DO WOMEN CONTRIBUTE LESS THAN MEN TO NATION BUILDING?[1]

by

Romulo A. Virola, Jessamyn O. Encarnacion, Armyl G. Zaguirre, and Raymond S. Perez[2]

ABSTRACT

Official statistics show that there are more economically active men than women (80% versus 50% in 2006) and that there is a gender differential in employment status (74% for men versus 46% for women in 2005). Are women then contributing less to the economy than men? Is the gender disparity for real or do these statistics mask the true worth of women? Can we achieve the MDG no. 3 on the promotion of gender equality and empowerment of women?

Accurate and adequate information on women's economic participation are obviously needed to respond to these questions and to guide the government in crafting more effective economic, social and environmental policies that are responsive to women.

However, towards a more meaningful measurement of the contribution of women to the Philippine economy, action is needed from many stakeholders. Unfortunately, twelve years after the Beijing Platform for Action which made specific recommendations on the possible reflection of unremunerated work in the system of national accounts, very little has happened. For instance, the 2004-2010 Medium-Term Philippine Development Plan does not go beyond a call for the intensification of "efforts to have sex-aggregated data collected and analyzed". And while the NSCB has undertaken pioneering initiatives in the past in this direction, neither the necessary budgetary support nor the demand-driven advocacy to push the initiatives forward have been given.

This paper presents the renewed NSCB efforts to quantify the contribution of women in the economy. Unpaid work such as housework is measured through a satellite account which is linked with but does not disturb the core accounts of the Philippine System of National Accounts (PSNA). Using data generated by the Philippine Statistical System (PSS) including those from time-use surveys and building from earlier studies done by Virola and De Perio (1998) and Virola (1999), the study computes the adjusted gross domestic product and gross national income/product accounting for the value of unpaid work covering the years 2000-2006. The paper further presents a set of recommendations to successfully mainstream the quantification of women's contribution to the economy in the PSS.

KEYWORDS: official statistics, economic participation, contribution of women, unremunerated work, sex-disaggregated data, satellite account, time-use surveys, adjusted gross domestic product, adjusted gross national income.

I. Introduction

Women accounted for the second largest number of poor population after the children, in both 2000 and 2003: 32.3 percent of women, or 12.2 million, were poor in 2000 while 29 percent, or 11.6 million, were poor in 2003 (see [1]). At the same time, gender differential still remains as an issue in economic participation: official statistics show that there are more economically active men than women (80% versus 50% in 2006) and that employment rate is higher for men than for women (74% for men versus 46% for women in 2005) (see [2]).

---

[1] Paper presented during the 10th National Convention on Statistics at the Shang-ri-la Hotel, Mandaluyong City on 1-2 October 2007.

[2] Secretary General, Division Chief, Statistical Coordination Officer (SCO) III, and SCO I, respectively, of the National Statistical Coordination Board. The views expressed in this paper are those of the authors and do not necessarily reflect the views of the NSCB. The authors acknowledge the assistance of Noel S. Nepomuceno and Teresita M. Almarines in the preparation of this paper.

These statistics pose a challenge to the country in achieving Goal 3 of the Millennium Development Goals (MDGs), which calls for the promotion of gender equality and empowerment of women, among others (see [3]). One particular concern is the slow and uneven progress towards gender equality as women's contribution continues to be undervalued and undercounted in the national accounts[3]. Accurate and adequate information on what women do and how much they produce can surely help government and even the private sector in crafting more effective economic, social and environmental policies and programs that are sensitive to women.

In the 2000 Pilot Time Use Survey (TUS) conducted by the National Statistics Office (NSO) for Batangas and Quezon City, results showed that for both areas, the number of hours spent by women on housework and child family care was higher than men, be it during weekdays or weekends. In fact, hours spent by women for housework was, on the average, twice as much as by men. This situation would of course mean less hours available to women to do other things such as engaging in economic activities. It is therefore not surprising that the TUS showed that, for all days of the week, except during weekdays in Quezon City, men are more "economically empowered" spending longer hours on economic activities than women. Thus, men have greater economic "visibility" and higher contribution to the economy, more participation in making economic decisions, and more access to credit (see [4]). The economic undercount of women thus puts them in a situation that can perpetuate, if not outright worsen the inequity between men and women.

