

Monetary inflation and real estate prices

For a couple of months now, news about inflation in developed economies has been catching the attention of researchers. Fears about a long-term inflation process have made monetary institutions such as the European Central Bank declare that the recent peak in inflation is consistent with its inflation target and that it expects an inflation rate moderately above target in the medium term. This declaration is sending the message that a long-term inflationary process based upon expansionary monetary policy is not occurring. On the other hand, economists who claim that the inflationary process will be longer, support their assertion on the substantial increase in the monetary base resulting from the Quantitative Easing policies used to fight against the pandemic. The monetary expansion impacts on inflation are uncertain after the experience of the monetary policy applied to fight against the Financial Crisis' effects, when the increase in monetary liquidity did not produce further inflationary pressures.

If rising consumer prices persist, what effect would this have on the modern real estate market? What do we know about the links between inflation and real estate prices and the direction of their effects? Knowledge is critical in these times to forecast the potential impacts and take correct investment decisions. The literature on this issue mainly comes from the 70s and early 1980s, a period of our economic history with a high inflation process. The contributions from those years agreed that persistent consumer price growth modified long-term inflation expectations resulting in a distortion of relative house prices (Smith *et al.*, 1988), especially in situations of excess demand and associated with the particular mortgage payment systems existing in that period (Kearl, 1978, 1979; Lessard and Modigliani, 1975). The findings supported the idea that long-term inflation expectations increased the relative prices of owner-occupied housing vs asset values (Summer, 1980) resulting in a fall in the price of capital assets (exacerbated by tax treatment) and a consequent increase in the prices of alternative assets, such as housing.

The research showed that a second channel transmitted the impulses of consumer prices to real estate prices, operating through the homeownership market. In the case of households with mortgages, inflation expectations reduced the real cost of real estate capital (more when the interest payment was tax-deductible) and increased capital gains that were not taxed (Poterba, 1980; Dougherty and Van Order, 1982); all of which pushed up demand for housing and, consequently, their real prices (Hendershott and Hu, 1981; Diamond, 1980; Follain, 1982; Rosen and Rosen, 1980, among other references). The effect was found to be more significant on the rental price, which fell faster in real terms in the presence of long-run consumer good price growth processes (Titman, 1982). The increase in expected inflation also reduced the discount rate and raised the price associated with the future flow of rents (Lessard and Modigliani, 1975; Kearl, 1979; Schwab, 1982). Researchers also suggested that higher current prices in the owner-occupier market would encourage developers to build new units and, as a consequence, stimulate supply responsiveness (Diamond, 1980), suggesting that one of the drivers of the prolonged housing cycle, during the seventies, was associated with the inflationary processes of the time.

A fruitful debate favouring and against the benefits of inflation on residential demand took place around this literature. For example, Poterba (1984) argued that inflation pushes residential demand up because of the preferential tax treatment for house purchases, which implied a reduction in the effective cost of housing for homeowners therefore causing increased demand. On the contrary, other authors sustained that housing demand would



diminish as a consequence of the high long-term inflation. [Kearl \(1979\)](#), for instance, considered that a higher rate of inflation led to increases in nominal mortgage interest rate, raising the debt service in real terms (in nominal fixed-rate loans) and worsening the homeowner payment capacity until their nominal income could be increased and thus reduce the debt charge. He argued that the effect of reducing the present value of mortgage payments may not occur if the real interest rate is unchanged so that housing demand would not increase in the inflationary period.

The inflationary process is also transmitted through a third channel related to the costs associated with using property, the business performance of firms using space and their rent levels. [Tauchen and Witte \(1983\)](#) showed that energy costs (in commuting between offices and administrative centres) affected the location decisions of firms and provided evidence of their influence on real estate prices. The effects of inflation on total construction costs also affected an increase in prices ([Maisel, 1963](#); [Hoffmeyer and Mordhorst, 1967](#)).

In all those research, the influence is single-directional from the inflation to housing prices. [Stevenson \(1999, 2000\)](#) found how housing led inflation, and earlier works looked for a circular causality between the two variables identifying the last channel of transmission from inflation to house prices which falls under the monetary policy domain. The literature on this issue explains how changes in relative prices would modify investment decisions in the housing market, finally stressing inflation or increasing banking exposure. The existing research found a causal association between housing prices and inflation through several monetary channels among which two are more intense, the so-called asset price channel ([Greiber and Setzer, 2007](#)) and the credit channel ([Iacoviello and Minetti, 2008](#)). Through them, residential prices act *per se* as an accelerator of inflation (see a summary of channels in [Taltavull and White, 2016](#)). The influence is bi-directional through those channels.

The studies conducted during the high inflation period in the seventies referred to a housing market where homeownership enjoyed tax reduction; corporations had similar tax conditions to households or the small investors and financial markets had imperfections with entry-barriers and high interest rates. Currently, interest rates are low (with a low user-cost of capital), financial markets are global, the interest deductions of housing mortgage do not exist anymore, fiscal treatment is divergent among tax-payers and developed economies' markets are mature. These structural features create a different situation that begs the question of whether a (un) expected inflationary process would have a comparable effect on the housing market to those decades ago, opening up an exciting field for real estate researchers.

Knowledge about the determinants of real estate prices has advanced substantially since the seventies, while the role of inflation has been forgotten. This issue of the Journal of European Real Estate Research is a good example. It presents a number of recent papers that provide both a theoretical background and empirical evidence on real estate price reactions at aggregate and disaggregated spatial scales.

The two first papers are devoted to explaining the role of fundamental variables on real estate prices.

