sup> The RDD on the other hand, was an impact assessment method that compared Pantawid household beneficiaries who are characterized with incomes that are lower than the provincial poverty threshold with households who have slightly higher incomes from the provincial poverty threshold but have similar socioeconomic characteristics as the Pantawid household beneficiaries. RDD had to be applied as the program had already by then covered all poor households who are eligible for the Pantawid.

**12. Despite Pantawid being in its early years of implementation, both impact evaluation results already indicated significant positive outcomes on the health and education of the Pantawid household beneficiaries.** The evaluation studies revealed: (i) increased enrolment among poor young children of ages 3-11 years old with a high 98 percent enrolment for primary-aged kids (6-11 years old), (ii) increased attendance among 6-17 years old but no impact on enrolment of these older kids; (iii) improved nutritional status of poor babies (6-36 months) showing a 10 percent reduction in severe stunting; (iv) increased use of maternal and child health services by pregnant and lactating women; (v) enhanced investments to meet health and education needs of poor children; and (vi) reduced expenditures on vices like alcohol consumption. Additionally, effects on health related services accorded by other government agencies (e.g., PhilHealth) were likewise positive, as Pantawid beneficiaries became members of these programs.

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<sup>9</sup> Non-Pantawid beneficiaries who were eligible Pantawid grantees but agreed to participate in the survey were immediately absorbed in the Program after the conduct of the survey.

13. Although the two evaluation studies focused mainly on measuring the program's effectiveness in achieving its education and health outcomes, they also provided insights on the potential positive spillover effects of the program to the local economy particularly in the areas of work motivation, labor allocation, savings, and access to credit. Specifically, the studies found out: (i) that regular and stable Pantawid cash grants did not encourage mendicancy as Pantawid household members who are of working age did not decrease their efforts to work or search for more work; (ii) increased savings among several household beneficiaries; (iii) decreased child labor hours with their heightened school attendance; (iv) increased, albeit insignificant, investments on non-financial assets particularly livestock; and (v) improved access to financial institutions. Surprisingly, the studies showed no significant changes in per capita consumption, which may be largely due to the inappropriateness of the evaluation design to adequately capture the nuances of the household's expenditures and income.

**14. Recent impact studies on Pantawid also provided some indications of the potential links of the program to the inclusive pathway for local economic growth.** Reyes et. al.'s evidence based analysis (2013) recommended the expanded coverage of Pantawid beneficiaries to 15-18 years as their study showed that a high school graduate's average daily wage would be 40 percent higher than an elementary graduate. Better incomes would not only improve the chances of poor families to escape from intergenerational poverty, but would also bolster the quality of the local economy's work force. Further, the study of Orbeta, Pacqueo, Spohr (2013) revealed that the program increased the desire for more work of the employed household head, female spouse, household members aged 18 years old and above, and middle-aged workers aged 35-54 years old. This finding indicates the potential contribution of the program in incentivizing Pantawid recipients to increase their prospective aspirations for work and assuming that jobs are available, could facilitate the mainstreaming of the ultra-poor back to the local economy.

**15. Another strand of research focused on the impact of Pantawid on household consumption using the 2011 Annual Poverty Indicator Surveys data and employing the propensity score matching method** (Tutor 2014). It observed that consumption expenditures of Pantawid households did not increase overall but changes in consumption goods were observed in terms of increased outlay on carbohydrate food types (e.g., rice), education-related goods, and clothing in fulfillment of the Pantawid conditionality. Heterogeneity of the impact was observed wherein significant consumption expenditures were recorded for Pantawid recipients whose incomes belong to the bottom 20 percent of the income echelon, with consumption outlays being significant for carbohydrate food and education-related goods. A couple of reasons for the variations in consumption impact could be due to the expanded coverage of Pantawid beneficiaries who may not be extremely poor (e.g., families with disabilities), and the insufficient amount of the cash grants in relation to expenditure

requirements to meet the 4Ps conditionalities, thus leaving little room to maneuver to improve consumption of other basic needs.

**16. The women focus of Pantawid as household managers of the funds is intentional** as women tend to prioritize the use of expenses firstly, on the fulfillment of the education and health conditionalities, and secondly on ascertaining that their families have at least three meals a day. As some Pantawid households experience irregular payment schedule, this creates uncertainty on the family consumption decision-making process, and which in turn, influences women households to buy in bulk storable food like rice as soon as they receive their cash assistance.

17. Two other studies that have implications on consumption behavior of Pantawid are the works of Reyes et al (2013) and Ducolos and Lim (2015) that distinguished the poor as transient and chronic poor and the determinants for the variations in poverty status. Such differences in poverty and their determinants are more pronounced with chronic poor and may need more targeted and enlarged cash transfers. Important findings of these poverty focused approach on the 4Ps are that there are more transient than chronic poor (which may partly explain the sudden poverty incidence rise in 2014, in response to adverse effects of income on natural calamities and the erratic movement of rice and other key food items); and that the chronic poor are often spatially located (more in rural areas and provinces that are conflict ridden) and are dependent on highly seasonal occupations like in agriculture, fisheries, and natural resource. The other equally important conclusion of these studies is that conditional cash transfers will be more effective poverty alleviation measure if complemented with programs that are productivity enhancing (e.g., farm to market roads, rural electrification, etc.).

***b) Review of Selected Literature: Local Economy Impact of Conditional Cash Transfer Programs***

**18. While most Pantawid evaluation studies focused their impact assessments on achieving its intended outcomes (i.e., increased access to education and health services for the poor), it has been observed that the huge transfer of cash to the poor and poor areas of the country has produced unintended economic impacts or the “ripple effects” both at the household and local economies.<sup>10</sup>** With the scaled up implementation of CCT as a major vehicle for poverty alleviation, the need to understand these unintended impacts on attaining inclusive growth have become increasingly important to government decision makers and planners. A greater understanding of these economic and productive impacts of CCT can contribute to broadening the policy menu for the inclusive growth strategy.

19. A recent attempt in better understanding of the impacts of CCT on the local economy is the set of country case studies by the UN Food Agriculture Organization

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<sup>10</sup>Refer to Reyes, et.al. (2013), Orbeta, Pacqueo, Spohr (2013), (Tutor 2014), and Ducolos and Lim (2015)

(FAO), in coordination with the UNICEF Eastern and Southern Africa Regional Office and the governments of Ethiopia, Ghana, Kenya, Lesotho, Malawi, Zambia and Zimbabwe. The project is called *From Protection to Production* (<http://www.fao.org/economic/ptop/home/en/>; 2012-2015). The work also benefited from the comprehensive literature review conducted by the *Policy in Focus* of the International Policy Centre for Inclusive Growth (UNDP) entitled, *The Impact of Cash Transfers on Local Economies* (2015, Volume 11, Issues No. 1).<sup>11</sup> In turn, this comprehensive review of the impact of CCT on the local economy provided invaluable insights in terms of focusing on the key question areas of this research study, the foundations for its conceptual and analytical framework, and the appropriate tools and methodologies for analyzing local economy impacts of Pantawid.

20. In the FAO study, **local economy impacts of CCT are examined mostly at two levels: (i) household level; and (ii) the local economy level defined in terms of administrative jurisdictions like villages, districts, provinces or cluster of provinces or country.** The underlying context of the impact evaluations is that non-existent, imperfect, and/or malfunctioning markets predominantly characterize developing economies which in turn, disadvantage most the poor households in these economies. The use of the regular and predictable cash transfers to compensate for the market failures can have both growth efficiency and redistributive effects (Ravallion 2015). Many of the economic impacts on CCT and social transfer focus on the effects that regular and predictable provision of cash accord to poor households on tackling the adverse consequences of imperfect or malfunctioning markets such as credit, insurance, and the labor market; and in addressing their lack of engagement in the market exchange of goods and services by providing them with the means for productive investment and labor participation.

