Chapter 6a: Empirical Estimates of 'Production'

The previous chapter argued that a definition of production restricted to alienable goods and services opens up the possibility of breaking the neoclassical nexus and recognising different types of economic activity. I also suggested that an accounting based on such a restricted definition could provide insight into the "provisioning of society" through a greater consistency of comparison in comparing market and non-market production. The neoclassical based definition of production includes some activities (most notably emotional labour) when they take place in the market, but not when they are done in the household. The more restricted definition can potentially treat each sector equally – at least in as much as the definition of production is applied in a consistent manner (even if the concept of value is derived from and expressed in terms of the market). Indeed, I suggested that (having abandoned both the labour theory of value and transaction cost theories which underlie existing restricted definitions) this consistency of approach was a key consideration and outcome in adopting such a restricted definition.

In this "chapterette" I want to further consider these issues, but in more quantitative terms. It should be stressed that what is being attempted here is not a thorough accounting of production (narrowly defined). As Shaikh and Tonak have shown in their *Measuring the Wealth of Nations*,[1] and as much of the discussion in this chapter will verify, such an accounting is a major research undertaking in its own right. It is well beyond the scope (and interest) of this thesis. Instead, as the chapter numbering suggests, what is attempted here is an extension of the discussion in the last chapter. Rather than producing new, robust estimates, I want simply to point to the orders of magnitude involved so as to shed further light on the conceptual issues and on the possibilities and usefulness of such an alternative view of production – particularly in comparing the size of market and non-market production.

Existing Estimates

Unfortunately even making "order of magnitude" estimates of market and non-market production using a restricted definition of production is made difficult by the lack of existing

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1 Anwar Shaikh and E. Ahmet Tonak (1994) *Measuring the Wealth of Nations: The Political Economy of National Accounts*, New York: Cambridge University Press.

data. We have seen in Chapter 2 that most measures of non-market production simply extend the national accounts definitions to non-market production. Thus, even if, as I suggested in the previous chapter, there is little empirical difference in the various definitions and measures when dealing with household production, the extended accounting still compares that fairly restricted (commodity-like) non-market production to a market production defined by the neoclassical definition.

Conversely, the Marxian measures, which do utilise a restricted definition in accounting for market production, do not deal with non-market production (because their interest is in capitalist production). The closest they come is the *conceptual* recognition of non-market production in Shaikh and Tonak, and their estimate of the US economy where they borrow Eisner's estimate of household labour to get a total production figure comparable to existing extended accounts. In doing this, Shaikh and Tonak estimate a Gross Final Product of $933.8billion in 1966, of which $267.9billion, or 28%, was household labour.[2] This is less than Eisner's own estimate of household production being 35.1% of total income,[3] but the figures are skewed because Shaikh and Tonak reject the imputation of a value of returns to investment in household capital which forms a part of Eisner's and other extended accounting. Notwithstanding the objections to such imputations discussed in Chapter 3 and raised again below, excluding returns to capital does make an "apples to apples" comparison difficult.

Adding Eisner's full estimate of household production (including the imputed capital returns) to Shaikh and Tonak's GFP figure gives us a total final product of $1086.7billion with the household economy contributing some 38.7%.[4] However, this figure is itself problematic. On the one hand, it exaggerates the share of non-market production because Shaikh and Tonak's measure of market production does not include non-capitalist market production (ie. the self-employed). On the other hand, it understates household production because Eisner's estimates of household capital are based on "durables" (eg. whitegoods) and "semi-durables" (clothing, furnishings) and does not include expenditure on other (variable) capital inputs into household

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2 These are figures in 1966 dollars and are adapted from Shaikh and Tonak's Table 5.4 which gives figures in 1982 dollars: Marxian Gross Final Product production for 1966 = $1902.69 in 1982 dollars. *ibid*., p102.

3 R Eisner, E Simons, P Pieper, and S Bender (1982) "Total Income in the United States, 1946-1976: A Summary Report" *Review of Income and Wealth*, Vol 28, No. 2, p 172.

4 Figures adapted from Eisner, *ibid*., and Shaikh and Tonak *op.cit.*

production.[5]

Australian estimates are even more difficult to find. There has been little interest in Marxian national accounting. Kathie Gibson, Julie Graham and Don Shakow began a research project in the 1980s to calculate economic indexes in Marxian value terms. Unfortunately, they only published limited data and focused on the organic composition of capital and rate of surplus value, rather than figures for national product. They produced data for two years, 1974/75 and 1978/79, but the work was not continued and there has been little interest since then.[6] While I will return to their taxonomy and method later, their empirical work is now dated and of little help in establishing even the order of magnitude figures required here.

Thus there is little assistance in the existing literature to estimate production (narrowly defined) across both market and non-market sectors. In order to produce such a measure for Australia it is necessary to either start from scratch with raw data collated using Marxian categories or to adapt the existing official figures. While the former is more accurate, again it is beyond the scope and intent of this thesis (even if it were possible given that ABS collection systems and categories are built around neoclassical definitions). The estimates produced here are broad adaptations of existing official figures.

In the next section I focus on market production and the types of changes to national accounts production estimates which can be made to reflect the more narrow definition of production. "Ball park" figures are then produced to show the order of magnitude of these changes and preliminary results are discussed. The following section similarly adapts Ironmonger's figures for household production to reflect a restricted definition of production. Finally, having made ball park estimates of restricted production in both non-market and market spheres, we are able to compare the results and tentatively (given the roughness of the estimates) support the arguments of the previous chapter as to the relative import of market and non-market production.

