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Buyers' behaviour and the housing bubble in Greece

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Summary

During the period 2004-2007, there was a peak in both housing construction and house prices in Greece. Two important changes in the real estate tax regime were early announced, which were extensively promoted by the mass media and real estate professionals, in a way that anticipated significant increases in real estate prices: the imposition of VAT on real estate and the drastic tax increases on real estate transfers from the beginning of 2006. The question posed and investigated in this work is the following: given the favourable economic environment, this work investigates to what degree and in which ways, were home-buyers influenced by the views presented by the mass media, in order to proceed to the acquisition of a privately-owned dwelling?

Based on both social psychology and behavioural economics approach, a survey was performed with a questionnaire, which was answered by people who had bought their home during the study period, in two Greek cities.

Home-buyers were informed about the imposition of new tax regulations and considered that house prices would continue to rise. They were not directly influenced by the messages received from the mass media, but through discussion with members of their family, they reached the pessimistic conclusion that the acquisition of a privately-owned home would be more difficult in the future and, therefore, they felt they had to proceed with buying a dwelling as soon as possible.

Keywords: residential market, social psychology, behavioural economics

1. Introduction

During the period 2000-2007, the residential market in Greece was highly active. However, the peak in housing construction was recorded between 2004 and 2007. A significant decrease in the housing construction has been noticed, since the beginning of 2008, and since 2009 in the market values too, according to data issued by the Bank of Greece, that confirmed the downturn in the housing market.

The macroeconomic data of the Greek economy since 2001 has favoured the development of the housing market. However, the particular conjuncture of the period 2004-2007 is puzzling with regard to the possible effect of psychological factors, affecting the residential market.

This work aims at investigating:

a) The possible influence on the behaviour of prospective buyers of the early announcement of tax regulations, which were widely publicised by the media:

- The imposition of Value Added Tax on new buildings (Law 3427/2005) from 1.1.2006, and
- The two significant increases in taxes of real estate transfers. The first took effect on 1.1.2006 and the second on 1.3.2007.

b) The manner in which prospective home-buyers received and processed the information regarding the tax reform in relation to the evolution of the market.

2. Theoretical framework

According to numerous pieces of research, psychological factors related to individuals and their entourage, play a significant role in investment decisions (Kent et al., 2002). Keynes (1936/2007) suggests that interactions among individuals influence them to such a degree that they tend to think and behave in a similar manner, which is usually irrational. When prices go up, investors rush into acquiring the desired commodities, thinking that it would be more difficult to get them in the future or considering that the profit attained from such an investment would be significant. In reverse, in the downturn, they rush into selling their assets in order to moderate losses. It has been confirmed that the real estate markets operate in a similar way (Shiller, 1989), leading to the enhancement of their cyclical movement. The real estate demand and prices increase during welfare periods. The length and the intensity of this phenomenon are accentuated, because of the delay in the construction of new buildings, since the time between the first manifestations of demand till its satisfaction is approximately two years. The supply of buildings falls short of demand for a certain time period, with obvious effects on prices. Real estate prices rapidly increase during up-turn, while in down-turn they slowly decrease, because the real estate owners hesitate to sell their real estate at prices lower than the maximum reached previously (Renard, 1993).

It is also well known that, when the general economic environment is favourable for investments in real estate, psychological factors support the price increase to levels above their end-use value, because the investors believe that the value of their assets will be higher in the future, while objective factors do not support this view. This often results in the creation of "bubbles" in the real estate market (Stiglitz, 1990; Flood and Hodrick, 1990; Renaud, 1997; Schiller, 1990, 1995, 2001 and 2006) that generate important economic, social and spatial consequences in the cities.