21. **At the household level, the focus of the impacts studies are the changes in consumption patterns and distribution, labor market allocation, investments on non-food and productive assets, credit worthiness of and access to credit by CCT beneficiaries, savings, and risk coping strategies.** Key findings of these studies are: (i) increased amount spent on consumption (income effect), changes in the quality of consumption (substitution effect) and the way consumption was financed (through own and not debt financing; a combined income and substitution effect); (ii) changes on labor supply of different household members; (iii) investments of some of the funds as working capital for diversified productive and other livelihood activities that increase the beneficiary household's revenue generation capacity; (iv) prevention of detrimental risk-coping strategies such as distress sales of productive assets, child school drop-out, or

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<sup>11</sup> See also FAO (2011) '*From Protection to Production: The Role of Social Cash Transfers in Fostering Broad-Based Economic Development*', Rome, FAO; Arnold, C. with Conway T. and Greenslade M. (2011). *Cash Transfers Literature Review*, Policy Division, Department for International Development, April. These works show that cash transfers can foster broader economic development impacts.

engagement in risky income-generation activities such as commercial sex, begging and theft; and (v) improved credit worthiness of cash transfer beneficiaries (Oxford Policy Management 2013). Depending on the asset base of the poor household, incomes are augmented through expanded economic activity ranging from petty trading/engagement on micro and small enterprises to increases on on-farm productivity and in a few cases to more ambitious livelihood diversification strategies.

22. There is a growing body of evidence that putting women household members in-charge of the cash grant improves the ability of the household to reduce risky coping strategies (Schubert, B. and Huijbregts, M. 2006), ensures the household's financial security, expands women's participation in the labor market (Brazil's *Bolsa Familia* program 2007), and spends in ways that improve household welfare (Wallace T., and Chapman J. (2011). CCT also increased access to and control over resources amongst female-headed beneficiary households.

23. **On the local economy level, the major themes of the impact studies revolve around the effects on economic exchange, trading, prices, labor markets and productivity changes.** Increased purchasing power of cash transfer beneficiaries influenced the expansion of trading activity with beneficiaries buying more in local shops particularly after payment day (Oxford Policy Management 2013). Depending on the degree of spatial integration to markets and the presence of market infrastructure, there was a tendency for a greater variety of goods being traded, and a more stable and affordable price environment as the number of traders expand and compete to take advantage of the presence of a larger number of income endowed CCT beneficiaries. Rural versus urban locations are important determinants for the variations of impact on the local economy. Rural based beneficiaries of CCT tend to use portions of their cash grants to productive working capital investments like purchase of inputs and basic farm equipment. Smaller and poorer communities benefit more from CCT interventions than bigger communities that are less poor. Further, expanded demand for goods and services from a large number of CCT beneficiaries create strong bargaining leverage to the beneficiaries. Where markets for these goods are weak and commodities are inelastic, local prices will rise. With the entry of more businesses, supply constraint will be eased and prices will stabilize. And if there are no trade restrictions between and among localities, logistics facilities will improve and domestic trade flourish.

24. Local economy wide impact assessments are more challenging to undertake because of the complexities of isolating the effects of CCT with other policy measures and the effects of external and conditioning factors, as well as the dearth of quality data. Ideally, a CGE model will be appropriate to capture these direct and indirect as well as the multiplier effects of CCT on the economy, but obtaining accurate and reliable data is a major obstacle. Short of CGE, local economy wide impact assessments are being experimented in African economies. These however, require substantial time, and manpower and financial resources.

## B. Objectives

### Overall objective

25. **The overall objective of this project is to determine qualitatively and quantitatively the nature, form, and degree of the economic impact of the Pantawid’s cash grant expenditures (or payouts) on the local economy.** The study’s overarching thesis is that the provision of regular and predictable cash grants to ultra-poor households in the context of malfunctioning or nonexistent markets can generate positive productive and economic impacts at the household level. In turn, household expenditures stimulate the growth of the local economy through (a) improved food and nonfood value chains, and (b) more integrated economic networks that link Pantawid beneficiaries to business groups, markets, and government and nongovernment stakeholders.

26. The nature and extent of economic impacts of Pantawid are manifested through three inter-related sub-economies that comprise the local economy. These three sub-economies are: household economy, economic sector (e.g., food sector), and provincial/regional economy. We define each of these sub-economies as follows:

- Household economy involves the accumulation, consumption and distribution of resources within the Pantawid household beneficiary. We hypothesized that increased and varied consumption of Pantawid recipients serves as the trigger for spurring economic activities.
- Economic sector<sup>12</sup> refers to the commodity or service sectors whose production has been stimulated by the increased demand from Pantawid beneficiaries. Previous evaluation studies have revealed that Pantawid beneficiaries have increased their demand for food (particularly food staples or carbohydrate-rich food), education-related goods, and clothing. Understanding on how Pantawid-induced demand for these goods has changed the structure, organization, and performance of these economic sectors will be important in examining the influence of this demand push on stimulating more integrated and well-functioning markets.
- Provincial/regional economy defines the spatial coverage constituting the local economy of this research study. Local economy impact at this level refers to the direct and indirect economic effects arising from the Pantawid beneficiaries’ use of the cash grant. These could be in terms of impact on price and inflation, entrepreneurial activities, trade, and poverty. Variations

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<sup>12</sup>A subset of the economic sector is the emergence of “flea markets” during cash payout distribution. A case study of this particular market channel will be rendered to determine whether or not these are merely unorganized petty trading activities or have led to the participation of formal micro and small businesses to these livelihood activities.

of impact may also be due to another locational characteristic, i.e., rural versus urban. The analysis of local economy impact at this level will focus on provincial level and regional level effects. To address the overriding hypothesis, several hypotheses are developed for each sub-economy level.

**Specific objectives for each of the sub-economies**

27. Each of the sub-economies serves as the focus of the study's analysis in illustrating the impact of Pantawid on the local economy. Specific objectives for the each of the sub-economies are as follows:

- For the household economy, and using cross sectional analysis examining differences in the composition of expenditures between Pantawid beneficiaries and non-Pantawid respondents and differences in economic activities and economic decisions, the specific objectives are as follows:
  - i. To determine whether Pantawid led to reduced or lower consumption of primary goods at the household level;
  - ii. To examine whether Pantawid resulted in higher or increased expenditures on consumer goods by the Pantawid household beneficiaries;
  - iii. To determine whether Pantawid resulted in higher employment opportunities for the Pantawid communities;
  - iv. To examine whether Pantawid encouraged higher savings from Pantawid household beneficiaries;
  - v. To determine whether Pantawid enhanced the role of women in economic decision making within the Pantawid household; and
  - vi. To examine whether Pantawid resulted in higher or better aspirations in life for Pantawid beneficiaries.
  
- For the economic sector, and using the rice value chain (RVC) to illustrate the impact of Pantawid cash payout expenditures (rice being the staple food and a major food expenditure item of the poor), the specific objectives are as follows:
  - i. To assess how the Pantawid expenditures pump primes the rice economy of Bicol region;
  - ii. To evaluate how rice consumption, both in terms of quality and quantity, is being affected by the Pantawid Program;
  - iii. To identify changes in empowerment behaviors and actions of Pantawid beneficiaries toward other rice stakeholder, including government, private sector and NGOs; and
  - iv. To analyze the changes in organization, structure and practice of RVC players in the light of Pantawid implementation.