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5 Eisner, *ibid.*, p 135. See also discussion of Ironmonger and Snooks' estimates in Chapter 2 here.

6 Katherine Gibson, Julie Graham, and Don Shakow (1989) "Calculating Economic Indicators in Value Terms: The Australian Economy and Industrial Sectors" *Journal of Australian Political Economy*, No. 25, pp 17 - 43. It should be noted that Gibson and Graham themselves have since rejected the type of analysis implied in this work. See J K Gibson-Graham (1996) *The End of Capitalism (As We Knew It): A Feminist Critique of Political Economy*, Cambridge: Blackwell.

Market Production

At a broad conceptual level, producing a measure of market production as defined by a restricted definition is quite straightforward. It is simply a matter of defining which industries or activities are "production" of new goods and services (narrowly defined - as opposed to social maintenance or exchange) and then summing the production figures in the national accounts for those industries. This is essentially the same as GDP minus the value 'produced' by industries defined as social maintenance or exchange industries.

However, as some exchange and social maintenance activities take place within the production industries, not all distribution/exchange and social maintenance activities are captured by this method. For instance, the wages of a salesperson or an accountant employed by a metal manufacturer remain part of the income or value added in that manufacturing sector, despite the fact that those activities are about exchange not production. In the transaction cost framework the value of such workers' wages would be considered a transaction cost. The estimate of transformation services (production) would be the value of production less the wages of the transaction occupation workers. However, in the Marxian framework, sales people and accountants are similarly viewed as non-production labour, but the final product figures of the metal manufacturer remain the same. Those workers' wages are seen as a claim on the surplus created by the production workers, but are still part of the (market) value of the final product.

Where the purpose here is to measure the (market) value of production (narrowly defined), an approach like the Marxian one may seem preferable because, despite including some exchange activities, the final production figures are nonetheless the market value of those goods and services produced and consumed. However, while this is appropriate for a measure of production, it is problematic when comparing market and non-market production. Some activities that could be viewed as the 'exchange activities' of the household (eg. paying bills = accountancy) are included in the estimates of household production, but as noted in Chapters 2 and 5, many analogous activities are not (eg. household management and emotional labour). This again creates a problem of an "apples to oranges" comparison between market and non-market production, as the value of market production is the production activity plus internalised exchange labour, while the value of non-market production is simply the production activity.

For a consistent measure it is thus not only necessary to delineate industries which are exchange activities, but also to delineate those occupations which perform exchange activities, and then deduct the value of wages of those occupations in the production sector. This would require knowing the number of people in all occupations deemed as exchange activities within the production sectors. Unfortunately the data for this is not published by the ABS. ABS labour statistics do record the numbers of people in different occupational groups in the economy, but the calculation here also requires figures on which industries those workers are employed in. For instance, many people employed as clerks are likely to be employed in the finance sector, which has already been included in the accounting for exchange activities. To simply estimate the wages of all clerical staff as an exchange expenditure would then double count the value of the wages of those clerical staff working in the finance sector. The ABS no longer publishes the "Industry by Occupation" figures necessary for the proper calculation of exchange activity.[7]

Because of this unavailability of necessary statistics I propose here to simply ignore the value of exchange labour within the market production sectors. This is clearly not ideal, although the scale of the mismatch of data between market and non-market production is much less than in the neoclassical extended accounts precisely because the restricted definition does exclude some exchange activity from its estimate of production.

Defining Non-Production Activities

Having adopted the comparatively simple method of accepting the national accounts final product by industry figures as the basis of our revised estimate, the important task remains to designate which industries are "production", and which are not. We have seen in Chapter 1 and in the previous chapter that there are marked differences in definitions of production (and by implication exchange activity) between the various Marxian measures, and between them and the transaction cost approaches. Yet these differences and the perennial debates they reflect are not the fatal problem they might at first seem. If one is trying to analyse the economy by macro-economic modelling based on the labour theory of value (or

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7 The ABS did publish the appropriate labour market "Industry by Occupation" figures for the years 1966 to 1984, but these have not been published since. The current series only provides the aggregate numbers of workers in various occupations, not their industry location. Australian Bureau of Statistics *Labour Force Australia*, Canberra: ABS.

neoclassical/Keynesian economics) then the definitional issues and the precision of the measures used may be highly important. But given that this is not the purpose of the revised production measures, then these issues may not have the same currency. Again, drawing boundaries is always arbitrary in places, but as argued earlier, it is also a necessity of measurement. However, as long as the taxonomy is basically consistent, then it should be possible to incorporate an analysis of some broad differences between production, and social maintenance and exchange activities into an accounting. This will then provide some measure of their magnitude and changes over time.