According to the behavioural economics approach, most investors act in the same manner as the crowd, obeying the "herd instinct", favouring the appearance of "bubbles" in the market (Shiller, 1995; Beltratti, 2004). The phenomenon of "herd behaviour" initially attracted the interest of psychologists, and subsequently of economists. The pioneers behavioural economists interested in the phenomenon were Thorstein Veblen (1899, 1900) and Harvey Leibenstein (1950, 1966), while Gabriel Tarde (1898/1989, 1903) and Gustave Le Bon (1895/2003) were the pioneers in the field of social psychology. The approaches of these disciplines are different: behavioural economics deals with the long-term effects of the phenomenon, as well as the possible benefits occurring with regard to investments, while social psychology investigates how and why the individuals demonstrate this type of social behaviour. In economic analyses, the reference unit is not the individual; the interest is mainly focused on the macro-level of analysis of the phenomenon, assuming that individual motives are rational. In socio-psychological studies, the interest is focused on the processes developing at a micro level, thus ignoring their effects at a macro-economic and institutional level (Lie, 1997; Daniel et al., 2002; Wurgler, 2002). According to Rook (2006), the ignorance of motives causing "herd behaviour" constitutes a serious weakness of the economic analysis, while the main weakness of the socio-psychological research remains the disregard of the structural characteristics of the wider institutional environment (Rook, 2006).

Tarde (1903) in his "Laws of Imitation" considers that the basic component of society is imitation and imitation means somnambulism, and that the formation of crowds is inherent to elements of urban sociality. Contemporary researchers (Towens, 2003; Blackman, 2007; Barry and Thrift, 2007), and especially Borch (2005) share the view of Tarde (1890, 2007) Tarde also considers that imitation in human behaviour is a significant phenomenon that is accomplished *ab interioribus ad exteriora*; in other words, the imitation of ideas and behaviours appears even before these come into existence. Prominent researchers also recognise that imitation is a major factor in causing "herd behaviour" (Shiller, 1995; Beltratti, 2004).

From the aforementioned, it can be concluded that an interdisciplinary approach to the phenomenon of "herd behaviour" may be useful in the analysis of both its causes and its effects at both the micro- and macro-levels. A prerequisite for this approach is the moderate consideration of the market efficiency and the paradigm of *homo oeconomicus*, which are dominant in neoclassical economic thought, but also in some psychological approaches, since there are some social psychologists who do not recognise irrationality in crowd behaviour, like for example Turner and Killian (1957), the latter indeed consider that imitation, communication and suggestion (cited in Borch, 2006) - as psychological concepts - should be integrated into a sociological approach. The concept of "bounded rationality" was introduced by the economist Herbert Simon in the 1950s (Simon, 1986) is now accepted by some psychologists, contributes towards bridging the gap between psychology and economy. According to this concept, factors related to human nature, as well as the wider institutional environment, lead individuals to proceed not to the best, but to the most satisfactory choice and action.

In this study, we attempt to reconcile both behavioural economics and social psychology approaches.

3. Data from the Greek housing market

In this section, some official data on the housing market in Greece, as well as the basic macro-economic conditions which led to the exceptional evolution of the market in the period from 2000 onwards, are presented and discussed.

According to the data published in the Monthly Statistical Bulletins of the Bank of Greece, the annual price index of dwellings, both in Athens and the other urban areas, had been sharp during the periods 2000-2002 and 2004-2006 (Figure 1). It should be noted that this index refers to the total number of housing transactions, (newly-built and used houses). As a rule, price increases are first registered in market segment of newly-built residences and then transmitted to the market of the used ones, since the increase in the prices of new houses diverts a significant segment of the buyers towards the purchase of used properties. Consequently, the price increases of new houses was possibly higher than this represented by the index. A spurt was also observed in the issuing of new building permits, and according to the data of the National Statistical Service of Greece, the rates of growth in the production of new dwellings in the country were high in the periods 2000-2002 and 2004-2005¹.

The process of liberalisation of the capital market and the financial system in Greece was accomplished when the country acceded to the third stage of the European Monetary Union, in January 2001. Credit rates were in constant decrease and during the period 2004-2007 were substantially lower than the rate of increase in house prices. Restriction in the bank financing of houses purchase up to 70% of their market value had already been abolished since 1988. The housing loan market has shown considerable growth. According to the data provided by the Bank of Greece (Bulletins of Conjunctural Indicators), in December 2000, the residue of housing loans in Greece amounted to approximately 17 billion Euro, rose to 40.2 billion by the end of 2003, and reached 93.7 billion in December, 2007.