Sviatlana Engerstam presents evidence about the role of macroeconomic determinants of apartment prices in Swedish and German cities, finding idiosyncratic geographic reactions of similar fundamentals. Cunha and Lobão investigate the real estate price reactions to changes on aggregate variables at four geographical levels, including 25 Portuguese metropolitan areas. Their results consistently support the previous findings demonstrating that price determinants and momentum differ geographically to explain prices. Archontakis, Nikitidou and Tagkalakis review the financial crisis's effect on the Athens residential market and its sub-regions by analysing valuation reports and extracting the structural characteristics at the spatial level. Their results demonstrate that a bundle of attributes lead the house price movements while macroeconomic variables determine the strength of the housing demand. The stronger the demand, the higher the house prices in smaller and older apartments.

Mariusz DoszŹyŹ evaluates the prior information in real estate appraisal, finding that the mixed estimation models produce a better valuation accuracy. Please, Just and Wehrheima analyse the news coverage and sentiment of real estate-related trends in Germany by choosing seed words from around 170,000 newspaper articles published between 1999 and 2019. They find interest changes revealed by the word analysis over time which could impact real estate investment and returns. Jackson and Orr qualitatively evaluate the role of sustainability value premium's key drivers to explain real estate investment decisions, covering a gap in the literature explaining how sustainable measures could be integrated into real estate valuation.

Finally, Hoesli, Duca and Carvalho summarise the evolution of housing prices at the international level during the coronavirus disease 2019 (COVID-19) period. The paper provides a discussion about the economic and behavioural components affecting house prices, the potential linkages between tourism and house prices and the changes in housing preference after the first pandemic hit.

I hope the reading of this issue captures your interest.

Paloma Taltavull

References

- Diamond, D.B., Jr (1980), "Taxes, inflation, speculation and the cost of homeownership", *Real Estate Economics*, Vol. 8 No. 3, pp. 281-298.
- Dougherty, A. and Van Order, R. (1982), "Inflation, housing costs, and the consumer price index", *The American Economic Review*, Vol. 72 No. 1, pp. 154-164.
- Follain, J.R. (1982), "Does inflation affect real behavior: the case of housing", *Southern Economic Journal*, Vol. 48 No. 3, pp. 570-582.
- Greiber, C. and Setzer, R. (2007), "Money and housing: evidence for the Euro Area and the US", available at: <https://www.econstor.eu/bitstream/10419/19691/1/200712dkp.pdf>.
- Hendershott, P.H. and Hu, S.C. (1981), "Inflation and extraordinary returns on owner-occupied housing: some implications for capital allocation and productivity growth", *Journal of Macroeconomics*, Vol. 3 No. 2, pp. 177-203.
- Hoffmeyer, E. and Mordhorst, K. (1967), "Determinants of fluctuations in house-building in Denmark, 1880-1940", in Nevitt, A. (Ed.), *The Economic Problems of Housing*, Palgrave Macmillan, London, pp. 92-104.
- Iacoviello, M. and Minetti, R. (2008), "The credit channel of monetary policy: evidence from the housing market", *Journal of Macroeconomics*, Vol. 30 No. 1, pp. 69-96.
- Kearl, J.R. (1978), "Inflation and relative price distortions: the case of housing", *The Review of Economics and Statistics*, Vol. 60 No. 4, pp. 609-614.
- Kearl, J.R. (1979), "Inflation, mortgage, and housing", *Journal of Political Economy*, Vol. 87 No. 5, Part 1, pp. 1115-1138.
- Lessard, D.R. and Modigliani, F. (1975), "Inflation and the housing market: problems and potential solutions", available at: <https://dspace.mit.edu/bitstream/handle/1721.1/1902/SWP-0813-03119402.pdf?>
- Maisel, S.J. (1963), "A theory of fluctuations in residential construction starts", *The American Economic Review*, Vol. LIII, pp. 359-383.
- Poterba, J.M. (1980), "Inflation, income taxes, and owner-occupied housing", Working paper, (w0553), NBER, available at: https://www.nber.org/system/files/working_papers/w0553/w0553.pdf.

- Poterba, J.M. (1984), "Tax subsidies to owner-occupied housing: an asset-market approach", *The Quarterly Journal of Economics*, Vol. 99 No. 4, pp. 729-752.
- Rosen, H.S. and Rosen, K.T. (1980), "Federal taxes and homeownership: evidence from time series", *Journal of Political Economy*, Vol. 88 No. 1, pp. 59-75.
- Schwab, R.M. (1982), "Inflation expectations and the demand for housing", *The American Economic Review*, Vol. 72 No. 1, pp. 143-153.
- Smith, L.B., Rosen, K.T. and y Fallis, G. (1988), "Recent developments in economic models of housing markets", *Journal of Economic Literature*, Vol. XXVI, Marzo, p. 38 y ss.
- Stevenson, S. (1999), "The performance and inflation hedging ability of regional housing markets", *Journal of Property Investment and Finance*, Vol. 17 No. 3, pp. 239-260.
- Stevenson, S. (2000), "A long-term analysis of regional housing markets and inflation", *Journal of Housing Economics*, Vol. 9 Nos 1-2, pp. 24-39.
- Summers, L.H. (1980), *Inflation, the Stock Market, and Owner-Occupied Housing* (No. w0606), National Bureau of Economic Research, available at: https://www.nber.org/system/files/working_papers/w0606/w0606.pdf.
- Taltavull de La Paz, P. and White, M. (2016), "The sources of house price change: identifying liquidity shocks to the housing market", *Journal of European Real Estate Research*, Vol. 9 No. 1, pp. 98-120.
- Tauchen, H. and Witte, A. (1983), "Increased costs of office building operation and construction: effects on the costs of office space and the equilibrium distribution of offices", *Land Economics*, Vol. 59 No. 3, pp. 324-336.
- Titman, S. (1982), "The effects of anticipated inflation on housing market equilibrium", *The Journal of Finance*, Vol. 37 No. 3, pp. 827-842.