

Compendium

Chapter 4: Home produced 'housing' services

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1 . What are household housing services?

As shown in table 1.1, 'housing services produced by owner occupiers' are already estimated within the core System of National Accounts (SNA, 2008) as 'imputed rentals for housing services'. Imputed rentals represent the value of owner occupier housing if it were rented on the rental market. The household housing services within the Household Satellite Accounts (HSA) are different. The value of household housing services in the HSA are defined as the value of: buying or renting a house or flat, getting it furnished and equipped, cleaning it, maintaining it, and repairing it. This definition extends the definition of housing services already estimated in the core SNA.

Under the extended HSA definition of household housing services, both the value of the shelter and home produced services of household upkeep such as DIY, gardening and cleaning activities are included.

As described in the methodology section of this article, this analysis uses an input/production approach (comparable to GDP (I)), to estimate total output of household housing services. This requires the estimation of the following components:

- equivalent labour costs that would normally have been paid to maintain the housing using market services (Compensation of Employees; CoE)
- goods and services (resources) used up by housing such as utilities like electricity or water (Intermediate Consumption; IC)
- a market equivalent profit which a third party contracted in to provide some of the household upkeep activities could reasonably expect to generate in any given year (Gross Operating Surplus; GoS)

(Taxes and subsidies are not adjusted for and in this analysis are assumed to have no contribution to the total output or gross value added (GVA) of household housing services).

In addition to these elements, estimates of the value of accommodation services are also added in by using actual rentals paid for housing (for tenants) or imputed rentals paid for housing (for owner occupiers). These 2 estimates are taken from the National Accounts. Therefore total output is described with the following formula:

Total Output = CoE + IC + GoS + Imputed Rentals

In comparison, GVA can be best described with this formula:

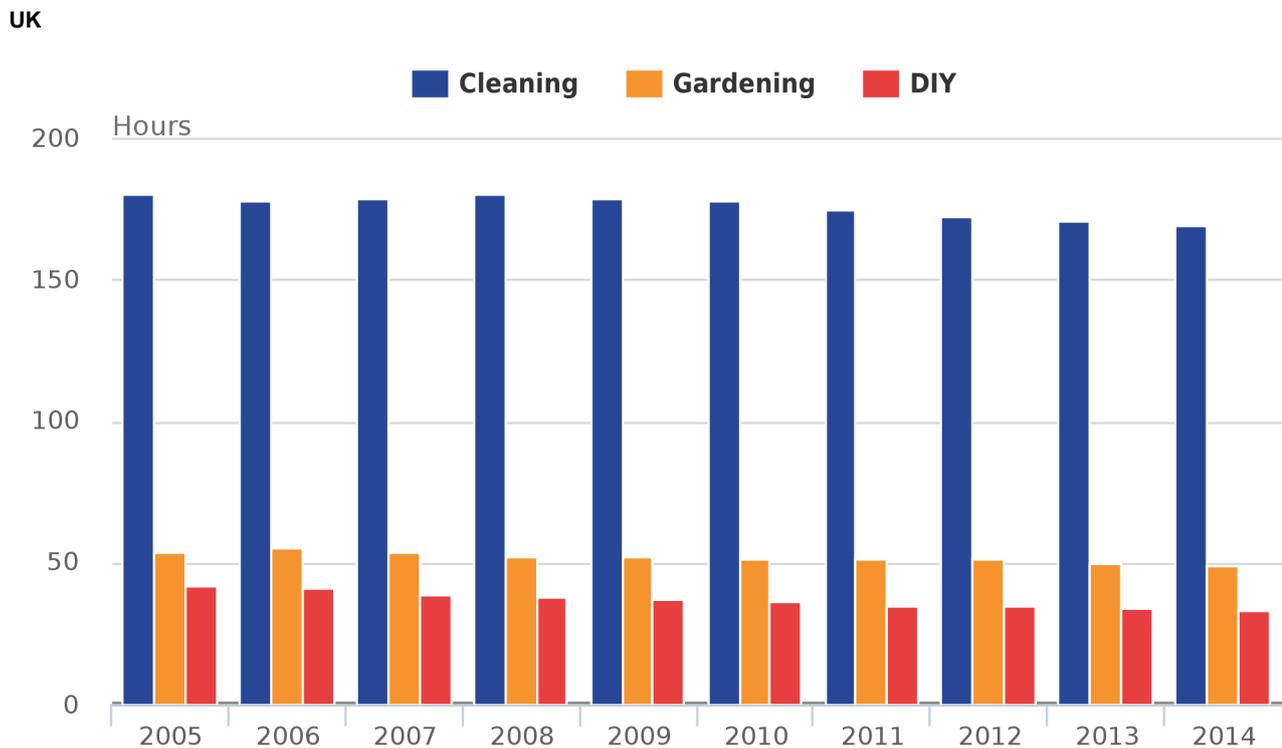
GVA = CoE + GoS

In contrast to the measure of total output, the value of GVA excludes the output of imputed rentals for housing as this is already accounted for within the core SNA. It also excludes the value of actual rentals paid for housing by recording actual rentals paid for housing as intermediate consumption, therefore excluding it from GVA estimates.