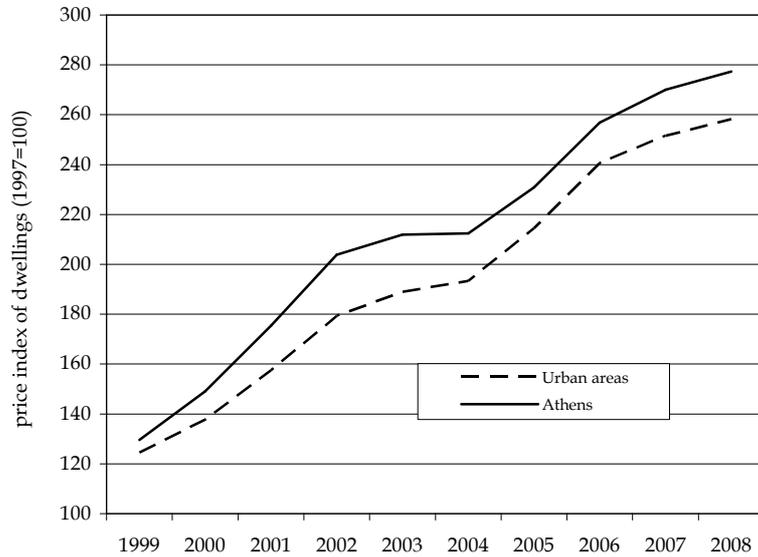
Two important tax reforms have been announced by the Greek Government since 2004: the imposition of VAT on real estate constructions, and the increase of the tax on real estate transfers. The first increase in the tax on real estate transfers was in the order of 30%, and was applied at the same time as the imposition of VAT. There was a second increase in the order of 20-25%, which was also announced in advance. Articles and comments in the press anticipated the significant raise in the prices when the new regulations would come in effect, have created a rather fictitious pressure on the market, and have boomed housing building activity. During this period, no official or documented study was ever published regarding the actual expected effects of the new tax regulations on the real estate market.

The conclusion resulting from the above data is that the favourable economic environment rendered borrowing convenient for buying a house and the demand caused an immediate increase in the supply.

Given that supply needs an important time interval to meet demand, and the fact that the demand was maintained at high levels, real estate prices went on dramatically increasing.

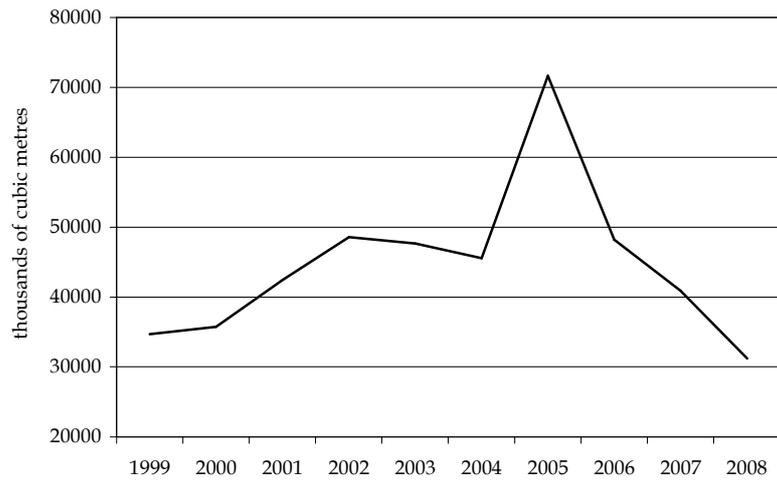
¹ The following should be taken into account: (a) the issuing of a new building permit does not imply the effective construction of the building, and (b) the shortest interval between the issue of the permit and the building accomplishment is usually fourteen months.

