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**HOUSING SHORTAGE**  
**AND HOUSING INVESTMENT IN PORTUGAL**  
A preliminary view

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A preliminary view**

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## **Housing in Portugal: a non-priority**

Housing is not a political priority in Portugal. Unfortunately, it has not been a scientific priority as well. Out of the tops of the political and research agendas, housing problems tend to perpetuate themselves.

It is tempting to think the Portuguese housing policy as non-housing led. That would mean that the main policy outcomes on housing have been consequence of broader economic conditions and political decisions designed for purposes other than housing. In fact, unable to produce effective changes in the private rental housing market, the Portuguese governments have since 1976 tended to underpin their housing policy almost exclusively on a subsidised credit scheme for the acquisition or building of owner-occupied housing. The social housing sector represents only about 4% of the housing stock. As a consequence, low-income households hardly have access to housing and have had to search for housing solutions outside the formal building and credit sectors. Moreover, there is in Portugal a long standing housing shortage, which reflects inadequate housing conditions but also a quantitative insufficient housing production.

The other side of the coin - housing as a non-research agenda - has implied the scarcity of available statistical data. This is particularly true in the case of data for housing market dynamics research, such as an index of house prices or the number of dwelling transactions, which are non-existent. Besides, construction without building permits (significant until the mid-eighties) and tax evasion have biased much of the available data.

## **housing shortage and housing investment**

The main housing problem that Portugal has to face is undoubtedly the shortage of decent housing. This housing shortage is not merely cyclical, associated to short-run causes, but persistent, structural.

The Portuguese population is almost stagnant since the early 1980s (an increase of less than 0.2% between the Census of 1981 and 1991), but there are serious regional disequilibria in Portugal. The unbalanced economic growth and the associated urbanisation process, mostly in the coastal areas, where traditionally the population has been more concentrated, have stressed the housing pressures.

The numerous shanty towns in the metropolitan areas of Lisbon and Oporto - more than 42,000 “*barracas*” affecting about 162,000 people - are the most expressive sign of that housing shortage. No other EU country has such structural problem. Also a significant part of the housing stock (about 240,000 dwellings - 8% - according to the *ENH White Paper on Housing Policy in Portugal, 1993*<sup>1</sup>) is in serious disrepair. But other not so visible problems exist. According to the last Census (1991), 23% of households lived in overcrowded dwellings, 3.5% shared their homes with one or more families and 5% of dwellings had none or just one of the basic amenities (electricity, WC or piped water).

Such situation shows that both the market and the government have been unable to solve the housing needs of the Portuguese households. The supply of “low cost” or “social” housing (private or public provision) is insufficient and there is no real alternative between renting and owning. Despite the unfreeze of housing rents after 1985, construction to let represents, on average, less than 2% of the total new dwellings built. Private rented housing, which is concentrated in the urban areas and in 1981 represented 39% of the total stock, has decreased 23% in ten years, representing 27% of the stock in 1991. Owner-occupation, instead, has increased 26% between 1981 and 1991 (it represented 57% of the stock in 1981 and 65% in 1991). This increase in owner-occupancy is one of the highest in the EU (8 percentage points in ten years). Besides, it is a consistent process: in 1970 only 49% of households lived in their home.

Meanwhile, about 22% of the owners in 1991 had outstanding debt. A figure that might be growing fast, given the remarkable increase of housing credit through the formal banking system since the end of credit limits and the development of the financial liberalisation process, in detriment of informal ways of getting funds such as near relatives, neighbours and friends. The information available shows a consistent increase in the importance of the formal housing credit system. Although still low by European standards, the outstanding residential mortgage debt has grown from 6% of GDP in 1980 to 12% in 1990 and 19% in the end of 1995. The share of these loans in the total outstanding debt of the non-financial firms and households has increased from 9% in 1980 to 25% in 1990 and 32% in 1995. In terms of annual gross credit granted, the rates of growth have been absolutely astonishing: in 1994 a peak was reached with the number of contracts growing 41% and the amount of credit granted 60% (52% in real terms). Such credit is granted through the general banking system, where there are no housing specialised credit institutions, even though the weight of the “special credit institutions” - the

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<sup>1</sup>*Livro Branco sobre a Política de habitação em Portugal*, Encontro Nacional de Habitação, Lisboa, 11-12 de Fevereiro de 1993.

only ones lending for housing purposes until 1986 and providing subsidised credit until 1991 - is still high. The subsidised credit in the 1990s has represented about half of the total credit granted and the credit granted under the young borrower scheme represents about 30 % of the total credit.

In a housing context like the one described above, characterised by an extensive housing shortage and a significant increase in the ownership rate and of the households debt, associated with a lack of tenure choice, one of the issues deserving attention is how does housing investment behave. *Is it contributing to solve the Portuguese housing shortage?* Besides, having in mind that Portugal is a small open economy, the globalisation of the economy, the need of competitiveness and the European integration of the Portuguese economy, *what are the links between housing and the national economy fundamentals?*

In fact, the present context for the Portuguese housing policy is very challenging. Priemus *et al.* (1992), in their report on the consequences for national housing policies from the European Monetary, Economic and Political Union project<sup>2</sup>, stated that the four so-called “EC-poor” (Portugal, Spain, Greece and Ireland) seem to be going through a modernisation stage similar to the one experienced by the rich countries of Europe in the period between the end of the Second World War and the beginning of the 70s. A stage characterised by fast urbanisation, changing households' patterns and upward pressures on housing prices and building activity. One that, according to these authors, “has historically given rise to far reaching public support in terms of regulation of the credit market, public loans and subsidies and town planning.”<sup>3</sup>.

However, does this mean we just had to look at the way the European developed countries dealt with their housing problems and learn with their experience? I do not think so. The present context of the Portuguese economy, where achieving a successful integration in the European Economic and Monetary Union and modernising the productive structures are the main goals of the Portuguese government policy, is very different from the one those countries faced in the 50s and 60s. The fulfilment of the Maastricht convergence criteria, for instance, implies macro-economic constraints such as the need to reduce public deficits and inflation, which constitute a considerable challenge for the Portuguese economy. Portugal is the second poorest country of the European Union, with a GDP representing (in PPP terms) little more than

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<sup>2</sup>Priemus *et al.*, *European Monetary, Economic and Political Union: Consequences for National Housing Policies*, Housing and Urban Policy Studies, 6, Delft University Press, 1992.

<sup>3</sup>Priemus *et al.*, *idem*, p.49.

60% of the European average and with social protection levels of the welfare state still far from the ones reached in the richer countries of the European Union.

*What are the implications of these constraints for the Portuguese housing policy?* As Ghekiere (1992)<sup>4</sup> rightly pointed out, in this fiscal context there is little space for an interventionist policy of massive building by the state such as the one undertaken after the Second World War in other countries. Besides, we must be aware that sometimes the most powerful effects of government policies on housing provision are determined by “non-housing” reasons, namely macro-economic policies<sup>5</sup>.

Let us now look at the importance of the GFCF in housing relative to total construction investment and to GDP (see Charts 1 and 2)<sup>6</sup> as well as at the Portuguese situation in comparison with the other EU countries (see Tables 1 and 2). The National Accounts before 1977 tended to underestimate the GFCF in housing and construction<sup>7</sup>, a fact that has to be taken into account.

It seems evident the decrease of importance of housing in total construction investment and in the GDP since a peak reached in 1974.

Meanwhile, Tables 1 and 2 show data on GFCF in housing and in total construction as a percentage of GDP in the EU countries. In the early 1990s, Portugal was part of the group of countries with the highest ratios of housing on GDP, while the opposite was true in 1980. Yet the better position of Portugal in the 90s does not mean there has been any increase in the share of the resources devoted to housing investment. Instead, it were the ratios of the other European countries that have decreased.

A first conjecture can be drawn: *evidence suggests that the Portuguese housing shortage is linked to a low level of housing investment.*

Having in view an enlightenment of the housing investment behaviour in Portugal, and its possible relation with the national economy fundamentals, I will try next to identify the long-run as well as the short-run dynamics of the housing investment in Portugal.

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<sup>4</sup>Laurent Ghekiere, *Les Politiques du Logement dans l'Europe de demain*, La Documentation Française, Paris, 1992.

<sup>5</sup>See Oxley and Smith, *Housing Policy and Rented Housing in Europe*, Chapman & Hall, London, 1996, p.13.

<sup>6</sup>Original data provided by the National Institute of Statistics, expressed in current prices, have been used. The Portuguese National Accounts were subject to a change of base after 1986, including now the Mainland, the Azores and Madeira (the NA-77 referred only to the continental Portugal). Therefore, there is a breakdown in the series in 1986.

<sup>7</sup>See Ivo Gomes Francisco, *Compreender a Contabilidade Nacional*, Banco de Fomento e Exterior, Lisboa, 1990, p.170-171.



## Housing Investment Trends and Cycles

This section is devoted to the identification of housing investment trends and cycles in Portugal, for which GFCF in housing is used, and its relation with the GDP. The available data refers to the period from 1958 to 1991, the statistics are annual and are expressed in real values<sup>8</sup>. The need to have a sufficiently long time series has led to the consideration of a period backing to 1958. However, as has already been referred, the National Accounts before 1977 tended to underestimate the GFCF in housing and construction. That means the results of the analysis undertaken should be read with some caution.

The identification of housing investment trends and cycles is done by using the Hodrick-Prescott filter and the correspondent procedure provided by RATS<sup>9</sup>(HPFILTER.SRC)<sup>10</sup>. It is a technique widely used by *real business cycles* economists. In a simple way, we may say that the HP filter computes a trend of a series through a simultaneous minimisation of the deviations between actual and trend values and of the fluctuations of the growth rates of the trend values.