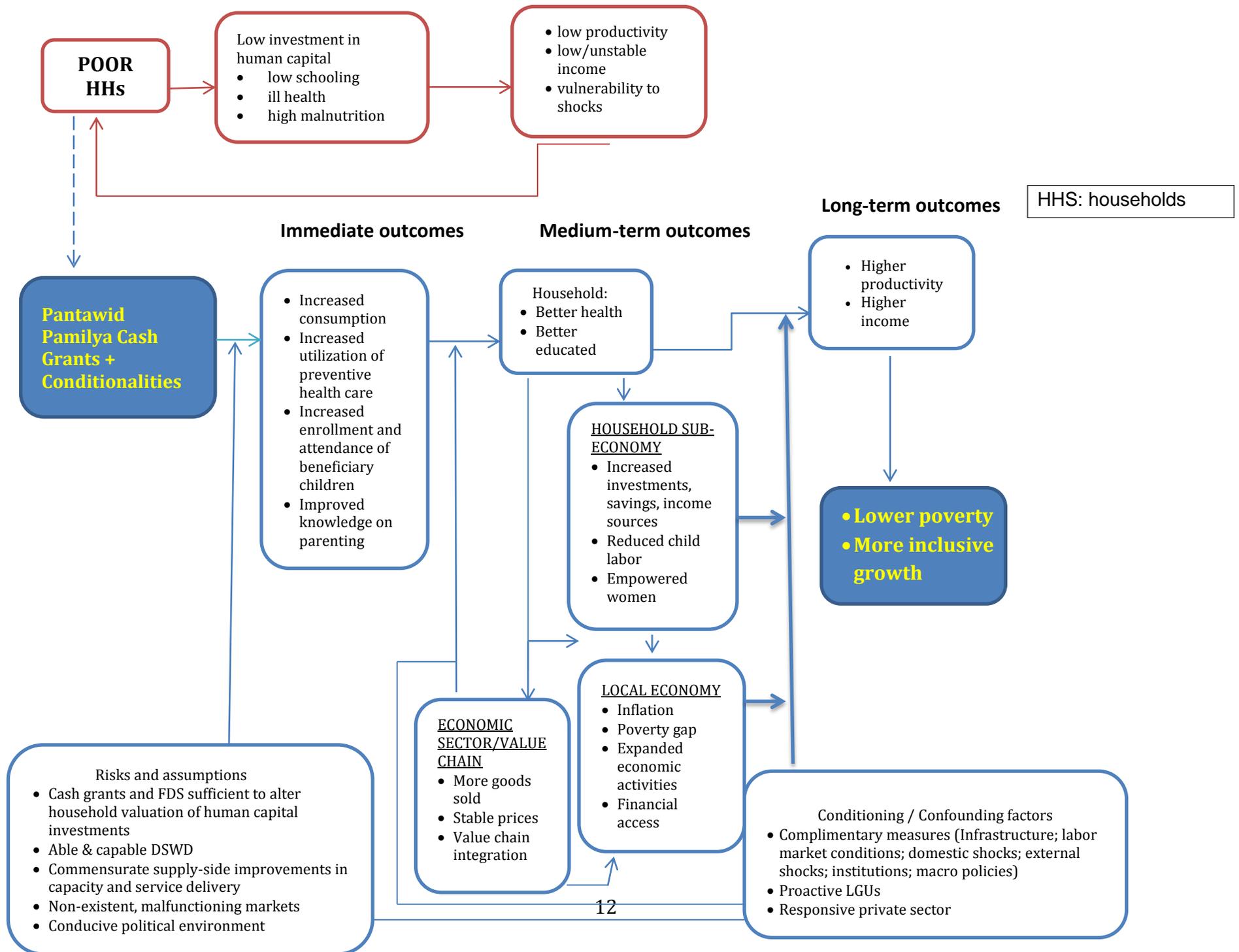
- A subset of the economic sector study is a granular analysis of how “flea markets”, which normally sprout during Pantawid cash payouts, evolve and operate in selected sites. An analysis of the evolution and operation of the flea market provides excellent insights and information on the pattern of consumption behavior of the Pantawid beneficiaries during cash payouts. The specific objectives for this granular research work are as follows:
  - i. To describe which goods or products were bought more by the Pantawid beneficiaries;
  - ii. To identify who the sellers/vendors/entrepreneurs are and the types of product sold, their place of origin, where they obtain their products, and their amount and sources of capitalization;
  - iii. To analyze the effects of the flea market operations on employment generation and other indirect economic activities within the Pantawid sites selected by the study; and
  - iv. To determine the roles of the local government units (LGUs) in facilitating the payouts and determine whether additional local revenues are generated from the operations of the flea market and the utilization of such revenues.
  
- For the provincial/regional economy level, the specific objective is to determine the effects of the Program on three “macro” variable indicators, namely: impacts on (i) poverty; (ii) overall price levels or Consumer Price Index; and (iii) labor participation and employment.

### C. Conceptual Framework

28. **Figure 1 illustrates the conceptual foundation and the analytical framework used by the research in delineating and understanding the local economy impact, as well as the links of the local economy impact to the first round and subsequent round of outcomes of the Program.** The primary focus of this local impact assessment is the productive and economic spillover effects of the Pantawid’s cash transfer grant/payout. The impetus for the economic spillover effects of the Pantawid stems from the injection of regular and predictable cash amounts to the beneficiaries which effectively augment their main source/s of income:

$Y_{B,t} = \sum (Y_1 + Y_2 + \dots + Y_n) + Y_p$  where:  $Y_{B,t}$  is income of the Pantawid beneficiary at time  $t$ ; and is the sum of various income sources ( $Y_{1,2,\dots,n}$ ) and  $Y_p$  is the cash outlay for the Pantawid household (maximum of PhP15,000 per annum for 3 children and PhP500 for each child for health services).

**Figure 1. Conceptual and Analytical Framework**



Source: Adapted from World Bank 2014, Figure 1,p.7

29. **Of the different income sources,  $Y_p$  is most secure (at least until the child is 18 years old), stable, and predictable (released at regular intervals).** In contrast, the Pantawid household beneficiary would usually have zero to 1 income source but this and other sources of income are uncertain, of low value, and are often received on an intermittent and short-term basis.

30. Using the utility maximization under constrained budget concept, the importance of the Pantawid cash grant to the beneficiary is its potential of enabling the households, who are chronically poor, to move from a survival expenditure mode (ultra poor state) to a subsistence (near poor state) level. Assuming the availability of at least one income source to supplement the  $Y_p$ , at the household sub-economy level, there could be room for the Pantawid household to buy the right amount of food (at least 3 meals a day) and occasionally, consume better quality food (more protein rich food) and other non-food essential items. Additionally, with appropriate budget management, this could lead to procurement of non-financial assets, more or new productive livelihood activities (for Pantawid farmers, purchase of good seeds, fertilizer and other farm inputs; and for urban Pantawid, engagement in livelihood enterprises like petty trading, etc.), and reduction of adverse risk coping measures like divestment of existing assets or eating less meals a day.

31. **The demand-driven push for more commodities (more and variety of food, education-related goods, and clothing) from Pantawid beneficiaries is expected to stimulate existing markets of these goods to respond to the additional demand through more efficient and integrated value chain segments.** Improvements in the value chains of demanded goods from Pantawid consumers comprise the economic sector sub-economy effect. Initially, prices may move upward as the supply side may be rigid. With continuous demand push, this will stimulate value chains of these commodities to compete through more and better quality goods supplied, better logistics and marketing strategies, and through affordable prices. Enterprising micro and small businesses will seize the opportunity of moving their goods to the Pantawid beneficiaries especially during cash payout days.

