



PRODUCTIVITY

Detached home building in Australia remains the most efficient in the world

A prevailing myth has developed that contends that productivity in detached home building has declined in recent decades. This myth is based upon a misunderstanding of ABS data and logic errors.

Productivity is a measure of output from an industry divided by the inputs. The following outlines the challenges and errors made in measuring inputs and outputs from detached home building.

There are two main contentions that conclude that there has been a decline in labour force productivity within the home building industry in Australia. This is then suggested to contribute to the deterioration in the supply of housing in Australia.

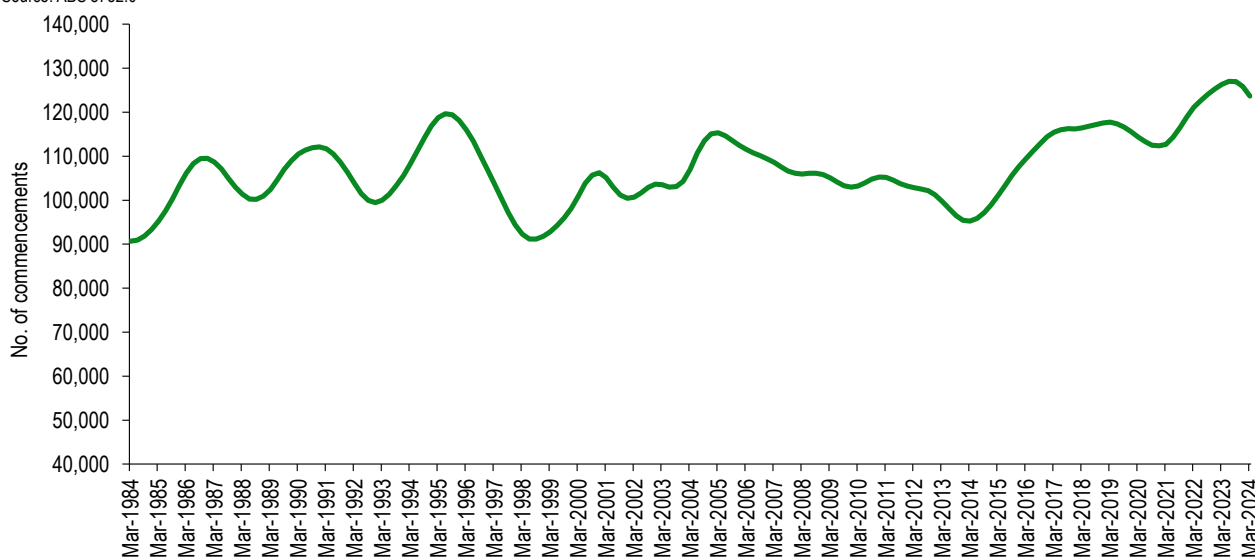
These two contentions are premised on the basis that outputs from detached house building in Australia have remained relatively constant over recent decades while labour inputs have increased over the same period. This is erroneous and ignores the structure of labour in the home building industry.

Measuring outputs from detached house building

There are two common errors made in measuring outputs from detached home building in Australia. The chart below shows new home starts and completions since the 1980's.

Detached House: 3 Year rolling average - AUS

Source: ABS 8752.0



The figure above shows that the number of houses completed has remained relatively stable over decades. There are cycles evident, but when considered over a three-year cycle, the volume of houses completed each cycle remains consistent.

Errors in measuring productivity: Outputs

The first error made in assessing outputs from detached home building sector is that a home built in the 1980's bears little resemblance to a home built in 2024. A home built in the 1970's, clad in asbestos, with little or no insulation, typically three bedrooms, without a garage is significantly different from a 2020's home that is compliant to the Building Code of Australia, achieves seven-star energy rating, typically has more than four bedrooms, a garage under the roofline, possibly two storeys, and is wheel-chair accessible, power to charge an electric vehicle, etc.

The difference in the type of homes built over decades, makes it difficult to use approvals, commencements or completions of houses as a measure of outputs from the industry.