Formally, the HP filter computes the estimated growth component  $y^g$  of a time series  $y$ , expressed in logarithms, by minimising the sum over  $t$  of

$$(y(t)-y^g(t))^2 + \lambda * ((y^g(t)-y^g(t-1))-(y^g(t-1)-y^g(t-2)))^2$$

where  $\lambda$  is the weight on the squared 2<sup>nd</sup> difference of the growth component. A cyclical component may then be estimated as the difference between the original series and the HP growth component.

A smoothing trend of this cyclical component may be estimated applying the HP filter procedure.

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<sup>8</sup>The sources of the data used are:

- Departamento de Prospectiva e Planeamento, *Série Retrospectiva das Contas Nacionais Portuguesas (1958-1991) - ensaio de compatibilização com o SCNP-86*, Lisboa, 1995;
- Banco de Portugal, *O Stock de Capital na Economia Portuguesa (1953-81)*, documento de trabalho n° 6, 1984;
- unpublished data on GFCF in Housing and Construction, 1977-1991, provided by the Portuguese *National Institute of Statistics (INE)*.

Given the several changes of the National Accounts in the period considered, we had to admit some restrictive hypotheses and to do our own calculations. Details of these and the series may be provided under request.

<sup>9</sup>*Regression Analysis of Time Series*, version 4.2, an econometric package from Estima.

<sup>10</sup>See R. Hodrick & E. Prescott, "post-war U.S. Business Cycles: An Empirical Investigation", Carnegie-Mellon working paper, 1980, R.G. King & S.T. Rebelo, "Low frequency filtering and real business cycles", *Journal of Economic Dynamics and Control*, 17, 1993, pp. 207-231, and the information given in the RATS file "HPFILTER.SRC".



I used a  $l=400$  for the identification of the long-run trend of the series and a  $l=100$  to compute a smoothing trend of the cyclical component of the series.

### **A. Long-run Trends.**

Charts 3 to 10 show the results of long-run trend determination.

Let us make some remarks on these results.

1. There is clear evidence of a change in the housing investment long-run trend after a period of consistent growth that reached its peak by 1979. While the annual average growth in the 1958-79 period was 7.4%, it became negative afterwards: -0.4% in 1980-91 (see Chart 3).

2. This was in sharp contrast with what happened in the same period with the investment in non-housing construction trend: 6.0% in 1958-79 and 6.5% in 1980-91 (see Chart 5 and the Chart 10 for a perspective of the evolution of the respective growth rates).

3. In the same periods, Gross Domestic Product grew 5.5% and 3.1%, respectively.

4. I tried to confront the former analysis with the figures for new dwellings completions.

First, it must be stressed the instability of new dwelling production (see Chart 8). Yet the most awkward aspect refers to the opposite conclusions we reach: while the period after 1980 shows a decreasing trend in housing investment, when we look at the dwellings trend we are led to the conclusion of an improvement on housing construction (see Chart 9).

Why does this happen? The most important explanation, I think, has to deal with the different nature of the data: estimates of housing GFCF in the context of National Accounts on one hand<sup>11</sup>, legal permits for housing construction, on the other. The latter data is questionable on several grounds<sup>12</sup>: that evolution of dwelling construction is not very reliable given (i) the available information on the consumption of construction materials; (ii) the nature of the housing policy; (iii) the relevance of the informal sector and illegal construction in the Portuguese house building between the 60s and the mid-eighties, after which is thought to be a decreasing phenomenon; (iv) a more rigorous collection of the statistics on housing permits and completions since the late 1980s.

<sup>11</sup>with the problems already referred.

<sup>12</sup>See the *ENH White Paper on Housing Policy in Portugal* (1993).

Let us now turn our attention to the results of the identification of the housing investment short-run dynamics, that is, of cycles.

## **B. Short-run Dynamics**

Short-run dynamics is shown in Charts 11 to 17.

Short-run cyclical fluctuations of a series, as referred above, are measured as the relative deviations between actual values and the correspondent HP-trend values. Smoothing trends of this fluctuations are then computed producing what I call HP-cycles.

Regarding these short-run fluctuations, the main points to retain are:

1. The similarity of housing and total construction investment cycles, although housing fluctuations have been more pronounced (see Charts 11 and 12).

2. Housing and total construction investment are very pro-cyclical whilst the non-housing investment in construction presented a counter-cyclical behaviour (Charts 11 to 15). Non-housing investment in construction refers mainly to public works. So, these results suggest closer links between housing investment behaviour and the fundamentals of the national economy.

3. Gross Domestic Product became more unstable since the early 1970s. It reached a peak in 1973 and the following trough in 1985.

4. Housing and total construction investment reached a peak in 1974, after which they suffered the downturn phase of the cycle until 1985.

5. Even though the smoothing HP-cycle of non-housing investment in construction shows a counter-cyclical nature, a closer look at Chart 11 seems to evidence a coincident upturn phase of this variable and the GDP after the mid-1980s. It is tempting to link this to the effects of the European integration of the Portuguese economy after 1986. Yet only the availability of more recent data and a deeper analysis may highlight this conjecture.

6. The relationships between dwellings' completions and GDP (Chart 16) and between housing investment and disposable income cycles (Chart 17) are not so clear-cut than the ones we identified between housing investment and the GDP.

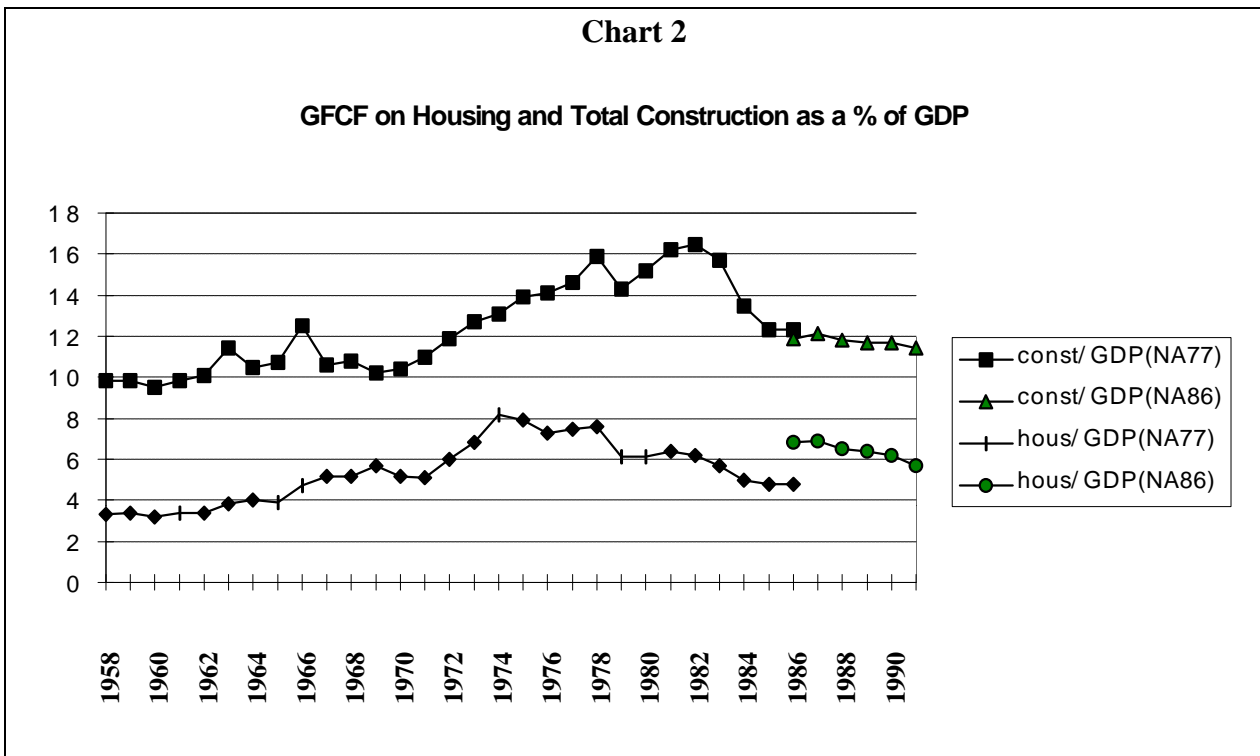
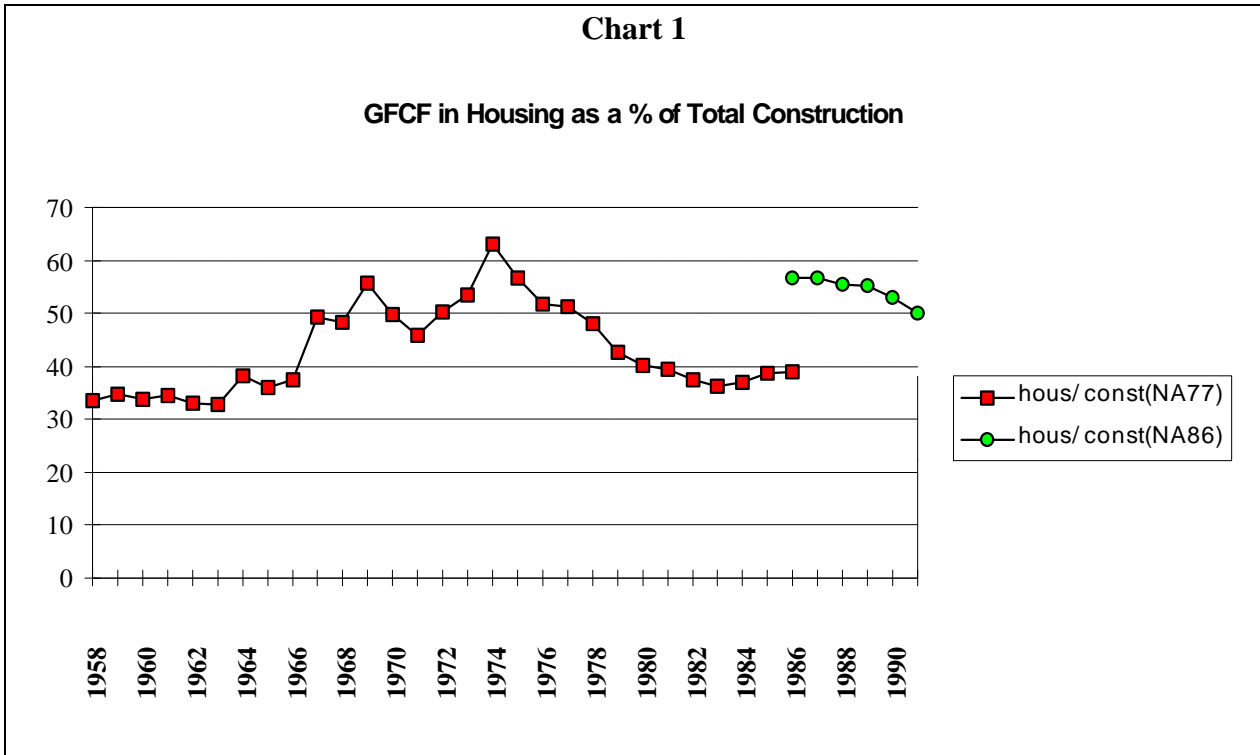
## Conclusions

