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Examining the women's low labor market participation rate in the Philippines: Is housework the missing link?

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Examining the Women's Low Labor Market Participation Rate in the Philippines: Is Housework the Missing Link?

Connie Bayudan-Dacuycuy



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Connie Bayudan-Dacuycuy

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

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Abstract

While the Philippines has achieved several milestones advancing gender equality in the country, there are some areas that can still benefit from further government interventions. One such area pertains to the moderate female participation in the labor market, which hardly improved in the last 26 years. The lackluster participation of women in the labor market presents a continuing concern, and this is amply reflected in Philippine Development Plans and laws designed to support working women. However, other important factors remain to be addressed, and this paper looks into the role of women's housework. The paper also discusses the role of housework on men's market work. Doing so provides a holistic perspective and hence, a better narrative to ensure that both men and women equally benefit from development. Results indicate that housework affects both men and women's participation in market work. However, the study finds a bigger increase in women's market work participation when they do not engage in non-market work and a bigger decrease when their spouses do not share in the household production.

Keywords: housework, market work, labor force participation, gender

Table of Contents

| | |
|--|----|
| 1. Introduction | 1 |
| 2. Women in the Philippines: Some background on policies and history | 4 |
| 3. Market and non-market work: Review of related literature..... | 6 |
| 4. Empirical Strategy and data sources..... | 7 |
| 5. Discussion of results | 9 |
| 6. Summary and conclusions | 12 |
| 7. References | 13 |
| APPENDIX..... | 17 |

List of Figures

| | |
|--|-------------------------------------|
| Figure 1. Labor force participation rate, % of respective sex population aged 15+, national estimate | 2 |
| Figure 2. Predicted probability of working..... | Error! Bookmark not defined. |

List of Tables

| | |
|--|---|
| Table 1: Recent significant laws for the protection of the welfare of women and girls..... | 5 |
|--|---|

Examining the women's low labor market participation rate in the Philippines: Is housework the missing link?

Connie Bayudan-Dacuycuy*

1. Introduction

Studies show that women's outcomes affect other outcomes related to growth and development. For example, women's high educational attainment, positively affects food security (Smith and Haddad (2000)). It also positively affects children's health, nutrition status, and educational outcomes (Duflo 2012). Given these, women can help the Philippines achieve the goals stated in the Philippine Development Plan 2017-2022 and the *AmBisyon Natin* 2040, a twenty-five-year strategy plan that articulates the vision and aspirations of the Philippines to become a middle-income society.

The contributions of women to Philippine society have not gone unnoticed, and the country has achieved significant advancements in certain areas that could pave the way for fully harnessing women's potentials. In the education front, the Millennium Development Goals target ratios of girls to boys in primary, secondary, and tertiary education have been achieved. With respect to tertiary education, data from the Commission on Higher Education indicate that female enrolments in Academic Year 2016-2017 are 57%, 62%, 47%, and 53% of total enrollees in State Universities and Colleges, Local Universities and Colleges, Other Government Schools, and Private Schools, respectively. There are also more females who have enrolled in Masters (66%) and Doctorate programs (60%). In addition, the 2013 Functional Literacy, Education and Mass Media Survey (FLEMMS) indicates that male and female basic literacy rates, or the ability of a person to read, write and understand a simple message in any language/dialect¹, are similar. However, the female functional literacy rate, or the higher form of literacy that includes not only reading and writing skills but also numerical skills², is higher across various age groups.

Advancements in education notwithstanding, much remains to be done along the labor market participation front. Based on the 2018 Global Gender Gap Report (GGGR) of the World Economic Forum, the Philippines is ranked 8th in the global ranking of gender parity. This is two ranks higher than in 2017 and the country is the only Asian economy that is at the top. The rest of the Asian economies are ranked between 26th (Lao PDR) and 148th (Pakistan). Despite this rosy trend, the 2018 GGGR indicates that the country needs to do more work to achieve gender parity in the economic participation/opportunity and political empowerment sub-indices.

In addition, the male labor force participation rate (LFPR, figure 1) in Asian countries in 1990 is between 79%-85%. By 2016, the male LFPR in Thailand, Philippines, and Malaysia have decreased by 10, 7, and 5 percentage points, respectively. Even though there is a downtrend in the male LFPR, the female LFPR remains substantially lower. In 1990, the female LFPR in Indonesia, Malaysia, Philippines, and Singapore was between 45% and 48%. Almost three decades after, the female LFPR in these economies has improved, with Singapore registering

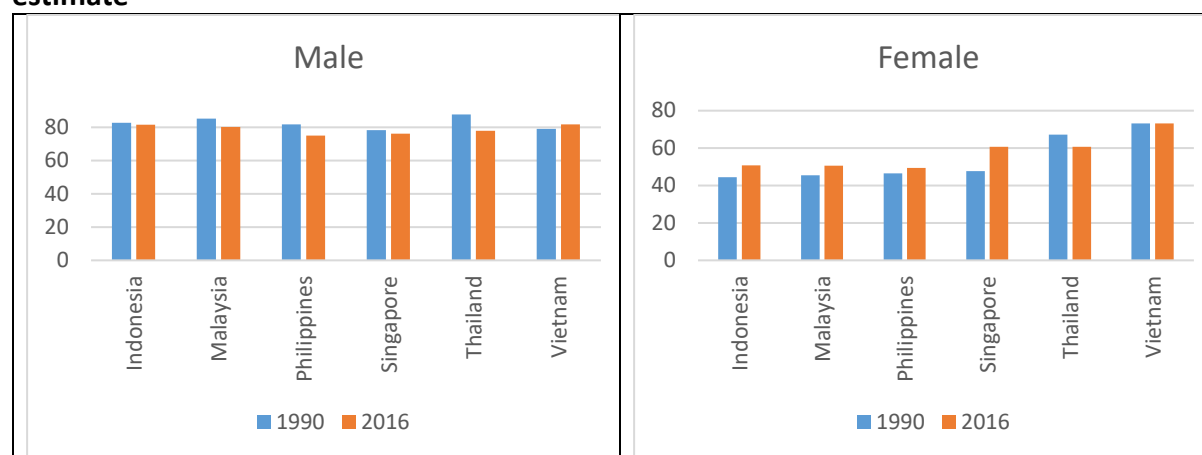
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¹ <https://psa.gov.ph/content/literacy-men-and-women-philippines-results-2008-functional-literacy-education-and-mass-media>

² <https://psa.gov.ph/content/literacy-men-and-women-philippines-results-2008-functional-literacy-education-and-mass-media>

the biggest increase at 13 percentage points and the Philippines registering the smallest increase at 3 percentage points.