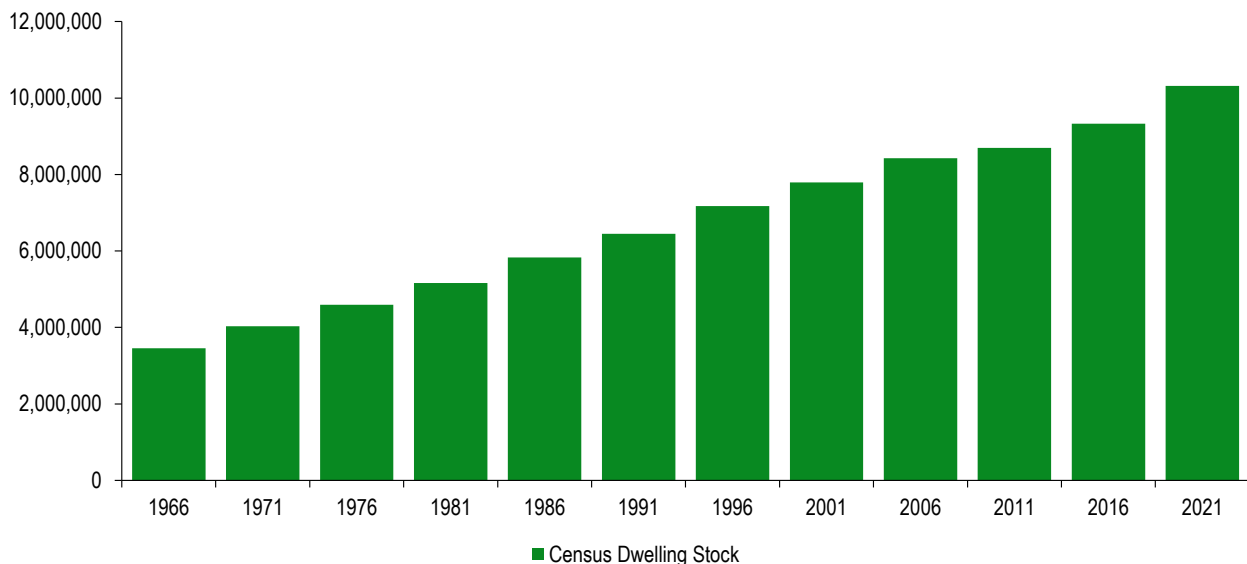


The second error made in measuring outputs from the industry is that they fail to incorporate the growth in the volume of established homes.

In 1986, there were only 5.8 million total dwellings in Australia. Since then, the stock of dwellings has increased, with 10.9 million dwellings counted in mid-2022, hence the size of the renovation segment has become larger. Data from ABS 8731.0 Table 78 shows that the value of renovations approved in the March quarter 2024 is 2.5 times larger than it was in 1986 (in chain volume measures).

Dwelling stock, Australia

Source: Historical Census Data



As the pool of established houses increased, so too did the volume of labour that is required to maintain and renovate this pool of homes. Furthermore, as the requirements of the Building Code and planning regimes were increased from the 1990's, so too have the complexity, time and cost of maintaining these houses increased. This is explained in more detail below.

Errors in measuring productivity: Inputs

There are two main contentions made to demonstrate that inputs to detached house building have increased. These are:

1. **Employment has increased:** That residential building companies employ more people in 2024 than in the past but build the same number of homes. Therefore, productivity has declined.
2. **There are more tradies in the economy:** That there are more skilled trades in Australia in 2024 than in the past, but we build the same number of homes. Therefore, productivity has declined.

