DO WOMEN CONTRIBUTE LESS THAN MEN TO NATION BUILDING?

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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 # 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

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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]).

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",

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[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.

which was presented in 1999 during the 52rd 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 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

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[4] Conventional GDP does not include unpaid housework services such as: a) cleaning, decor ation 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) transport ation of member of the households or their goods.

[5] Under E.O. 352 signed by President Fidel V. Ramos on 1 July 1996.

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

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[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.

is still a possibility of underestimation due to the prevalence of unregistered pubs, clubs, and the like, which employ mostly women.

- **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:

- **United Kingdom**. In 1995, the value of unpaid work of the country was estimated at between 40% and 120% of GDP, depending on the method by which its monetary value was measured (see [9]).

- **Finland**. In 2001, GDP increased by 40% and household consumption by almost 60% when production excluded from the national accounts is included in the figures (see [10]).

- **Germany**. Using the generalist rate, the GVA of household production for 2001 amounted to 820,000 million euros – equivalent to 30.5%[8] of the GDP.

- **Bulgaria**. In 1988, the value of production in non-SNA activities was 47% and 71% of GDP based on net wages and gross wages, respectively. Estimate based on labour costs (97%) is 13 percentage points higher than that based on gross wages (84%) (see [12]).

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[8] Based on the computations of the authors.

- **Denmark**. In 1987, the value of labor inputs in non-SNA activities based on labor costs is 37% of GDP, which is 16 percentage points higher than that based on net wages (21%). The value of production in non-SNA activities based on labor costs is 43% of GDP (see [12]).

- **France**. In 1985, the value of labor inputs in non-SNA activities based on gross wages and labor cost is 33% and 36% of the GDP, respectively (see [12]).

- **Norway**. In 1992, using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 39%, 38%, and 37% of GDP, respectively (see [13]).

- **Korea**. In 2001, the value of unpaid work was 30-40% of GDP and 70-90% of total annual wage (see [13]).

- **Netherlands**. In 1990, using opportunity cost approach, the value of unpaid work was estimated at 108% of GDP. On the other hand, using specialist method, it is estimated at 82% of GDP (see [13]).

- **Austria**. In 1992, using opportunity cost approach, the value of unpaid work was estimated at 138% of GDP (see [13]).

- **Switzerland**. In 1997, using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 49, 41, and 52% of GDP, respectively (see [13]).

- **Japan**. In 1996, Using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 23, 15, and 20% of GDP, respectively (see [13]).

- **New Zealand**. In 1999, the value of productive unpaid work by New Zealanders aged 15 years and over was 39% of GDP (see [14]).

Annex 1 shows a more detailed summary for the above countries, which also includes information whether the activity has been institutionalized or done by private researchers, among others.

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.

A more detailed illustration of the methodology is provided in Annex 2. 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 (IP C) (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. (Note: While estimates will be generated using the "old" and "updated" methodology, only details for the latter will be described below as details for the former are presented in Annex 2.)

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!**

Taking into account unpaid work provided by the employed, the unemployed and those not in the labor force, the GDP using market price (MP) approach increased by 66.2 percent.   Of the total 66.2 percent of unpaid work, women contributed 39.5 percent while men contributed 26.7 percent *(see Table 1)*.

Table 1. Percentage Distribution of Value of Unpaid Hours
(Housework Services) to GDP, At Current Prices

Year	% to GDP					
	Women		Men		Total	
	OC/MP	MP	OC/MP	M P	OC/MP	MP
2000	46.69	40.73	48.60	27.42	95.28	68.15
2001	47.45	40.90	48.48	27.73	95.93	68.63
2002	47.23	40.84	49.27	27.80	96.51	68.64
2003	44.82	38.83	47.69	26.17	92.50	65.00
2004	43.55	37.90	48.16	25.63	91.70	63.54
2005	45.29	39.19	47.84	26.63	93.13	65.83
2006	44.89	38.93	48.56	26.40	93.45	65.33
2000-2006	45.52	39.46	48.34	26.73	93.86	66.19

- **Women's Contribution to GDP increased by 8 Percentage Points!**

Women's contribution to adjusted GDP improved to 47.1 percent from 38.8 percent. *(see Table 2)*.