Responding to the need for information on women's contribution to the economy, to include unpaid housework services, Virola and De Perio (1998), generated a satellite account on the contribution of women for the period 1990-1997 using various parameters available in the Philippine Statistical System (see [5]). This was later updated by Virola in his paper entitled, "Women's Contribution to the Economy – the Philippine Experience", which was presented in 1999 during the 52nd Session of the International Statistical Institute (see [6]). Results of the two studies showed that for the period 1990-1998, the contribution of women to the Philippine economy in the conventional GDP[4] is estimated at about 35-40 percent; when unpaid work is taken into account, the share rises to about 50 percent.

The methodology used earlier by the two studies in the estimation of unpaid work has not been revisited for improvement. This year, the NSCB received renewed calls to value women's unpaid work, most persuasively from Prof. Solita "*Mareng Winnie*" C. Monsod.

Hence, this paper responds to the challenge by updating some parameters in the earlier work by Virola and De Perio (1998) (see [5]) and Virola (1999) (see [6]) on the measurement and valuation of women's unpaid work, using the results of the 2000 TUS and produces estimates for the period 2000-2006.

The paper is organized as follows. The following section presents a discussion on the conventional framework of the SNA, and how contribution of women is being captured and underestimated, under that framework. The third section presents efforts, both at the international and local level, on the measurement of unpaid work. The fourth section

[3] This was underscored during a consultative workshop held last 24 May 2007 organized by the United Nations Development Programme and the United Nation Population Fund in collaboration with the National Economic and Development Authority and the National Commission on the Role of Filipino Women.

[4] Conventional GDP does not include unpaid housework services such as: a) cleaning, decoration and maintenance of the dwelling unit; b) cleaning, servicing and repair of households durable goods, including vehicles; c) preparation and serving of meals; d) care, training and instruction of children; care of sick, infirm or old; and e) transportation of member of the households or their goods.

presents the improvements made on the earlier methodology of Virola and de Perio (1998) (see [5]) and the remaining limitations of the methodology. The fifth section provides the highlights of the estimates for the period 2000 to 2006 and the final section presents some concluding remarks and recommendations on the measurement of the contribution of women in the Philippine economy.

II. The Philippine System of National Accounts

The Philippine System of National Accounts (PSNA) adopts the framework of the System of National Accounts (SNA) developed by United Nations in collaboration with four other international organizations, the latest of which is the 1993 SNA (see [7]) Under the System of Designated Statistics (SDS)[5], the PSNA is compiled by the NSCB. PSNA estimates of the country's Gross Domestic Product (GDP) and Gross National Product (GNP) are released on a quarterly basis with a time lag of 2 months for the first three quarters and 1 month for the fourth quarter.[6] Estimates are also available on an annual basis for the regions and one of the initiatives being pushed now is the compilation of the accounts for the provinces and key cities. [7]

The SNA production boundary comprises the production of institutional sectors, namely: 1) financial corporation; 2) non-financial corporation; 3) general government; 4) non-profit institutions serving households; and 5) households. Under the SNA production boundary, all market and non-market goods and services produced by the first four institutions are measured as part of GDP/GNP. However, for the household sector, only market goods and services; and non-market goods are included in the production boundary. Hence, all non-market services produced in the household are not measured as contribution to the economy, except for domestic services provided by domestic helpers. The uncounted activities include the following:

- Cleaning, decoration and maintenance of the dwelling unit;
- Cleaning, servicing and repair of household durable goods, including vehicles;
- Preparation and serving of meals;
- Care, training, and instruction of children;
- Care of sick, infirm or old; and
- Transportation of members of the household or their goods.

It should be noted further that women usually produce the above-mentioned services in their households. Adequately measuring women's contribution in society therefore, means expanding the definition of the SNA production boundary to include non-market services.