This focus on simply getting some ball-park figures is important because I argue that within Marxism and the transaction cost literature there *is* broad agreement on core activities which are exchange or transaction costs. By implication they also define production (narrowly defined). However, it is probably easier to discuss which activities are exchange or social maintenance - ie. which industry sectors appearing as production in the national accounts will be left out in an accounting for a more restricted definition of production. Principal among the exchange activities are the "FIRE" industries: finance, insurance, real estate.[8] Most Marxian measures see these as non-production (read exchange) activities.[9] Similarly, regarding the problem of which industries are transaction industries, Wallis and North note that

> Three cases that seem clear are real estate and finance, whose role is primarily to facilitate the transfer of ownership; banking and insurance, whose role is to intermediate in the exchange of contingent claims; and the legal profession, whose primary role is to facilitate the co-ordination, enactment, and monitoring of contracts.[10]

There is more divergence of views on wholesale and retail trade. While Kushnirsky's analysis of Adam Smith's categories and Soviet accounting (cited in Chapter 1 here) suggests that retail and wholesale activities are not production, (as did Gibson, Graham and Shakow's

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8 Note here that "real estate" refers to real estate services (which are about facilitating real estate transactions) rather than the value of rent and housing services (which are payments for housing). However, if we are interested in activities which are about ownership/exchange, then in a more thorough accounting we would need to go further, as Shaikh and Tonak do in distinguishing between exchange activity revenue arising from ground rent (ie. an unproductive claim on surplus), and that arising from capital improvements (eg. buildings and infrastructure [rather than land] which is a return to productive capital). However, such accounting is beyond the scope of the bald estimates being attempted here. See Shaikh and Tonak, *op.cit.*, p 254.

9 See for instance, Shaikh and Tonak, *op.cit.*; Gibson, Graham and Shakow, *op.cit.*; and Paul Baran and Paul Sweezy (1967) *Monopoly Capital: As Essay on the American Economic and Social Order*, New York: Monthly Review Press.

10 John Joseph Wallis and Douglas C North (1986) "Measuring the Transaction Sector in the American Economy, 1870-1970" in Stanley L Engerman and Robert E Gallman (ed), *Long Term Factors in American Economic Growth*, Chicago: University of Chicago Press. p 101.

Australian figures), the orthodox Marxian view, as articulated by Shaikh and Tonak (and supported in this case by O'Connor, and Kushnirsky and Stull), suggests that retailing at least is a trade activity belonging in the production circuit. Recall that conceptually Shaikh and Tonak (and O'Connor) distinguish between sales clerks presenting goods and services for sale (production), and those clerks actually ringing up the purchase (exchange). They regarded all of wholesale as being unproductive. To this disagreement, we could also add the transaction cost literature. Fuess and Van Den Berg actually give estimates of transaction costs based on including all of wholesale and retail trade as transaction services, and other estimates only including half of wholesale and retail trade. The second set of estimates (1/2 of wholesale and retail trade) is produced on the grounds that not all services associated with wholesale and retail are necessarily transaction services: shopping, for instance, may provide some entertainment value while transport is clearly a transformative activity.[11]

Given the disagreement within the Marxian literature and the practical difficulties of distinguishing exchange activity from productive activity in these sectors, and more importantly, given that the purpose of these estimates is simply to incorporate *some* analysis of the difference between exchange activity and production, then the choice of including an (admittedly arbitrary) half of the Wholesale and Retail sector in the estimate of exchange activity is not a bad one.

The estimates are more confused when we consider the various other activities which some authors have suggested constitute exchange labour or transaction costs, namely, advertising and legal services. Again there is broad agreement between Marxian and transaction cost literature that such services do constitute exchange activity, but they tend not to be listed as separate industry sectors in the official production accounts. Rather they come under a more general heading of "Property and Business Services". But even if we accept that advertising and legal services are unproblematically exchange industries, the general "Property and Business Services" classification of these industries is problematic because it also includes activities which are not exchange activities. Thus, architectural, engineering and computer

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11 Scott M Fuess and Hendrik Van Der Berg (1996) "Does GNP Exaggerate Growth in 'Actual' Output? The Case of the United States" *Review of Income and Wealth*, Vol 42, No. 1 ,.p 39, 43.

services appear alongside advertising and legal services in the classification of business services.[12]

Even using more disaggregated figures does not necessarily solve the problem. Production industry categories like computer servicing may also contain activities dedicated to accounts and marketing (witness the expansion of direct mail marketing), which would be exchange activities. As is explained more fully in Appendix 2, ABS statistics do not allow for a meaningful (for our purposes) disaggregation of the category of business services. Short of a major research project using other statistics, an accurate reckoning of exchange business services can not be made.

For the purposes of the bald estimates being constructed here, I have deemed the whole category of Property and Business Services as an exchange industry. Obviously this is not ideal, but can be justified on three grounds. Firstly, legal and advertising services (along with accounting services which, being largely about ownership are also [relatively] uncontroversially exchange activities) are the biggest single component of the category of business services.[13] Secondly, the difficulties caused by category changes (again, see Appendix 2) make any disaggregation impossible. Finally, the inclusion of this whole industry category (despite its inclusion of some production activity) would seem reasonable given that the overall estimate here of exchange industries is a large understatement of exchange activities in the economy (for reasons discussed further below).

Thus the national accounts industry categories of "Finance and Insurance" and "Property and Business" plus one half of the value of Wholesale and Retail Trade are excluded from the restricted definition of production as they represent predominantly exchange activities. However, other industries might also be excluded as they relate more to social maintenance than to the production of new goods and services for consumption.

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12 Australian Bureau of Statistics (1993) *Australia and New Zealand Standard Industrial Classification*, Cat 1292.0. Canberra: ABS.