2 . Volume of time spent carrying out productive activities of household upkeep

The compensation of employees component of household housing services is estimated by multiplying the volume of time spent carrying out activities for household upkeep by an appropriate market wage rate. Average annual hours undertaking activities of household upkeep per person in the UK has been falling between 2005 and 2014. Changes in the volume of time spent in these activities are likely to drive changes in both the total output and the GVA of household housing services.

Figure 4.1: Average annual hours carrying out household upkeep tasks per person, 2005 to 2014



Source: UK time Use Survey 2000 and British Household Panel Survey (BHPS)

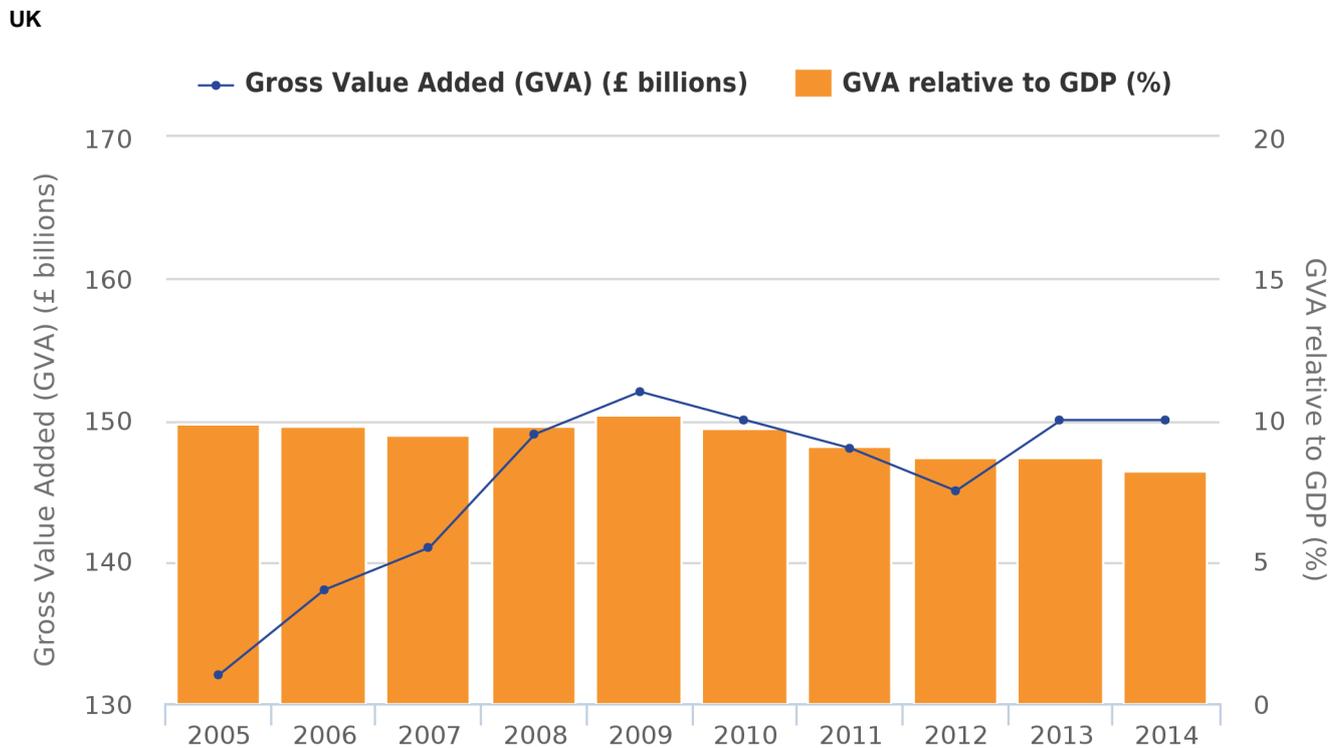
As shown in figure 4.1, the amount of hours spent per person per year carrying out activities of household upkeep has steadily declined across all 3 types of activity: cleaning, DIY and gardening. Mean annual hours spent per person carrying out cleaning, DIY and gardening fell by 11.2 hours, 8.6 hours and 5.0 hours respectively between 2005 and 2014. This represents a fall of 6.2% for cleaning, 9.3% for gardening and 20.5% for DIY in the mean time spent carrying out those activities (per person, per year) between 2005 and 2014.

These trends could be explained by a range of factors. Innovation in tools and methods used to carry out these activities is likely to have a negative impact on the amount of hours taken to complete tasks. Further, the number of first time buyers, who will have more of a vested interest in upkeep of the house, [has been in steady decline over the last 15 years](#). The UK has an ageing population who may find it more difficult to undertake these tasks relating to household upkeep. Finally, it is possible that higher occupation rates per household may be having a negative effect. Supporting some of these possibilities it is also reported that the economic climate has been growing increasingly difficult for those market services which sell tools and materials for DIY (Mintel, 2013).

