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The Effect of House Prices on Growth

During the last decade, disparities in growth rates have been widening between the "Anglo-Scandinavian" countries and the euro area. A hypothesis to explain these growth differentials is based on the development of house prices and their effect on consumption. House price developments may be considered a major determinant of growth differentials in the European Union during the period 1995 to 2005.

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Development of house prices

Residential property prices in the euro area have been dynamic over the last decade, but the pattern has differed strongly across countries. In some countries, high demand for houses was fuelled by the decline in interest rates which accompanied the introduction of the single currency.

In the UK, Ireland, the Netherlands, Spain, Greece and the Scandinavian countries, real house prices have soared since 1995. In most countries of continental Europe, on the other hand, house prices have remained flat. Between 1995 and 2005, real house prices rose by almost 10 percent p.a. in Ireland, somewhat less in the UK, Spain and the Netherlands. In Germany and Austria, real house prices even declined.

During a catching-up process (Ireland, Spain, Greece, new EU countries) the prices of houses and non-traded goods tend to rise faster than goods prices (Samuelson-Balassa effect).

It is widely assumed that in many countries house prices are now higher than one would expect from underlying economic factors (*ECB,* 2006). In the UK, they are about 20 percent higher than can be explained by the interaction of supply and demand (*Wealy,* 2006).

Rising house prices transfer resources from first time buyers to present house owners. Hence they impose a burden on future generations (in a similar way as do budget deficits).

House prices are determined not only by "real" demand and supply. During the last decades – as a consequence of deregulation and liberalisation – houses have increasingly become objects of speculation. Thus, house prices tend to overshoot just like share prices or exchange rates.

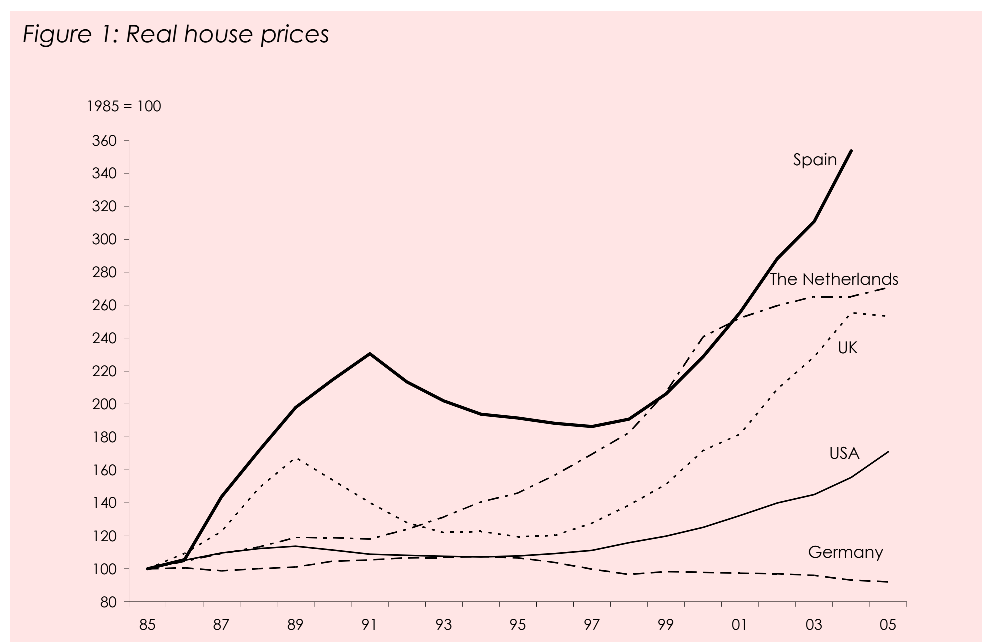
Concerns about the boom in house prices

Housing is the dominant component of wealth for the typical household, particularly in countries with a high share of residential property. Houses are, however, risky assets with volatile prices.

Central bankers around the world have viewed the run-up in house prices cautiously. The *ECB* (2006) explicitly regards house prices as an important determinant of monetary policy. Soaring house prices have permitted consumer spending to outstrip income growth, and the increase in house prices has contributed to current account imbalances. The dynamism of house prices has been accompanied by a strong increase in housing loans. Above all, there is a risk of a bursting of the house

price bubble in some countries – similarly to the early 1990s. Homeowners face substantial risk of lower prices that could stay low for some time.