13 In the 1992/93 Input-Output accounts, the first with a relevant disaggregation of business services, "Legal, accounting, marketing and business management services" made up 50.5% of the output of business services, and with "Other Property Services", these exchange activities are 71% of the broader I-O category of Property and Business Services. Calculation derived from Australian Bureau of Statistics *Australian National Accounts: Input Output Accounts*, Canberra: ABS. 1992/93. p 43

In the previous chapter I argued that health and education should be excluded from production (narrowly defined) as they did not produce alienable products. In terms of a categorisation, they are arguably more about maintaining the people and socio-economic system than about production. Similarly, industry categories like defence are clearly about social maintenance and there is a consensus in the Marxian and transaction cost literature that defence and other "guard labour" (including police and courts) is about protecting (the system of) property rather than production.

Other government expenditure is more complicated. Again, as Wallis and North noted, in some senses all government activity is a transaction cost (ie. not production) because it is about underpinning a system of production (ie. social maintenance).[14] However, I noted that Wallis and North did not follow this through and adopted a narrower definition of transaction costs. The Marxian accounts are similarly of little help here as government expenditure is excluded in large part because it does not create value for capital – a concern irrelevant to my accounting project. Overall, I suspect that the national accounts category of "Government Administration and Defence" is just too broad an aggregation. Even more than the grey areas in other categories, government activities probably stretch across a number of categories. Yet again, more empirical work than is possible here is required to go below the national accounts aggregates.

For the sake of convenience I propose here to simply exclude all of Government Administration and Defence from the estimate of production. Clearly this is not ideal, but equally clearly much government administration is indeed about regulation or redistribution of existing production rather than being about the production of new goods and services. And of course when it comes to comparing market and non-market production, the distribution of resources and governance within the household economy (through negotiation, custom, emotional labour or violence) is not included in the accounts of non-market production. Thus the decision to exclude all of Government Administration and Defence, while even more arbitrary than most, can be justified on the grounds of consistency with accounting for non-market production.

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14 Wallis and North, *op.cit.*, p 114. In this context it should be remembered that government owned business or trading enterprises are classes under their industry group in the national accounts, not under government. Australian Bureau of Statistics (1990) *Australian National Accounts: Concepts, Sources and Methods*, Cat No. 5216.0. Canberra: ABS. p 15.

Estimating Market Production (Narrowly Defined)

The end result of excluding from the restricted definition of production all these industry sectors is a listing of production sectors as incorporating:

- Agriculture, forestry and fishing;
- Mining;
- Manufacturing;
- Electricity, gas and water supply;
- Construction;
- Accommodation, cafes and restaurants;
- Transport and Storage;
- Communication services;
- Cultural and recreational services;
- Personal and other services; and
- one half of Wholesale and Retail Trade.

This is essentially the same classification used by Gibson, Graham and Shakow in their Australian Marxian measures: the differences being the inclusion of one half of Wholesale and Retail Trade (which they excluded), and categories like "Entertainment", "Restaurants, Hotels and Clubs" and "Personal Services" which they regarded as productive, but which were excluded from their measure due to lack of reliable data.[15] Again, this similarity suggests that, despite the perennial debates, there is enough consensus in radical political economy on what constitutes production – even if the reasons and other categories are more contentious – to produce an order of magnitude estimate of production (narrowly defined).

Having designated which industry sectors are to be counted as production, it remains then to sum the production figures in the national accounts for those industries in order to arrive at the estimate of gross market production (narrowly defined). The figures used here are the Chain Volume Measures provided by the ABS for the years 1975-1999.[16] Table 6a.1 gives the

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15 Gibson, Graham and Shakow, *op.cit.*

16 The Chain Volume Measures in the new Australian System of National Accounts replaced the Constant Price estimates in the old ANA, but serve the purpose here of providing an industry disaggregated time series of production. Australian Bureau of Statistics (1999a) *Australian System of National Accounts, 1997-98*, ABS. Cat 5204.0. p 2.

total estimates of restricted product as against GDP, as well as growth rates in both. The original ABS figures and the calculations behind this table are contained in Appendix 1.

Table 6a.1: Restricted Market Product and GDP

Year	Restricted Product $m	Restricted Product Growth p.a.	GDP $m	GDP Growth p.a.	Gross Market Product $m	Restricted Product % of GMP
Jun.1975	156241		270576		248663	62.8%
Jun.1976	159627	2.2%	278159	2.8%	255291	62.5%
Jun.1977	165301	3.6%	287943	3.5%	263898	62.6%
Jun.1978	166292	0.6%	291211	1.1%	265805	62.6%
Jun.1979	174032	4.7%	306536	5.3%	279787	62.2%
Jun.1980	177258	1.9%	314200	2.5%	286036	62.0%
Jun.1981	181439	2.4%	323949	3.1%	294251	61.7%
Jun.1982	187874	3.5%	335833	3.7%	304901	61.6%
Jun.1983	178459	-5.0%	327778	-2.4%	296149	60.3%
Jun.1984	189047	5.9%	346017	5.6%	313727	60.3%
Jun.1985	198068	4.8%	361840	4.6%	328803	60.2%
Jun.1986	204352	3.2%	376960	4.2%	342666	59.6%
Jun.1987	206848	1.2%	387354	2.8%	351932	58.8%
Jun.1988	217805	5.3%	408191	5.4%	371675	58.6%
Jun.1989	228442	4.9%	424832	4.1%	386982	59.0%
Jun.1990	234482	2.6%	440584	3.7%	401314	58.4%
Jun.1991	231368	-1.3%	439783	-0.2%	399301	57.9%
Jun.1992	230793	-0.2%	441458	0.4%	399860	57.7%
Jun.1993	236874	2.6%	457735	3.7%	414822	57.1%
Jun.1994	248234	4.8%	476556	4.1%	432131	57.4%
Jun.1995	258319	4.1%	498113	4.5%	452007	57.1%
Jun.1996	272397	5.4%	520669	4.5%	472929	57.6%
Jun.1997	282194	3.6%	540379	3.8%	490765	57.5%
Jun.1998	293762	4.1%	565881	4.7%	514648	57.1%
Jun.1999	306001	4.2%	591546	4.5%	538585	56.8%

Source: ABS Time Series. Reference Year for Chain Volume measures in 1997/98.

