

## MacroecoMomics

### *Household Satellite Accounts and the Millennium Development Goals*

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#### **Introduction**

Despite the failures that continue to plague development efforts as the world works to achieve the Millennium Development Goals (MDGs), oftentimes we continue using the same failed methods. Critics routinely fault traditional measures of economic development, such as the Gross Domestic Product (GDP) for being out of touch with reality. Though the GDP has its use, it fails to represent the whole economy of a region or nation. For instance, it doesn't count any work done notably by women in the home as “productive.” This oversight penalises women not only in the home, but also in the workplace as their labour is consistently undervalued all over the world. However, since the UN's Fourth World Conference on Women in 1995 there have been greater efforts to correct this shortcoming by including unpaid household work in the System of National Accounts (SNA) (used to calculate the GDP). One approach to addressing this issue is the use of household satellite accounts (HSA), which economists and policymakers would use in tandem with the GDP. While HSA will increase the perceived value of work done by women whether in the home or in the workplace, various problems hamper its effectiveness. As such, the Working Group on Women's Employment and Economic Development (WGWEED) is studying HSA studies, results, and methodologies in order to point out several discrepancies in methodology that lack sufficient gender sensitivity. The year after Beijing the UNDP conducted a worldwide study valuing unpaid work. That HSA, valued at \$16 trillion, was worth 70% of the world GDP, and more than two-thirds of that work was done by women. Indeed, HSA is a critical battleground in the fight for both sustainable development and gender equality.

The idea of valuing unpaid work is not new. In fact, Norway included unpaid housework in its GDP until 1950 when the UN's first effort to standardise national accounting practices asked that unpaid work be excluded in favour of a universal methodology.<sup>1</sup> But a veritable revolution in the true sense of the word didn't gain momentum until the Beijing Platform. Since then, studies done by national governments (e.g. UK, Finland, Australia) have added on to those already done by international organisations (e.g. Eurostat, International Labour Organization) and academics (e.g. Duncan Ironmonger, Heinrich Lützel, Lehka Chakraborty).

#### **Purpose**

Despite these recent advances, lack of gender sensitivity and other problems continue to plague HSA. In an effort to understand and improve the implementation of HSA, WGWEED has reviewed several recent HSA set up in developed nations. This paper commissioned by WGWEED hopes to accomplish two things by the propagation of HSA:

1. Increase the perceived value of unpaid work, especially done by women

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<sup>1</sup> Iulie Aslaksen and Charlotte Koren, “Unpaid household work and the distribution of extended income,” *Feminist Economics* 2, no. 3, 1996: 65-80.

## 2. Decrease wage disparity between men and women doing paid work.

We seek to do this first by discussing the results of several recent HHSA studies, then we present several links between HHSA and the MDGs. Finally, by discussion we hope to formulate specific recommendations to be made to ECOSOC and other bodies.

### HHSA Studies

**World** study by UNDP: This rather basic study was conducted just after the Beijing Platform in 1995. It showed the great potential for valuating unpaid work, estimating it at a massive \$16 trillion. It further disaggregated the data by gender and found that more than two-thirds (\$11 trillion) of the work was done by women.<sup>2</sup> The ramifications of this study on how we women and development are vast. No longer can we study development without taking into account the nearly equal contributions of those who make development possible, but have not shared in as many of its benefits.

**Australia:** The Australian Bureau of Statistics (ABS) continues to improve its valuation of unpaid work. It started in 1992 (before the Beijing Platform) by setting up an HHSA. In 1997, it expanded its methodology by including hybrid wage assignment estimates, making it the only national study to include this method. In 2007, ABS is concluding a third HHSA to come out in November. The greatest strength of the ABS studies is that they incorporate different methodologies while using the same data. This affords researchers the purest methods to compare the different methodologies. From the results summarised in the appendix, we see that gross wages led to a 14% increase over net wages (wages after tax), suggesting that the use of net wages may be an undervaluation as the system of national accounts uses gross figures. Moreover, while the difference between the gross opportunity cost method and the replacement cost methods were great, the difference between the net opportunity cost method and the replacement cost methods were not significant. This suggests that the opportunity cost method might not be as inflated as has been assumed. The most interesting aspect of the study, however, was the use of the hybrid method, which resulted in estimates closer to the specialist method than to the generalist method. ABS defined the hybrid method by what Australians usually paid for. They usually hire housekeepers to clean, while hiring specialists to care for children and household maintenance, so ABS calculated the hybrid wage by those criteria. Such results give an increasingly accurate picture of the value of unpaid work in Australia and have already started to be used in government and academia. Other countries ought to follow their methodological lead.