Figure 1: Real house prices



In the early 1990s, the sharp increase in interest rates contributed to the bursting of the house price bubble in Japan, the UK and some Scandinavian countries after rapid deregulation had fuelled house prices.

Causes of the house price boom in the USA and many European countries

House prices, like any market prices, are determined by supply and demand. In the last decade, demand for houses was supported by unusually low interest rates. They increased in particular the affordability of higher-priced housing. In Spain and Ireland, real long-term interest rates have been very low (about 2 percent) as a consequence of EMU. In low-inflation countries such as Germany and Austria, real long-term interest rates have been relatively high (almost 4 percent).

In some countries, particularly in the UK, housing supply has been extremely weak over the last decade and has underpinned the boom in house prices. Land use regulations are the main factor in restricting the supply of houses. They favour present house owners at the cost of house buyers.

Table 1: House prices, GDP growth and interest rates

	Ø 1985/1995	Ø 1995/2005		
	Real GDP	Real GDP	Real house prices	Real long-term interest rates
	Percentage changes from previous year, p.a.			Percent p.a.
Ireland	+ 4.7	+ 7.3	+ 9.5	2.0
Spain	+ 3.0	+ 3.6	+ 7.1	2.3
Finland	+ 1.1	+ 3.5	+ 5.0	3.5
USA	+ 2.9	+ 3.3	+ 4.7	2.7
UK	+ 2.5	+ 2.8	+ 7.8	4.0
Sweden	+ 1.6	+ 2.7	+ 5.5	3.9
The Netherlands	+ 2.7	+ 2.3	+ 6.4	2.4
France	+ 2.0	+ 2.2	+ 5.8	3.2
Austria	+ 2.6	+ 2.2	– 1.6	3.3
Denmark	+ 1.8	+ 2.1	+ 3.9	3.2
Belgium	+ 2.3	+ 2.1	+ 3.3	3.1
Switzerland	+ 1.5	+ 1.5	– 0.4	2.4
Germany	+ 2.3	+ 1.4	– 1.5	3.4
Italy	+ 2.2	+ 1.3	+ 2.2	3.0
Japan	+ 3.1	+ 1.2	– 3.2	1.7

Source: Bank for International Settlements, Eurostat, OECD.

Market-based and bank-based countries

The IMF distinguishes between market-based and bank-based financial market systems. In market-dominated systems (e.g., USA, UK), there are liquid and transparent markets also for real assets. House prices are more volatile than in bank-dominated countries (e.g., Germany). Typical features of the mortgage markets in European countries are given in Table 2. The shares of fixed and flexible mortgage rates as well as the usual mortgage terms vary significantly across euro area countries.

Countries with market-based financial market system not only have more volatile house prices, but the reaction of demand to house price changes is also much faster than in those with bank-based systems (i.e., the core of the euro area). According to calculations by the *IMF* (2004), the long-run reaction of private consumption to a 1 percent increase in house prices is +0.040 percent in market-based systems and +0.015 percent in bank-based systems.

The last decade was characterised by a "marketisation" of housing finance. Housing markets headed toward perfect capital markets and came closer to the image of neoclassical capital theory. Securitised housing loans are now traded on markets like commodities, resulting in a liquid market. Variable-rate mortgages and interest-only loans became more popular in a number of countries. The duration of mortgages was extended (to 30 years and more).

Table 2: Features of mortgage markets

	Real house prices[1] Ø 1995-2005	Share of property[2] 2003	Mortgage loans 2002[3]	Usual mortgage term[3]	Predominant type of interest payment[1]	Market or bank-based financial system	
						IMF (2004)	*Demirgüc-Kunt – Levine* (2001)
	Percent p.a	Percent	As a percentage of GDP	Years			
Ireland	+ 9.5	76.92	36.5	20	Flexible	Market	Bank
UK	+ 7.8	70.00	64.3	25	Flexible	Market	Market
The Netherlands	+ 6.4	53.00	78.8	30	Fixed	Market	Market
Spain	+ 7.1	82.90	32.2	15	Flexible	Bank	Market
Denmark		51.00	74.3	30	Fixed	Bank	Market
Sweden	+ 5.5	61.00	40.4	< 30	Flexible	Market	Market
Finland	+ 5.0	58.00	31.8	15-18	Flexible	Bank	Bank
France	+ 5.8	56.22	22.8	15	Fixed	Bank	Bank
Italy	+ 2.2	80.00	11.4	15	Mixed	Bank	Bank
Germany	– 1.5	43.60	54.0	25	Fixed	Bank	Bank
Austria	– 1.6	56.00	27.0	25	Fixed	Bank	Bank

