



# Asset Service Lives and Depreciation Rates based on Disposal Data in Japan by Koji Nomura and Yutaka Suga

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- Impressive piece of work
  - Brings in much needed recent empirical evidence on service lives and depreciation
  - New, interesting dimension: type of use
  - Definition 1 – Definition 2 (actual vs zero value of disposed assets) shows importance of distinction
  - Useful well beyond Japanese context
  - Sound methodology





## Effects of obsolescence (1)

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- Survey of service lives
- Importance of re-sales (to different industry, private consumption or exports) underlines:
- Time of disposal = economic decision
- Obsolescence is certainly one of the determining factors (e.g. Japanese machinery no more suitable for domestic production but suitable for exports)





## Effects of obsolescence (2)

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- It follows that depreciation rates  $\delta$  reflect *both* wear and tear and obsolescence (= in line with SNA)
- But obsolescence *also* affects the price (index) of new assets  $p$
- User costs ( $r + \delta - dp/p$ ): is there double counting? Issue with computers?





## Effects of obsolescence (3)

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- In an accounting sense Nomura/Suga calculations of  $\delta$  suggest 'no', as  $\delta$  depends positively on price index of new assets
- In a more subtle way, 'yes' if declining real prices lead to short service lives
- Modelling this relation is beyond the scope of this work but may shed light on the issue
- Nomura/Suga data could be used to examine relationship





## Dwellings (1)

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- Strikingly low service lives for dwellings in international comparison (except Canada)
- Nomura/Suga offer differences in treatment of renovations as explanation
- But even for new building only Japan's  $\delta$  is much higher than other countries'





## Dwellings (2)

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- Other explanation hinted to by authors:  
possible positive correlation with land prices
- Another effect of economic obsolescence?
  - In prime locations, value of structures relative to land = low
  - Decision to re-construct completely more easily taken
  - Reconstruction may be less labour intensive than renovation
  - High-end demands for buildings in prime location (cabling, technology, design etc)





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- To conclude:
    - Very valuable work
    - Needs to be brought to attention of other NSOs (OECD NAWP)
    - Above and beyond depreciation rates and improved capital measures for Japan, it provides also data source for analyses