32. **Theoretically, at the local sub-economy wide level (provincial aggregated at regional level) and in the medium term, there will be effects on local prices and inflation, business enterprise development, poverty gap, and domestic trade.** Increased demand for goods and services would eventually stimulate local economy's market transactions, push for labor demand, expand trade, and spur other multiplier effects especially as these combine with productive enhancing measures of the government and private sector (the conditioning factors). The long-term outcome would be lower poverty and a more inclusive growth pathway, but this of course will depend on who among the poor are being impacted (chronic or transient, rural or urban, Pantawid or non-poor).

**33. In this three-staged local economy impact, women will play pivotal roles in the Pantawid's success to achieving the long-term outcome.** There are ample evidence showing that women's participation raises productivity, investment, and overall economic health of the economy. There will be gender lens in all three sub-economy levels of analysis especially at the household level.

**34. In summary, the local economy effects of Pantawid can be viewed** as the (a) income (and substitution) effects in the consumption of Pantawid beneficiaries emanating from the household sub-economy, (b) the value chain improvements in key economic sectors that are bolstered by the shifts in consumption and income of Pantawid beneficiaries, and (c) the local economy's spatial or geographic effects on *inter alia*, market transactions, prices, intra- and inter-trade, more financial transactions, and possibly other multiplier effects.<sup>13</sup>

#### **D. Methodology**

**35. The study employs a combination of quantitative and qualitative methodologies to determine the local economy impact of the Pantawid program at the three sub-economy levels.** Primary data gathered through cross sectional survey of Pantawid beneficiaries served as the main tool for basing the economic impact assessment at the household economy level. The survey benefited from the previous Pantawid two Wave studies as both assessment works generated information on household consumption patterns and distribution, household labor use, accumulation of savings and investments, credit access and worthiness, and incentives for work. Where feasible, the current survey built on the above data generated from the two Wave studies so as to provide a better understanding of their existing trends on the above mentioned parameters.

**36. The household level analyses involve a repeat survey of the Pantawid impact study (Wave 2) that was conducted in 2014 but with the present one focusing on consumption and income.**<sup>14</sup> The survey questionnaires benefited from the Annual Poverty Incidence Survey (APIS) and the Family Income and Expenditure Survey (FIES). Due to logistical and time constraints, the study only examined Pantawid beneficiaries in

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<sup>13</sup>There is also a direct link between the mid- to long-term outcomes from better health and education of Pantawid kids to the long-term increases in disposable income and productivity at local economy level. Healthy and academically equipped Pantawid kids would bolster the local economy's human capital resources and the pool of labor force in the long-term. These would provide more income generating opportunities to this new breed of workers and further boost the local economy. The interface of the health-education outcome of Pantawid with the local economy impact will not be covered in this study, as most of the target beneficiaries for the household survey are those with children between 0-18 years.

<sup>14</sup>For a detailed discussion of the methodology employed in the household sub-economy level analysis, refer to the paper of Gordoncillo, Prudencio, et.al. (2016) attached as Annex A to this report.

specific contiguous provinces constituting the administrative jurisdiction of a region. Consistent with the Pantawid's target household beneficiaries (those belonging to the income strata of 40 percent and below), the study selected four provinces in the Bicol region, also previously covered by the Wave 2 evaluation study, as its research sites. These provinces are Albay, Camarines Norte, Catanduanes and Masbate. The total number of samples covered in the 2014 Impact Evaluation study across the four provinces is 668. Because of the full roll out of Pantawid after 2013 the randomized control trials (RCT) approach is no longer feasible as there are no more control groups. Hence, the estimation of the impact of the Program to the local economy at the household level replicated the regression discontinuity design (RDD) used in the 2014 study. To enhance the parameter estimates, the RDD procedure was adjusted using propensity scores.

**37. For the economic sector analysis of the local economy impact, Figure 2 illustrates the sample of key economic segments or nodes of the rice value chain<sup>15</sup>.** The demand-driven push from Pantawid beneficiaries is expected to stimulate production of the goods demanded by beneficiaries. For this purpose, we identified a commodity usually demanded or purchased by Pantawid recipients: rice (food consumption). The value chain of rice was divided into three segments: upstream (production); midstream comprising of the processing, logistics, and marketing; and the downstream segment (or the consumer market comprising the Pantawid and non-Pantawid beneficiaries). The analysis traced and mapped the value chain segments of rice demanded by Pantawid consumers, and the potential changes in the organization, structure, and performance of the value chain segments due to the demand push from the Pantawid consumers. Breakdown of costs per segment and the share of each business player to the price received by Pantawid beneficiaries were undertaken. Qualitative methods employing FGDs and KIIs in the value chain segments were also conducted. They were meant to better understand the nature and depth of changes in the value chain, especially if these responded to the needs and requirements of Pantawid poor families, introduced efficiencies in the value chain segments, and reflected distributive effects on costs and benefits among the key players in the value chain.

**Figure 2. Sample of rice value chain mapping**

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<sup>15</sup>For a detailed discussion of the methodology employed in the economic sector level analysis, refer to the paper of Bulao, Rolan Jon Go, et al. (2016), attached as Annex B to this report.



**38. Part of the analysis will be a case study of flea markets that usually sprout and operate in the surrounding areas where the Pantawid cash payouts are being made.<sup>16</sup>**

The types and varieties of trading and other market activities that occurred during payout days were documented to find out who engaged in these activities; to determine if these evolved into productive and economic activities that responded to the needs of Pantawid recipients or essentially remained as informal trading activities; and to assess the share of expenses of Pantawid recipients and the nature of market relations that developed between consumers and sellers.

**39. The scope of the local economy wide analysis covered contiguous poor provinces that comprise an administrative region.<sup>17</sup>**

Using regional level data from the FIES, APIS, BSP, LFS, PSA, DPWH, and the recent Listahanan-generated data that verified and updated eligible beneficiaries, a panel regression approach was applied to examine the effects of Pantawid funds on (1) poverty, (2) Consumer Price Index and (3) labor participation and employment. The CPI and employment models are further disaggregated to specific models to determine which sub-categories of CPI and employment are significantly more affected by the CCT program. Each regression is then checked if random or fixed effects is more appropriate for the analysis using Hausman test. Furthermore, Breusch-Pagan Lagrange Multiplier (if applicable) is conducted to test whether pooled-OLS or panel data is more relevant to the study.

**40. For all the three sub-economy levels, the qualitative methodology was applied, and more extensively for the economic sectoral sub-economy value chain.**

This approach is useful in gaining a better understanding of the mechanisms how the impacts of 4Ps pan out at the three sub-levels. Also, it provided more in-depth insights on the variety of impacts due to geographic locations, differences in socio-economic demography, gender, social networks involved, differences in power groups of various interest groups, and other conditioning factors. The idea was to highlight the where and under what conditions the Program produced productive economic impacts.

<sup>16</sup>For a detailed discussion of the methodology employed in analyzing “flea markets” that usually sprout during Pantawid cash payout days, refer to the paper of Paunlagui, Merlyne (2016), attached as Annex C in this report.

<sup>17</sup>For a detailed discussion of the methodology employed in the local economy-wide analysis, refer to the paper of Adriano, Karlo-Fermin S., et.al. (2016), attached as Annex D to this report.

## D. Key Findings

41. Key findings of this study on the impacts of the Program are presented below broken down to the three sub-economies which served as the analytical focus of the research work: (a) household level analysis; (b) economic sector analysis enriched by the flea market case study; and (c) local-regional wide analysis.