In this paper I tried to link the housing shortage issue to the housing investment behaviour in Portugal. An identification of the main threads of housing investment trends and cycles in Portugal has been undertaken. Our findings, although dependant of the uncertain reliability of the data - and demanding a more detailed examination, namely by using econometric modelling - suggest a challenging situation on theoretical grounds regarding housing in Portugal:

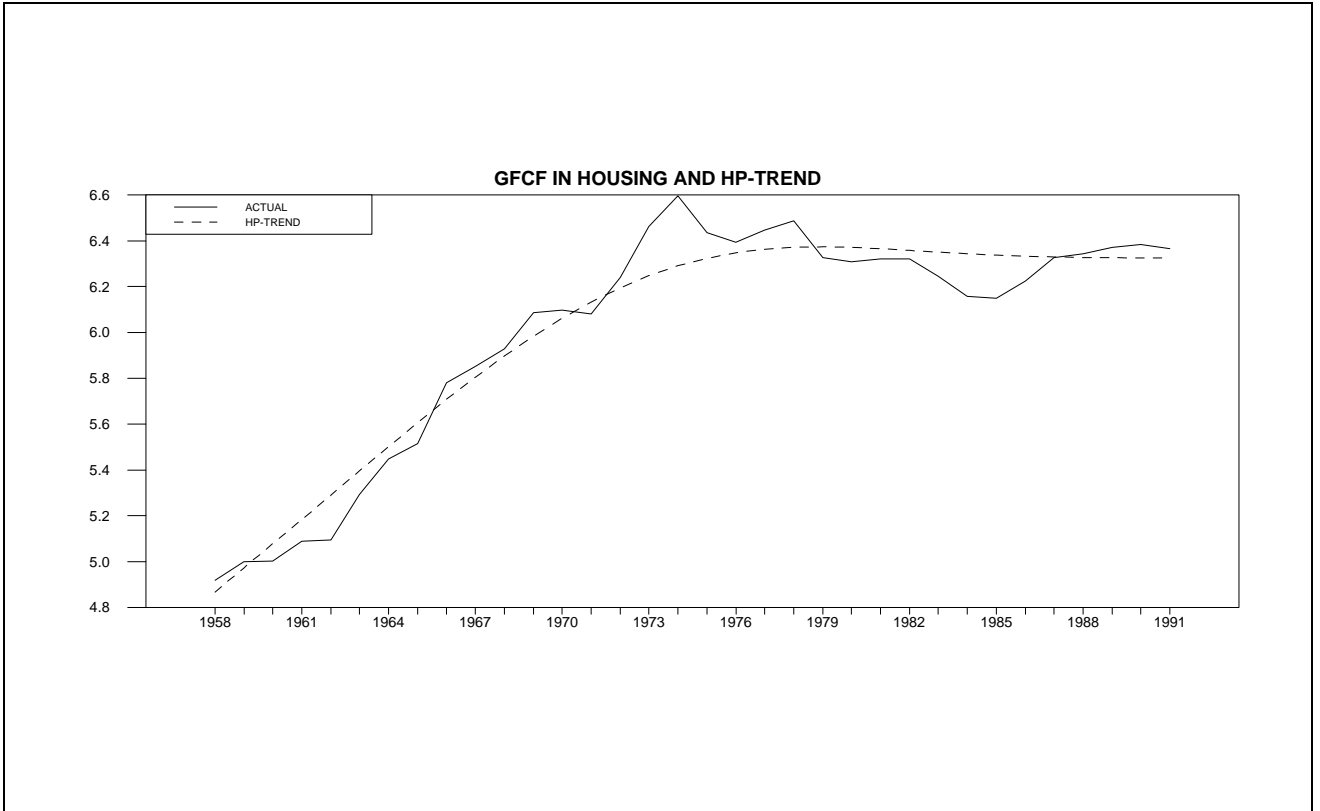
a) *the Portuguese housing shortage is linked to a low level of housing investment:* evidence suggests that the ratio of housing investment to GDP is low and that the long-run housing path is not increasing in pace with the GDP, being the trend of housing investment negative in the period 1980-..., which means it would be possible a better performance of housing investment;

b) *housing investment has a pro-cyclical behaviour,* suggesting there has been no autonomy of the housing sector from the rest of the economy and that its behaviour is linked to the fundamentals of the national economy. If this is true, what is the direction of causality? Besides, is there any specificity of the Portuguese case in comparison with the other European countries?

These are issues demanding further research.