Figure 1. Labor force participation rate, % of respective sex population aged 15+, national estimate



Notes: Data taken from the World Development Indicators-World Bank. Accessed, January 7, 2019. LFPR is the proportion of the population ages 15 and older that is economically active; all people who supply labor for the production of goods and services during the specified period (<https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>). The 2016 male LFPR for Thailand pertains to the latest available data (2015) while the 1990 male LFPR for Vietnam pertains to the earliest available data (1996).

The lackluster improvement in the female LFPR has been acknowledged by the Philippine government. The latest Philippine Development Plan 2017-2022 outlines several strategies to promote the labor force participation of women, some of which have already been translated into policies. Executive Order No. 12 was signed in early 2017, the objective of which is to attain zero unmet needs for modern family planning by 2018. The Responsible Parenthood and Reproductive Health Act (RH Law or RA 10354) that provides for the comprehensive delivery of reproductive and health services, has been enacted in 2012 as well. The RH Law is deemed important in harnessing the demographic dividend, or the shift of the population structure to higher working-age population relative to young dependents and the older population (65 years and above). Moreover it has the potential of promoting economic growth³.

Despite these efforts, there are other fundamentally important factors that researchers and policymakers can focus on to understand why women in the Philippines do not fully participate in the labor market. One of these factors pertains to the amount of time women spent on housework that tends to be dictated by gender identity⁴, which is defined by Akerlof and Kranton (2000) as one's sense of belongingness in a social category that prescribes behavioral norms. For example, *men* and *women*, as social categories, are presumed to specialize in market work and housework, respectively.

³ This follows from the idea that "children are net consumers while the working age population are net producers and without large numbers of children to support, economies could divert more resources to capital investment, which can stimulate the productive employment for the working-age population" (UNFPA, 2018). Indeed, this is echoed by the National Economic Development Authority, "which recognizes the potential of the government to better allocate its resources for economic development and social services given a low dependency ratio" (<http://www.neda.gov.ph/2018/12/19/neda-explainer-reaping-demographic-dividend/>). The RH Law not only has the potential to lower teenage pregnancy but can lead to better health outcomes for women and mothers, and better education outcomes for girls.

⁴ Identity economics is similar to 'doing gender' theory of West and Zimmerman (1987). In this theory, males and females are providers and homemakers, respectively, and they under- or over-perform household chores to compensate for the nonconformity to these roles.

Housework goes by many names. It is referred to as home production or non-market work (Gronau 1977; Becker 1965) and unpaid care work (Elson, 2000). Different terminologies notwithstanding, housework is performed across countries and societies to enhance the welfare of individuals in households. However, unlike outcomes concerning market work, non-market work rarely enters the policy space. This is possibly due to the fact that the valuation of housework is not easy and time use data are rarely collected.

This paper aims to analyze the effects of housework on women's labor force participation and is relevant in several ways. First, time is a limited resource and its allocation, whether to market work or non-market work, has fundamental implications on labor market outcomes. Women and girls do disproportionately bear the burden of the care economy, which can result in time poverty. In turn, this leads to low development outcomes that prevent them from realizing their full potential. Hence, the analysis of the role of housework can provide better directions in crafting policies that can enhance female participation in the labor market. Since females comprise half of the country's population, putting into good use their skills, talents, and ideas can help in achieving a sustainable and inclusive growth.

Second, the country has one of the highest fertility rates in the region at around 2.7 children born per woman (Philippine Statistics Authority 2018). This has significant implications on women whose responsibilities include taking care of children and the elderly. Home production may give rise to market work intermittency and to a relatively disadvantageous position in the formal labor market. This can partly explain why more women entrepreneurs are in the informal sector where work arrangements are relatively more flexible.

Third, housework and other services performed for household's own consumption are not included in the System of National Accounts (Bayudan-Dacuycuy and Dacuycuy 2018). To the extent that housework is largely confined in the women's sphere of responsibilities, their contribution to society remains undervalued, if not invisible. In some settings where relative resources affect household bargaining outcomes, a correct valuation of home-based production might shape more favorable environments for women (Bayudan-Dacuycuy and Dacuycuy 2018).

In the Philippines, few studies have analyzed housework and women's labor market outcomes until recently when advocates have managed to attract the attention of national and international bodies to care economy and unpaid work. Today, the Sustainable Development Goal includes in its Goal 5 (Gender equality and empowerment of girls/women) a target to recognize and value unpaid care and domestic work. Partly due to such initiatives, several studies on housework in the Philippines have been undertaken. These include Bayudan (2006), Chen et al (2016), and Bayudan-Dacuycuy and Dacuycuy (2018), who have unlocked several important findings to better understand the consumption of time and how it is affected by various factors such as intrahousehold power, wages, and attitudes. Central to the focus of these studies are working women. However, around 49% of women in the Philippines are not economically active and a research on the potential factors affecting women's participation in the labor market is also important so that policies, on top of existing ones, can be crafted to fully harness the maximum potential contributions of the country's human resources.

At this point, we emphasize that even though the main focus of the paper revolves around labor force participation and housework of women, it is also important to discuss the effects of housework on men's labor force participation. Doing so provides a holistic perspective and hence, a better narrative to ensure that both men and women equally benefit from development.

In addition, the market and non-market work of both men and women are necessarily interrelated. First, the Philippine society is egalitarian (Medina 1995) and typical of egalitarian households, wives and husbands are both key decision makers on household issues such as labor market participation, use of family planning methods, and hiring of household help (Bayudan 2006).

Second, there are gains from the complementarity of spousal housework in the Philippines since doing housework together enhances marital relations through shared experiences and avenues that provide information necessary for a repeated game such as marriage (Bayudan-Dacuycuy and Dacuycuy 2018). Given the egalitarian mindset and possible gains from doing non-market work together, it is not surprising that men in the Philippines are more open to devote time to non-market production, which is likely to affect their participation in market work as well.