### 1) *Household Level Analysis*

42. Using both cross section and panel data, the household level analysis tested the following hypotheses: (i) whether Pantawid reduced or lowered consumption of primary goods; (ii) whether the Program led to higher or increased expenditures on consumer goods; (iii) whether it led to an increase or higher employment opportunities; (iv) whether it resulted in higher savings among beneficiaries; (v) whether Pantawid enhanced the role of women in economic decision making at the household level; and (vi) whether the Program resulted in higher or better aspirations in life for the beneficiaries.

43. **a) Food consumption** - The cross section data analysis revealed that the Pantawid beneficiaries are consuming more cereals, in general, and more rice, in particular, than non-beneficiaries. However, in terms of the overall food group, the results varied. The beneficiaries consumed more meat (i.e., the food of the “rich” in the Philippine context) but lesser fish and vegetables compared to non-beneficiaries. The panel data result was consistent with the cross section analysis result in terms of the increasing consumption pattern for cereals. However, the comparison between the endline and the baseline showed that meat consumption has declined. The increasing consumption of an inferior good like rice despite increasing rice prices overtime coupled with an increase in the consumption of the relatively less inferior goods like meat is a classic manifestation of the “Giffen paradox”<sup>18</sup>.

44. **b) Non-Food Expenditures** - In general, the patterns of spending for non-food items such as clothing, health, education, utilities, communications and recreational goods, are shown to be higher among Pantawid beneficiaries compared to non-beneficiaries. However, there is also common pattern that the impacts of the Pantawid Program are more pronounced among those beneficiaries at the bottom end of the poverty grouping compared to those beneficiaries at the boundary of the poverty threshold. This pattern is particularly evident in the consolidated models for the three provinces. Across

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<sup>18</sup> The “Giffen paradox” was forwarded as an argument to explain the seemingly inconsistent behaviour of increasing consumption of a commodity as its price increases. This phenomenon, when observed in inferior goods, is a natural behavior of consumers who are poor. Rice constitute the bulk of the budget among the poor. If the price of rice increases, the households’ ability to maintain its consumption mix is altered. As an adjustment, the household buys more rice and reduces consumption on the other commodities in its expenditure basket (Samuelson, 1992).

provinces, there are variations in the results. For education, the pronounced effect at the bottom end of the poverty grouping is evident in the provinces of Camarines Norte and Masbate. In Albay, spending on clothing among beneficiaries is higher compared to non-beneficiaries across the board; in fact, the level of spending is higher. Spending on education for Albay and Camarines Norte is higher among Pantawid beneficiaries compared to non-beneficiaries; however, the difference is not significant for the province of Masbate.

45. Pantawid beneficiaries spent more on utilities and communications compared to non-beneficiaries. However, those who are closer to the poverty threshold are spending less compared to those who are at the bottom end of the poverty grouping. For recreational goods and services, the consolidated model for the three provinces showed a lower spending among Pantawid beneficiaries compared to non-beneficiaries. However, the individual provincial estimates showed higher spending on recreational goods particularly in the province of Albay.

46. **c) Savings and Investments** - The overall pattern in terms of savings and other forms of investments shows that Pantawid beneficiaries are saving and investing more than the non-Pantawid counterparts. This result is consistent for most of the outcome variables that show differentiation across income groups among beneficiaries: those who are at the bottom end of poverty grouping are saving and investing more than those who are closer to the poverty threshold. This pattern seems counter intuitive, but the behavior is quite rational considering the conditionalities of the Program. Poorer households have more pressure to set up some form of a hedge fund to ensure that they can maintain the conditionalities of the Program to remain into the beneficiaries list. This hedge fund can come in the form of actual savings in banks or cooperatives or in the form of backyard livestock or household assets.

47. **d) Business Ownership and Employment** - A common feature in a poor community setting is the presence of convenience store popularly referred to as “sari-sari” store. These shops are family-operated, serving as an annex to regular homes in the community. However, this enterprise requires liquid assets. The results of the analysis showed that Pantawid households are more likely to operate a sari-sari store compared to non-beneficiaries, indicative of the savings generated by Pantawid beneficiaries. Moreover, this pattern is also reflected in the manner through which family labor is employed in the operation of the “sari-sari” store as a family enterprise.

48. **e) Role of Women** - In terms of key economic decisions made by the household, the results showed that women in Pantawid households are more active in the decision making on household marketing and budgeting. This demonstrates that the Pantawid program does not only affect the behavior of the households in terms of consumption but has also enhanced the women’s role in the decision making on marketing and budgeting.

49. The amount of time spent on child care is lower among Pantawid mothers compared to non-Pantawid counterparts. This pattern is evident, in particular, in the province of Albay. For the consolidated data of the three provinces, there is no difference between the efforts of Pantawid mothers in helping children with their studies compared to the non-Pantawid mothers. The direct or positive effect in Albay was negated by the inverse effect in Masbate.

50. **f) Expectations and Aspirations** - The benefits of the 4Ps is not limited to its direct material benefits. It was found out that the Program influences aspirations, which in turn determines the future behavior of the beneficiaries. The study revealed that beneficiaries are more optimistic in terms of their children achieving more in life than their parents due to their children's guaranteed access to education. Further, beneficiaries have higher social aspirations compared to non-beneficiaries.<sup>19</sup>

## 2) Economic sector analysis

51. **a) How the Pantawid Pamilyang Pilipino Program pump-primers the rice economy of the Bicol Region** - The 4Ps cash grants along with the IRA of the LGUs create a multiplier effect in the local economy of Bicol. Researchers estimate the multiplier to be 7.87 and 3.49 for the first and second income deciles, respectively. Also, it was found out that the Pantawid cash grants for Bicolanos can potentially generate an additional PHP18 to 40 billion revenue for the local economy. This is because Pantawid and IRA combined represent a cash infusion from the national government to the Bicol region of an amount no less than PhP23 billion in 2015. Assuming a multiplier of 2.938 for the entire Bicol population, such cash injection is estimated to generate an additional PHP67.57 billion income to the region's economy, which is about a quarter of its GRDP. These estimates are supported by the observed increase in the number, gross sales, and capitalization of agriculture-related businesses in the research locales, including but not limited to the RVC players. This improvement in the business environment extends to related economic industries such as supermarkets, groceries and the transport, where sales and patronage rose.

52. **There is a significant increase in the number of registered agricultural-related businesses in the three locales of the study.** In Libmanan, the trend before Pantawid was declining number of rice mills: 17 in 2005 to only 13 in 2008. The number started to rise again until it reached 17 again in 2014. *Compradas* (rice traders and dealers) also saw a remarkable increase from only 1 in 2008 to 11 in 2015. In Naga City, agriculture businesses increased by 213 percent between 2005 and 2015. Of this number in 2015,

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<sup>19</sup>A consolidated aspiration and a component specific indices were generated covering three dimensions: economic, political and social. In each component, the index was generated by anchoring an aspiration level relative to a benchmark. For instance, respondents were asked if they know someone who is rich and what is the amount of income they would consider rich (as the benchmark). They were then asked as to their current level of income and the level of income they aspire. The index is then generated as the ratio of the difference between the aspired level and the benchmark over the benchmark income.

94 percent are rice retailers. Total capitalization of all registered agriculture businesses increased from about PhP1.65 million in 2005 to about PhP13.27 million. Total sales also rose from a measly amount of PhP3.645 million in 2005 to PhP119.23 million in 2015.