Figure 1: Evolution of the annual price index of dwellings



Source: Bank of Greece, Bulletins of Conjunctural Indicators

Figure 2: Annual volume of new dwelling constructions
(as in the registration of building permits issued)



Source: Statistical Service of Greece

4. Methodology

A field survey was performed in the summer of 2007. A questionnaire was answered by individuals who had bought a newly-built residence in two medium-size cities of Greece - Volos and Karditsa - between 2004 and 2007. The two main difficulties faced in the collection of data were: a) the lack of any directory of home-buyers in Greece, and b) the fact that, due to cultural reasons, Greeks are usually reluctant to properly answer questions regarding the acquisition of their assets. Thus, the owners - occupants of apartments in newly-built building - were researched and personally contacted in this survey, with huge difficulties. 194 questionnaires were collected, 54 of which were felt to be unreliable and so were not included in the sample. There were no special reasons or peculiarities of the local real estate markets, which would make the samples in the two cities inhomogeneous. The limited number of questionnaires made the use of any advanced statistical methodology impossible. This is a fact that makes questionable the results of this study, although we believe that they may adequately describe the general characteristics of the house buyers behaviour during the period of study.

5. The apprehension of potential home-buyers surrounding the residential market evolution

According to our survey data,

- 72% of the residences were bought during the years 2005 and 2006².
- 87% of the residences conveyed were intended for usage by the owner, out of which 71% were bought using a housing loan. This loan represented over 50% of the dwelling value in the 90% of the cases. For 37.4% of the residences purchased, the loan amounted to 100% of their market value.
- 87% of the home-buyers answered that family or personal needs necessitated the buying of a residence, as well as their desire to escape paying rent by having their own home, to enjoy a better quality of accommodation, as well as the desire to inherit an asset to their descendants.
- The vast majority of home-buyers in both cities were families (80%). They considered their home purchase as a good investment (90%) and believed that their decision to buy was correct, since house prices would be continuously ascendant. 10% of the home-buyers answered that they should have bought their home earlier.

5.1. The purchase of a dwelling was accelerated

One of the basic questions that home-buyers were asked to directly refer to their belief as to whether they had proceeded to their house purchase under pressure, thinking that if they did not buy a dwelling soon, it would be difficult for them to do so in the future. Although, 71.4% replied that they did not act under pressure, a further investigation into their answers to other relevant questions proves the opposite:

² It should be mentioned that buildings completed in 2006 and 2007 were not burdened by VAT, since their building permit had definitely been issued before its imposition.

- The opinion of the vast majority of home-buyers was that prices would further increase (substantially or less) and that they felt that in the future they would face significant difficulties in buying a residence. For this reason, they believed that they had to proceed in buying at the time (Tables 1 and 2).
- The answers of 2/3 of home-buyers were associated with the pressure of buying a house with the evolution of prices (Table 2)³.

When the housing market shows a slow cyclical movement, a number of residences are annually constructed and purchased, so there is a relative balance attained between supply and demand. For most households, the purchase of a dwelling is usually planned at a concrete time. The evolution of house prices, together with many other factors, is certainly taken into account. In our survey, 28.6% of the home-buyers replied that they had accelerated their purchase. This percentage is extremely important, as far as it refers to the excess in demand for new residence, and probably resulted in the price increases, as well as the over production of new dwellings, certainly with a phase difference, since the construction of dwellings requires a significant amount of time. In the beginning of the year 2009, there were still buildings near completion, for which the building permits had been issued in late 2005.

The immediate demand was satisfied, to a high degree, through the purchase of residences under construction. According to our survey data, only 16% of the dwellings purchased were finished, while the construction of 35.6% of them had not been started. The highest percentages in buying a dwelling in the stage of construction or from the drawings are registered in 2005 and in 2006 (84.85%). These rates also support the hypothesis that home-buyers acted under pressure.

The survey data provide evidence that the excess demand is caused by a significant number of home-buyers that were aware of prices increase, and who hastily anticipated the purchase of a house, thinking that these price increases would render such an acquisition difficult in the future.

5.2. The announcement in advance of the new tax regulations has influenced home-buyers decisions

Three out of four home-buyers of those thinking that house prices would increase, were aware about the imposition of VAT on new constructions as well as the new tax regime on real estate transfers. More, they were pessimistic about their economic capacity to purchase a dwelling in the future (Table 3). It seems that they were influenced to a significant degree in their decision to buy a residence by their information regarding the imposition of the new tax regulations (Table 4).