**Chart 3**



**Chart 4**

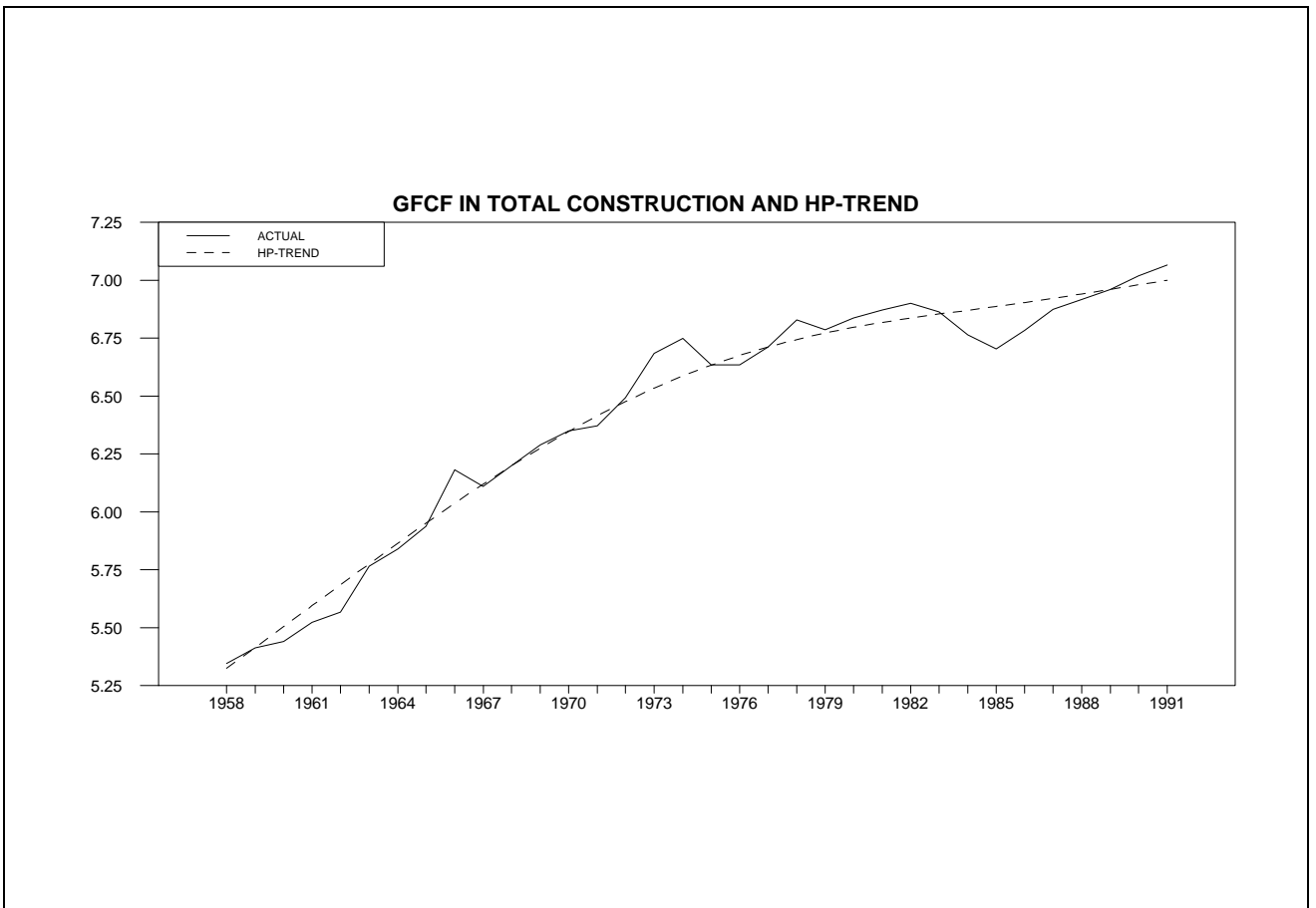


Chart 5

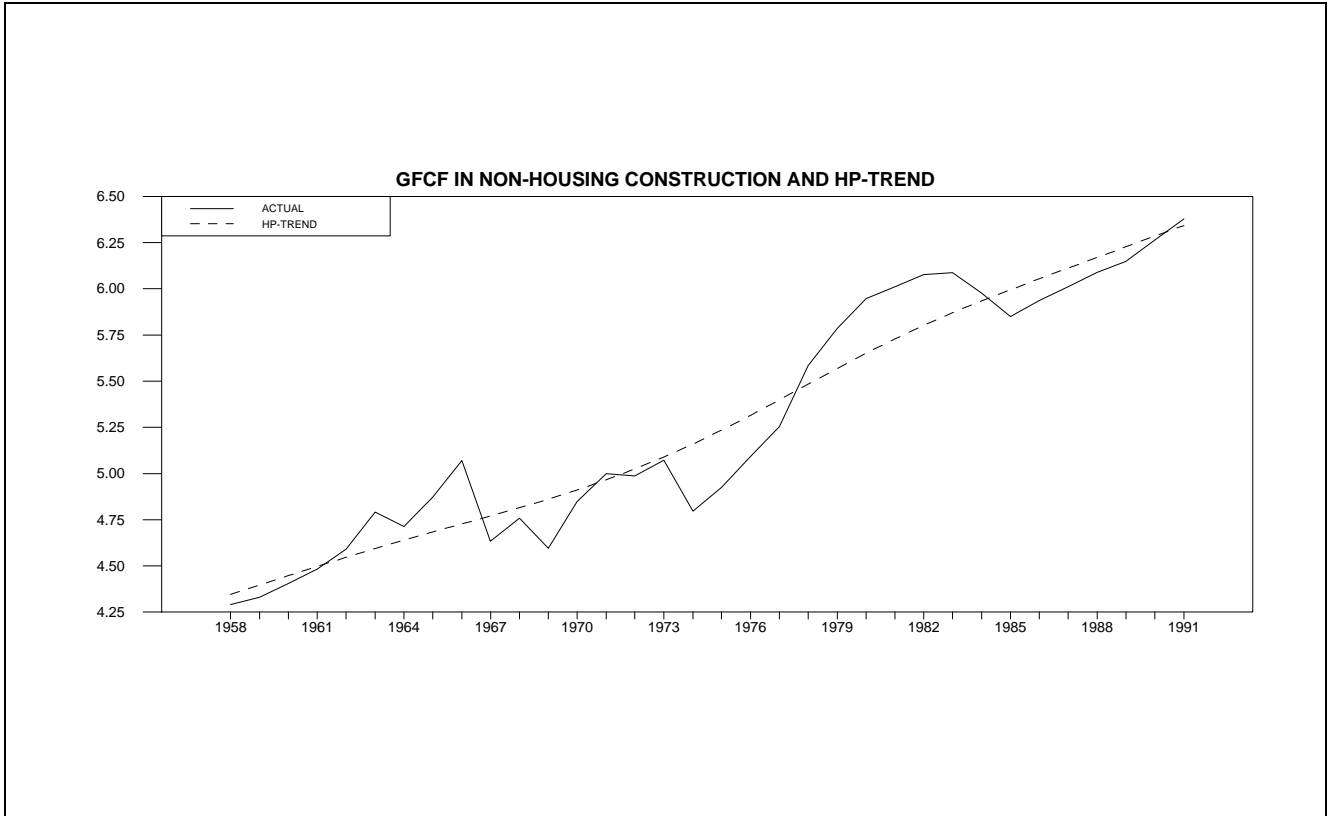