Source: *Marterbauer – Walterskirchen* (2005). – [1] Bank for International Settlements. – [2] *IMF* (2004). – [3] *Demirgüc-Kunt – Levine* (2001).

The role of refinancing

In countries with flexible interest rates (e.g., the UK), private households benefited directly from falling interest rates after 1995. When mortgage interest rates are predominantly fixed – as in the USA and many euro area countries – refinancing is necessary to reduce interest payments for old loans.

During the 1990s and early 2000s, many American homeowners refinanced their properties – sometimes more than once – as interest rates dropped to record lows. Thus they were able to lower their monthly payment often dramatically. Besides, they "cashed out" some of the equity in their homes. When they refinanced, they got a new loan for a higher amount than they owed on the old loan.

Household sector borrowing has grown radically in many countries. The precarious position of households (e.g., in the USA) stems largely from loose lending standards and cash-out refinancing.

In the euro area, refinancing seems to be restricted by high transaction costs and institutional factors. Moreover, the risks of rising interest rates and falling house prices are much lower.

The effect of house prices on private consumption

Many economists have suggested that house price changes have significant effects on aggregate consumption (*Al-Eyd et al.,* 2005). Recent developments in housing help to explain trends in consumption, particularly in the UK, Spain, some Scandinavian countries and in recent years also in France. Aggregate consumption in Germany and Austria may have been held back by developments in house prices. Financial liberalisation occurred at a slower pace in Germany and Austria than in the rest of the euro area.

The effects of house prices are particularly high in those countries in which mortgage financing and refinancing are easily accessible, the share of real property is high and transaction costs are low. If there are no credit constraints, as in a liberalised financial system, housing wealth will affect private consumption.

An explanation for the correlation between house prices and consumption is that a house is an asset that can be used as collateral in a loan. An increase in house prices allows borrowing-constrained homeowners to increase consumption or at least to smooth consumption over the life cycle. In a period of low interest rates, relaxed borrowing constraints are most effective. During the last decades, mortgages became increasingly the instrument for consumer borrowing in countries with market-based financial systems.

There is a large positive effect of house prices on consumption for the cohort of homeowners (quite often older people) and hardly any effect for renters (mainly young households). Aggregate consumption becomes more responsive to house price changes as the share of homeowners increases and older homeowners become an increasing fraction of the population (*Campbell – Cocco,* 2006).

Rising home prices and low interest rates have fuelled the surge in mortgage borrowing and enabled consumers to spend at high rates relative to their income. The saving ratios of private households have declined dramatically in the USA, UK, Spain and some Scandinavian countries (Figure 3). Low interest rates have counterbalanced the growth in debt and acted to dampen the growth in the household debt-service burden.

These trends in house prices, household indebtedness and saving ratios are not sustainable. Household spending relative to income cannot grow indefinitely.

House prices and residential building

On the one hand, increasing demand for houses will raise house prices. Housing demand is influenced by current and expected demographic developments (migration flows), residential property prices, household income and financial indicators (interest rates, availability of mortgage finance, etc.). But on the other hand, soaring house prices may fuel speculative demand. Higher prices expected in the future may raise supply and demand today.