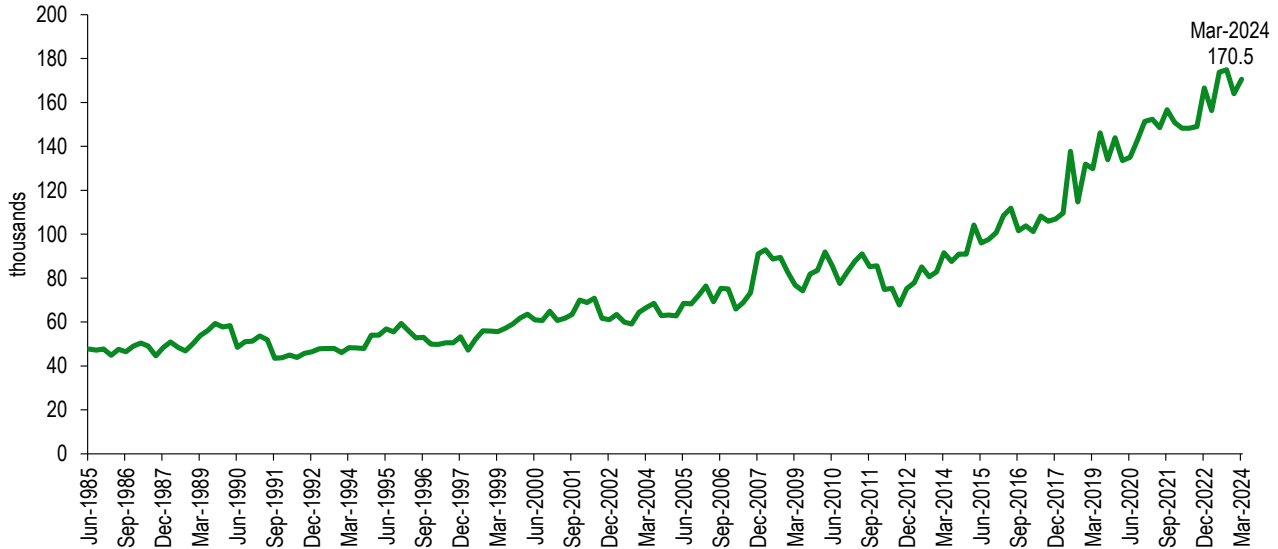
Contention one: Productivity is declining because the number of people employed by building companies has increased, but the volume of homes completed has remained stable!

The figure below is the ABS Labour Force Detailed Data (Cat. No. 6291.0) on the number employed in the Residential Building Construction sector (ANZSIC Group 301). *Prima facie* analysis would suggest that the number of people employed by residential building businesses has increased and given that the number of homes completed has remained stable, therefore productivity in the industry has declined.



Number employed in residential building construction, Australia

Source: ABS 6291.0 EQ06, Employment by ANZSIC



This contention is wrong because:

- Number employed in ANZSIC 301 measures people directly employed by building companies. This includes lawyers, accountants, sales staff, administrators, etc. It is not a complete stocktake of those skilled trades that are engaged to undertake building work on site, such as carpenters, joiners, electricians, architects, engineers, etc.
- Detached house building in Australia is undertaken by sub-contractors who are paid to complete tasks. They are generally not directly employed by paid for the completion of a task, rather they are sub-contractors. For this reason, they are largely excluded from the ANZSIC 301 measure of those directly employed by building businesses.

Some skilled tradespeople are directly employed by building companies, but it is not the dominant form of engaging skilled trades.

- There has also been a rise in 'supply and install' arrangements as vertical integration has grown. 'Supply and install' describes an arrangement where the supplier of a product, for example bricks, also supplies the labour to install the bricks. Under these circumstances, skilled tradespeople are more likely to be directly employed by the original equipment manufacturer (OEM) which will not fall under the definition of 'building businesses'.

Moreover, the growth in employment recorded by the ABS as part of ANZSIC 301 largely reflects changes in industry structure. These changes include consolidation, vertical integration and an increase in pre-fabrication within the detached home building sector. These structural changes have occurred largely since the GFC and is associated with an increase in foreign direct investment within building businesses.

- One in ten detached houses built in Australia in 2023 was built by an overseas-owned company. The emergence of large investors in the sector has also seen the trend toward vertical integration and therefore, direct employment.

Moreover, as the industry moved to more pre-fabrication, more skilled trades were employed directly in off-site manufacturing facilities, and fewer skilled trades are engaged onsite.

It would be an error to conclude that this shift toward pre-fabrication, or vertical integration, is evidence in itself, of a decline in productivity in the sector.