**53. b) How rice consumption, both in terms of quality and quantity, is being affected by the 4Ps** - Rice consumption behavior of Pantawid beneficiaries has changed in terms of quality as manifested by the shift from NFA rice to commercial rice. According to the respondents, the cash grants, along with the relatively lower prices of commercial rice, enabled them to afford better quality commercial rice. The study also found an increase in the quantity of rice the household consumed which was attributed by the respondents to two factors: (1) growing children in the household, and (2) children starting their own family but still living with their parents. Although the increase in the quantity of rice consumed may not be directly attributable to the program itself, it can be inferred that Pantawid may have a positive impact on rice consumption. With the increase in household size, the Pantawid beneficiaries are still able to increase their consumption and at the same time shift to better quality rice varieties.

**54. The findings above are not evident with Pantawid beneficiaries who are rice farmers.** Their shift to better quality rice can be attributed to their use of new hybrid seeds, portions of its harvest are kept for household consumption. Expectedly, Pantawid beneficiaries who are rice farmers are more rice self-sufficient than their non-farmer counterparts. While Pantawid farmers did not see a direct link between their capacity to buy new hybrid seeds and the Pantawid cash grants, the study discovered that in some cases, Pantawid farmer-beneficiaries use a certain portion of their cash payout to buy rice farming inputs.

**55. c) Changes in empowerment behaviors and actions of Pantawid beneficiaries toward other rice stakeholders, including government, private sector, and NGOs** - In evaluating the empowerment behavior and actions of Pantawid beneficiaries toward other rice stakeholders, the study found out that beneficiaries can now easily access credit from rice retail stores because of the predictable streams of income coming from the Pantawid cash grants. Beneficiaries have forged a stronger relationship with retail stores through a “suki relationship” over time.<sup>20</sup> The study revealed that beneficiaries tend to trust rice retailers more than non-Pantawid rice consumers do due to the “suki relationship” forged.

**56. Pantawid rice consumers’ buying behavior has also changed.** From buying rice on a per kilo and daily basis, most of the Pantawid respondents now buy rice on a per sack basis during the payout session. This provides a hedge for the Pantawid household who

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<sup>20</sup>However, one unscrupulous retailer charged an interest rate of up to 32 percent in a single transaction. Although this is an exception rather than a rule, this development should be a cause of concern to prevent it from becoming a trend among traders.

experiences uncertain income earnings because of underemployment and seasonal employment, key features of the poor's participation in the labor market.<sup>21</sup>

**57. Non-government organizations (NGOs), such as SKK<sup>22</sup> and CDL<sup>23</sup>, disclosed that it is easier for them to organize farmer-members** who are Pantawid beneficiaries as they are already accustomed to complying with DSWD requirements. Being beneficiaries, Pantawid farmers are better informed and trained on the latest farming technology and can better access government and privately-provided credit and other support services.

**58. d) Changes in organization, structure, and practices of RVC players in the light of the Pantawid implementation.** Several changes in the organization, structure, and practices of RVC players were noted in light of Pantawid's implementation. Among the RVC players, the program has greater impact on retailers and wholesalers. Rice retailers and wholesalers disclosed that they could easily identify beneficiaries during payout as their buyers because they come to their retail stores as a group. They also confirmed a slight increase in their income when the Pantawid beneficiaries became group buyers. In turn, rice retailers and wholesalers have extended credit and other special arrangements to Pantawid rice consumers to encourage them to buy. Results of the KIIs and secondary data gathered also support the increased income received by rice wholesalers and retailers with the implementation of the Program.

**59. An interesting finding of the study is the reorganization and integration of RVC players.** For instance, a miller-respondent does not only engage in milling activities but also in retailing, wholesaling, trading and with some, even owning rice fields from which a portion of their harvest is sold to buyers. In Camarines Sur, partnerships between DA, LGUs, the Church, and NGOs are also formed to provide services to farmers.

**60. The numbers of agri-related businesses, their total capitalization and gross sales have generally increased in the study sites.** Their growth and expansion resulted to higher employment among the local labor force<sup>24</sup>, which further increased purchasing power. The impact of the cash payout along with IRA is estimated to contribute to as much as 25 percent of the GRDP<sup>25</sup>.

61. Among the RVC players, the farmers have the highest return per kilogram of paddy rice compared to the other players. Nevertheless, other players, especially wholesalers-retailers and big rice mills, earn much bigger aggregate returns due to economies of scale. Big rice mills also indicate significant income improvement due to increased

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<sup>21</sup> In one of the study sites, beneficiaries complained even if they wanted to buy rice as a group, they were prevented by the assigned DSWD personnel because they were told that it would take longer time to process their request.

<sup>22</sup>SKK Farmers Corporation

<sup>23</sup>Caritas Diocese of Libmanan.

<sup>24</sup> Based on key informant interviews, FGDs, and PSA data

<sup>25</sup> Based on researchers' estimates of multiplier effect of IRA and Pantawid grant as discussed in the paper of Bulao et al. (2006)

investments in their facilities. Most Pantawid farmer beneficiaries depend on other rice value chain actors for credit for their farming inputs, although a number of them benefit from services provided by the government and NGOs. The study also found out that a portion of the cash grant is sometimes used by the Pantawid farmers to procure farm inputs if credit is unavailable elsewhere.

### **2.a) Flea market case study**

62. **It is now a common sight to see the operation of a flea market near the site where the Pantawid cash payouts to the beneficiaries are being made.** The operation of the flea market is a manifestation that the extra income received from the Program can perk up local economic activities since most products being sold in the flea market come from the locality or neighboring areas. A granular analysis (through interviews with Pantawid beneficiaries during the payout sessions, visits to these flea markets, and interviews of traders or their assistants) of such flea markets in a number of sites in the sample areas was conducted to better understand the supply and demand dynamics of this trade triggered by the 4Ps.

63. **a) Most commonly bought goods** - For nonfood items, the most commonly purchased are goods required by children such as slippers, and school supplies like paper, pencil, and ballpen. For food items, Pantawid beneficiaries usually buy rice, bread, sardines, noodles and other canned goods.

64. **b) Place of origin** – In the case of Milagros, Masbate, most of the merchants come from the same municipality. On the other hand, in Libon, Albay, merchants come not only from within the municipality but also from neighboring municipalities. However, in both Milagros and Libon municipalities, traders involved in the food stall business are from within the municipality they operate because of the perishable nature of their products. In contrast, all *ukay-ukay* merchants in the payout sites come from neighboring municipalities.

65. **c) Impact on business revenues** - The effect of Pantawid is positive on the revenues of most merchants regardless of the payout sites. Some also gained from the expenditures of Pantawid beneficiaries even if they did not participate in the flea market near the payout venue. The pharmacy store, mini-grocery, and the school supplies shop in Masbate operating outside the flea market site were patronized by the beneficiaries because of the “suki” system.

66. **d) Impact on employment generation** - There are indications that the Pantawid expenditures contributed to increasing employment at the locality, albeit small. This is particularly true for establishments in the town center where additional sales persons are temporarily hired due to increased business activities during Pantawid payout days.

67. The effect on the local economy of Pantawid depends on the location or venue of the payout. The case study discovered that the effect of cash transfers is more felt in isolated communities than those communities with greater exposure to trade from neighboring markets. In the Municipalities of Milagros, Masbate and Libon, Albay, the effect of Pantawid beneficiaries expenditures on the local economy is highly visible given the higher number and variety of merchants present during the payout. In Vinzons where majority of the Pantawid beneficiaries use ATM machines located in two established markets close to Vinzons, the beneficiaries patronize the shops there (instead of the flea market shops) because of the variety of goods being sold at lower prices.