3 . Gross value added of household housing services

In the pursuit of comparability, the value of household housing services is estimated using similar economic methods to the core System of National Accounts (SNA, 2008), specifically those used in the production of GDP (I). Figure 4.2 presents estimates of GVA and the relative size of household housing GVA is compared with Gross Domestic Product - the total amount of GVA across the economy in any given year ¹.

Figure 4.2: GVA of household housing services and GVA relative to GDP, 2005 to 2014



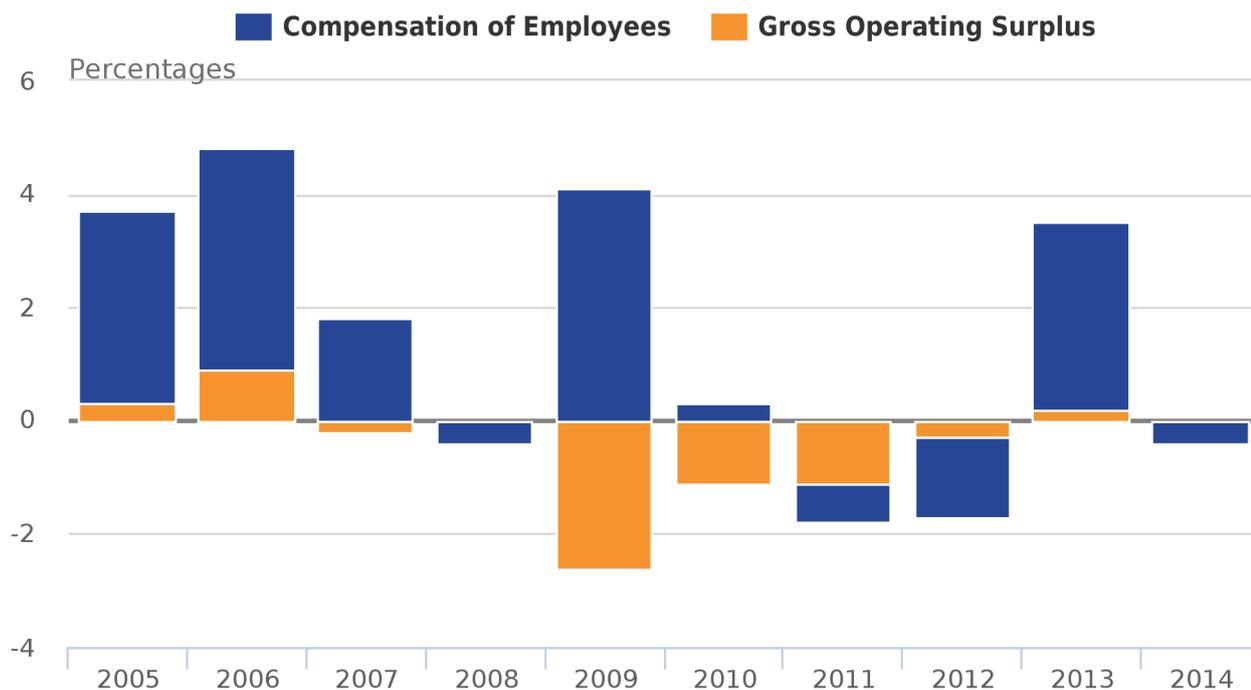
Source: Office for National Statistics

Figure 4.2 shows that between 2005 and 2010, the GVA of household housing services grew by an annual average rate of growth of 2.6% while there was a period of lower (slightly negative) growth between 2010 and 2014 at negative 0.1%. Over the whole series between 2005 and 2014, there was an annual average growth rate of 1.4%.

The proportion of the GVA of household housing services relative to GDP decreased throughout the 12-year period, from 9.9% of GDP in 2005 to 8.2% by 2014. Shortly after the economic downturn in mid-2008, the relative size of household housing services briefly grew again, peaking in 2009 where the size of its GVA was equivalent to a 10.2% share of GDP.

Figure 4.3: Contributions to GVA growth of household housing services, 2005 to 2014

UK



Source: Office for National Statistics

The previous chart, figure 4.2, showed growth in the GVA of household housing services followed 2 trends throughout the time series. Initially between 2005 and 2009, growth in GVA is mostly positive with an annual average growth of 3.5%². Figure 4.3 shows most of the growth is driven by the value of compensation of employees which has grown by an annual average of 3.8% between 2005 and 2009. The slowdown in GVA between 2010 and 2014 to negative 0.1% is mainly driven by slower growth in compensation of employees. As shown in the earlier section, this change in the value of compensation of employees was related to a fall in the amount of time spent carrying out activities rather than a fall in relative wage rates.

Notes for gross value added of household housing services

1. Gross Domestic Product is the sum of GVA across the economy plus or minus taxes and expenses
2. In 2009 there is negative growth in the level of Gross Operative Surplus which is related to the economic downturn as this value is imputed using a ratio derived from equivalent market services. As the volume of non-market activity increased for a short duration after the economic downturn it may be more appropriate to impute a positive growth in gross operating surplus for 2009. Further work is necessary to develop currently experimental techniques to impute gross operating surplus