The structure of the paper is as follows: section 2 provides a brief background on history and policies related to women, section 3 reviews some related literature, section 4 discusses the data source and empirical strategy, and section 5 summarizes and discusses some policies that the government can consider.

2. Women in the Philippines: Some background on policies and history

From a broader policy perspective, the Philippines has made significant gains towards gender equality. A major achievement is the Magna Carta of Women 2009 (MCW or RA 9710) that implements the Convention on the Elimination of Discrimination Against Women (CEDAW). CEDAW seeks to eliminate all forms of discrimination by dismantling social structures, such as laws and institutions that treat women unequally and prevent them from attaining their full human development⁵. The MCW reiterates the duties of the State to protect women against discrimination and violation of their rights.

In addition, the Philippine Plan for Gender-Responsive Development 1995-2025 (PPGD) mandates every government administration to develop time-bound framework plans for women. In line with the PPGD, then president Benigno Aquino's Social Contract included the promotion of equal gender opportunity in all spheres of public policies and programs⁶. The Philippine Development Plan 2011-2016 and the Philippine Development Plan 2017-2022 include gender-related target and strategies as well. The latest Framework Plan under PPGD was the Women's Empowerment, Development and Gender Equality Plan 2013-2016 (WEDGE Plan). The WEDGE Plan was spearheaded by the Philippine Commission on Women and it aimed to operationalize the MCW and the Social Contract of the Aquino government. In particular, WEDGE was the gender equality guiding plan of the PDP 2011-2016 (Philippine Commission on Women, 2014).

In recent years, several laws have been put in place to protect and enhance the welfare of women and girls, and to some extent, the welfare of men and boys such as those provided by the Anti-Trafficking in Persons Act, Solo Parent's Welfare Act, and Responsible Parenthood and Reproductive Health Act (see table 1). Among these, the RH Law is the most relevant for harnessing the demographic dividend. However, its full implementation has been met with several discriminatory and legal barriers, such as the fragmented support of LGUS to the RH

⁵ <https://www.pcw.gov.ph/international-commitments/cedaw>

⁶ <https://www.pcw.gov.ph/international-commitments/cedaw>

law (Commission on Human Rights, 2016) and the voiding of the Supreme Court of the law's eight key provisions. In addition, the implementation of the law has been stalled by the 2014 Supreme Court TRO on Implanon and Implanon NXT on the ground that these are abortifacient. However, FDA Resolutions, issued on November 10, 2017, declared Implanon and Implanon NXT as non-abortifacient. This means that these contraceptives will be publicly provided once again, which is a welcome development for women belonging to the urban and rural poor sector whose household budgets could not accommodate these contraceptives. Most women find the use of these contraceptives convenient (Commission on Human Rights 2016).

The role of women in Philippine society has been shaped by the combination of various factors that can be partly traced prior to the period of Spanish colonization when customary laws have promoted gender equality and have given women the right to own and inherit property and engage in trade (Medina 2001). In addition, the 1987 Family Code stipulates that properties acquired during the course of marriage are jointly owned by both husband and wife.

Table 1: Recent significant laws for the protection of the welfare of women and girls

| | |
|--|--|
| R.A. 10361 Domestic Workers' Act (2012) | Also known as Batas Kasambahay , the law seeks to protect the rights of domestic works against abuse, to provide them decent working conditions and income, and to reduce the incidence of child labor and trafficking in persons for the purpose of domestic work. |
| R.A. 10354 Responsible Parenthood and Reproductive Health Act (2012) | Specifically stating gender equality goals in its declaration of policy, the RH Law provides a national policy for family planning, maternal and child health, and age-appropriate reproductive health education. |
| R.A. 9710 Magna Carta of Women (2009) | Operationalizes the Philippines' commitment to CEDAW, the Magna Carta is an expansive comprehensive Act which aims to eliminate all forms of discrimination against women. |
| R.A. Anti-Violence Against Women and their Children Act (2004) | Through the criminalization of physical, sexual, psychological, and economic abuse of women and children by their intimate partners, the Anti-VAWC Law seeks to protect victims and prevent all forms of abuse against women and children. |
| R.A. 9208 Anti-Trafficking in Persons Act (2003) | Institutes policies to eliminate trafficking in persons, most of whom are women and girls. |
| R.A. 8972 Solo Parent's Welfare Act (2000) | Provides for benefits and privileges to solo parents and their children |

Source: David et al (2017).

Owing to the Spanish colonization of more than 300 years, various aspects of the family in the Philippines have shades of Spanish influences, the most pervasive of which is rooted in religion. Divorce remains a passionately contested social issue thus far. Possibly influenced by the Church teachings that men are the pillar and women the light, age-old norms and traditions ascribe roles to men and women: women nurture and their comparative advantages are in non-market work while men provide and their place is in the labor market. Over the years and potentially confounded by a host of factors, these social prescriptions persist.

Although earlier studies claim that Filipinas are still accorded lower social status (Williams and Domingo 1993), recent evidence points to Filipinas becoming more active in the majority of household decision-making domains (Upadhyay and Hindin 2007; Hindin and Adair 2002). This is validated by Bayudan (2006) who shows that in the Southern Philippines, consultation is a common practice between husbands and wives especially on the purchase of big-ticket items such as television or land, wives' labor market participation, the hiring of household help, and the use of family planning method. Majority of wives do not consult on the purchase of

small-ticket items such as shoes and clothes. In addition, there are domains (such as the wife's labor market participation and travels) in which either the wife or the spouse prevails as a decision-maker.

In home production, housework in the Philippines appears to follow a male-female dichotomy, majority of which remains in the sphere of women's responsibilities. Bayudan (2006) shows that food shopping, food preparation, house cleaning, buying and washing clothes, and child care are tasks done mostly by wives while job repairs are tasks undertaken by husbands. A relatively similar proportion of wives and husbands fetch water (15%), gather firewood (6%) and tend animals (20%).