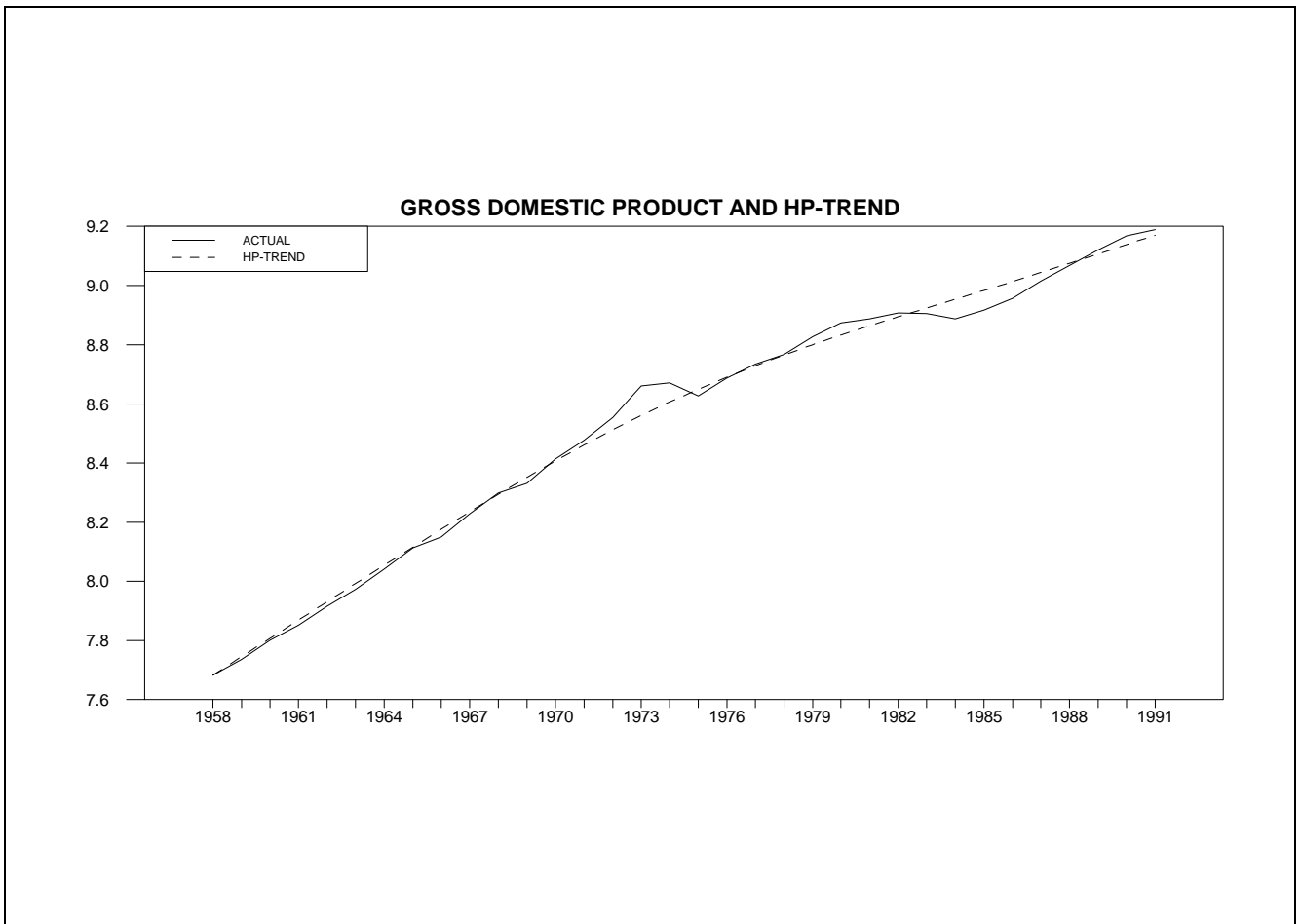
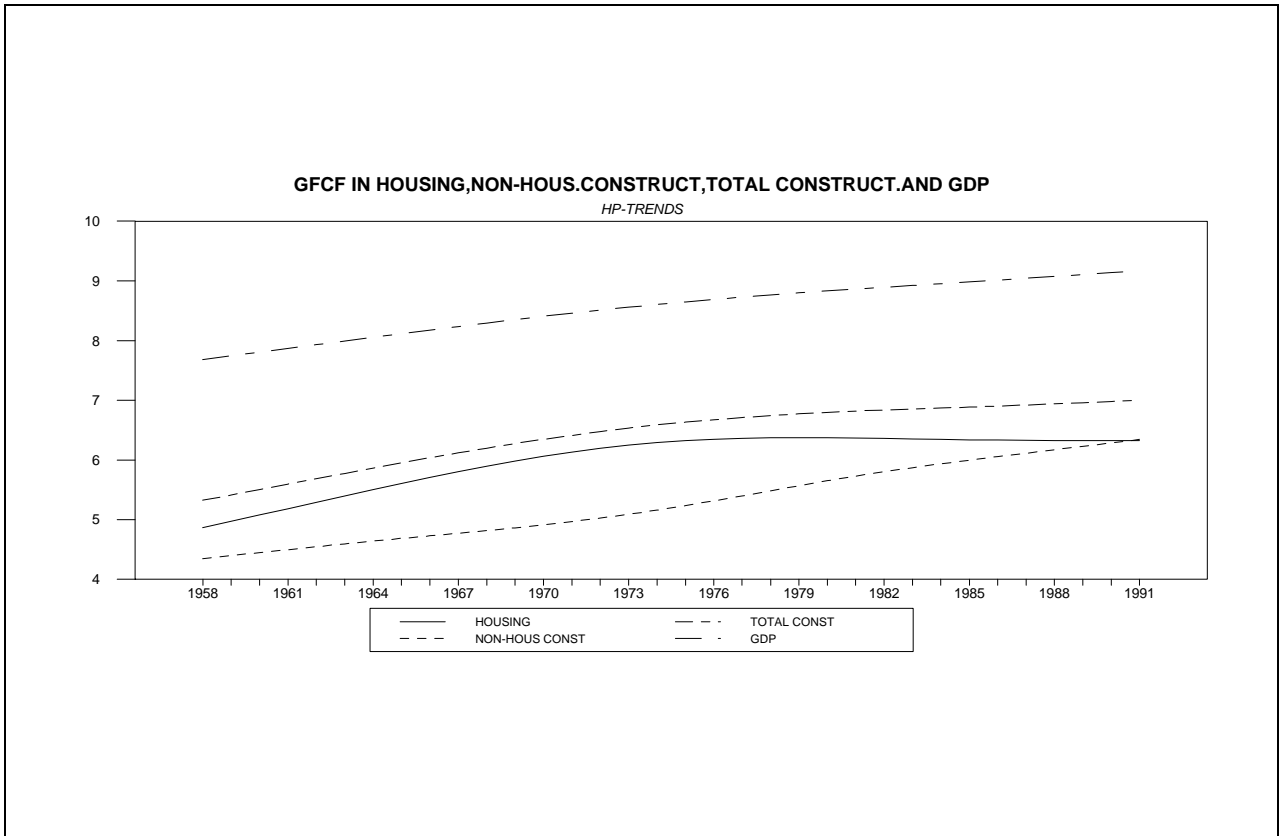