Table 2. Percentage Share to GDP and Adjusted GDP by Sex, 2000-2006

Year	Conventional GDP			Adjusted GDP		
	Men	Women	Total	Men	Women	Total
2000	61.80	38.20	100.00	53.06	46.94	100.00
2001	60.42	39.58	100.00	52.27	47.73	100.00
2002	60.49	39.51	100.00	52.35	47.65	100.00
2003	61.62	38.38	100.00	53.21	46.79	100.00
2004	62.10	37.90	100.00	53.65	46.35	100.00
2005	61.12	38.88	100.00	52.92	47.08	100.00
2006	61.07	38.93	100.00	52.91	47.09	100.00
2000-2006	61.23	38.77	100.00	52.93	47.07	100.00

- **Women Account for 59.6 Percent of The Total Hours of Unpaid Work!**

Women account for 59.6 percent of the total number of hours of unpaid work. Women not in the labor force contributed 81.3 percent of the total hours of unpaid work of those not in the labor force. Employed women con tributed 44.7 percent of the total hours of unpaid work of the employed. Unemployed women contributed 51.0 percent of the total hours of unpaid work of the unemployed *(see Table 3)*.

Table 3. Percentage Distribution of Total Unpaid Hours of Work (Housework Services) by Sex, Employed, Unemployed and Not in the Labor Force

	2000		2001		2002		2003		2004		2005		2006		2000-2006	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Employed	44.14	55.86	45.39	54.61	45.37	54.63	44.50	55.50	43.76	56.24	44.85	55.15	44.77	55.23	44.68	55.32
Agriculture, Fishery and Forestry	10.82	25.32	11.29	24.81	11.37	24.74	11.15	24.82	10.79	25.09	11.14	24.63	10.95	24.46	11.07	24.84
Mining and Quarrying	0.02	0.33	0.03	0.29	0.03	0.28	0.02	0.27	0.03	0.25	0.06	0.27	0.04	0.34	0.03	0.29
Manufacturing	5.62	4.70	5.24	4.57	5.04	4.57	5.06	4.77	4.91	4.77	4.97	4.48	4.77	4.46	5.09	4.62
Electricity, Gas and Water	0.08	0.31	0.07	0.29	0.07	0.31	0.08	0.26	0.09	0.27	0.08	0.24	0.08	0.27	0.08	0.28
Construction	0.11	4.54	0.12	4.59	0.13	4.61	0.12	4.71	0.10	4.58	0.12	4.32	0.09	4.33	0.11	4.53
Wholesale and Retail Trade	12.57	5.16	13.27	6.23	13.52	6.22	12.61	6.39	12.75	6.57	13.12	6.84	13.06	6.77	12.99	6.31
Transportation, Communication and Storage	0.45	6.20	0.38	6.17	0.39	6.13	0.40	6.38	0.46	6.57	0.48	6.37	0.50	6.29	0.44	6.30
Financing, Insurance, Real Estate and Business Services	1.25	1.23	1.46	1.39	1.47	1.47	1.50	1.82	1.42	1.74	1.55	1.73	1.75	1.86	1.49	1.60
Government Services	13.21	8.06	7.54	4.82	7.56	4.81	7.09	4.54	7.01	4.73	6.93	4.56	6.95	4.65	8.04	5.17
Private Services	0.00	0.01	5.98	1.46	5.79	1.48	6.46	1.54	6.18	1.65	6.40	1.71	6.58	1.81	5.34	1.38
Unemployed	48.91	51.09	53.74	46.26	51.52	48.48	50.95	49.05	52.73	47.27	50.51	49.49	47.68	52.32	50.95	49.05
Not in the Labor Force	81.25	18.75	81.52	18.48	80.52	19.48	82.95	17.05	82.75	17.25	80.34	19.66	80.13	19.87	81.25	18.75
TOTAL	59.77	40.23	59.60	40.40	59.50	40.50	59.73	40.27	59.66	40.34	59.54	40.46	59.58	40.42	59.62	40.38