In terms of market production, 41% of women in 2015 are in vulnerable employment⁷ although there are existing bills that aim to provide social security to the informal sector. In addition, based on the Global Entrepreneurship Monitor, there are 30% more women entrepreneurs. The government is currently focused on the development of micro, small and medium enterprises (MSMEs) since these have important roles on output and export growth, poverty alleviation, and economic empowerment. In addition, MSMEs are touted to be the vehicle towards a resilient, people-oriented, and people-centered ASEAN community.

3. Market and non-market work: Review of related literature

Due to Becker's theory of the family (1991), the effect of housework on wages is well documented. Central to this theory, the division of housework is dictated by comparative advantage. Therefore, the spouse that commands a higher price in the market work will specialize in market work and the other spouse will specialize in non-market work. In this setting, efficiency is central to the division of time devoted to non-market production. The implications of Becker's theory, including the male wage premium, have been tested and validated, although the question remains whether this premium has declined or not (see for example Bardasi and Taylor 2008; Hersch and Stratton 2000; Korenman and Neumark 1991).

Focusing on women's market participation, factors such as costs (Fosu 1999), uncertainties (Blau and Grossberg 1991), and family-related concerns like husband's health status (O'Hara 2004), and parental care (Ettner 1995), have been illustrated to affect women's LFP. A recent strand of research highlights how attitudes on gender roles at home and in the labor market affect the participation in market work (Bertrand, Pan and Kamenica 2013; Fortin 2005; Akerlof and Kranton 2000; Greenstein 2000).

In the Philippines, an earlier study on women's labor market participation is that of Bayudan (2006) who analyzes women's time allocation in the context of a collective bargaining framework. This improves on earlier frameworks that assume that the family acts as a single unit with the same preferences and maximizes a single utility function. In the collective bargaining framework, the role of intrahousehold power to determine intrahousehold outcomes is recognized and the consumption of time, such as those spent in recreation, child care, household chore, backyard production, working at home, and working outside of home, is

⁷ Vulnerable employment is contributing family workers and own-account workers as a percentage of total employment. They are the least likely to have formal work arrangements, are the least likely to have social protection and safety nets to guard against economic shocks, and often are incapable of generating sufficient savings to offset these shocks (<https://data.worldbank.org/indicator/SL.EMP.VULN.ZS>).

given by $T^i = f(W_w, \varphi_w(a_h, a_w); d)$ where W is woman's wage and d is a vector of other socioeconomic determinants.

Unlike the typical unitary framework that yields the consumption of time, $T^i = f(W_w, W_h, Y; d)$, the collective bargaining framework emphasizes the role of intrahousehold power of husband and wife, $\varphi_w(a_h, a_w)$. While the main objective of Bayudan (2006) is to establish the pareto efficiency in women's time allocation, results of the paper also emphasize that power is an important determinant of women's time use. For example, when there is a high probability of a husbands' control over the wives' money, wives spend less time working outside and spend more time working at home where the flow of income can be easily monitored or controlled (Bayudan 2006).

Following Akerlof and Kranton (2000) on identity economics that emphasizes the importance of attitudes in various labor market outcomes, Bayudan-Dacuycuy and Dacuycuy (2018) analyze how wage and attitudes to work and family life affect the time devoted to housework. In this particular research, the consumption of time is given by $T = f(W_w, attitudes; d)$ where T is the total hours spent on housework. This paper attempts to control for two sources of bias, namely, the sample selection bias arising from the fact that wages are observed only for working women and the endogeneity of wage. An important takeaway from the paper is the potential gains from the complementarity of spousal housework in the Philippines.

Another strand of research on housework focuses on the issue of double burden or second shift (Hochschild and Machung 2012) in which work at home and in the labor market can potentially lead to women's time poverty. In this context, Chen et al (2016) characterize how this double burden evolves over the women's life course using latent class analysis in the dataset collected in the Southern Philippines. They find that most women in their mid-life are engaged in high-intensity market work and in substantial amount of non-market chores, with some women becoming high intensity caregivers while the rest deals with double burden.

4. Empirical Strategy and data sources

This research uses the International Social Survey Program (ISSP)⁸ dataset, which is a collaboration among the ISSP member countries (mostly from Europe and Asian countries like Japan, the Philippines, and Taiwan) that aim to conduct annual surveys on social science topics. Typically, the ISSP data collection focuses on a given topic each year, including the role of government, social networks, social inequality, family and changing gender roles, work orientations, religion, environment, national identity, citizenship, leisure time and sports, and health and health care. The 2012 ISSP collects data on family and changing gender roles and is the main dataset used in this research. The information collected in this survey includes attitudes towards gender roles at home and in the labor market, housework, market work history, and labor market outcomes of respondents and their partners. Data for the Philippines are collected using a stratified multistage clustered random sampling by the Social Weather Stations in Quezon City through face-to-face interviews on voting-age adults (18 years old and above) in four study areas, namely, the National Capital Region, Luzon, Visayas, and Mindanao.

⁸ For further details, see <http://www.issp.org>.

The theoretical framework that establishes the relationship between market and non-market work is well-documented. The earliest versions are household production models that include market work, housework, and leisure in an individual's utility function (Gronau, 1977; Becker, 1965). These have been extended by Pollak and Wachter (1975) to account for the joint production of market work and housework, which essentially improves on the assumption of the perfect substitutability of market and home-based commodities. Housework, on the other hand, can be affected by attitudes to family and the labor market. In the Philippines, some studies have underscored the importance of attitudes in explaining housework (see for example Bayudan-Dacuycuy and Dacuycuy 2018).

To model labor market participation, we assume that the agents' utility to work is represented by $LFP = g(LFP^*) = \begin{cases} 1, & LFP^* > 0 \\ 0, & LFP^* \leq 0 \end{cases}$ where $g(LFP^*)$ is the link function that allows the linear model to be related to the response variable. LFP_i^* is specified as $\beta_i x_i + \varepsilon_i$, where x_i is a vector of observable characteristics and ε_i denotes unobservable attributes.

For the purpose of the study and given the available information from the 2012 ISSP, the observed variable LFP is defined as

$$LFP = \begin{cases} 1, & \text{if both market work hours and wages are reported} \\ 0, & \text{if both market work hours and wages are not reported} \end{cases}$$

Assuming that ε_i is an independent and identically distributed error term, the appropriate estimator is a Probit regression.