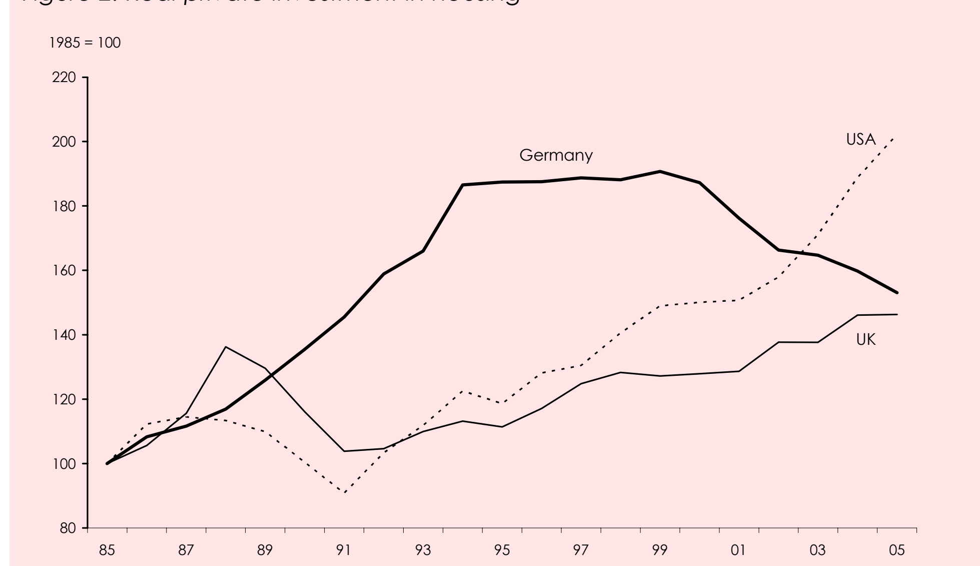
There is a close relation between house prices and residential building (Table 3 and *Altissimo et al.,* 2005). In all countries in which real house prices boomed private investment in housing increased strongly – with the exception of the UK and the Netherlands (probably due to supply constraints in metropolitan areas). In Germany and Austria, house prices as well as investment in housing declined during the period 1995-2005.

Are house prices a consequence or a cause of economic growth?

It is quite likely that economic growth will affect real house prices. But where did higher growth in the UK and the Scandinavian countries come from?

Growth differentials are usually explained by supply factors: research and development, education, price competitiveness, flexible labour markets, deregulation, etc. With this type of long-term reasoning, it is hard to explain why higher competitiveness through structural reforms and long-run supply factors in the 1995-2005 period fuelled mainly housing and consumption in the Anglo-Scandinavian countries (relative to the core euro area countries) – not exports and investment. Moreover, it is difficult to explain the sharp decline in the saving ratio of private households in most of these countries without considering real wealth effects.

Figure 2: Real private investment in housing



The Keynesian answer on growth differentials is: more expansionary monetary and fiscal policies in the Anglo-Scandinavian countries were the main reason. This may be true for recent years, but not for the entire 1995-2005 period. Thus, both answers are not fully convincing for the medium term.

The boom in house prices provides quite a good explanation of the stylised facts. It can explain the strong increase in consumption and housing as well as the decline in saving ratios in most of the Anglo-Scandinavian countries.

Cross-country regressions (*Marterbauer – Walterskirchen,* 2005) show that, during the period 1995-2003, the effect of house prices on growth differentials between countries was even more important than that of investment in machinery and equipment. The theoretical axiom that medium-term growth rates are exclusively supply-side determined should thus be questioned. The duration of the cycle in residential building may be 15 years and more.

In the long run, however, there is no significant effect of house prices on GDP growth, since periods of booming prices are usually followed by sharp price falls. In the USA and other countries, there is no long-term upward trend in real home prices (*Shiller,* 2006).

Table 3: Components of demand

	GDP	Private consumption	Private investment in housing	Exports	Investment in machinery and equipment
	Percentage changes from previous year, Ø 1995/2005, p.a., volume				
Ireland	+ 7.3	+ 5.9	+ 10.1	+ 11.0	+ 9.1
Spain	+ 3.6	+ 3.8	+ 9.1	+ 6.4	+ 6.6
Finland	+ 3.5	+ 3.1	+ 5.6	+ 6.8	+ 2.4
USA	+ 3.3	+ 3.8	+ 5.4	+ 4.4	+ 7.1
UK	+ 2.8	+ 3.5	+ 2.5	+ 4.6	+ 2.6
Sweden	+ 2.7	+ 2.3	+ 6.4	+ 6.5	+ 4.6
The Netherlands	+ 2.3	+ 2.1	+ 1.5	+ 5.3	+ 3.1
France	+ 2.2	+ 2.3	+ 1.4	+ 4.9	+ 4.7
Austria	+ 2.2	+ 1.6	– 2.6	+ 6.6	+ 3.1
Denmark	+ 2.1	+ 1.7	+ 4.6	+ 5.2	+ 4.6
Belgium	+ 2.1	+ 1.7	+ 1.8	+ 4.2	+ 4.1
Switzerland	+ 1.5	+ 1.5	– 0.2	+ 4.9	+ 2.8
Germany	+ 1.4	+ 1.1	– 2.1	+ 7.3	+ 3.3
Italy	+ 1.3	+ 1.8	+ 1.6	+ 1.9	+ 2.5
Japan	+ 1.2	+ 0.9	– 2.9	+ 5.7	+ 2.1