It is clear from the figures in Table 6a.1 that restricting the definition of production has a major impact on the quantum of the national product. On average the restricted production measure was 59.6% of Gross Market Product (GMP) - which, borrowing from Ironmonger's categories, is the national accounts GDP minus the category "Ownership of Dwellings" which in an extended accounting is part of non-market production. This is to say that just over 40% of what is currently measured as new production is in fact not additional goods and services available for consumption (the material provisioning of society), but is rather the necessary cost of living in and reproducing an advanced capitalist economy and society.

Again, while this order of magnitude is important, it should be recognised that this is a particular definition of production – just one view of the hologram. There are clearly other aspects of the economy and even other "productions", for instance, some aspects of emotional labour which produces subjectivities, social institutions and even people. There are also other issues surrounding the provisioning of society: health, education services for instance, which might also be regarded as important to such a provisioning. Nonetheless, when we take the particular view of the hologram which is concerned with the production of new, alienable goods and services for consumption, it is clear that the market economy produces much less than the orthodox national accounts figures suggest.

More than that, when we take this view, we can see that the proportion of this production (narrowly defined) relative to the production measured in GDP is declining: from 62.8% of GMP in 1975 to 56.8% in 1999. This is perhaps not surprising given the restructuring of the Australian economy (including the decline of old manufacturing industry). It is also consistent with the US data which points to the consistent growth of transaction costs. [17] But while the trend may not be surprising, the figures change the view of economic growth over the past 25 years. If economic growth actually means growth in production, then the Australian economy has not performed as well as the neoclassical accounting would have us believe. While the GDP 'economy' more than doubled between 1975 and 1999, growing at an average of 3.3% per year, production (narrowly defined) grew at an average of only 2.9% per year.

The difference in magnitude and growth can be seen in Figure 6a.1 below. Again however, given the bald nature of the estimates, any conclusions should be treated very tentatively.

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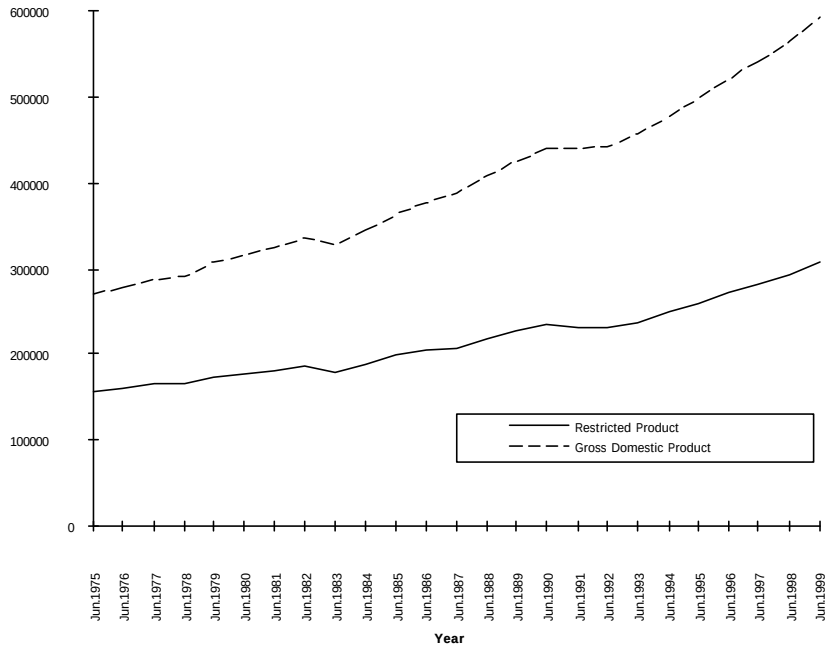
17 Wallis and North, *op.cit.*, p 121.

More importantly though, it should be remembered that while this different view of (market) economic growth might be significant, the primary interest of this thesis in the restricted definition of production is in its application across market and non-market production. Thus, having produced bald estimates of production (narrowly defined) for the market, it will also be necessary to produce similar estimates for non-market production.

Figure 6a.1: Production: Restricted v GDP



Household Production

Chapter 2 discussed various estimates of household production in Australia, but none of these used a restricted definition of production. Thus, to get a consistent definition of production across market and non-market sectors requires not simply changing the market estimates to a restricted definition as above, but also modifying the estimates of non-market production. In what follows I propose to make estimates of household production based on three different methods of measurement. As with the market estimates above, the procedure is more one of making order of magnitude adjustments to existing measures than producing new estimates from original data.