Housework, or the total hours spent per week on household work and on family members, is given by $HW_i = g(HW_i^*) = HW(\alpha_i z_i + e_i)$ where z_i is a vector of observable characteristics. Assuming that e_i is an independent and identically distributed error term, the appropriate estimator is an ordinary least squares regression. The final models include the following specifications:

$$LFP = f(\text{personal}_{\text{respondent}}, HH \text{ chars}, Y \text{ work history}, HW_{\text{respondent}}, HW_{\text{spouse}}) \quad (1)$$

$$HW_{\text{respondent}} = f(\text{personal}_{\text{respondent}}, HH \text{ chars}, Y, \text{attitudes}, \text{personal}_{\text{spouse}}) \quad (2)$$

$$HW_{\text{spouse}} = f(\text{personal}_{\text{spouse}}, HH \text{ chars}, Y, \text{attitudes}, \text{personal}_{\text{respondent}}) \quad (3)$$

Given the assumptions on the error terms in equations (1) - (3), LFP and HW can be combined into a multi-equation system in which the error terms share a multivariate normal distribution (Roodman, 2011). Because the distribution of the errors is known, the parameters of the models in the system are estimated using the conditional mixed process estimator. In equations (2) and (3), *personal* pertains to the respondent's attributes such as age, educational attainment, marital status, and spouse's educational attainment; *HH characteristics* pertains to households' attributes such as location, and household size; and *Y* is family income.

Work history refers to the market work history of the mother of the respondent, the inclusion of which follows from two strands of literature that establish the effect of maternal employment on children's future labor market outcomes. First, in the context of time inputs and home production, maternal employment affects children's cognitive skills (see for example Stafford

1987; Ruhm 2002), which in turn affect labor market outcomes (see for example Green and Riddell 2003). Second, in the context of gender identity, behavior is transmitted to children through demonstration and maternal employment may elicit positive behavioral responses from children that may be valuable in the labor market (Bayudan-Dacuycuy and Dacuycuy 2018). There also appears to be a role model effect on children's subsequent labor market choices (Olivetti, Pattachini and Zenou 2013). *Work history* is used to identify the market work equation (1) from the non-market work equations (2 and 3).

Following Bayudan-Dacuycuy and Dacuycuy (2018), attitudes to family and labor market are also included as explanatory variables of housework in equations (2) and (3). Attitudes variables are culled out from the following questions: 1. *When mother works, preschool child is likely to suffer?* 2. *When women work, family life suffers?* and 3. *Men's job is to earn money while women's job is to look after home?* Responses include 1 for strongly agree; 2 for agree; 3 for neither agree/disagree; 4 for disagree; and 5 for strongly disagree. The responses are recoded to create binary variables equal to 1 when the response is 4 or 5 (positive attitude) and equal to 0 when the response is 1 or 2 (negative or indifferent attitude). Attitudes are used to further identify the market work equation (1) from the non-market work equations (2 and 3).

5. Discussion of results

Results from the simultaneous estimations

The estimation results are presented in table 1A in the appendix. Looking at the estimates for female respondents, those who are married are more likely to participate in market work (also referred to as *working* in the succeeding discussion). They are also more likely to work given that their mothers have participated in market work and given higher family income and higher household size. They are less likely to work when they spend more time on housework but are more likely to work when their spouses spend more time on non-market production.

The time spent on housework by female respondents is negatively correlated with household size and positively correlated with the presence of toddlers. None of the variables pertaining to the respondents' attitudes significantly affects the respondents' time allocated to non-market work. However, the attitudes of female respondents positively correlate with the time spent by their partners in non-market work.

Looking at the estimates for male respondents, those who are older, belong to bigger households, and reside in the urban areas are less likely to work. Men from households with high family income are more likely to work. While the probability of male respondents to join the labor market is not significantly affected by the time they devote to housework, it is positively correlated with the time devoted by their spouses to non-market production.

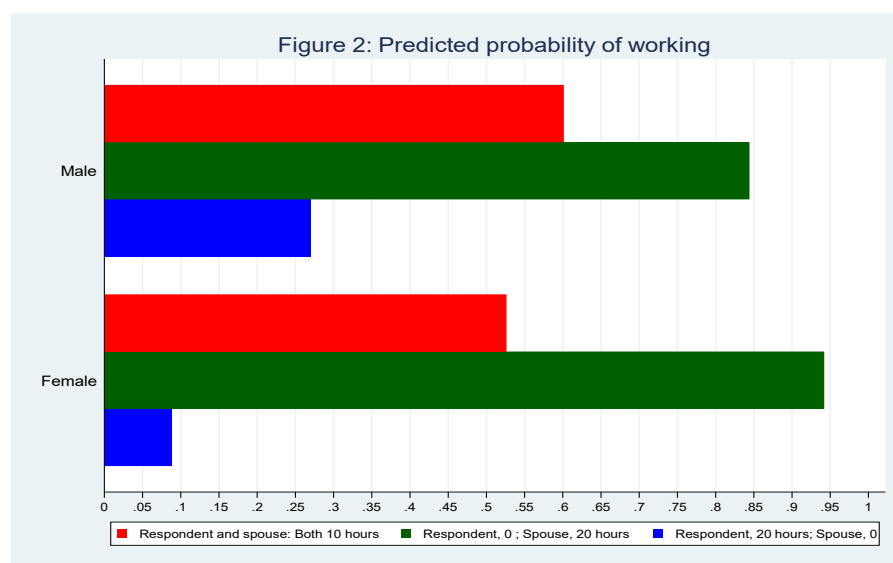
The time spent on housework by male respondents is positively correlated with the household size and having a college degree. Their partners' housework, on the other hand, is negatively correlated with male respondents' positive attitudes towards gender roles at home and in the labor market.

Marginal effects of housework on the probability of working

Given these estimates, the probabilities of working are predicted for a set of attributes related to the respondents and their households. These include the following: the respondent is a 40-year old college graduate and married to a partner who is a college graduate as well. In addition,

the respondent's mother had worked when the respondent was young, and the respondent has positive attitudes towards gender roles at home and in the labor market. This means that the respondent disagrees with the notion that preschool children and family life suffer when women work and with the dichotomy of men as earners and women as homemakers. In addition, the family income of the respondent is around PhP20 000 and the household resides in urban Luzon.