68. **e) Role of LGUs and raising local revenues** - The municipality derived extra revenues from flea market traders by imposing market rental fees collected by a designated market collector. The positive contribution of these extra revenues generated is highly visible in Libon where the successful operation of the Libon Town Center (LTC) is partly supported by the fees generated from market rentals and where various merchants sell their wares particularly during payout days.

69. On the other hand, merchants operating in these flea markets expect some assistance from the LGUs. Among which they identified were: provision of security particularly at night time, maintenance of cleanliness in the payout venue like regular garbage collection especially during payout days, and provision of additional toilets with ample water supply to maintain their cleanliness.

### **3) Local economy-wide analysis**

70. **a) Impact on poverty** - Using the presence or absence of toilet as a proxy indicator<sup>26</sup> for poverty and applying economic techniques using regional panel data for the Philippines from the period 2002-2014, the estimated regressions show that Pantawid has a statistically significant relationships to households without toilets and hence poverty. More specifically, the results illustrate that a Php1 billion increase on the regional CCT budget decreases the rate of incidence of households with no toilet (or poverty) by **16.64** percent. This implies that a Php1 billion increase on the CCT budget of the region will, on average, decrease the region's rate of increase of families without toilet (who are poor) by approximately 2,331 households.

71. **b) Impact on CPI/inflation** - Using the same econometric techniques and regional panel data, the study found out that the effect of Pantawid on regional CPI (i.e., inflation) is positive. The estimated CPI regressions show that a 1 percent increase on the regional Pantawid budget raises regional CPI (inflation) by approximately **0.017 point**. This suggests that for every Php1 billion increase on the regional Pantawid

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<sup>26</sup>No toilet was used due to limitation in the number of observations and heterogeneity problem. See main paper for full discussion (Adriano, et.al. 2016, Annex D).

budget, regional CPI (inflation), on average, raises by **0.70 point**. Furthermore, among the CPI categories, Pantawid has the largest impact on the CPI of alcohol & tobacco. In particular, the results show that for every PhP 1 billion increase on the regional Pantawid budget, alcohol & tobacco CPI, on average, raises by **1.01 units**, while holding other factors constant. Similarly, the Pantawid program has positive impacts on food CPI, education CPI, health CPI and clothing CPI where the average effect of a PhP1 billion increase in the regional Pantawid budget is **0.87 units, 0.79 units, 0.66 units and 0.43 units**, respectively.

**72. c) Impact on labor participation and employment** - With regard to labor participation and employment, the regressions show that Pantawid decreases labor participation while having a positive but insignificant effect on employment. A PhP 1 billion increase on the regional Pantawid budget decreases labor participation rate by **0.86 percent**. This implies that a PHP1 billion increase on the regional Pantawid budget will, on average, decrease the region's rate of increase of labor participation by approximately 388 laborers.

**73. Although the estimated regressions on labor participation and employment generated alarming outcomes, the disaggregated or specific models of employment showed interesting and positive results.** The study considered the impact of Pantawid budget on the three types of employment: (1) wage and salary, (2) own account and (3) unpaid. The specific model results show that Pantawid has significant impact on wage and salary employment, and on own account, but no significant effect on unpaid employment. More specifically, Pantawid discourages own account and unpaid employment, while encourages wage and salary employment. The latter is more desirable as most of the jobs under this type have security of tenure and belong to the formal sector. The effect of an additional PHP1 billion in the Pantawid budget is positive on wage and salary employment. The number of workers under this category could increase by approximately 1,431, in addition to the average annual increase of 37,938. On the other hand, given the same amount of additional Pantawid budget, own account workers will decrease by 107, on the average.

## **E. Implications and Recommendations**

**74. The study reveals that the Program validates most of the study's hypothesis that the huge cash transfer to poor beneficiaries will have positive multiplier effects and externalities on the economies of the poor communities** where they reside beyond the original outcome goals of the program, which are better access to education and health services for the poor. To yield greater benefits from these positive impacts and harness their potentials for the further development of the local economies of these poor communities, the following recommendations are proffered per each sub-economy analyzed.

## 1) Household level analysis

75. **The overall result showing the positive changes in the economic decisions and economic activities at the household level adds to the merit of further continuation and even expansion of the 4Ps.** However, Program implementors must take cognizance of the pattern that in some of the positive impact of the program, the changes are more pronounced for those who are at the bottom end of the poverty grouping. This implies that targeting beneficiaries below and above the poverty threshold is a less effective approach. It is argued here that a more structured targeting should be employed to account for the various poverty groups. A weighted system can be adopted based on the poverty groups: the lower the household is in the poverty grouping, the higher is its priority in the selection process.

76. **The seemingly paradoxical result indicating that Pantawid women beneficiaries spent lesser time in child care compared to non-beneficiary women merits further scrutiny.** Anecdotal accounts and cursory observations point out that during payouts, recipients (mostly women) had to queue for hours to avail of the cash payments. This somehow indicates the need for the Pantawid program to devise a more efficient system for cash payment.

77. Moreover, Pantawid beneficiaries are required to attend group meetings twice a month and sometimes, required to report to the local DSWD office to verify status of payment because sometimes, beneficiaries received amounts different from what they should obtain. This too, draws time of women away from child care. This implies that there is the need to streamline procedure to minimize regular meetings and also to ensure consistency between the entitlements and actual payments to avoid confusion and minimize efforts of women trying to verify the amount received compared to their perceived entitlements.

78. Finally, the “Giffen” behavior in rice consumption merits the consideration of insulating the conditional cash transfers from sharp surges in the prices of basic commodities. The unbalanced diet of the households as a consequence of this price response may have profound and long-term effect on children that could negate the positive impact of the Pantawid Program. To mitigate this problem, the amount of cash transfers should be indexed with the rate of inflation.

## 2) Economic sector level analysis

79. **a) Indexation of cash grants to CPI.** Results of the study show that beneficiaries can afford commercial rice given current market prices. However, since rice price is volatile, Pantawid consumers are easily affected by negative supply shocks. Based on the 2012 FIES, around 20 percent of the poor’s expenditure goes to rice. Moreover, a substantial portion of the Pantawid cash grant is spent on grocery items and other basic

commodities. The increase in prices of these items can easily erode the poor's purchasing power. To prevent this from happening, the indexation of the cash grants to the CPI is highly recommended, provided the payout does not fall below the present amount received by the beneficiaries.

**80. b) Assistance in strengthening farmers organizations.** The study found out that farmers' associations help their members gain access to: (a) credit, (b) modern farming equipment that boost farm productivity, and (c) relevant and timely market information and farming technology. A recent study of the World Bank (2016) showed that when farmers are organized, they have better bargaining leverage with the buyers and traders and hence, can ask for a fairer price for their produce.<sup>27</sup> It is thus recommended that government provide systematic assistance to Pantawid farmers to organize themselves into farmers' associations. This will also enable them as a group to enjoy the benefits of scale economies in terms of lower prices for the collective purchase of their farm inputs.

**81. c) Improving access to credit.** The study found out that Pantawid-farmers are saddled with debt from the other actors in the rice value chain (i.e., millers cum traders). Besides the Pantawid cash grants, there might be a need for the government to establish a credit scheme to meet credit requirements of poor farmers for their farm inputs. Although current credit policy of the government discourages government from directly engaging in the provision of subsidized credit scheme<sup>28</sup>, there are ways by which government can work with private financial institutions in extending lower interest credit to poor farmers by the former partly shouldering the burden of credit interest rates. By channeling credit to private financial institutions, this will avoid the usual borrowers' default of their loans as they no longer will see credit coming from the government as a dole out but must be paid to private banks. However, strict eligibility criteria, using the recently completed Farm and Fishery Registries, should be applied in extending low interest credit to poor farmers and fishers.