In addition to these unaccounted activities of women, there are also areas of possible underestimation occurring within the SNA production boundary. It should be stressed, however, that underestimation is possible, regardless whether the economic players are women or men. However, for purposes of this study, we list only a few economic activities of women where possible underestimation occurs:

- **Women in the entertainment industry**. While this is presently being captured in the PSNA in the estimation of private services under recreational activities, there is still a possibility of underestimation due to the prevalence of unregistered pubs, clubs, and the like, which employ mostly women.

[5] Under E.O. 352 signed by President Fidel V. Ramos on 1 July 1996.
[6] This schedule is in accordance with the Advance Release Calendar of the NSCB.
[7] The province of Guimaras and the NSCB are currently collaborating on the Provincial Product Accounts of Guimaras.

- **Women engaged in household operations**. As there is no listing of paid household help available, it is also possible that the contribution of these women is not adequately measured in the estimation of the GDP/GNP.
- **Women engaged in household-based agricultural production**. Backyard production of own-produced food items by women may likewise not be adequately measured because they are not captured by the surveys collecting the relevant information.

III. Efforts on the Measurement of the Contribution of Women in the Economy

3.1 Efforts in the International Community

As early as 1971, Canada already started compiling the contribution of their women's unpaid work to their economy. This has been updated periodically by Statistics Canada, the latest of which is for 1998, which shows that the estimated value of unpaid work in Canada in 1998 was $297 billion. Between 1992 and 1998, the value of unpaid work increased by 18.3% (in nominal terms). As a percentage of GDP, however, it fell three percentage points, from 36% to 33% (see [8]).

Estimates of the value of unpaid work for the following countries are also available in the United Kingdom, Finland, Germany, Bulgaria, Denmark, France, Norway, Korea, Netherlands, Austria, Switzerland, Japan, and New Zealand.

3.2 Efforts in the Philippine Statistical System (PSS)

It is worth noting that earlier efforts in the international community came mostly, if not all, from developed countries. In 1998, on the other hand, the first attempt of the Philippines to measure the contribution of women in the Philippine economy was made thru the work of Virola and Ms. De Perio (see [5]). They produced the first estimates of the value of women's unpaid work covering the period 1990-1997. This was later updated by Virola (1999) (see [6]) which showed that for the period 1990-1998, the contribution of women to the Philippine economy in the conventional GDP was about 35-40 percent; when unpaid work is taken into account, the share rose to about 50 percent.

In 2000, the NSO conducted the Time Use Pilot Survey, with financial assistance from the Canadian International Development Agency (CIDA) (see [4]). The survey was piloted in Quezon City (2 highly urbanized barangays) and in Batangas (2 urban, 2 rural-agriculture, and 2 rural-others barangays), selecting 30 sample households for each sample barangay. For each sample household, at most three members aged 10 years old and over were asked as respondents. Despite the availability of data on the time spent of household members 10 years old and over during weekdays and weekends from the pilot TUS, these were never utilized to compute for the value of women's unpaid work for later years as there was neither the budgetary support nor the demand-driven advocacy push to continue the pioneering initiatives earlier undertaken by the NSCB.

IV. Estimation Methodology

4.1 GDP, NFIA, and GNP by sex

Estimation of GDP, NFIA, and GNP by sex followed the same methodology developed by Virola and De Perio (1998) (see [5]) and Virola (1999) (see [6]), which used the production approach. GDP by sex is computed using two options: 1) using employment statistics; and 2) using hours of paid work. It should be noted, however, that while the two options would generate results close to each other, the latter was used as final results as it is

deemed to be more reflective of the "quantity" of participation of women or men in the labor force.

In estimating NFIA by sex, remittances by sex were used as weights for disaggregating net compensation while net property income was divided equally between men and women due to unavailability of an allocation basis.

All constant price estimates were obtained using the GVA-IPIN as deflator.

Basically, the improvement in the earlier methodology is only on the use of updated parameters and additional computations using an expanded coverage of unpaid work and self-valuation.

4.2 Unpaid household services by sex

Similar to the previous study, the contribution not only of the employed, but also of the unemployed and those outside the labor force was accounted for in the estimation of unpaid household services.