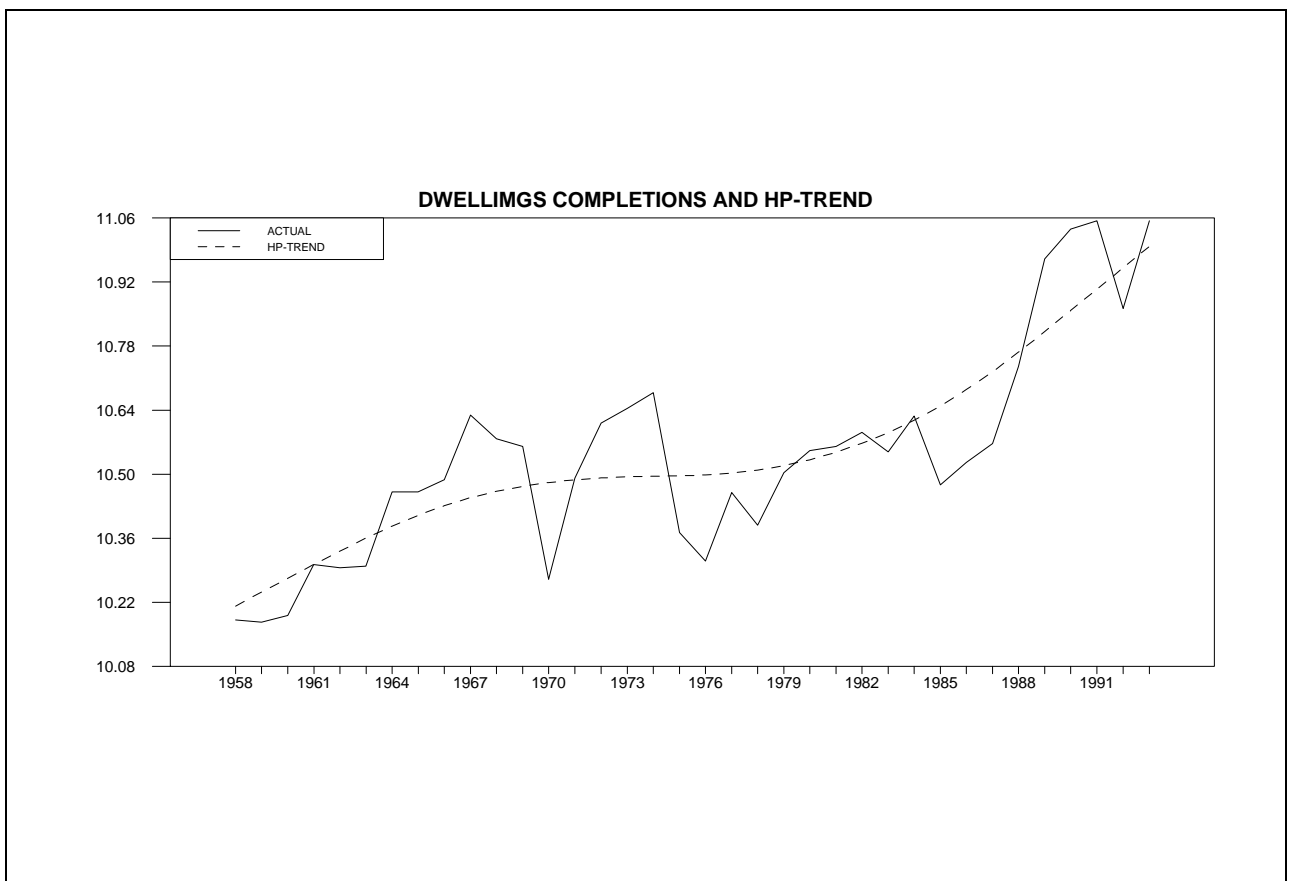
Chart 6



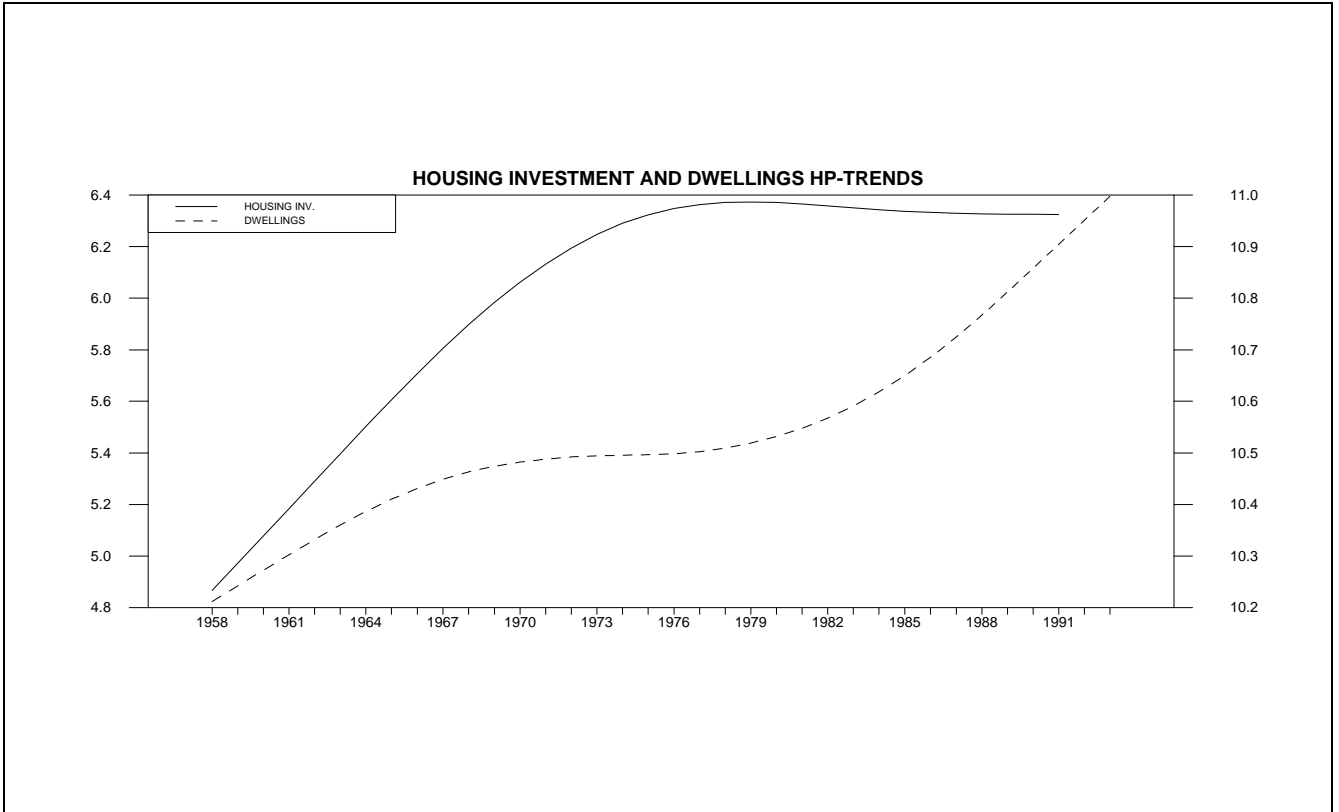
**Chart 7**



**Chart 8**



**Chart 9**



**Chart 10**

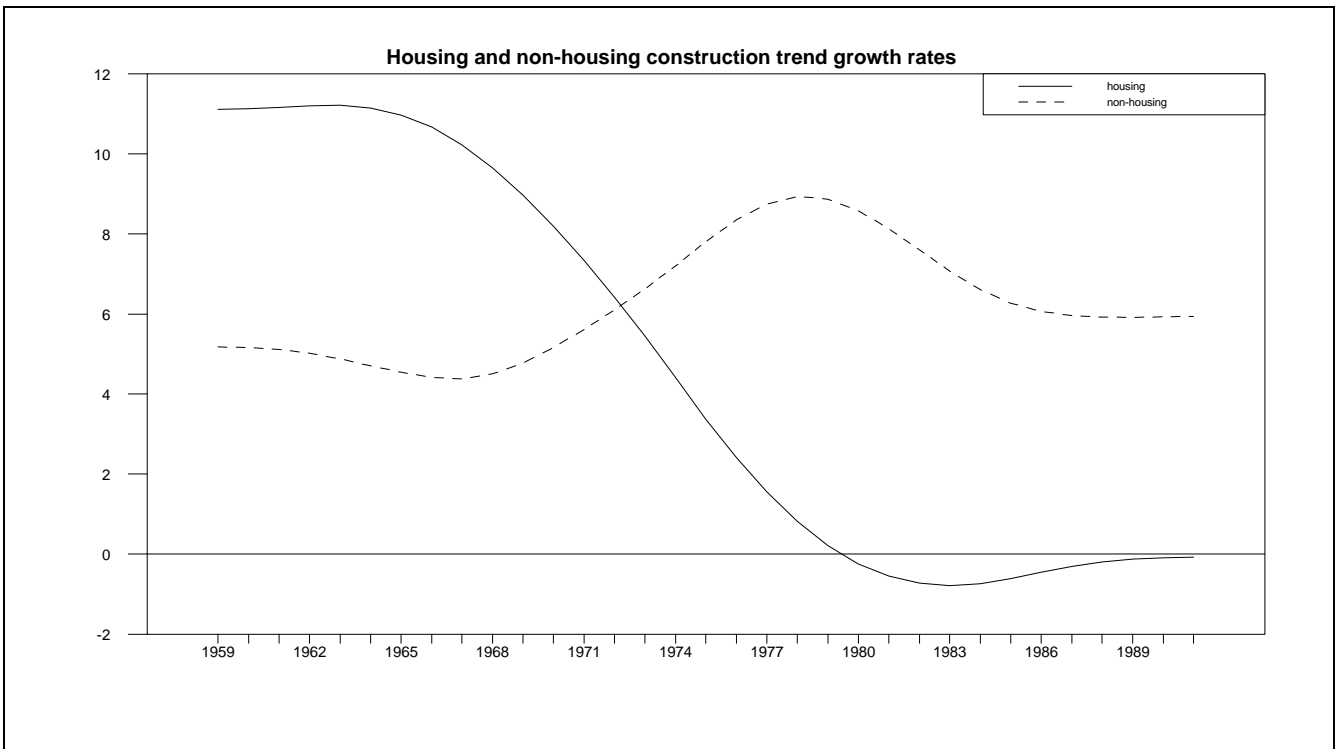
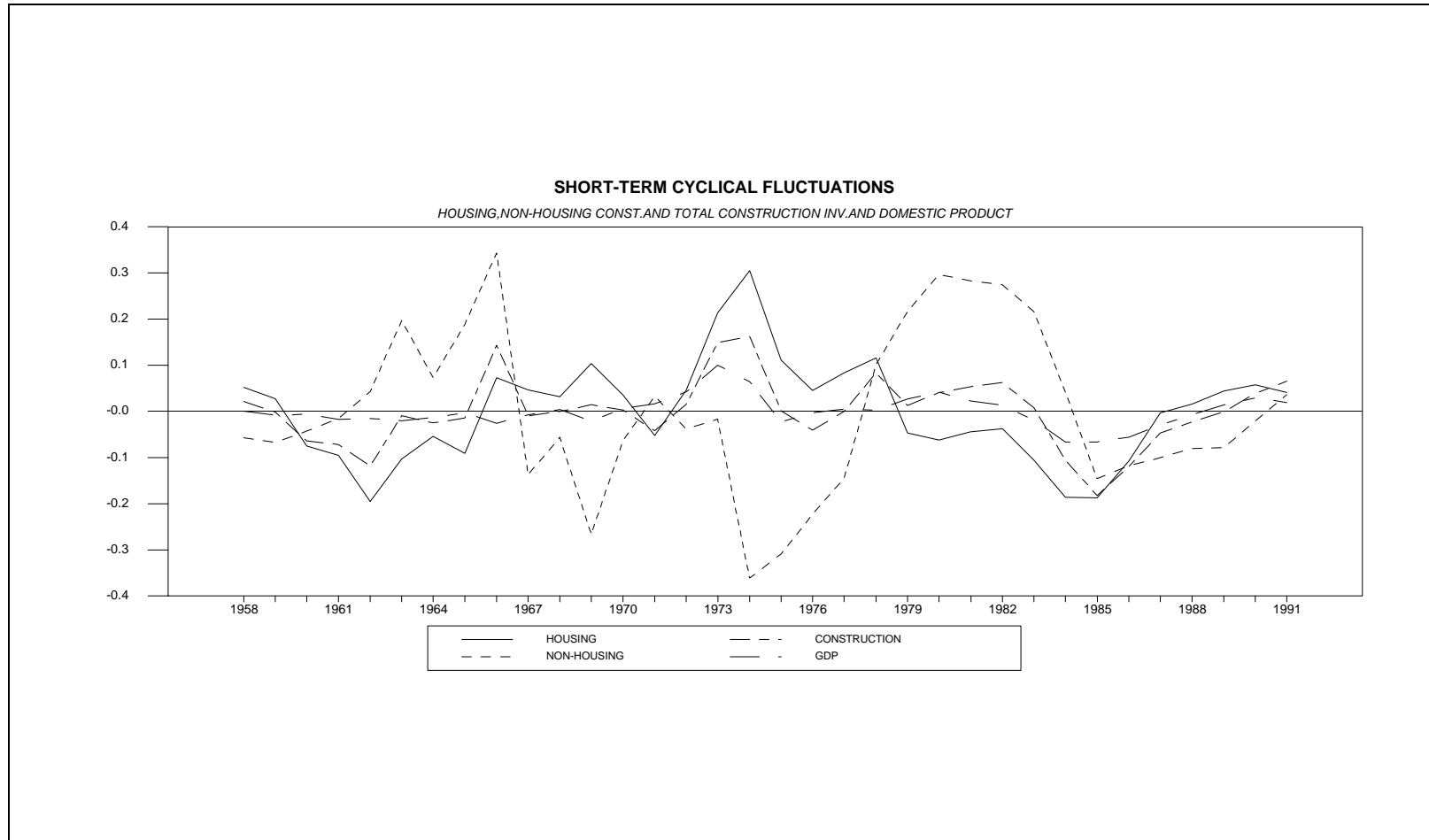