- **Women Not in the Labor Force Account for More than Half of the Total Value of Unpaid Work of Women!**

Women who are not in the labor force account for more than half or 54.3 percent of the total value of unpaid work of women from 2000-2006. Employed women contributed 40.6 percent and unemployed women contributed 5.1 percent.

Because of large participation of men in the labor force the employed men contributed the biggest share of 74.2 percent of the total value of unpaid work of men. Men not in the labor force contributed 18.5 percent and unemployed men contributed 7.3 percent. *(see Table 4)*.

Table 4. Percentage Distribution of Total Value of Unpaid Hours of Work (Housework Services) by Sex for All (Market Price), In Million Pesos
At Current Prices

	2000		2001		2002		2003		2004		2005		2006		2000-2006	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
Employed	38.65	72.67	42.31	75.10	41.39	73.22	40.81	75.52	39.37	74.82	41.15	74.47	40.51	73.69	40.62	74.23
Unemployed	5.21	8.08	5.99	7.61	5.79	8.00	5.72	8.17	6.38	8.46	4.00	5.77	3.65	5.90	5.12	7.28
Not in the Labor Force	56.14	19.24	51.70	17.29	52.82	18.77	53.46	16.31	54.25	16.72	54.85	19.76	55.84	20.42	54.26	18.49
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

- **Women Accounted for only 27.4 Percent of the Total NFIA!**

Due to less remittances coming from women than men from 2000-2006, women's contribution to NFIA was only 27.4 percent. Women accounted for 34.2 percent of the total net compensation *(see Table 5)*.

Table 5. Percentage Distribution of Net Factor Income from Abroad by Sex, 2000-2006, At Current Prices

Year	NFIA		Net Compensation		Net Property Income	
	Women	Men	Women	Men	Women	Men
2000	26.59	73.41	32.44	67.56	50.00	50.00
2001	29.51	70.49	36.25	63.75	50.00	50.00
2002	22.77	77.23	32.76	67.24	50.00	50.00
2003	26.33	73.67	34.12	65.88	50.00	50.00
2004	25.51	74.49	32.94	67.06	50.00	50.00
2005	30.39	69.61	35.92	64.08	50.00	50.00
2006	30.55	69.45	35.21	64.79	50.00	50.00
2000-2006	27.38	72.62	34.23	65.77	50.00	50.00

- **Women Contributed 46.2 Percent of the Adjusted GNP!**

The women's contribution was 38.0 percent to conventional GNP but increased to 46.2 percent to the adjusted GNP *(see Table 6).*

Table 6. Percentage Share to GNP and Adjusted GNP by Sex, 2000-2006

Year	Conventional GNP			Adjusted GNP		
	Women	Men	Total	Women	Men	Total
2000	37.51	62.49	100.00	46.20	53.80	100.00
2001	38.95	61.05	100.00	47.03	52.97	100.00
2002	38.50	61.50	100.00	46.73	53.27	100.00
2003	37.56	62.44	100.00	45.92	54.08	100.00
2004	37.01	62.99	100.00	45.41	54.59	100.00
2005	38.24	61.76	100.00	46.30	53.70	100.00
2006	38.24	61.76	100.00	46.24	53.76	100.00
2000-2006	37.99	62.01	100.00	46.23	53.77	100.00

- **New estimates of Unpaid Work Increased!**

Using the 1998-99 methodology to estimate the 2000-2006 series, the value of unpaid work was about 37.0 percent of GDP. Using the new parameters, this increased to 66.2 percent. The big increase came primarily from the big increase in the contribution to unpaid work of employed men. Women's contribution to the adjusted GDP correspondingly increased from 29.6 percent to 39.5 percent *(see Table 7).*