**Canada:** This study shows the marked difference between the opportunity cost and replacement cost methods. Not reflected in the appendix, the study disaggregated work load by gender, and found that not only did women do more than two-thirds of the unpaid work, but women also engaged in more work overall, which has been found to be the case in other countries as well. Such gender-disaggregated statistics will open the eyes of the world to the gender inequalities that exist and persist.

**Estonia:** Conducted with the help of Eurostat, this study is the newest of the group (published in 2006) and uses refined input methods as suggested by the Eurostat task force paper.<sup>3</sup> It also used rather basic methods, which enabled a smaller groups of statisticians with fewer resources to set up the HHSA. This cooperation could be the model for international and regional organisations as well as developed nations aiding developing nations in setting up HHSA.

**Finland:** Though Finland employed the generalist replacement input method, the task force

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<sup>2</sup> UNDP, *Human Development Report*, 1996.

<sup>3</sup> Antonio Baigorri and others, *Household Production and Consumption: Proposal for a Methodology of Household Satellite Accounts*, (Luxembourg: Office for Official Publications of the European Communities, 2003), 25.

wrote in the report: “In the future, we also wish to be able to use output method to determine the value of production.”<sup>4</sup> They recognised the limitations of the input method, and called for a mixed approach. Especially given the comparative undervaluation of women's unpaid work by the input method, the output method has added importance and potential to promote gender equality.

**Japan:** This study, sponsored by Japan, India, and the UN was actually conducted by the private company Sumitomo Life-Research Institute, Inc. The jobs correlated with tasks performed by unpaid workers were lacking in equivalence (e.g. time spent in childcare was given the wage of a kindergarten teacher). It is interesting to note that if the valuation of hours of paid work were to use the same methodology as this study, the result would be a mere 29-45% of the GDP, which begs the question: if paid work doesn't even amount to half of the GDP, where does the GDP come from? Comparing the HHSA to the GDP, it would then be worth 50% rather than 20%.

Testing my hypothesis that these concerns were merely a reflection of division of labour and wage disparity between the sexes, I calculated the HHSA using male wages rather than disaggregated wages (using the specialist replacement method). The results were telling. There would be a 57% increase in total value of unpaid work. 92% of the value of unpaid work would be done by women (up from 87% in the original study), and unpaid work would be worth 31.4% of the GDP. This supported the hypothesis that the bias in the study seems to be merely a reflection of 1. the uneven distribution of unpaid work between the sexes and 2. the wage disparity between the sexes. And seeing that the wage disparity comes from the undervaluation of women's work in the home, this study clearly displays the vicious cycle that is undervaluation of women's work.

**New Zealand:** This study was not disaggregated by gender, which fails to show division of labour or accurate valuation of the value of women's work. Furthermore, the study did not include consumption additions to input. This simplified form of HHSA might allow more countries to set up HHSA without using too many resources, but the caveat is that in the future, the results must be disaggregated by gender or they will not reflect the true economy of the country.

**United Kingdom:** This was a seminal output method study. The report included spreadsheets, graphs, and in-depth discussions of which methodological decisions were made and why. In addition to the methodology, the results were invaluable. At 77% of the GDP, this study exceeded even UNDP's estimates. The HHSA per capita would equal nearly \$18,000, meaning that the unpaid working done by the average citizen of the UK was valued as greater than the GDP per capita of 85.7% of the nations in the world, including Spain, New Zealand, and South Korea. And given that two-thirds of that work was done by women, the HHSA per capita of women would be estimated at nearly \$23,500, greater still than the GDP per capita of Australia, Germany, Ireland, Liechtenstein, and Sweden.