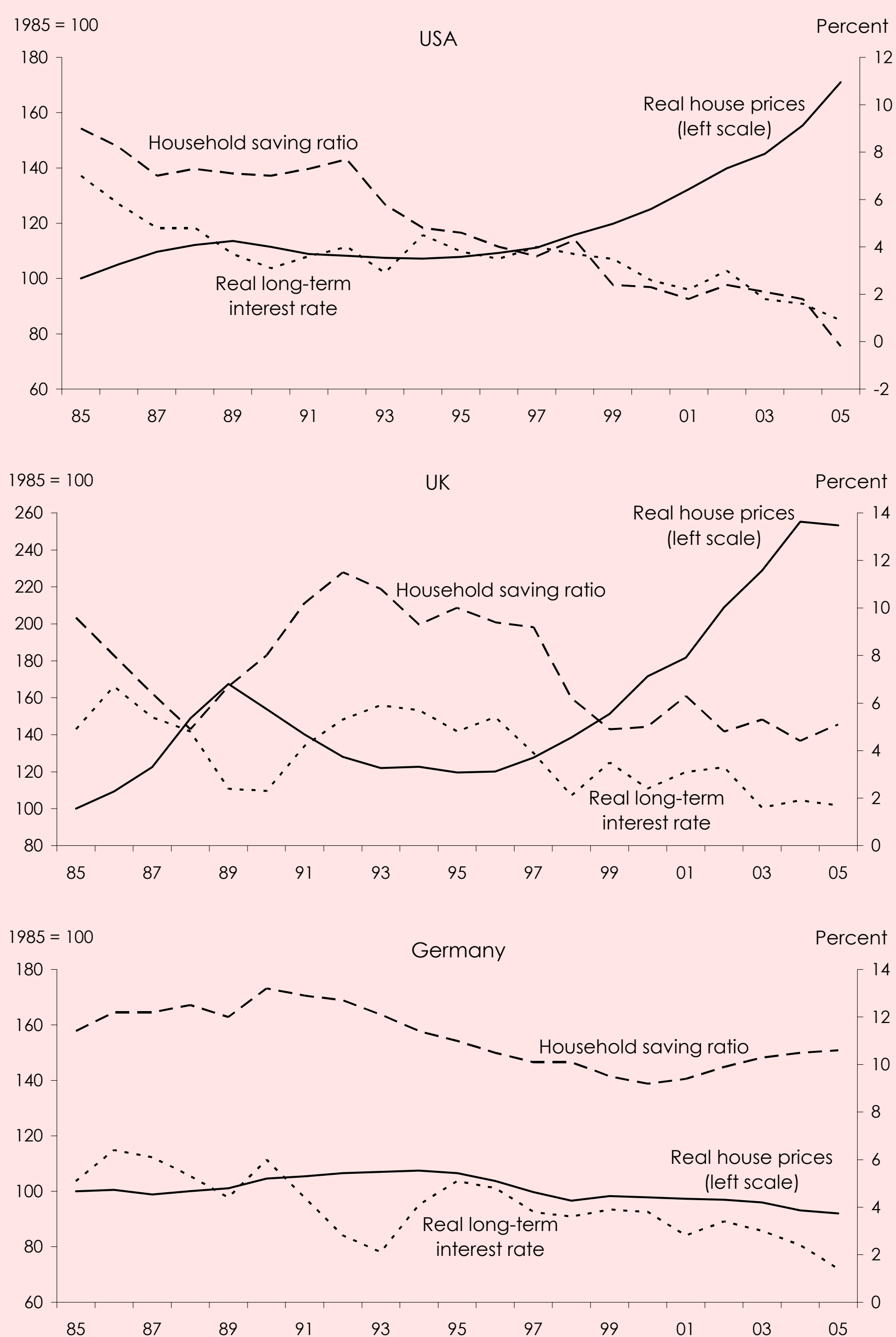
Source: Eurostat.