5.3. The ways of home-buyers influence

Only 36.4% of those questioned in the survey answered that their decision to purchase was influenced by the mass media. According to studies, the mass media are less effective in the assimilation of information and opinions by individuals, than common interpersonal dialogue, because the media does not stimulate all the functions of the brain, which are involved in interpersonal communication between human beings (Shiller, 1995; Chang et al., 2000). The media, exercise an indirect influence on individuals, since they

³ We mention that these two questions present a significant interdependence: Pearson Chi-square = 41.380 with $\alpha = 0,000$.

elaborate the received messages and they selectively communicate them to their entourage (Katz, 2006). Tarde (1898/1989) also attributes a vital importance to interpersonal contact and conversation. He considers that opinion is formed through the conversation between "the individual and his newspaper" and is refined in the coffee shop in discussions with other people. In this way "public opinion" is formed.

According to the survey data, amongst the social entourage of a significant number of home-buyers (approximately 50%), the subject of the increase in prices and the buying of a dwelling was discussed, both before and after the crucial date of 1.1.2006⁴ (Table 5). This percentage gets a weighty importance if we take into account the fact that those accelerating their purchase represent approximately 30% of the total number of home-buyers and they caused the excess demand mentioned above. Given the high percentage of informed home-buyers, it may be considered that the messages received from the mass media were transformed into opinion through discussions with other persons who had already received similar messages from their own social environment.

The discussions regarding the issue of the housing market usually resulted in the pessimistic conclusion: buying a house would be impossible or almost impossible in the future (Table 6), while a significant percentage of those discussing the matter ended up buying a residence (Table 7). Home-buyers possibly behaved similarly to their friends and acquaintances, seeking support for their decision, since there were many people in their social environment who bought their house at that same period. Such an interpretation of home-buyers' behaviour is also supported by theoretical approaches and more specifically by the psychology studies on social influence. These studies have shown that the size of the majority is not so important, but on the contrary it is the degree of agreement of a set of individuals constituting a "reference group", which is very important for them (Asch, 1956). If the individuals adhere to the ideas of a "reference group", it is more probable for them to identify themselves with it, no matter how small or large the size of this group is (Festinger, 1954). When people decide to identify themselves with a small "reference group", they do so after careful and in-depth analysis of their arguments. On the contrary, when they decide to stand with a large "reference group", they do so intuitively. In other words, both the main characteristics of the groups and their relative size are of great importance (Moscovici, 1976; Martin and Hewstone, 2001). In this case study, the major characteristic of the "reference group" was mainly the intention or the action of buying a residence. At the same time, the relative size of the group was significant or at least, it was perceived as such within the social network of the buyers. More precisely, 76% of individuals questioned, answered that "many" people in their entourage had proceeded to the purchase of residence.

According to the theory on "mental frames" of cognitive psychology, people tend to be influenced by their "mental frames" and to act in the same manner as their family and friends. "Mental frames" involve a specific manner of perception and understanding of information leading to decision-taking. One of the major factors that might influence "mental frames" is the people in their entourage. More, it has also been observed that individuals tend to synchronise their frames with those of their friends, family and other individuals with whom they are in contact (De Bondt, 1998). Additionally, the theory of "regret and

⁴ It is noted that, during 2006 and 2007, the majority of houses offered in the market were situated in buildings which were constructed with buildings permits issued before 2006 and thus their prices were considered lower than the ones which would be constructed with building permits issued in 2006 or later.

cognitive dissonance" suggests that the individuals/investors regret when they do not arrive at a correct decision. Thus, by trying to avoid this regret, they tend to harmonise their actions with those of other people, believing that in this way, they minimise the possibility of a wrong decision and consequently the possibility of regret (Shiller, 2001; Beltratti, 2004).

6. Conclusions

This work constitutes an inquiry into the importance of social psychology and behavioural economics approach in the study of real estate markets, through the investigation of the way in which home-buyers have reacted to the stimuli received from the mass media and their social environment, with regard to a factor of vital importance in their individual and family life; the acquisition of their own residence.

In light of the available data analysis, during the period of study, 2004-2007, those who bought a house were aware of the imposition of new tax regulations and believed that home prices would continue their ascending course. They processed the messages received from the media, through discussions with their social environment and concluded the pessimistic view, that the buying of a residence would be more difficult in the future. For this reason, they thought that they should buy a house at that time. A significant percentage of home-buyers rushed to buy a dwelling, thus creating an excess in demand. These home-buyers were sufficiently numerous so as to be able to overturn the balance of supply and demand of the previous years, and given the inelasticity in the supply of new dwellings, their behaviour induced further price increases.