To assess the contribution of non-market work, the probabilities of working are predicted by assuming different amounts of time allocated by the respondents and their spouses to housework given benchmark characteristics above. We consider three combinations in terms of the respondent's and spouse's input to housework: 1) each spends 10 hours (benchmark), 2) the respondent devotes 20 hours while the spouse devotes none, and 3) the respondent devotes 0 hour while the spouse devotes 20 hours.



Results of the prediction exercise are presented in figure 2. Given the benchmark, the probability of market participation by males is around 60% while the probability of market participation by females is around 53%. Relative to the benchmarks, the respective probabilities associated with male and female market participation are higher when both are completely disengaged from housework. While this is the case, it can be noted that the increase in the female's probability of working relative to the benchmark is bigger compared to that of the male. In particular, the former increases by around 42 percentage points while the latter increases by around 25 percentage points.

While the probabilities of working for both male and female respondents are lower given that they devote 20 hours to housework and their spouses devote none, the decrease in the female's probability of working is noticeably bigger. In particular, relative to the respective benchmarks, the female's probability of working decreases by around 43 percentage points while the male's probability of working decreases by around 34 percentage points.

These results point to two key observations. First, housework affects both men and women's participation in market work in the Philippines. Compared to men in other Asian countries, men in the Philippines have a more highly-evolved response in performing household tasks.

For example, based on the IDRC's Counting Women's Work project, women in India spend an average of 40 hours per week on unpaid work and care economy while men, only 3.5 hours⁹. In the Philippines, men spend more time on unpaid work and care economy. From the 2012 ISSP data, the weekly average time spent on care work, or housework related to child and elderly care, is 18 hours for men and 30 hours for women. The weekly average time spent on non-care work, or housework related to preparation/cooking of dishes, washing clothes, and cleaning the house, is 16 hours for men and 25 hours for women. From these, it is also evident that there are discernible disparities in terms of inputs, with women spending more time in care work. Non-care work can be scheduled after office hours while care work demands more attention and often does not have the flexibility in terms of timing. This plausibly explains why female's involvement in market work varies more with non-market work.

Second, even though the labor market participation of both men and women is affected, that of the women is more so. This is shown in the bigger increase in the women's market work participation when they do not engage in non-market work and in the bigger decrease when their spouses do not share in the household production. This provides evidence that housework acts as a major constraint in the realization of the full economic contribution of men and women in the country. These also highlight the importance of crafting policies that will help families in home production and care economy. Legislations related to child care economy are not wanting and have been in place since 1970s. Of these legislations, one of the most prominent is the Republic Act 8980 or Early Childhood Care and Development (ECCD) Act of 2000, which provides for the establishment of the National ECCD system that is comprehensive¹⁰, integrative¹¹, and sustainable¹² (Manuel and Gregorio 2011). Despite government's efforts to step in and shoulder a portion of the care economy, there is a need for the state to ensure the quality of services provided in child-development centers in the country.

While child care is well-legislated, elderly care is less so. The elderly population is still low, which is around 6% in 2000 and 7.5% in 2015. However, the proportion of the elderly to the total population is expected to reach a double-digit mark by 2020 assuming a moderate fertility and mortality decline (National Economic and Development Authority 2017). The government needs to anticipate this eventuality and should look into designing systems for elderly care, which typically falls within the women's sphere of responsibility. The potential increase in caregiving demand due to aging or health deterioration should be included in the policy space since this could affect labor market outcomes such as absenteeism and tardiness that will adversely affect labor productivity.

At this point, it should be recognized that because social norms play an important role on housework, legislation may not be considered as an appropriate instrument to bring about change. After all, how can legislations veto age-old gender roles and attitudes? However, legislation can provide a "nudge" to take mindsets to the right direction. For example, good and reliable child care services that coincide with the 8-hour office schedule can encourage mothers to go back to work after child birth. Legislations that promote good work-family life balance, such as flexi-time and four-day work week, can also push active participation in market work.

⁹ <https://www.idrc.ca/en/resources/perspectives/can-south-asia-address-barriers-womens-paid-work>

¹⁰ includes physical, social, emotional, mental, and spiritual aspect of child development

¹¹ delivery of complementary health, nutrition, early childhood education, social protection and other social services to children 0 to 6 and their families

¹² LGU-supported

6. Summary and conclusions

The Philippines has achieved several milestones to advance gender equality in the country, although there are areas that can still benefit from further government interventions. One such area is the degree of female participation in the labor market, which barely improved in the last 25 years. The lackluster participation of women in the labor force is a continuing concern and this is reflected in the space devoted to it in the Philippine Development Plans and in legislations designed to support working women. However, other important factors remain to be addressed. One such factor is the non-market production, which goes into the heart of issues related to the perpetuation of women's time poverty and lack of social mobility.

While the main interest of the paper is to understand the role of non-market work on women's market work, its role on men's market work is also analyzed. This is consistent with the Gender and Development framework that seeks to recognize the importance of both gender in economic development. This is also to recognize the interrelatedness of men and women's housework in the country considering the evidence that points to the marital benefits of doing housework together. The paper models the probability of working and the time spent on housework as simultaneously determined. It uses the mother's work history to identify the equation related to working. It also uses attitudes towards gender roles at home and in the labor market to identify the equations related to housework.

Several salient results are noted. First, ***housework affects both men and women's participation in market work***. Second, ***while the labor market participation of both men and women is affected, that of the women is more so***. This is shown in the bigger increase in the women's market work participation when they do not engage in non-market work and in the bigger decrease when their spouses do not share in the household production. It is, therefore, important to craft policies that will help families in home production and care economy. These include:

- 1) the provision of child care services that coincide with the 8-hour work load,
- 2) ensuring the good quality of services provided in child-development centers,
- 3) promoting work-life balance through a 4-day work week, and
- 4) designing systems for elderly care to accommodate the eventual rise of the elderly population in the country.

At this point, it is important to emphasize that the paper is an ongoing effort to understand housework/unpaid work/care economy and their potential effects on various socioeconomic outcomes. As such, there are some issues that the current research is not able to empirically address but are needed to be highlighted as future research directions.