For the employed, valuation uses both opportunity cost and market price approaches. On the other hand, for the unemployed and those outside of the labor force, only the market price approach will be used.

The earlier studies done by Virola and De Perio (1998) (see [5]) and Virola (1999) (see [6]) used time-use results of the study by the National Economic and Development Authority (NEDA) (1984) (see [15]) and the Institute of Philippine Culture, Ateneo (IPC) (1985-1990) (see [16]). This paper produces 2000-2006 estimates using the same methodology and parameters as the 1998 and 1999 studies, as well as 2000-2006 estimates using the time-use results of the pilot survey conducted by the NSO in 2000 (2000 TUS) (see [4]). The valuation of unpaid work uses two options: the average wage of a janitor and minimum wage. In addition, additional estimates were produced, expanding the definition of "unpaid work" to include community and volunteer work.

Further, aside from the above-mentioned approaches in estimating the value of unpaid work, estimates using the self-valuation approach from the 2000 pilot time-use survey are also compiled.

4.2.1 Opportunity Cost (for employed persons only)

For employed persons, using the 2000 TUS (see [4]), the average number of hours of unpaid work per day (by sex) of those living in Quezon City and Batangas were weighted by the total urban and rural population, respectively. The ratio of unpaid work to paid work was then obtained and used as an adjustment factor to the mean hours of paid work per week derived from the Labor Force Survey (LFS) (see [17]) to estimate hours of unpaid work in a week.

4.2.2 Market Price Approach (for employed persons)

The estimation methodology is as described in the immediately preceding section, except that the monthly compensation for janitors; and the minimum wage, were used for the valuation of unpaid work.

4.2.3 Market Price Approach (for unemployed persons and those not in the labor force)

For unemployed persons and those not in the labor force, the total time spent during weekdays on "housework, child and family care, shopping for household goods" were used. These were, however, rescaled to ensure that total hours spent on all activities would add up to 24 hours. The value of unpaid work was then derived by multiplying the number of hours of unpaid work per day by the salary per hour (salary of janitors; minimum wage), by the number of days in a year and by the number of the unemployed and those not in the labor force.

4.3 Unpaid household and community services by sex

The same procedures stipulated in section 4.2 was followed, except that total time spent in community services was included as part of unpaid work.

4.4 Self-Valuation Results

Direct estimation of unpaid household work was used using the self-valuation results from the 2000 TUS (see [4]).

V. Results and Highlights

The following results (based on the estimates in current prices) were obtained:

- Accounting for unpaid work, conventional GDP increases by 66.2 percent;
- Women's contribution to GDP increased by 8 percentage points;
- Women account for 59.6 percent of the total hours of unpaid work;
- Women not in the labor force account for more than half of the total value of unpaid work of women;
- Women accounted for only 27.4 percent of the total NFIA;
- Women contributed 46.2 percent of the adjusted GNP;
- New estimates of unpaid work increased; and
- Unpaid work is higher if self-valuation is used.

VI. Concluding Remarks and Recommendations

The methodology presented in this paper to measure unpaid work and to measure more completely the contribution of women to the economy surely needs improvement. Surely too, much more can be done if the data limitations of the PSS and the financial and manpower constraints of the NSCB are addressed. For example, the Time Use Survey results used in the paper came from a pilot survey that was conducted by NSO in one province and one city way back in 2000. A more comprehensive and updated TUS will certainly enhance the quality of the estimates. The loss of NSCB manpower and the restriction on hiring due to the rationalization plan of government have severely constrained the capacity and capability of the NSCB to address emerging concerns such as the measurement of the contribution of women to society.

Nonetheless, the efforts done by the NSCB indicate that despite the limitation imposed by the production boundary of the SNA, it is possible to produce statistics that can help measure the true worth of women in national development. The results appear to be comparable with results from other countries.

The efforts to value unpaid work in the SNA can benefit from a better appreciation of the international community to push the agenda forward so that countries can share and

learn from each other's experiences. Methodologies can then be improved at less cost and higher quality statistics can be provided by the PSS to its stakeholders. On the other hand it is also important that the users of these statistics recognize the benefits from the generation of the statistics and hence aggressively take initiatives in support of the efforts by the data compilers. It would also be helpful if the data users are able to demonstrate actual policy uses of the statistics they say they need.