### **3) Local economy-wide analysis**

**82. Although estimated results showed that Pantawid has demonstrated positive effect on poor households, particularly households without toilet, further studies should be conducted to determine the precise impact of CCT on poverty incidence.** One limitation of the regression analysis of Pantawid on poverty is that poverty incidence is officially monitored and computed only every three years (FIES) and hence, the possible number of observations is very limited given that Pantawid started only in 2008. Although APIS is done for all non-FIES years, the sample of APIS is different and therefore, not comparable to the sample of FIES. Thus, the team recommends that the government should officially measure and compute poverty incidence every year so that

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<sup>27</sup>World Bank. 2016. "The Mindanao Jobs Report: Agrarian Mindanao". Soon to be published report of the World Bank, Philippines.

<sup>28</sup>As stipulated in one of the provisions of the Agricultural and Fisheries Modernization Act (AFMA) of 1997 or Republic Act No. 8435.

indicators of poverty can be closely monitored. Furthermore, the team recommends a Computable General Equilibrium (CGE) analysis of Pantawid not just to accurately measure the multiplier effect of the Program but to also determine if it produces more economic welfare gains than other types of government projects or expenditures.

**83. On the other hand, even though the average regional effect of an increase in regional Pantawid budget by PhP1 billion is relatively small (with 0.70 as seen in Table 2.7 of Annex 4 report), there are some regions where the impact Pantawid on CPI is considerably large.** For instance, in regions CAR and II, the regional effect of an increase in Pantawid budget by PhP1 billion raises CPI by 2.21 and 1.44 points, respectively (Table 2.7). This is probably an indication that certain regions have poor economic conditions such that the market cannot quickly respond to sudden influxes in demand due to Pantawid beneficiaries expenditures. As such, the team recommends that further studies should be done to investigate the market conditions of these regions and to propose regional specific policies to improve market integration of these regions.

**84. It is recommended that a deeper analysis of the relationship between Pantawid and the CPI of alcohol and tobacco should be conducted.** This is because the relatively large CPI increase in alcohol & tobacco: (1) may originate from non-beneficiaries since some studies have already proven that Pantawid does not only increase consumption of beneficiaries but also of non-beneficiaries; and (2) may be an indication that the regional alcohol and tobacco goods market are in general weaker than other goods and services. Thus, the team recommends that future household surveys on Pantawid should include questions on the consumption patterns of beneficiaries on tobacco and alcohol.

**85. With regard to employment, it is important to determine the primary causes of the increase in wage and salary employment so that government can pursue policies that will promote the growth of sectors or industries that employ Pantawid beneficiaries.** The impact of Pantawid, in this case, can be the result of either: (i) increase in the demand for labor due to increase in various markets' demand, (ii) increase in the labor market participation of adult members due to loss of income from child labor, or (iii) increase in the labor market participation of adult members as a result of lower time allocation for domestic work since most of the children are in school. Thus, the team recommends future household and business survey projects should include questions on employment of Pantawid beneficiaries and non-Pantawid beneficiaries.

**86. It is recommended that future Labor Force Surveys (LFS) should include child labor participation.** Since LFS does not include labor of persons below 15 years old, the team was unable to establish if Pantawid has a significant impact on child labor participation. Monitoring child labor is an important input in the conduct of macro-level econometric analysis, the results of which can help the government to further improve Pantawid

implementation and inform other government poverty reduction programs to identify factors or measures that can significantly mitigate or decrease child labor participation.

**87. Finally, further studies should be conducted on the effect of Pantawid on own account employment.** As shown in the regression, Pantawid discourages this type of employment. However, the research team cannot pinpoint if the decrease is caused by either: (1) a disincentive effect, i.e. recipients of transfers would prefer not to work in less-gainful employment since Pantawid can compensate for their income loss; or (2) a shift or transfer of workers from own account to wage and salary employment. The team is unable to determine if the impact of cash transfer program to own account employment is more pronounced among the beneficiaries compared to non-beneficiaries.

## Annex 1

### DEFINITION OF TERMS

**Comprada:** rice traders who procure rice from farmers and sell such produce to millers, or alternatively mills rice and sell the final output to wholesalers.

**Consolidated (Pooled) Regression:** A regression model where all the data from the three provinces are combined in one single model.

**Consumption:** section of the RVC that refers to the purchase of rice from rice distributors (mainly rice wholesalers and retailers) by households and institutional buyers

**Cross Section Data:** Data generated through a one-time survey of respondents

**Double Difference:** A type of comparative analyses where the Non-Beneficiaries before the intervention are compared to the Beneficiaries after the intervention.

**Economies of scale:** the situation in which higher production of output leads to declining average cost of production; as such, other things equal, bigger farms earn higher returns

**Giffen Good:** A special type of inferior good where demand increases as its price increases.

**Households who experienced food shortage:** refers to the proportion of families who experienced hunger due to lack of food.

**Households with income below food threshold:** refers to the proportion of families with per capita income less than the per capita food threshold to the total number of families (population). (1997 Philippine Poverty Statistics, NSCB)

**Households with income below poverty threshold:** refers to the proportion of families with per capita income less than the per capita poverty threshold to the total number of families (population). (1997 Philippine Poverty Statistics, NSCB)

**Inferior Good:** A type of commodity where the demand decreases as income increases.

**input provision:** the section of the RVC which refers to the source of inputs for farming which include agrivet shops, seed growers, DA, NIA, and other RVC players

**Interaction Term:** A specific term in the regression model where the binary variable (Program Effect) is multiplied with the forcing variable (income) to determine heterogeneous effect.

**Marginal propensity to consume (MPC):** fraction of a change in income that is spent or consumed (Case, Fair and Oster, 2015). In this study, it was obtained by using level-level regression on the FIES 2012 data

**Marginal propensity to save (MPS):** fraction of a change in income that is saved, or alternatively, 1 less MPC (Case, Fair and Oster, 2015)

**Marketing/ distribution:** section of the RVC that refers to the distribution of milled rice from the rice processors/ millers to the rice wholesalers and/or retailers

**Multiplier:** ratio of the change in the equilibrium level of output to a change in some exogenous variable (Case, Fair and Oster, 2015). In the context of this study, it is computed as 1 divided by the MPS or 1 divided by the difference of 1 and the MPC.

**Paddy rice:** unprocessed or unmilled rice, locally known as “palay” or “paroy.”

**Panel Data:** Data generated through at least two surveys of the same respondents overtime.

**Parameter Estimate:** Is a term used to refer to the values generated as an estimate of the population attribute where the sample is drawn.

**Processing:** section of the RVC that refers to the threshing, drying, and milling/polishing of rice; main actors are rice millers and rice processing centers

**Randomized control trials:** The gold standard in impact evaluations where both the treatment and the control group are randomly chosen from the population.

**Regression Discontinuity Design:** A special case of segmented regression where the selection of beneficiaries' eligibility to an intervention is based on a cut-off point of a specific attribute.

**Rice production:** section of RVC that refers to the planting, growing, and harvesting of paddy rice which are mainly undertaken by farmers

**Ukay-ukay:** a term used for places that sell secondhand goods (such as clothing, shoes, bags, furniture, etc.) at cheap prices usually shipped from foreign countries, e.g., United States, Hongkong.

**Value chain:** refers to the different sections of producing a particular good or service where the cost and returns, and added value, per section are usually assessed or analyzed; in the context of this study, value chain refers to the different sections of rice production: input provision, production, processing, marketing/distribution, and consumption.

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