Table 7. Comparison of Old and New Estimates
2000-2006

	% GDP	
	OLD	NEW
2000-2006	37.03	66.19

	% GDP	
	OLD	NEW
Women	29.62	39.46
Men	7.41	26.73

		% GDP	
		OLD	NEW
Women	Emp	10.44	16.03
	Unemp	1.65	2.02
	NITLF	17.52	21.41
Men	Emp	4.78	19.84
	Unemp	0.74	1.94
	NITLF	1.89	4.94

		% GDP	
		OLD	NEW
Emp	Women	10.44	16.03
	Men	4.78	19.84
Unemp	Women	1.65	2.02
	Men	0.74	1.94
NITLF	Women	17.52	21.41
	Men	1.89	4.94

- **Unpaid Work is Higher if Self-Valuation is Used!**

GDP increased by 74.7 Percent using self-valuation of unpaid work, higher by 8 percentage points than the 66.2% increase when unpaid work was valued using market prices. This could be an indication of the systematic overestimation or underestimation when self-rated answers are used to measure various phenomena, like poverty and hunger. *(see Table 8)*.

Table 8. Percentage Distribution of Value of Unpaid Hours (Housework Services) to GDP Using Self Valuation, At Current Prices

Year	% to GDP		
	Women	Men	Total
2000	41.97	32.98	74.95
2001	43.84	34.25	78.09
2002	43.55	34.19	77.73
2003	43.83	34.38	78.21
2004	41.96	33.16	75.12
2005	40.56	31.84	72.40
2006	39.01	30.62	69.64
2000-2006	41.83	32.85	74.68

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[9] 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

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

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
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.

Some countries with efforts to value unpaid work

Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
1. United Kingdom	1995	Value of unpaid work was estimated at between 40% and 120% of GDP, depending on the method by which its monetary value was measured	1995 General Household Survey	Experimental household satellite account		• http://www.radstats.org.uk/no074/article2.htm • Developing Gender Statistics in the UK by Linda Murgatroyd
2. Finland	2001	GDP is increased by 40% and household consumption by almost 60% when production excluded from the national accounts are included in the figures. Among the various principal functions of household production, the highes GVA figure was recorded for housing. Its share was 43% of all household production. Meals and snacks accounted 27% of household production.	1999-2000 Statistics Finland's Time Use Survey, 2001-2002 Household Budget Survey	Finnish Household Satellite Account has been compiled in compliance with Eurostat and SNA93 guidelines		• http://www.kuluttajatutkimuskeskus.fi/files/4919/2006_household_satellite_account.pdf • Household Production and Consumption in Finland 2001: Household Satellite Account
3. Germany	2001	Using the generalist rate, the "GVA of HH production" for 2001 amounted to 820,000 million euros. This was roughly the equivalent of the value added of German industry and the trade, hotel and catering and transport	1999-1992 and 2001-2002 time-use surveys (TUS)	Compiled a household satellite system on the basis of the time use surveys. Compiling a		• http://www.genderkompetenz.info/eng/gendercompetence/subjectareas/employment/unpaid/aspects • Gender

Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
		segments together.		satellite account of household production is a compromise to accommodate the demand to take unpaid work into account in economic figures without including it completely in the GDP.		aspects in the area of unpaid work
4. Australia	1992, 1997	• Unpaid household work accounted for 91 per cent of the estimated value of total unpaid work in 1997. • The value of total unpaid work in 1997 was estimated to be about $261 billion (48 per cent of GDP), compared with about $225 billion in 1992 (54 per cent of GDP). • Women contributed 63 per cent of the estimated value of total unpaid work in 1997 (65 per cent in 1992). • The estimate of the value of total unpaid work as a proportion of GDP in Australia is comparable with estimates	Time use surveys conducted in 1992 (pilot) and 1997	Results have been released as a "satellite account" to the national accounts.	• ABS has conducted the 2006 TUS and data from the survey is expected to be publicly available in 2007. Results will be used to update the monetary value of unpaid work (i.e., for 2007).	• http://www.oecd.org/dataoecd/23/18/2508574.pdf • Aspects of Sustainability: Australian Experience by Barbara Dunlop, Australian Bureau of Statistics