First, women's contribution to society does not necessarily have to be in the labor market. Mothers are vital in instilling the value of learning and are considered vital partners of education institutions in realizing and reinforcing learning outcomes. It is already well-established that mothers have a big role to play in fostering a good learning environment especially during the children's early years in life when all types of development (physical, emotional, social, language, and cognitive) take place. Hence, the women's contribution can also be in rearing and nurturing the next generation of potential leaders and healthy and productive citizens.

While it is hard to dispute these contributions, the next question that needs to be confronted is ***what happens after the children have grown-up and started to go to school? For women in***

households facing financial constraints, market work becomes inevitable, although finding a new job or easing into it may become a challenge. A clear understanding of the effects of care economy and unpaid work on the start-stop-start of market work can help in strengthening programs for labor market re-entrants and in strengthening policies for work-family life balance.

Second, for some, unpaid work and care economy are life's choices while for others, these are life's roles that they need to assume. Hence, it is important to have an in-depth understanding of the motivations and preferences of men and women to do (or not do) market and non-market work. A clear understanding of these elements can help in determining what can be done to help men and women who seek to engage into the market work after (or during) the pursuit of their life's roles.

Third, partly due to gender roles, men, as household providers, are expected to participate in market work. However, emerging narratives show that fathers have equally (if not more) important roles to play in children-rearing. Evidence shows that paternal presence and involvement in child rearing and nurturing can result in the increased academic test scores (Yeung 2004), reduced aggression (Chang et al 2003), and reduced criminality and substance abuse and misuse (Sarkadi et al 2008) of children. In the Philippines, researches on the roles of men in children's outcomes are yet to flourish and future research in the country should also investigate this issue so that policies can be designed to enhance the household presence of working men and strengthen their involvement in child-rearing in the process.

Fourth, this paper provides an initial assessment of the effects of housework on the men and women's labor force participation and it has done so using a cross-section dataset. Further analysis will benefit from the use of panel data to establish the evolution of housework over the men and women's life course. Given that more evidence is needed to develop convincing narratives for policies that address housework/unpaid work/care economy, ***the Philippine Statistics Authority should seriously consider including time use questions as riders to its existing surveys such as the Labor Force Survey.***

7. References

- Akerlof, G. and G. Kranton. 2000. Economics and identity. *The Quarterly Journal of Economics* 115(3): 715-753.
- Bardasi, E. and M. Taylor. 2008. Marriage and wages: A test of the specialization hypothesis. *Economica* 75(299): 569-591.
- Bayudan, C. 2006. Wives' time allocation and intrahousehold power: Evidence from the Philippines. *Applied Economics* 38(7): 789-804.
- Bayudan-Dacuycuy, C. and L. Dacuycuy. 2018. Wages, housework and attitudes in the Philippines. *Journal of Asian and African Studies* 53(3): 366-383.
- Becker, G. 1965. A theory of the allocation of time. *The Economic Journal* 75(299): 493-517.
- Becker, G. 1991. A treatise on the family. Cambridge, Massachusetts: Harvard University Press.

- Bertrand, M., J. Pan, and E. Kamenica. 2013. Gender identity and relative income within households. NBER Working Paper 19023. Cambridge, Massachusetts: National Bureau of Economic Research.
- Blau, F. and A. Grossberg. 1991. Real wage and employment uncertainty and labor force participation decisions of married women. *Economic Inquiry* 29(4): 678-695.
- Chang, L., D. Schwartz, K. Dodge and C. McBride-Chang. 2003. Harsh parenting in relation to child emotion regulation and aggression. *Journal of Family Psychology* 17(4): 598-606.
- Chen, F., L. Bao, Z. Lin, Z. Zimmer and S. Gultiano. 2016. Double burden for women in mid and later life: Evidence from time use profiles in Cebu, Philippines. PWP-MPRC-2016-008. University of Maryland, Maryland: Maryland Population Research Center.
- Commission on Human Rights (CHR). 2016. Let our voices be heard: Report of the Commission of Human Rights Philippine national inquiry on reproductive health and rights. Gender Equality and Women's Human Rights Center, Diliman, Quezon City.
- David, C., J. Albert, and J. Vizmanos. 2017. Sustainable Development Goal 5: How does the Philippines fare on gender equality? PIDS Discussion Paper Series 2017-45. Quezon City, Philippines: Philippine Institute for Development Studies.
- Duflo, E. 2012. Women empowerment and economic development. *Journal of Economic Literature* 50(4): 1051–1079.
- Elson, D. 2000. Progress of the world's women 2000 UNIFEM Biennial Report. New York: United Nations Development Fund for Women
- Ettner, S. 1995. The impact of "parent care" on female labor supply decisions. *Demography* 32(1): 63-80.
- Fortin, B. and G. Lacroix. 1997. A test of the unitary and collective models of household labour supply. *Economic Journal* 107(443): 933–955.
- Fosu, F. 1999. Cost of living and labor force participation: Married women in urban labor markets. *Journal of Labor Research* 20(2): 219-232.
- Gray, J. 1997. The fall in men's return to marriage: Declining productivity effects or changing selection? *Journal of Human Resources* 32(3): 481-504.
- Green, D. and W. Riddell. 2003. Literacy and earnings: An investigation of the interaction of cognitive and unobserved skills in earnings generation. *Labour Economics* 10(2): 165-184.
- Greenstein, T. 2000. Economic dependence, gender, and the division of labor in the home: a replication and extension. *Journal of Marriage and the Family* 62(2): 322-335.