Behind all these, we must recognize the need for statistical capacity building[8] of the the producers, the users and the providers of statistics. We need to be able to produce better statistics; we need to be able to demonstrate better use of better statistics and we need to show better cooperation in the data collection activities of government if we want better statistics.

Finally, it is time the government thru the DBM and Congress realized that in the Third Millennium, statistics will play a critical role in the global competition among knowledge-based economies. If we do not decide to invest in statistics, we simply will be left behind, way behind China and India, the emerging tigers of Asia

ACRONYMS

CIDA	Canadian International Development Agency
DBM	Department of Budget and Management
GDP	Gross Domestic Product
GNP	Gross National Product
GVA	Gross Value Added
IPC	Institute of Philippine Culture
IPIN	Implicit Price Index
ISI	International Statistical Institute
LFS	Labor Force Survey
MDGs	Millennium Development Goals
MTPDP	Medium Term Philippine Development Plan
NEDA	National Economic and Development Authority
NFIA	Net Factor Income from Abroad
NSCB	National Statistical Coordination Board

[8] PARIS21 or Partnership in Statistics for Development in the 21st Century is pushing for this agenda.

NSO National Statistics Office

PSNA Philippine System of National Accounts

PSS Philippine Statistical System

SDS System of Designated Statistics

SNA System of National Accounts

SOF Survey on Overseas Filipinos

TUS Time Use Survey

REFERENCES

[1] **NSCB, National Statistical Coordination Board (2007)**. Press Release: Our Nation's Future, the Children, Still Account for the Largest Poor Population in 2003. September 2007.

[2] **NSCB, National Statistical Coordination Board (2007)**. Statistically Speaking – Are we Taking Care of Our Moms? May 2007.

[3] **NSCB, National Statistical Coordination Board**. www.nscb.gov.ph

[4] **NSO, National Statistics Office**. 2000 Pilot Time-Use Survey.

[5] **Virola, R. and S. de Perio (1998)**. Measuring the Contribution of Women to the Philippine Economy. 7th National Convention on Statistics. October 1998.

[6] **Virola, Romulo A. (1999)**. Women's Contribution to the Economy – the Philippine Experience. 1999. ISI 99. 52nd Session. Contributed Papers.

[7] **Organization for Economic Cooperation and Development, United Nations Statistical Division, International Monetary Fund, World Bank and Commission of European Communities (1993)**. System of National Accounts. 1993.

[8] **Statistics Canada**. Valuing Households' Unpaid Work in Canada, 1992 and 1998: Trends and Sources of Change. http://www.statcan.ca/english/conferences/economic2003/hamdad3c.pdf

[9] **Murgatroyd, Linda**. Developing Gender Statistics in the UK. http://www.radstats.org.uk/no074/article2.htm

[10] Household Production and Consumption in Finland 2001: Household Satellite Account. http://www.kuluttajatutkimuskeskus.fi/files/4919/2006_household_satellite_account.pdf

[11] Gender aspects in the area of unpaid work. http://www.genderkompetenz.info/eng/gendercompetence/subjectareas/employment/unpaid/aspects

[12] **United Nations**. Household Accounting: Experience in Concepts and Compilation. http://unstats.un.org/unsd/publication/SeriesF/SeriesF_75v2E.pdf

[13] Economic Evaluation of Unpaid Work in Republic of Korea. http://www.unescap.org/stat/meet/wipuw/wipuw-01.pdf

[14] **Statistics New Zealand**. Measuring unpaid work in New Zealand 1999 – article. http://www.stats.govt.nz/products-and-services/Articles/unpaidwork-Jun01.htm

[15] **NEDA, National Economic and Development Authority**. Study on the Quantification of Housework, 1984.

[16] **Miralao, Virginia A.** "Time-Use as a Measure of Women's Role in Development", Institute of Philippine Culture, Ateneo de Manila University, 1981.

[17] **NSO, National Statistics Office**. Labor Force Survey.