## HHSA and the MDGs

1. **Eradicate Extreme Poverty and Hunger** – One of the reasons that the majority of those in extreme poverty and hunger are women<sup>5</sup> is that their work is consistently unvalued and undervalued. They often lack access to credit due to lack of wages, social status, land, and property. They lack income security, especially in old age, as unpaid work does

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4 Johanna Varjonen and Kristiina Aalto, *Household Production and Consumption in Finland 2001*, (Helsinki: Statistics Finland, 2006), 73.

5 Ban Ki-moon. *Report of the Secretary-General: Strengthening efforts to eradicate poverty and hunger, including through the global partnership for development*. (Geneva: ECOSOC, 2007), 11.

not provide a pension. Often, unpaid work then leads to paid work, as in the transfer of home and subsistence farming into the market and income earning activities. Finally, women are by far the socially poorest in the world. Poverty is not merely economic, but more generally about empowerment and social inclusion. Many women are disempowered and cannot provide for themselves and their children due to a lack of social status.

By valuating unpaid work, women will have increased social status and increased economic status. HHSAs will put households and their welfare visible to policymakers. It will encourage pro-poor policies that will feed the hungry, provide microcredit for those who have few or no assets, and provide pension compensation for unpaid workers.

2. **Universal Primary Education** – Education in the home is already close to being universal. Improving education in the home is as important as and interrelated to providing formal education for all children. Valuating unpaid work will give a clearer understanding of the situations in the homes of each country and will bring more focus to the role of the home in the education and the future of children.
3. **Gender Equality and Women's Empowerment** – The lack of valuation and undervaluation of women's paid and unpaid work is a vicious cycle.<sup>6</sup> To break from this cycle and empower women both at home and in the workplace, HHSAs will increase the perceived economic and social value of women's work.
4. **Reduce Child Mortality, 5. Improve Maternal Health, 6. Combat HIV/AIDS, Malaria, and other diseases** – Health ought to start in the home, not in the hospital. Through viewing and valuing work done in the home, especially by mothers, governments and the UN can better know the situation in the home and empower the women who do most of the unpaid work there. As the world has seen: empowering mothers improves the health of the entire family.
5. **Ensure Environmental Sustainability** – The HHSAs include information on energy use in households including on transportation for members of that household. As household consumption is a large factor in overall energy consumption and homes each have ecological footprints, this information will be critical for policies on energy and environment. Furthermore, the HHSAs include volunteer work, much of which is done for civil society and non-governmental organisations, who contribute much, inter alia, to the sustainability of the environment. In fact, it is in such volunteer work that men tend to make large contributions.
6. **Develop a Global Partnership for Development** - Since the Beijing conference, no developing nations have conducted major national studies on unremunerated work, while most of the developed nations have. As part of the global partnership for development, developed nations ought to assist developing nations in valuating unremunerated work through setting up household satellite accounts at the national level.

## Conclusion

Much work remains to be done in setting up and analysing HHSAs. Only through adequate quantitative measurements will government leaders and policymakers fully understand

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<sup>6</sup> See analysis of Japan's HHSAs on page 3 of this report

the importance of unremunerated work to enable and support breadwinners, families, and children, providing the world with not only sustainable development but sustainable families and a sustainable future as well.

## Appendix

Country	Year	GDP <sup>7</sup>	HSA	% of GDP	Method <sup>8</sup>	Author
World <sup>9</sup>	1995	\$23,000	\$16,000	69.6%	RC-S10	UN Development Programme
Australia <sup>11</sup>	1997	\$423.6	\$203.4	48%	RC-S	Australian Bureau of Statistics
			\$184	43.4%	RC-G	
			\$201	47.5%	RC-Hybrid	
			\$264.1	62.3%	OC-Gross <sup>12</sup>	
Canada <sup>13</sup>	1996	\$700.5	\$214.4	30.6%	RC-S	Statistics Canada
			\$290	41.4%	OC	
Estonia <sup>14</sup>	1999	\$7.9	\$3.0	38%	RC-S	Statistics Estonia
			\$2.13	27%	RC-G	
			\$4.58	58%	OC	
Finland <sup>15</sup>	2001	\$133.5	\$61.81	46.3%	RC-G	Statistics Finland
Japan <sup>16</sup>	1996	\$2,850	\$570	20%	RC-S	Dept. of National Accounts (Japan)
			\$433.2	15.2%	RC-G	
			\$661.2	23.2%	OC	
			\$894.9	31.4%	RC-S	
Nepal <sup>17</sup>	1991	\$3.0	\$1.398	46.6%	RC-G	Meena Acharya
New Zealand <sup>18</sup>	1999	\$54.92	\$21.42	39%	RC-G	Statistics New Zealand
UK <sup>19</sup>						