As noted in Chapter 2 the ABS has produced measures of household labour based on time use

surveys in 1987 and 1992. Dollar value estimates were derived from these surveys by the ABS using a variety of methods: replacement costs based on each individual function in the household, replacement costs based on hiring one person to do all household work, and opportunity cost based on the average market wage.[18] However, these estimates deal only with household labour (and therefore do not provide for a consistent comparison with market estimates which include capital services). In the estimates here these ABS labour value figures are supplemented by the figures for returns to capital contained in Snooks' estimates. Most of the specific problems with Snooks' accounting which I discussed in Chapter 2 were about his assumptions of time use, rather than his capital estimates.[19] Thus, the base for the estimates here draws on the strengths of both ABS and Snooks' data.

In making revised estimates though, I have used only two methods of valuing household labour: opportunity cost at average wages, and general housekeeper replacement costs (rather than replacement for individual function). These are the highest and lowest of the ABS estimates respectively, and so provide the outside parameters for comparison with market production. They also provide a useful comparison with Ironmonger's Input-Output based accounting which is revised here to produce the third measure of non-market production.

As with the estimates of market production above, the first step in revising household production estimates is to identify which household activities included in the original estimates should not be regarded as the production of alienable goods and services for consumption in the restricted product sense. Or alternatively put, it is necessary to decide which household activities are more equivalent to the market categories identified as "social maintenance" or "exchange" than production. However, because much of the capital base of the household (principally house and land) is the same or overlapping for both production and non-production activities in the household, it is difficult to estimate the capital services to production activities with any accuracy. Thus, unlike the market estimates above which were derived from summing the value of product of those industries still identified as production industries, in estimating household product I start from the other end and simply deduct a

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18 In 1987 the ABS also made estimates using opportunity cost valued at award rates, and for 1992 based on both gross and net average wage. Australian Bureau of Statistics (1994) *Unpaid Work and the Australian Economy*, ABS. Occasional Paper, Cat No. 5240.0. p 24.

19 Again, see discussion in Chapter 2, and also Rhonda Sharp and Susan Donath (1995) "Book Review of Graeme D Snooks, Portrait of the Family Within the Total Economy" *Feminist Economics*, Vol 1, No. 3, pp 128 - 134.

value for designated non-production activities. The ball-park figure to be deducted is derived from the proportion of labour time spent on non-production activities.

In summary then, the method for estimating household production (narrowly defined) is to identify the proportion of time spent on non-production activities which are incorporated in existing measures of household production, and to reduce the existing estimates (ABS+Snooks, and Ironmonger's GHP) by the same proportion.

Defining Non-Production Activities

As noted in Chapter 2, the ABS adopts a taxonomy of production activities in its Time-Use surveys built around categories of domestic activities, child care, purchasing of goods and services, and voluntary work and community participation.[20] Time use is recorded for a range of activities under these headings, and it is at this level that we can begin to distinguish production from non-production labour.

"Domestic activities" includes things which are unproblematically regarded as production, like food preparation, laundry, ironing, and other housework, as well as other household labour like garden, pool and pet care, home and car maintenance, and transporting of other adults. The only category of work here which might not be regarded as production labour is "household management" (paying bills, filing, etc - ie. not actually running production in the household). In 1992 this activity took on average 8 of the 144 minutes per day which people spent on domestic activities.[21] This activity is clearly analogous to exchange activity in the market, being about keeping track of ownership/finance rather than production of new goods and services. Accordingly I have included it in the deduction for non-production activities.

This revision does create a problem however in the comparison with market production. While such clerical activities are clearly exchange activities, they were nonetheless incorporated into the estimate of market production when they took place within a production industry - because the relevant statistics were not available. If we view the household as being

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20 These headings are as they appear in the results of the 1992 time-use survey, although the headings (though not the calculations) change slightly in other publications. Australian Bureau of Statistics (1994) *How Australians Use Their Time, 1992*, ABS. Cat No. 4153.0. pp 8 - 9. Ironmonger also uses the ABS categorisation for his work. Duncan Ironmonger (1994) "The Value of Care and Nurture Provided by Unpaid Household Work" *Family Matters*, No. 37, pp 46 - 51.

21 ABS, *ibid.*, p 8.

engaged in production, then for consistency with market estimates, we should leave this exchange labour in the estimate of household production. I have not done so, partly because by this logic, no deductions would be made from the ABS and Ironmonger's household production figures. We would then have household production defined by the neoclassical definition, and market production defined by a restricted definition. This is not an "apples to apples" comparison either. With currently available statistics, a completely consistent comparison is impossible, but in making a deduction for such household labours, the estimate of non-market production becomes conservative, understating it relative to the market.