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Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
		made in other countries which have conducted studies using similar methodology (the estimates range between around 40 to 60 per cent of GDP, with the exception of Germany where the estimate is 71 per cent of GDP).				
5. Canada	1971-1992, 1992-1998	• 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) comparing to 1992. As a percentage of GDP, however, it fell three percentage points, from 36% to 33%. • Women who were not employed contributed the greatest proportion in the value of households' unpaid work with 36% in 1998. Those employed contributed at 27%. Conversely, a greater share of the value of households' unpaid work was attributed to men who were employed (22%) than men who were not employed	Major time use surveys conducted in 1986 and 1992, 1998	In the case of non-marketed goods and services, the national accounting approach is to assess value in relation with costs.	• Publication on Households' Unpaid Work: Measurement and Valuation is being published by the Statistics Canada's	• http://www.statcan.ca/english/conferences/economic2003/hamdad3c.pdf Valuing Households' Unpaid Work in Canada, 1992 and 1998: Trends and Sources of Change • http://www.swc-cfc.gc.ca/dates/whm/1998/index_e.html Women's History Month 1998: Canadian Women Making an Impact

Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
		(15%). This reflects the fact that a higher proportion of men than women are employed (65.9% for men versus 53.8% for women).				
6. Bulgaria	1988	The value of production in non-SNA activities is 47% and 71% of GDP based on net wages and gross wages, respectively. Estimate based on labour costs is 13 percentage points higher than those based on gross wages (84%).		Value of labor and value of production at cost of inputs in non-SNA activities (as percent of GDP)[10]		• http://unstats.un.org/unsd/publication/SeriesF/SeriesF_75v2E.pdf • Household Accounting: Experience in Concepts and Compilation, UN
7. Denmark	1987	The value of labor inputs in non-SNA activities based on labor costs is 37% of GDP, which is 16 percentage points higher than those based on net wages (21%). Net wages are calculated as gross wages for unskilled manual workers minus the average tax paid by these workers. The value of production in non-SNA activities based on labor costs is 43% of GDP. If gross value added for owner-occupied dwelling is included, the value rises from 43 to 50.		-do-		• -do-

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[10] May not necessarily be women's unpaid work.

Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
8. France	1985	The value of labor inputs in non-SNA activities based on gross wages and labor cost is 33% and 36% of the GDP respectively.		-do-	•	• -do-
9. Norway	1990	The value of labor inputs in non-SNA activities using labor cost is 38% of the GDP.		-do-	•	• -do-
	1992	Using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 39, 38, and 37% of GDP.		Based on a study by Dahle/Kitterod		• http://www.unescap.org/stat/meet/wipuw/wipuw-01.pdf Economic Evaluation of Unpaid Work in Republic of Korea
10. Korea		The value of unpaid work took up 30-40% of GDP and 70-90% of total annual wage.			•	• http://www.unescap.org/stat/meet/wipuw/wipuw-01.pdf Economic Evaluation of Unpaid Work in Republic of Korea
11. Netherlands	1990	Using opportunity cost approach, the value of unpaid work was estimated at 108% of GDP. Using specialist method, it is estimated at 82% of GDP.		Based on a study by Bruyn-Hundt	•	• -do-