Chart 11



**Chart 12**

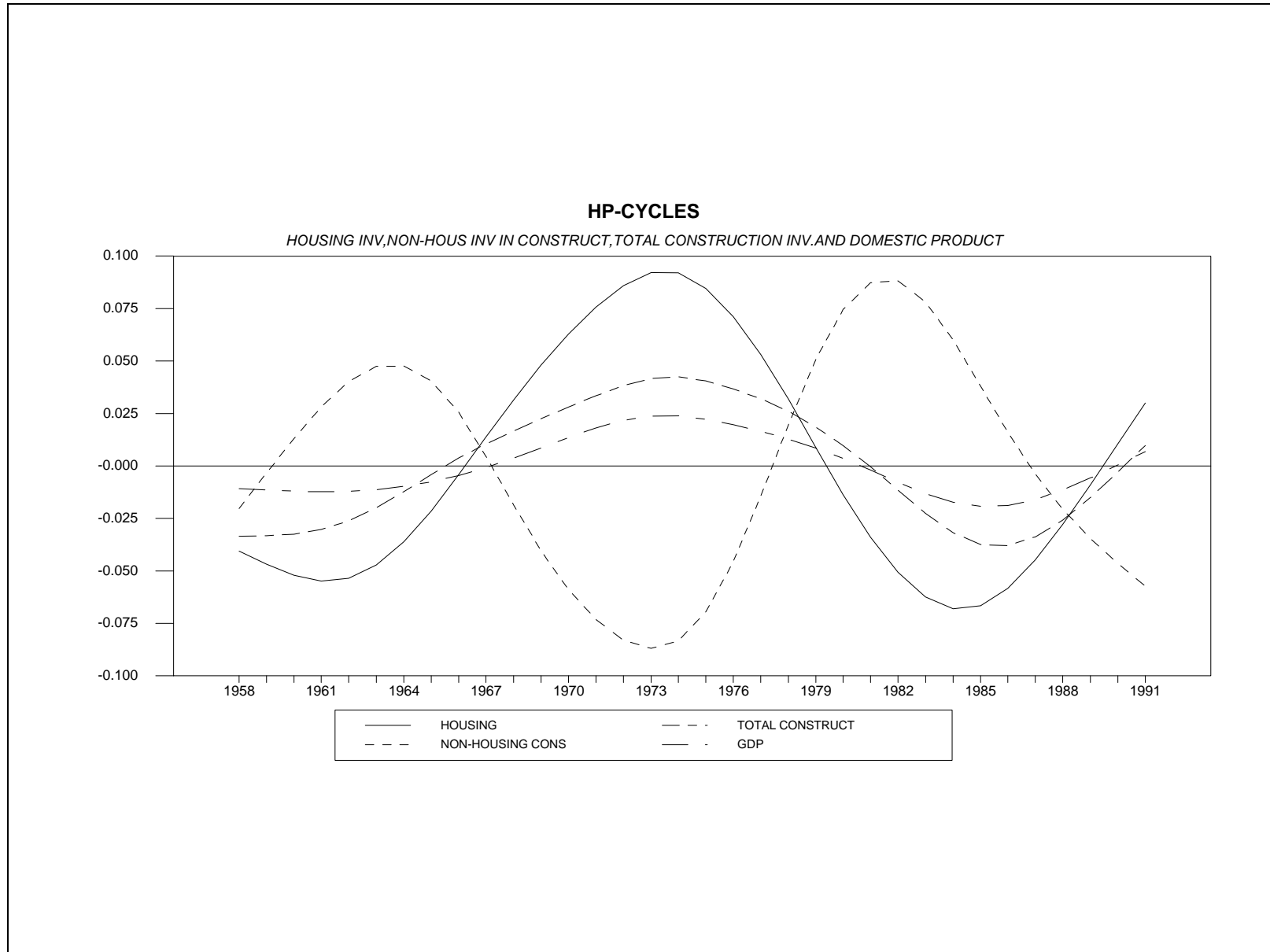


Chart 13

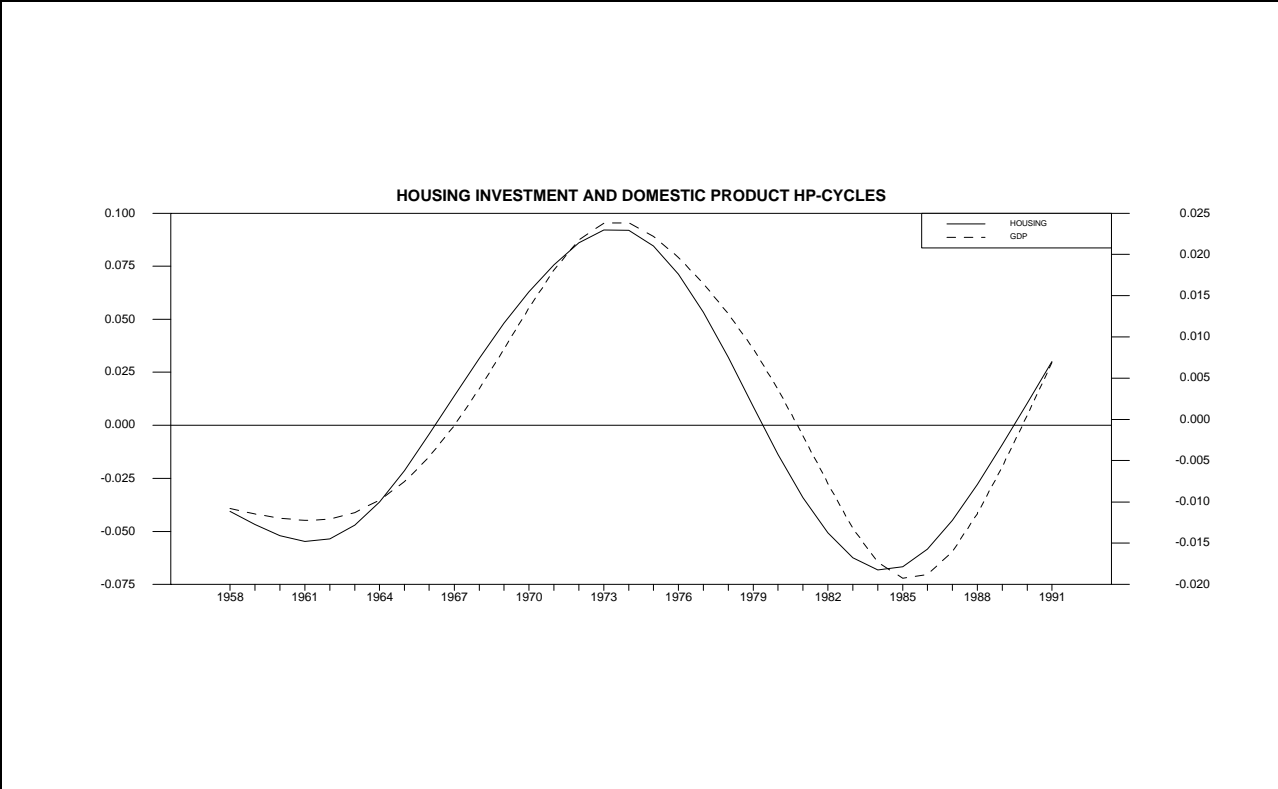


Chart 14

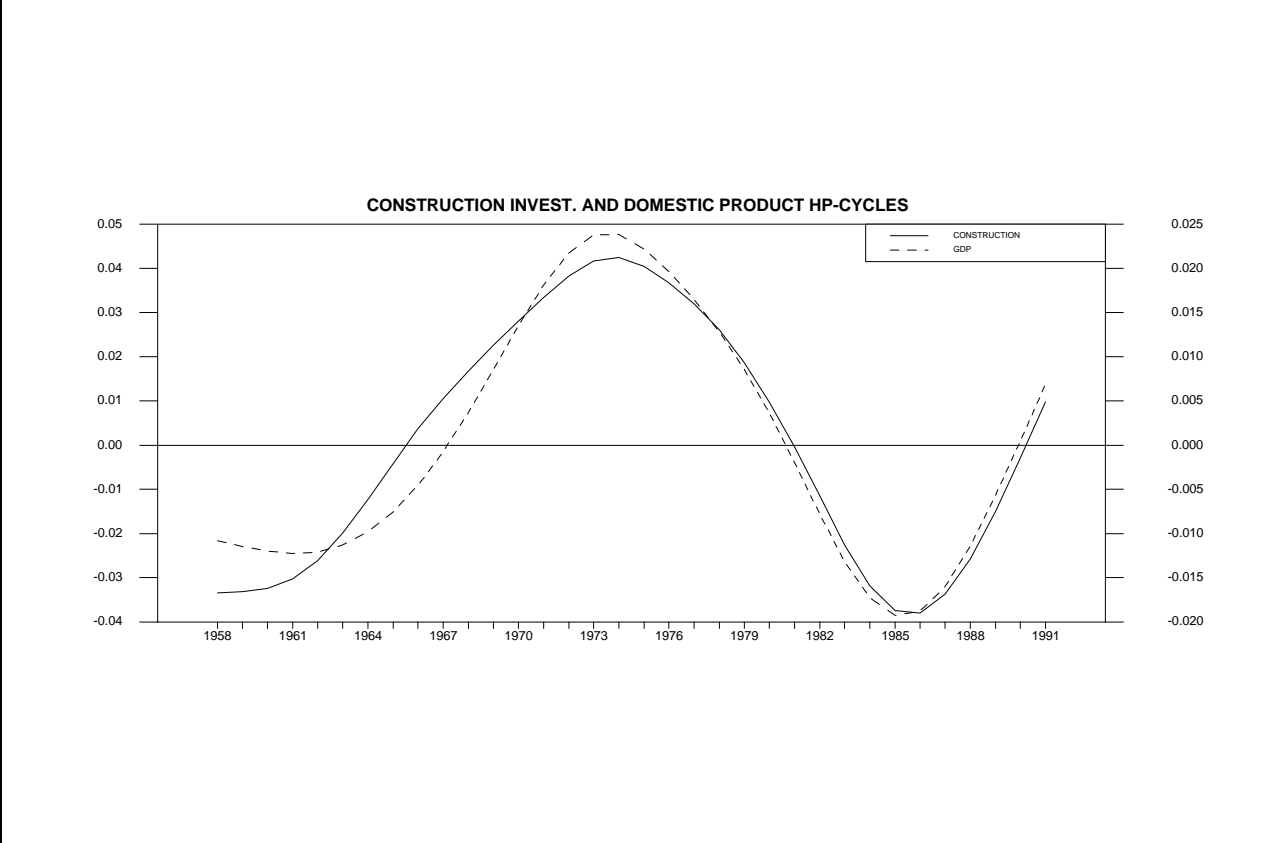


Chart 15

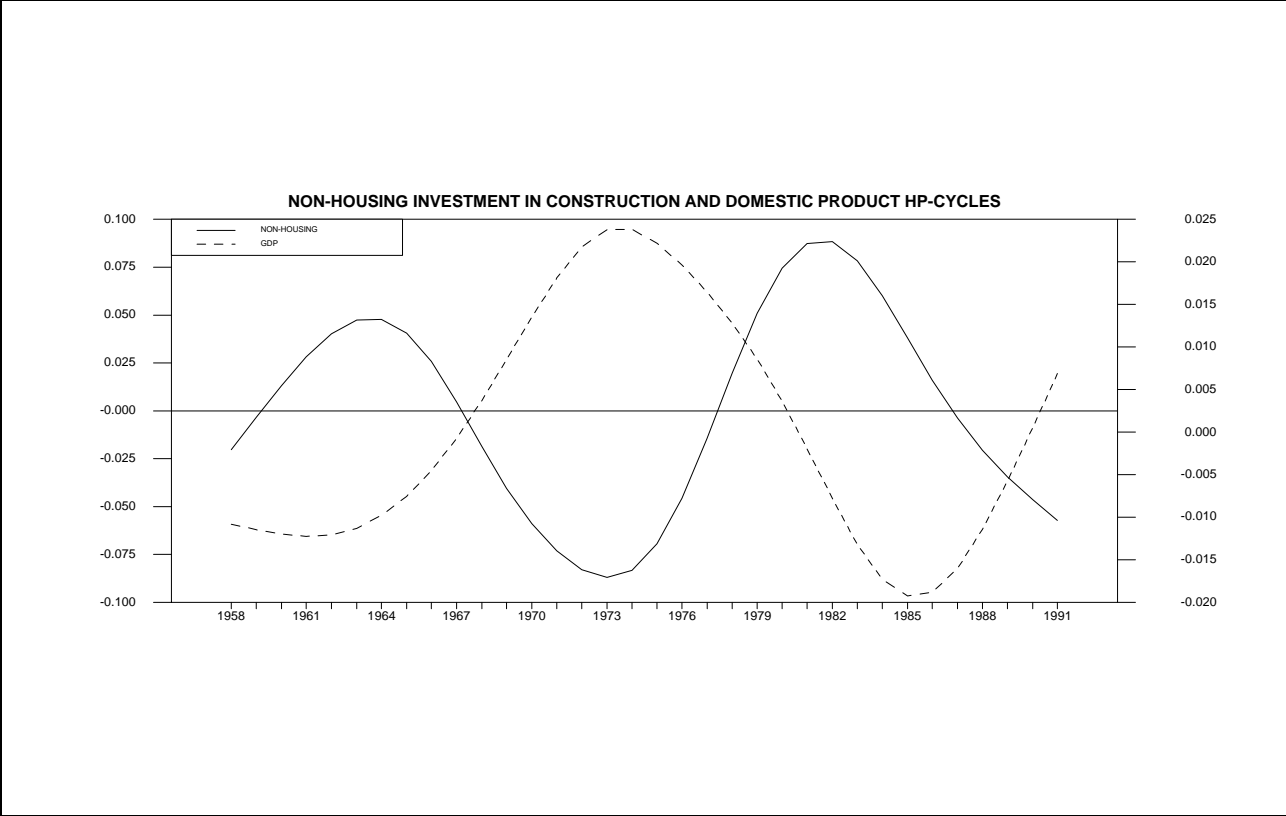


Chart 16

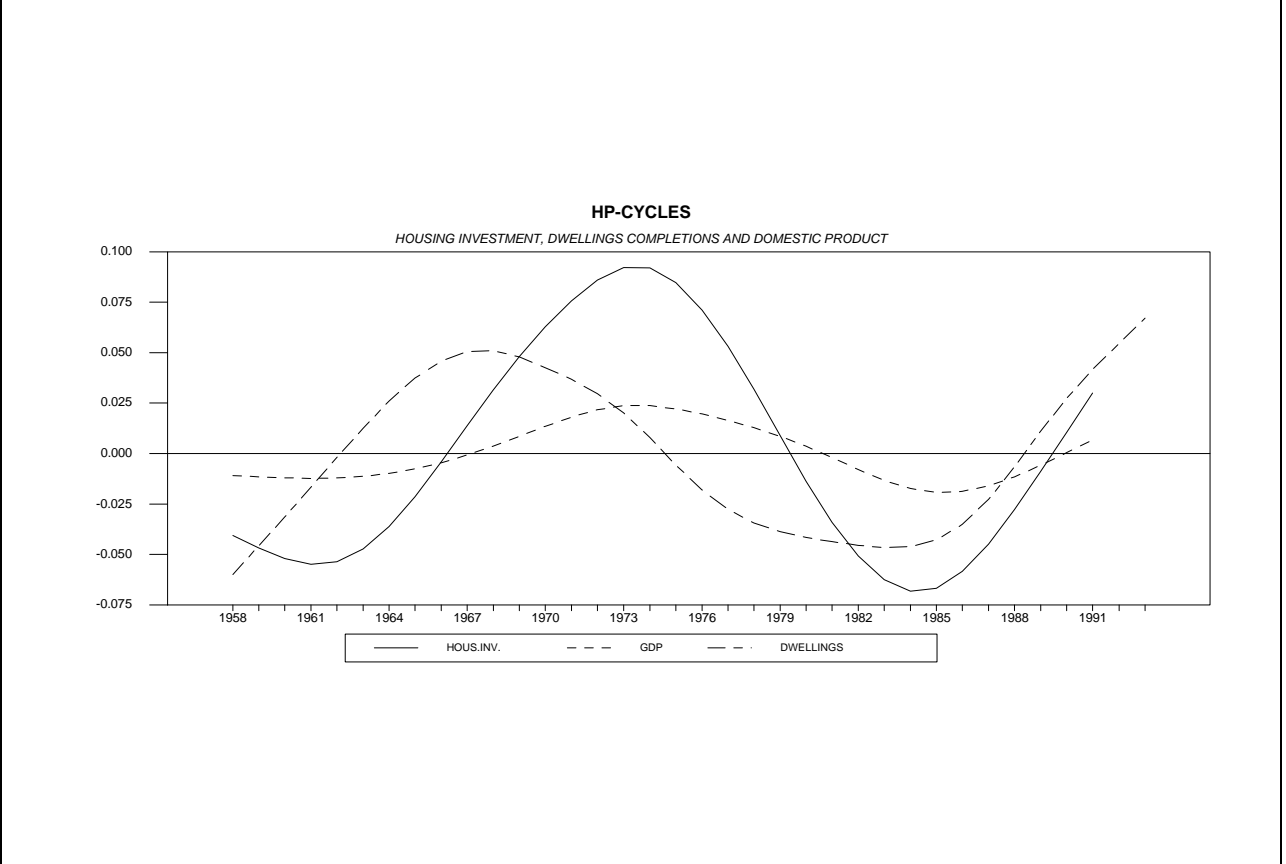
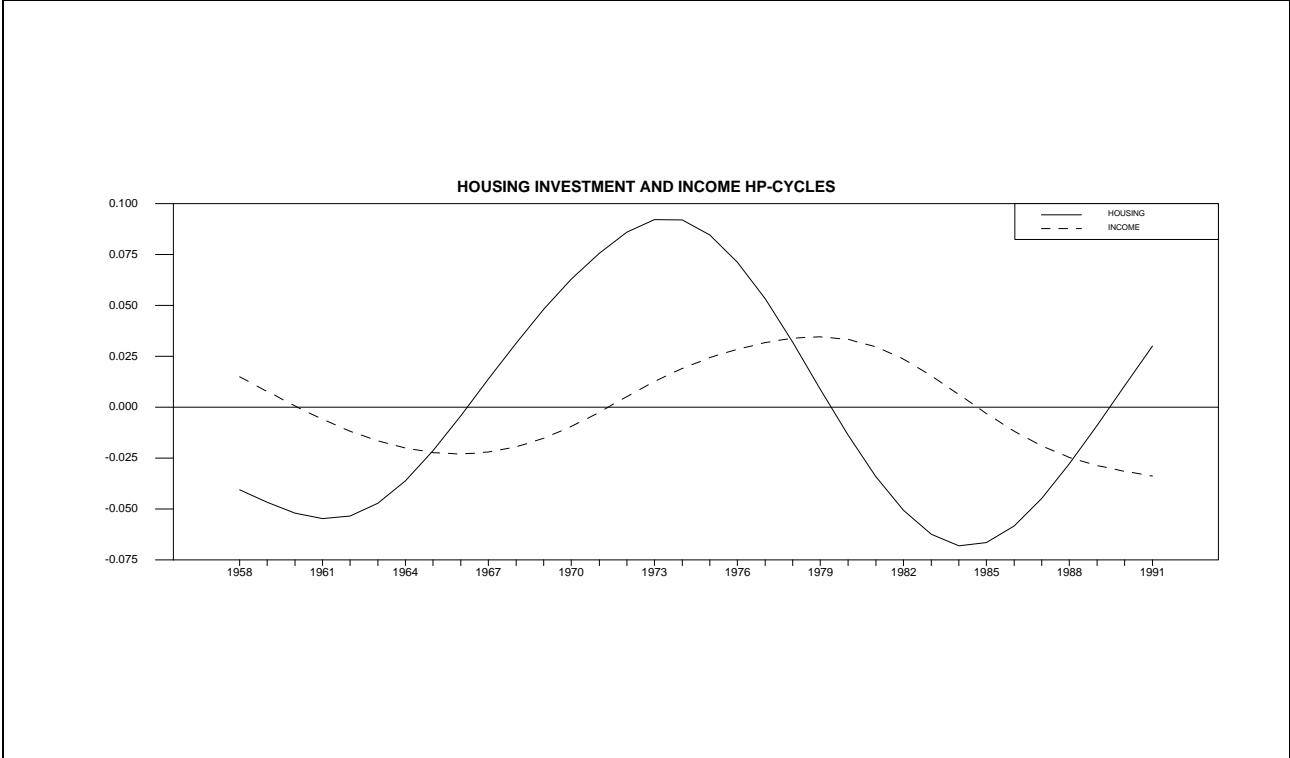


Chart 17



**Table 1**  
**GFCF in Housing as a % of GDP**

	1980	1990	1991
Belgium	6.4	4.3	4.8
Denmark	5.3	3.6	3.1
Finland	7.2	7.2	6.1
France	7.4	5.1	5.1
Germany	7.1	5.6	5.7
Greece	8.0	5.1	4.4
Ireland	6.2	...	4.0
Italy	6.7	5.1	5.3
Netherlands	6.2	5.2	4.7
Portugal	6.1	6.2*	5.7*
Spain	5.5	...	4.7
Sweden	4.7	5.9	6.4
United Kingdom	3.8	3.6	3.0

Source: UN/ECE, *Annual Bulletin of Housing and Building Statistics*, Geneva, 1995. \* INE, not published

**Table 2**  
**GFCF in total construction as a % of GDP**

	1980	1990	1991
Belgium	14.2	...	...
Denmark	11.8	9.5	8.2
Finland	16.1	16.4	15.0
France	14.0	11.4	11.5
Germany	14.1	11.3	11.5
Greece	15.6	11.3	10.8
Ireland	15.0	9.7	9.1
Italy	12.8	10.3	10.3
Netherlands	13.1	11.5	11.1
Portugal	15.2	13.1 (11.7)*	13.3 (11.4)*
Spain	14.1	15.7	15.8
Sweden	12.0	12.3	11.8
United Kingdom	9.6	10.6	9.3

Source: UN/ECE, *Annual Bulletin of Housing and Building Statistics*, Geneva, 1995. \* INE, the most recent values available (1995)