7 Billion US\$ (purchasing power parity) evaluated at price index of the year the study was conducted

8 RC=Replacement Cost, S=Specialist, G=Generalist, OC=Opportunity Cost

9 UNDP, *Human Development Report*, 1996.

10 For explanation of Replacement Cost method, see page 6 of this report

11 Dennis Trewin, *Unpaid Work and the Australian Economy 1997*, (Canberra: Australian Bureau of Statistics, 2000), 4.

12 For explanation of Opportunity Cost method, see page 6 of this report

13 Macredie, *Statistics Canada's Measurement*, 1999.

14 Statistics Estonia, *Valuation of Unpaid Work by Women and Men in Estonia*, (Geneva: Economic Commission for Europe, 2006), 7.

15 Varjonen and Aalto, *Household Production and Consumption in Finland 2001*, 30.

16 Masahito Fukami, *Monetary Valuation of Unpaid Work in 1996*, (Tokyo: Economic Planning Agency, 1999), 6.

17 Meena Acharya, "Time-Budget Studies for Measurement of Human Welfare," *Integrating Paid and Unpaid Work into National Policies: Selected Papers*, (New York: United Nations Development Programme, 1999), 11.

18 Statistics New Zealand, "Measuring Unpaid Work in New Zealand 1999." *Key Statistics* (June 2001): 9.

19 Sue Holloway and others, *Household Satellite Account (Experimental) Methodology*, (London: United Kingdom Office

### Input Method<sup>21</sup>

**1. Opportunity cost:** wages an unpaid worker could be making doing paid work instead.

<b>2. Replacement cost:</b>	wage would be for	a paid worker	to replace	the unpaid worker	
Simply put: <b>TIME x WAGE = VALUE</b> (often intermediate consumption and capital consumption are added as inputs to the net value added)					
There are three ways of determining which wage to apply:					
<b>a. Specialised market wages</b>	– Prevailing wage among specialist labour in the market (e.g. wage for janitor in a business building, wage for nurse in day care centre)				
<b>b. Specialised home wages</b>	– Prevailing wage among specialist labour in the home (e.g. wage for household cleaner, wage for nanny)				
<b>c. Generalised wages</b>	– Prevailing wage among generalist labour in the home (e.g. wage for a housekeeper or nanny)				
<b>d. Hybrid wages</b>	– A combination of two or more of the above three wage assignment methods				
<b>Output Method<sup>22</sup></b>					
	2000	\$1,360	\$1,057	77.7%	Output <sup>20</sup> Office of National Statistics (UK)

**Output:** goods and services produced by the household (Housing, Transport, Nutrition, Clothing & Laundry, Childcare, Adult Care, Voluntary Activity)

**Intermediate Consumption:** the value of those goods and services purchased to enable production output (e.g. ingredients bought to enable nutrition output)

**Adjustments:** some of the housing, transport, etc. output value is included in the price of other outputs (e.g. electricity used for cooking is included in the output of nutrition, so it should be subtracted from housing output as to avoid double counting)

for National Statistics, 2002), 3-5.

<sup>20</sup> For explanation of Output Method , see page 6 of this report

<sup>21</sup> Baigorri, *Household Production*, 25.

<sup>22</sup> Holloway, *Household*, 2002.

**Capital Consumption:** the value of capital inputs (e.g. the household capital for housing output or vehicle capital for transport output)



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