Moreover, during the period 1985-1995 – before the house price boom – growth differentials between euro area countries were rather small (Table 1).

The conclusion of an IMF study (*IMF,* 2004) on the causes of the boom in house prices was:

- a reduction of interest rates by 1 percentage point leads to an increase of real house prices by 1 percent;
- a rise in income by 1 percent results in an increase of real house prices by 1.1 percent;
- an acceleration of population growth by ¼ percentage point drives up real house prices by 1 percent.

Figure 3: Interest rates, house prices and saving ratios



Source: Bank for International Settlements, OECD.

The IMF concluded: "It appears that countries with predominantly fixed-rate mortgages have better behaved housing prices and fewer negative spillover effects on their economies" (*IMF,* 2004, p. 13).

The *OECD* (2004), on the other hand, recommends a deregulation of mortgage markets since this strengthens the wealth effects of rising house prices on private consumption and the effectiveness of monetary policy. However, there are positive effects only in the short-run.

References

Al-Eyd, A., Barrell, R., Davis, E.P., Pomerantz O., Consumption, Income and Wealth: a Time Series Based Panel Data Study of the Euro Area, NIESR, 2005.

Altissimo, F., et al., "Wealth and Asset Price Effects on Economic Activity", ECB Occasional Paper, 2005, (29).

Campbell, C., Cocco, J., "How do House Prices Affect Consumption? Evidence from Micro Data", NBER Working Paper, 2006, (11534).

Demirgüc-Kunt, A., Levine, R. (Eds.), Financial Structure and Economic Growth – A Cross-Country Comparison of Banks, Markets and Development, MIT Press, Cambridge, MA, 2001.

European Central Bank (ECB), Structural Factors in the EU Housing Market, Frankfurt am Main, 2003.

European Central Bank (ECB), "Assessing House Price Developments in the Euro Area", Monthly Bulletin, 2006, pp. 55-70.

IMF, The Global House Price Boom, IMF World Economic Outlook, Chapter II, Washington D.C., 2004.

Marterbauer, M., Walterskirchen, E., "Einfluss der Haus- und Wohnungspreise auf das Wirtschaftswachstum", WIFO-Monatsberichte, 2005, 78(11), pp. 761-774, http://publikationen.wifo.ac.at/pls/wifosite/wifosite.wifo_search.get_abstract_type?p_language=1&pubid=25815.

OECD, "Housing Markets, Wealth and the Business Cycle", OECD Economic Outlook, 2004, (75).

Shiller, R., "Long-Term Perspectives on the Current Boom in House Prices", Economist's Voice, 30 March, 2006.

Wealy, M., "Commentary: The Housing Market and Government Policy", National Institute Economic Review 2006, (195).

The Effect of House Prices on Growth – Summary

The differences in growth rates between EU countries during the period 1995-2005 can be attributed in part to the responsiveness of consumption and residential building to house price and interest rate changes. Rising real house prices in the UK, Ireland, the Scandinavian countries and Spain accelerated residential building and stimulated private consumption through wealth effects. According to cross-country analysis, an increase of real house prices by 1 percent raised GDP growth by 0.15 percentage point.

Mortgage borrowing has grown radically in these countries, and the saving ratios have declined.

In continental Europe, the stimulus of soaring house prices was lacking in the 1995-2005 period, with the exception of France and the Netherlands. But in this respect, the outlook seems to be brighter for continental Europe. In countries with high house prices there is a substantial risk of falling prices in the future with negative effects on consumption and residential building.

In the long run - including periods with falling house prices -, there is no clear evidence that house prices affect economic growth.

In market-based financial systems such as in the UK or Northern Europe, reactions to house prices and interest rate changes are clearly stronger than in bank-based systems such as in continental Europe.

Despite the success achieved on a medium-term basis by many countries with flexible real estate markets and market-based financial systems, a long-term growth strategy should not be based on these instruments, for soaring property prices tend to be followed by a downturn.