Child care presents many more problems than the relatively straight-forward categorisation of domestic activities. The ABS category is divided into care of "own children" and "other children", and then further divided into physical care, care for a sick child or a child with disability, teaching, playing, and minding. Some of the issues here were discussed in the previous chapter in relation to health and education more generally. While the line between "teaching" and "minding" is fairly arbitrary, and while it seems silly to distinguish caring for a sick child and a healthy one, following the discussion in the last chapter and the treatment of education and health in the market sector, I have excluded care of sick children and teaching from the list of productive activities in the household. Perhaps fortunately given the arbitrary nature of the distinctions involved, the figures are of little import anyway, reducing total time spent on child care as a *main* activity from 32 to 30 minutes per day.[22]

The category of "purchasing goods and services" (and associated travel) also provides difficulties in estimating household production (narrowly defined). As argued in Chapter 6 (proper) in relation to transport, the travel component (which is approximately one-third of the time use in this category) is relatively unproblematically classified as production. But where Shaikh and Tonak distinguish between the production of goods and services in retail trade, and the actual ringing up of the services (exchange activity), so too the household production category "purchasing of goods and services" contains both production and exchange activities. While the measure here is arbitrary, for consistency with the market

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22 Figures used here are for main activities rather than for all activities (which include time spent doing activities simultaneously) because the latter figure add up to more than 24 hours in the day and would therefore double count much household production. It is also arguable that work done in the market records/values only "main" activities, not all the other activities (including non-work) which workers might also do in a day - either simultaneously with, or squeezed in between, production activities. Figures are from ABS, *ibid*., p 8.

estimates above I have deducted as exchange/non-production half the time-use for purchasing goods and services (but not for the time for the associated travel). This deduction takes away 15 of the average 45 minutes per day spent on purchasing activities.[23]

Finally the ABS category of "voluntary work and community participation" needs to be disaggregated in estimating production - and indeed in the 1997 time use survey it is broken up so that voluntary work and care stand as one category, and the religious activities and community participation goes to its own separate category.[24] Following this break-down, I use only the time spent on voluntary work and helping able adults as part of the total time spent on non-market production activities. (Helping sick adults or those with a disability is again deducted as per the treatment of health in the market sector).

Estimating Household Production (Narrowly Defined)

The result of these classifications is that on average in 1992 some 234 minutes per day were spent on productive activities defined by the neoclassical definition, but 28 minutes or 12% of this was on activities not regarded as production of new goods and services in the restricted sense of the term. Accordingly then, in estimating the restricted product of the household sector, I have reduced the ABS+Snooks estimates (for each year) and Ironmonger's 1992 estimate by 12%. The final estimates for household product are listed in Table 6a.2 below.

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23 *ibid*., p 8.

24 Australian Bureau of Statistics (1998) *How Australians Use Their Time, 1997*, ABS. Cat No. 4153.0. p 18.

Table 6a.2: Gross Household Product (restricted)

Valuation Method	1987 $b	1992 $b
Opportunity Cost Estimates		
ABS Household Labour	162.8	272.3
Snooks' Household Capital	25.4	38.1 (a)
Gross Household Product (Neoclassical)	188.2	310.4
Gross Household Product (Restricted)	165.6	273.2
Housekeeper Replacement Cost Estimates		
ABS Household Labour	131.4	213.6
Snooks' Household Capital	25.4	38.1 (a)
Gross Household Product (Neoclassical)	156.8	251.7
Gross Household Product (Restricted)	137.9	221.5
Ironmonger's I-O Estimates		
Gross Household Product (Neoclassical)		341
Gross Household Product (Restricted)		300

(a) This figure is an understatement as Snooks' estimates stopped at 1990. The figure here is Snooks' 1990 estimate adjusted to 1992 prices.

Combined Results

Having adjusted the estimates of household production to utilise a restricted definition of production, we are now in a position to compare this with the estimates of market production (narrowly defined) produced earlier. The results for each of the measures of household production considered above are set out in Table 6a.3 below. As expected, in each case when a restricted measure of production is considered, the proportion of production contributed by the household sector is greater than that revealed using neoclassical based extended accounting. The order of magnitude of this difference is between 8.5 and 10.5 percentage points relative to total production, or, put another way, non-market production is up to 25% more important relative to the market than previous estimates have revealed.[25]

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25 It is even more important relative to the ABS comparisons of household labour and GDP which show household labour as up to 69% of GDP, or about 40% of the total economy. ABS estimates relative to GDP in ABS, *Unpaid Work, op.cit*., p 24.

Table 6a.3: Comparing Market and Non-market Production

	1987	**$b**	**1992**	**$b**
	Neoclass.	Restricted	Neoclass.	Restricted
Gross Market Product (a)	247.7		368.3	
Restricted Market Product (a)		145.6		212.6
Opportunity Cost Estimates				
Gross Household Product	188.2	165.6	310.4	273.2
Gross Economic Product	435.9	311.2	678.7	485.8
GHP as % of GEP	43.1%	53.2%	45.7%	56.2%
Householeeper Replacement				
Gross Household Product	156.8	137.9	251.7	221.5
Gross Economic Product	404.5	283.5	620.7	434.1
GHP as % of GEP	38.7%	48.6%	40.5%	51%
Ironmonger's Estimates				
Gross Household Product			341.0	300.0
Gross Economic Product			703.0 (b)	530.7
GHP as % of GEP			48%	56.5%

(a) These figures are derived from Table 6a.1 adjusted to current dollars using the implicit price deflater for GDP(E). See Table 7a.3 here.
(b) Figure is Ironmonger's original based on an estimate of GMP at $362b, rather than the $369b derived from Table 6a.1 here. The difference in terms of household share of production is only 0.5%

As noted in Chapter 6 proper, this increased relative importance of household production is politically important in making women's work more visible. This visibility stems most obviously from the results which show the increase in quantum of non-market production relative to the market. But in some ways the difference between the neoclassical and Marxian measures also points to the nature of the different work regimes involved. What the figures show is that the activities which are about social maintenance and exchange are a proportionately greater part of what is measured in the paid economy than in the household.