- Gronau, R. 1977. Leisure, home production, and work: The theory of the allocation of time revisited. *Journal of Political Economy* 85(6): 1099-1124.
- Hersch, J. and L. Stratton. 2000. Household specialization and the male marriage wage premium. *Industrial and Labor Relations Review* 54(1): 78-94.
- Hindin, M. and L. Adair. 2002. Who's at risk? Factors associated with intimate partner violence in the Philippines. *Social Science and Medicine* 55(8): 1385-1399.
- Hochschild, A. and A. Machung. 2012. *The Second Shift: Working Families and the Revolution at Home*. Revised ed. London, United Kingdom: Penguin Books.
- Korenman, S. and D. Neumark. 1991. Does marriage really make men more productive? *Journal of Human Resources* 26(2): 282-307.
- Manuel, M. and E. Gregorio. 2011. Legal frameworks for early childhood governance in the Philippines. *International Journal of Child Care and Education Policy* 5(1): 65-76.
- Medina, B. 1995. *The Filipino family, A text with selected readings*. Diliman, Quezon City: The University of the Philippines Press.
- Medina, B. 2001. *The Filipino family*. Diliman, Quezon City: The University of the Philippines Press.
- National Economic and Development Authority (NEDA). 2017. Philippine Development Plan 2017-2022. Pasig City, Philippines: NEDA.
- O'Hara, B. 2004. Do mothers work to support ailing husbands? *Journal of Family and Economic Issues* 25(2): 179-198.
- Olivetti, C., E. Patacchini, and Y. Zenou. 2013. Mothers, friends and gender identity. NBER Working Paper 19610. Cambridge, Massachusetts: National Bureau of Economic Research.
- Philippine Statistics Authority (PSA). 2018. Philippines 2017 National Demographic and Health Survey key indicators report. Quezon City, Philippines: Philippine Statistics Authority.
- Pollak, R. and Wachter, M. 1975. The relevance of the household production function and its implications for the allocation of time. *Journal of Political Economy* 83(2): 255-278.
- Roodman, D. 2011. Fitting fully observed recursive mixed-process models with cmp. *The Stata Journal* 11(2): 159-206.
- Ruhm, C. 2000. Parental employment and child cognitive development, NBER Working Paper 7666. Cambridge, Massachusetts: National Bureau of Economic Research.

- Sarkadi, A., R. Kristiansson, F. Oberklaid, and S. Bremberg. 2008. Fathers' involvement and children's developmental outcomes: A systematic review of longitudinal studies. *Acta Paediatrica* 97(2): 153-158.
- Smith, L. and L. Haddad. 2000. Explaining child malnutrition in developing countries: A cross-country analysis. FCND Discussion Paper No. 60. Washington DC: International Food Policy Research Institute.
- Stafford, F. 1987. Women's work, sibling competition, and children's school performance. *American Economic Review* 77(5): 972-80.
- United Nations Fund for Population Activities (UNFPA). 2018. The power of choice: Reproductive rights and the demographic transition.
- Upadhyay, U. and M. Hindin. 2007. The influence of parent's marital relationship and women's status on children's age at first sex in Cebu, Philippines. *Studies in Family Planning* 38(3): 173-186.
- Williams, L. and J. Domingo. 1993. The social status of elderly women and men within the Filipino family. *Journal of Marriage and Family* 55(2): 415-426.
- Yeung, W. 2004. Fathers: an overlooked resource for children's school success. In *After the Bell: Solutions Outside the School*, edited by D. Conley & K. Albright. London: Routledge.

APPENDIX

Table 1A: Determinants of work and housework of respondent and spouse

| | Male respondent | | | Female respondent | | |
|---|--------------------|-----------------------|-------------------|--------------------|-----------------------|-------------------|
| | Working respondent | Housework, respondent | Housework, spouse | Working respondent | Housework, respondent | Housework, spouse |
| Personal attributes | | | | | | |
| Respondent: Age | -0.02*** [0.01] | 0.00 [0.00] | 0.00 [0.00] | 0.01 [0.01] | 0.00 [0.00] | 0.00 [0.01] |
| Respondent: College | -0.24 [0.21] | 0.30** [0.15] | -0.03 [0.14] | -0.1 [0.18] | 0.10 [0.11] | 0.21 [0.15] |
| Married | -0.27 [0.24] | -0.11 [0.15] | 0.13 [0.14] | 0.41** [0.19] | 0.20 [0.13] | -0.14 [0.17] |
| Partner: college | -0.03 [0.24] | -0.16 [0.19] | -0.12 [0.17] | -0.15 [0.21] | -0.21 [0.14] | -0.06 [0.19] |
| HH characteristics | | | | | | |
| Household size | -0.08** [0.04] | 0.07*** [0.03] | 0.02 [0.02] | 0.02 [0.04] | -0.06*** [0.03] | 0.00 [0.03] |
| Number of toddler | 0.06 [0.10] | -0.05 [0.07] | 0.00 [0.06] | -0.07 [0.10] | 0.19*** [0.06] | -0.11 [0.07] |
| Family income | 0.25*** [0.09] | -0.02 [0.06] | 0.07 [0.05] | 0.20** [0.08] | 0.06 [0.05] | 0.1 [0.07] |
| Urban | -0.38* [0.22] | 0.04 [0.14] | -0.09 [0.13] | 0.25 [0.19] | -0.06 [0.14] | -0.12 [0.18] |
| Luzon | 0.08 [0.26] | -0.13 [0.16] | 0.45*** [0.15] | -0.16 [0.21] | 0.21 [0.14] | 0.1 [0.18] |
| Housework | | | | | | |
| Respondent | -0.23 [0.18] | | | -0.51*** [0.18] | | |
| Spouse | 0.31* [0.18] | | | 0.46*** [0.13] | | |
| Work History | | | | | | |
| Mother worked | -0.03 [0.15] | | | 0.22* [0.13] | | |
| Attitudes | | | | | | |
| When mother works: Preschool child suffer (=1 disagree, =0 agree) | | -0.02 [0.12] | 0.12 [0.11] | | -0.06 [0.11] | -0.07 [0.14] |
| When mother works: Family life suffers (=1 disagree, =0 agree) | | -0.13 [0.11] | -0.24** [0.10] | | 0 [0.10] | 0.23* [0.12] |
| Men work, women housework (=1 disagree, =0 agree) | | 0.11 [0.18] | 0.19 [0.15] | | -0.19 [0.12] | 0.22 [0.16] |
| $\rho_{working,housework_r}$ | -0.01 | | | 0.07 | | |
| $\rho_{working,housework_s}$ | -0.20 | | | -0.42** | | |
| $\rho_{housework_r,housework_s}$ | 0.25*** | | | 0.34*** | | |
| Observations | 399 | | | 454 | | |
| LR chi2 | 83.35 | | | 97 | | |
| p-val | 0.00 | | | 0.00 | | |

*/**/*** Significant at 10/5/1% level. Figures in brackets are standard errors.