Apart from its undeniable weaknesses, we consider that this study brings forth alternative and complementary approaches in the analysis of the real estate market, one step beyond Shiller's (1989) innovative work. For this reason, we hope that it may supplement and promote the further investigation and understanding of market dynamics and buyers behaviour, given the contemporary variable social environment, the economic volatility, and the intense cyclical movement of the real estate markets.

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Table 1: Correlation of the opinion about the evolution of prices and the opinion that the acquisition of a home would be difficult in the future

		Difficulty in the future		Total
		Yes	No	
opinion about the trends of prices	would increase a great deal	34 49.3%	23 32.4%	57 40.7%
	would increase	27 39.1%	31 43.7%	58 41.4%
	would remain constant	4 5.8%	4 5.6%	8 5.7%
	no opinion	4 5.8%	13 18.3%	17 12.1%
Total		69 100.0%	71 100.0%	140 100.0%

Table 2: Correlation between the apprehension that dictated timely house purchase, and the estimation that acquiring a home in the future would become increasingly difficult

		Difficulty in the future		Total
		Yes	No	
Timely purchase	Yes	63 91.3%	28 39.4%	91 65.0%
	No	6 8.7%	43 60.6%	49 35.0%
Total		69 100.0%	71 100.0%	140 100.0%

Table 3: Correlation of the degree of influence and the perception of the future possibility of buying a dwelling

	almost impossible		in a significant degree		in a slight degree or at all		Total	
Purchase impossible	29	46.0%	12	19.0%	22	34.9%	63	100.0%
Rather impossible	14	41.2%	4	11.8%	16	47.1%	34	100.0%
Possible	7	16.3%	6	14.0%	30	69.8%	43	100.0%
Total	50	35.7%	22	15.7%	68	48.6%	140	100.0%

Table 4: Correlation between information on the new tax regime and the degree of influence on their decision to purchase a residence

		Degree of influence				
		very significant	significant	little	no influence	Total
Information	Yes	49	22	18	17	106
		98.0%	100.0%	90.0%	35.4%	75.7%
Information	No	1	0	2	31	34
		2.0%	0.0%	10.0%	64.6%	24.3%
Total		50	22	20	48	140
		100.0%	100.0%	100.0%	100.0%	100.0%

Table 5: Housing market evolution was regularly discussed in meetings with friends and acquaintances

			Existence of conversations			Total
			Often	Rarely	Never	
Time interval	Before 1.1.2006	as to time period	34 49.3%	27 39.1%	8 11.6%	69 100.0%
		as to conversations	51.5%	51.9%	36.4%	49.3%
	after 1.1.2006	as to time period	32 45.1%	25 35.2%	14 19.7%	71 100.0%
		as to conversations	48.5%	48.1%	63.6%	50.7%
Total		as to time period	66 47.1%	52 37.1%	22 15.7%	140 100.0%
		as to conversations	100.0%	100.0%	100.0%	100.0%

Table 6: Correlation of the frequency of discussions, with the difficulty of buying a dwelling in the future

	Often		Rarely		Never		Total	
Impossible	35	55.6%	25	39.7%	3	4.8%	63	100.0%
Rather impossible	14	41.2%	14	41.2%	6	17.6%	34	100.0%
Possible	17	39.5%	13	30.2%	13	30.2%	43	100.0%
Total	66	47.1%	52	37.1%	22	15.7%	140	100.0%

Table 7: Correlation of discussions regarding the housing market prices evolution, with individuals who bought a dwelling during the same period

			Frequency of discussions			Total
			Often	Sometimes	Rarely	
Existence of individuals	Yes	Count	47	18	4	69
		%	71.2%	34.6%	18.2%	49.3%
	No	Count	19	34	18	71
		%	28.8%	65.4%	81.8%	50.7%
Total		Count	66	52	22	140
		%	100.0%	100.0%	100.0%	100.0%