

“Not everything that can be counted counts, and not everything that counts can be counted.”

Albert Einstein (attributed)

IPA transcription: “/nɒt ˈɛvriθɪŋ ðæt khæn bi ˈkhaʊntəd khaʊnts, ən nɒt ˈɛvriθɪŋ ðæt khaʊnts

khæn bi ˈkhaʊntəd/”

ˈælbərt ˈaɪnstaj̩n (əˈtrɪbjətəd)

1 Introduction

Econometric research on panel data suggests that studies based solely on a given time series could be biased by not incorporating the information content of the cross-section. Not only can panel data provide additional information, it also gives greater sample variation that can be exploited to obtain more precise parameter estimates—see, e.g., Baltagi (2008) on this point. While this is well-known in theory, the use of panel data has many limitations. The heterogeneity and noise of international data sources has always complicated and even restrained the scope of panel data analysis (and the use of related econometric techniques) in empirical work on housing.

Those same data limitations have skewed the evidence available to guide the theoretical work on the macroeconomic effects of housing and the determinants of house prices—especially on open-economy models. The stylized facts that theory seeks to understand are still largely derived from a reduced country sample—primarily the U.S. as illustrated, e.g., by Davis and Heathcote (2005) and Davis (2010)). Our efforts to develop a consistent panel of international house prices and other housing indicators, therefore, seeks to mitigate the concerns about the comparability of the data and to facilitate the empirical and theoretical research in this area.

As indicated, lack of comparability complicates the research on international house prices. The main contribution of our work is, therefore, sorting out the existing data by country, selecting the most *similar* series and documenting the differences across countries to clarify the extent to which international sources can be made comparable for empirical analysis purposes. As a result, we construct a panel dataset of house price indexes starting in the first quarter of 1975, which is released regularly to the public at quarterly frequency. We also maintain all vintages of the country series for researchers interested in the effect of data revisions, and complement the database with the corresponding indexes on personal disposable income (PDI) per capita. PDIs per capita can be used to control for changes in the affordability of housing, so as not to treat house price movements in isolation.

1.1 Outline

The rest of the paper proceeds as follows. Section 2 discusses the standard methods used to construct a representative house price index, and explains the selection criteria used to obtain comparable reference indexes for house prices. It also outlines the national income and product accounts and the relevant definitions of income used to construct the corresponding indexes of PDI per capita. Section 3 briefly describes our own methodology to extend the reference series, and seasonally-adjust the data. It discusses the aggregation method that we use on the house price and PDI index series as well. Section 3 also explains how the database is maintained and

the quarterly updating process that we follow, after a *sufficient* number of countries in our sample have reported the necessary data. Section 4 provides a detailed discussion of the national data sources and describes the implementation of our methodology to construct a house price index series expressed in nominal and real terms for each country. It also notes the sources of PDI data, working-age population data, and the Personal Consumption Expenditure (PCE) deflator for every country.

The appendix contains a brief description of the data sources as well as a series of tables summarizing the key characteristics of the data by country and by the characteristics of the dwellings. Future drafts of this note will contain notice of any refinements or modifications of the methodology described here as well as detailed references to any new series that might be added to the database.