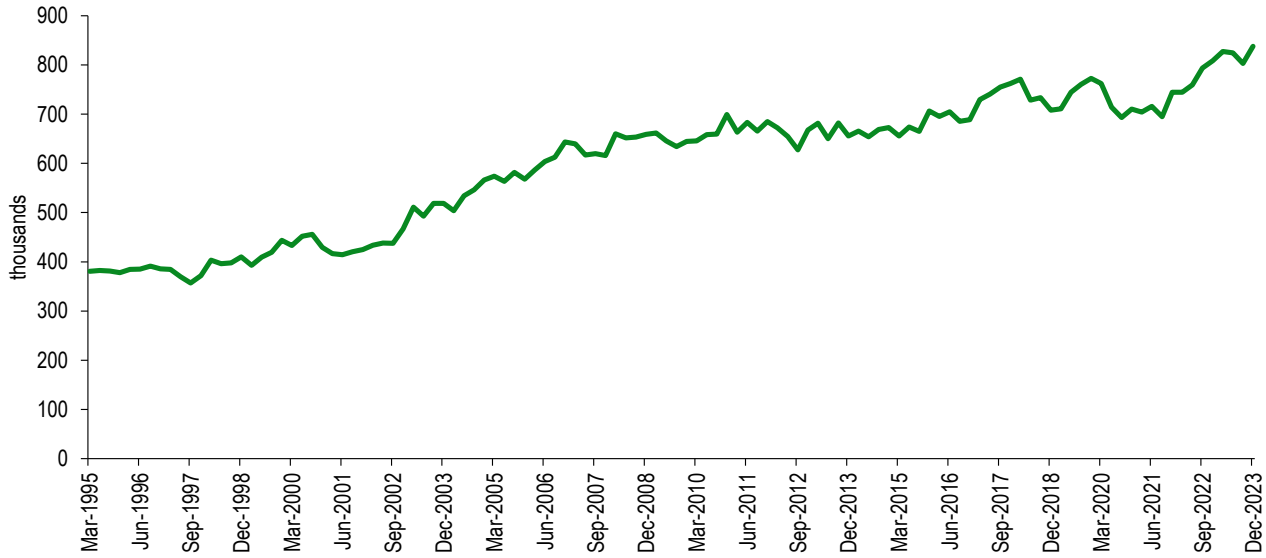
Contention two: Productivity is declining because the number of tradies has increased, but the volume of homes completed has remained stable!



The figure below is the ABS Labour Force Detailed Data (Cat. No. 6291.0) on the number employed in the Construction Services sector (ANZSIC Subdivision 32). *Prima facie* analysis would suggest that the number of skilled tradespeople engaged to build homes has increased and given that the number of homes completed has remained stable, therefore productivity in the industry has declined.

Number employed in construction services, Australia

Source: ABS 6291.0



This contention is wrong because:

- The number of employed persons in ANZSIC 32 Construction Services does not accurately reflect the number of skilled tradespeople engaged to build a house because non-residential building sectors also use these services.
- There are more skilled tradespeople in the economy now than in the 1970's because they are employed in non-residential construction (i.e. hospitals, schools, commercial, civil) and mining.
- The growth in the number of skilled tradespeople engaged in the economy more closely reflects the growth in the Australian mining sector, which is a large employer of the same tradespeople, than the growth in residential house building.

Conclusion

The public discussion examining the state of productivity can be easily mis-represented. Measures of the inputs and outputs of the industry are difficult to estimate and even then, can be easily misunderstood.

This opens the question of how to measure productivity, such as time to build or gross output. These would require a more extensive analysis of data that may not have a sufficient history or may not be publicly available.

International comparisons of productivity are also challenging, given that building sites are largely accessible year round, where many northern hemisphere countries have shorter years, due to weather, that require a larger volume of pre-fabrication. For these reasons, it is an error to conclude that there is a need for productivity reforms in the detached home building sector, based upon the evidence presented above.

Even if measured accurately, commentators have also made the error of assessment when concluding that an increase in those directly employed by building businesses, are increasing in number while the volume of homes built remains constant. This is because a change in employment from direct employment to sub-contracting, or vice versa, does not by itself indicate a change in productivity.

Productivity improvements in the industry are likely to come from removing the most significant market failure, which is unnecessary government intervention.