This suggests that either the household is more efficient in terms of the production of new goods and services for consumption, or that we need to look for other activities beyond "production" which govern, sustain and reproduce the household. As argued in Chapter 5 and 6, by not counting significant parts of the (market) economy, we may open up the space to see that there are also significant parts of the household economy which are not counted even in the extended accounts. By excluding the labour of doctors, lawyers and the powerful market

operators, we might also destigmatise and recognise the labour in other excluded categories, like household emotional labour.

The figures which show the increased relative importance of household production may also assist in making women's work more visible by contributing to the greater feminist/green/(postmodern) Marxist project of decentring the market. At a symbolic or rhetorical level, it is important that in all but one of the measures above, the household and community sector actually 'produces' *more than half* of the economy's new goods and services. This may be rhetoric rather than analysis, but as McCloskey notes about economic argument generally, rhetoric and imagery are important. [26]

The figures above actually go further in showing the importance of non-market production than the neoclassical figures which some feminists use to argue for a decentring of the market. For instance, Hilkka Pietilä's well-known eco-feminist attempt to visualise the economy as being based on a free (ie. non-monetary) core, still uses GNP figures to calculate the proportion of the whole economy occupied by this free sector (37.5% of the Finnish economy in 1990).[27] Other strands of "green economics" which also seek to decentre the market and visualise an economic structure as containing many different (market and non-market) sectors, might also benefit from a more consistent comparison which decreases the relative importance of the market.[28]

However the figures and analysis above may be particularly telling within a Marxian discourse. Those like the *Rethinking Marxism* school, and J.K Gibson-Graham in particular, have sought to highlight non-market and non-capitalist production so as to offer a 'glimpse' or a vision of a different political economy. The results presented in this chapter are particularly valuable to this project because the increased size of the non-market economy stems from Marxism's own definitions. To assert, as Marxian critics of Gibson-Graham (and others) do, that the focus on non-market production is idealist (as opposed to materialist), is at

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26 D McCloskey (1985) *The Rhetoric of Economics*, Madison: University of Wisconsin Press.

27 Hilkka Pietila (1997) "The Triangle of the Human Economy: Household-Cultivation-Industrial Production: An Attempt at Making Visible the Human Economy in toto" *Ecological Economics*, Vol 20, No. 2, pp 118 - 119.

28 Here I am particularly thinking of the "New Economics" followers of Schumacher and Max-Neef. See, for instance, Jane Wheelock (1992) "The Household in the Total Economy" in Paul & Max-Neef Ekins, Manfred (ed), *Real Life Economics: Understanding Wealth Creation*, London: Routledge.; Paul Ekins, ed (1986) *The Living Economy*, London: Routledge and Kegan Paul, 1986.

one level to ignore the greater 'material base' of society in non-market production, or alternatively, to argue for the superiority of neoclassical over Marxist definitions and accounting![29]

Of course, this is all still at the level of rhetoric, and Marxists can (and do) still posit capitalist production and accumulation as the fundamental dynamic of the economy, regardless of the relative size of the production.[30] But the assertion of the hegemony of capitalist production relations/capitalist economy must be argued for theoretically and empirically, not simply asserted as if it is self-evident. Given the relative size of non-market production I see no reason why the capitalist sector's input into the household should *a priori* be deemed more important than the household sector's input into the market via the production of labour. Nor though, do I assert that my figures suggest that the non-market sector is 'really' hegemonic, or otherwise more important than the market simply because of its greater size.

What I am suggesting is that the existing (neoclassical) figures do not give a consistent comparison on which to even consider the different sectors' relative sizes, and that a restricted definition of production both gives a more consistent comparison and shows that in quantum, the non-market sector(s) produce more new goods and services than does the market. The question of hegemony is a different matter to the relative size of the various sectors. Ultimately I suspect that the issue of hegemonic Capitalism v deconstructed "capitalism" is in part about different assumptions and standpoints (and therefore different views of the economy/hologram). Hopefully though, the increased importance of household production (judged by Marxism's own definitions) might at least open the necessary view of the

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29 Cox et al., argue that Gibson-Graham generally fail to take account of the unequal power relations between capitalist and non-capitalist activity, although the charge of idealism is more particularly about Gibson-Graham's alleged locating of capitalism in Marxist discourse rather than in material political economic events. While, as outlined in Chapter 6, the notion of a material *base* is problematic, if "material base" means production of goods and services (the material provisioning of society), then there is greater reason for Marxists to consider non-market production. Cox et al.'s critique of Gibson-Graham does not consider non-capitalist production as a subject of analysis at all. Brian Cox, Demetriou Demetrakis, Mike Donaldson, Rene Leal, and Richard Southall (1999) "Katherine Gibson and the Antinomies of Post-modern Socialism", in *Rethinking Marxism in Australia in University of Wollongong*.

30 Again, see Cox, *ibid*. However, the same analysis also applies to market production, so that for instance, Andrew Wells critiques the mainstream view of economic history in nineteenth century Australia, arguing that the key centres of accumulation remained in the rural sectors, regardless of the relatively greater share of commodity production (as measured by neoclassical/Keynesian accounting) of urban based construction and manufacturing. Andrew Wells (1989) *Constructing Capitalism: An Economic History of Eastern Australia, 1788-1901*, Sydney: Allen & Unwin.

"economy as hologram" in a discourse largely fixated on a monolithic entity: "the Capitalist system".