Country	Time series	Results	Data source	Remarks	Institutionalization	Link/Source
12. Austria	1992	Using opportunity cost approach, the value of unpaid work was estimated at 138% of GDP.		Based on a study by Franz	•	• -do-
13. Swiss	1997	Using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 49, 41, and 52% of GDP.		Based on a study by Sousa-Poza	•	• -do-
14. Japan	1996	Using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 23, 15, and 20% of GDP.		Based on a study by M. Fukami	•	• -do-
15. New Zealand	1990	Using opportunity cost approach, specialist method, and generalist method, the value of unpaid work was estimated at 66, 42, and 51% of GDP.		Released by Statistics New Zealand	•	• -do-
	1999	The value of productive unpaid work by New Zealanders aged 15 years and over was 39% of GDP.		-do-		• http://www.stats.govt.nz/products-and-services/Articles/unpaidwork-Jun01.htm

ESTIMATION METHODOLOGY

I.   Gross Domestic Product (GDP) by Sex

Estimation of GDP followed the same methodology developed by Virola and De Perio (1998), which used the production approach.

$$GVA \quad = \quad GO - II \qquad \text{eq. 1}$$

where GVA =   gross value added
GO   =   gross output
II   =   intermediate inputs

The GDP is the sum of all GVA by economic activity, i.e..

$$GDP \quad = \quad ?GVA_i \qquad \text{eq. 2}$$

where i runs through all the economic activities or industries.

Using the labor force statistics, two options can be used to breakdown GDP/GVA by sex, one using employment and the other using hours of work. With these parameters used as weights, GVA_i can be estimated for men and women.

$$GVA^F_i \quad = \quad w^F_i GVA_i \qquad \text{eq. 3}$$

$$GVA^M_i \quad = \quad w^M_i GVA_i \qquad \text{eq. 4}$$

where GVA^F_i =   GVA for women in economic activity i

GVA^M_i =   GVA for men in economic activity i

w^F_i, w^M_i =   weight computed using employment or number of hours work

II.   Net Factor Income from Abroad (NFIA) by Sex

The NFIA consists of two components: net compensation and net property income. To derive NFIA by sex, the two components of NFIA were disaggregated first by sex.

$$NC^r = w^r NC \qquad \text{eq. 5}$$

$$NC^M = w^M NC \qquad \text{eq. 6}$$

where NC^F = net compensation of women

NC^M = net compensation of men
NC = net compensation

w^j = weight for sex j

Remittances by sex in the Survey of Overseas Filipinos (SOF) was used as weights.

On the other hand, net property income was divided equally between men and women due to unavailability of an allocation basis.

NFIA by sex was derived by adding up the results.

$$NFIA^r = NC^r + 0.5 NPI \qquad \text{eq. 7}$$

$$NFIA^M = NC^M + 0.5 NPI \qquad \text{eq. 8}$$

where $NFIA^F$ = net factor income of women

$NFIA^M$ = net factor income of women

NPI = net property income

III.   Unpaid Household Services by Sex (Virola and De Perio (1998) and Virola (1999))

1.   Opportunity Cost Method (for Employed Persons only)

For the employed group, an indirect approach was used. From the total number of hours of paid work estimated when GDP was disaggregated by sex, the number of hours of unpaid work by sex was computed using parameters on the ratio of unpaid work

from the special study of Institute of Philippine Culture (IPC), Ateneo. For this method, the average monthly compensation per paid employee from the Annual Survey of Philippine Businesses and Industries/Census of Philippine Businesses and Industries, the NSCB Quarterly Economic Indices, and mean hours of work per week from the Labor Force Survey (LFS) are used to estimate per hour compensation. Though disaggregation by economic activity is available for all these parameters, disaggregation by sex is not available except for mean hours of work.

2.   Market Price Approach (for Persons in the Labor Force)

For all persons in the labor force, the monthly compensation for janitors and the mean hours of work by sex were used to estimate the per hour compensation under the market price approach.

However, for the unemployed and those outside the labor force, a direct approach is used by using a parameter on the per capita number of hours of unpaid work. Using the parameters coming from the IPC, Ateneo study, the number of unemployed and not in the labor force by sex from the LFS, the number of hours of unpaid work services for the unemployed and those not in the labor force were estimated.