

## **CONSUMER BEHAVIOUR: DOES HISTORY MATTER?**

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### **Abstract**

*The economic crisis and its obvious effects are moulding consumer behaviour and offer the framework for reshaping consumption patterns. However, confronted with budget changes it is natural to assume that consumers might be reluctant to immediately recast their consumption patterns. Their reluctance can be related to the notion of hysteresis which is used by economists to describe the persistent influence of past economic events. The paper aims at presenting the notion of hysteresis, briefly reviewing its application to economics and especially consumer behaviour, given the vast possibilities for empirical testing offered by the present context.*

**Keywords:** *consumer behaviour, hysteresis, persistence, habits*

**JEL classification:** *A12, D11*

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### **1. Introduction**

The world economy is affected by the global crisis which has left its mark on the lives of consumers almost in all markets of the world. The obvious effects and their constant mediatisation emphasize the impact of the crisis and add to the already installed state of uncertainty. The current context shaped by the economic crisis is remodelling mentalities and re-lays the foundation for a new conceptual model of determinants of consumer behaviour- more conscious, more rational, and more attentive. However, it

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seems rather improbable for consumers to abandon their consumption patterns immediately once confronted with budgetary restrictions. In other words, it is only natural to assume that the consumers would try to stick to their consumption patterns, following a budget decrease. This influence of the past on present behaviour relates to the notion of hysteresis, which originated in the field of ferromagnetism where it was employed to describe the persistence of a temporary influence in a particular system. Subsequently, the term “hysteresis” was applied to a variety of domains, including economics.

In economics, the term is used to describe the persistent influence of past economic events and the reference to the influence of memory effects on the functioning of economic system is considered to represent a significant advance in economic thought. Moreover, it is credited with potential to narrow the gap between economic modelling and economic reality (Cross, 2009).

The paper is therefore an attempt to revisit the notion of hysteresis and to briefly review its application to the field of economics and especially to the theory of consumer behaviour, bearing in mind the very generous terrain offered by the current context of the economic crisis for empirical testing of hysteresis effects.

## **2. Brief account on Hysteresis in the Field of Economics**

The term “hysteresis” derived from the Greek word “hysterein” meaning “that which comes later” and was used for the first time by the physicist James Alfred Ewing (Ewing, 1881) in the 19<sup>th</sup> century to describe the persistent effects of the temporary exposure of ferric metals to magnetic fields. The irreversibility coined as hysteresis can be explained as follows – if the initially unmagnetized probe is magnetized until it reaches saturation and then the magnetic field is dropped to zero, the ferromagnetic material retains magnetization. Therefore the ferromagnetic materials is of history dependent nature - once the material has reached the saturation point due to the magnetizing field applied, the magnetizing field can be reduced to zero and the material will retain an important degree of magnetization. In other words, the hysteresis loop shows that the ferromagnetic material remembers its past. In order to drive the magnetization to zero again, the magnetic field must be reversed and increased. It then reaches the saturation point in opposite direction.

Easy to assimilate at an intuitive level, the persistent influence of past events in different areas of economy was noticed and rather extensively discussed in the dedicated literature.

But although the notion was certainly present previously, the term “hysteresis” *per se* was only seldom used in economic literature before the 1980’s (Cross, 1993).

Nicholas Georgescu-Roegen has used the term consistently since 1950 (Georgescu-Roegen, 1950) in the field of consumer behaviour, and subsequently in his work from 1971, *The Entropy Law and the Economic Process* provided the economic literature with a general framework for the application of hysteresis to social sciences. Although he did not offer a formal definition, his work had a great impact on the application of hysteresis to economics.

The term was used in the 1960’s by Paul Samuelson and in the 1980’s was extensively used in unemployment and international trade with Edmund Phelps using it to describe the dependence on history in the former domain, while Murray Kemp and Henry Wan used it in the latter (Cross, 1993).

In international trade hysteresis refers to the persistent influences of temporary factors such as exchange rates variations and their impact on prices and quantities. The application of hysteresis is mainly exemplified by the fact that foreign firms can enter a domestic market only by incurring once-for-all sunk costs; a temporary but sufficiently large rise of the exchange rate would induce permanent entries by foreign firms. Therefore, even when the exchange rate returns to its previous level, the firms will find profitable their stay in the domestic markets (Franz, 1990).

In unemployment, in the mid 1980’s, it was empirically proved that following the implementation of the disinflationist strategies unemployment did not go back to the natural or equilibrium level in most European countries, but remained high and even continued to rise. This was the moment when the economists started to develop other explanations for the persistence of unemployment, based on the accumulation of the consequences of the most important previous shocks experienced by the economy, thus introducing hysteresis (Lang, 2009).

Hysteresis, referring to the persistent effects of temporary influences, was considered for application also in the field of foreign investment, capital formation or marketing.

However, although hysteresis has been invested with relevance to economic systems, it has not been formally incorporated into mainstream economic models (Cross et al., 2010).

### **3. Consumer Behaviour and Hysteresis – A Historical Overview**

In Duesenberry's relative income consumption function (Duesenberry, 1948) and in the work of Franco Modigliani (Modigliani, 1949) it is shown that households tend to maintain the level of consumption, in the case of income reduction, the consumption patterns being subject to habit. Or in other words the highest level of past disposable income remains imprinted in consumers' memory thus determining their present consumption patterns.

The notion was also explored by Nicholas Georgescu-Roegen (Georgescu-Roegen, 1950), who raised the question whether the mapping of the indifference varieties does in fact depend on the economic experience of the individual that is whether the indifference varieties of the same individual could be perceived as an invariant element by the static theory. The evidence brought to sustain that they are not invariant refers to is that temporary experiences of an individual such as income or price changes leave noticeable traces when the previous conditions are restored.

The tests conducted by Brown revealed that in both cases of increase and decrease of income, consumer expenditure lagged behind inducing the idea that consumer demand was related to income or other cyclical variable. Brown explains that due to some inertia in their actions consumers fail to react promptly to income changes and referring also to the previous research conducted by Duesenberry and Modigliani actually uses the term "hysteresis", asserting that "the habits, customs, standards and levels associated with real consumption previously enjoyed become "impressed" on the human physiological and psychological systems and this produces an inertia or "hysteresis" in consumer behaviour" (Brown, 1952). Furthermore, Brown replaces the level of past disposable income present as variable in the work of Duesenberry and Modigliani with the previous real consumption actually experienced.

The notion (although not the actual term hysteresis) may also be found in several other works related to consumer behaviour theory, such as those of Haavelmo and von Weizsäcker, with Haavelmo resuming the problem by stating that past consumption should enter in the utility function (Elster, 1976).

Nicholas Georgescu-Roegen popularized the term “hysteresis” and presented an application to consumer behaviour in his work, *The Entropy Law and the Economic Process*, of 1971. Acknowledging that physical behaviour sometimes depends on past experience, Nicholas Georgescu-Roegen referred to the most widely known example of magnetic hysteresis to emphasize the important difference between physical hysteresis and history in the field of social sciences. One may find a great enough number of unmagnetized ferric metals in order to experimentally prove that elements sharing an identical past behave identically, but in order to formulate a law of magnetic hysteresis one should have also the opportunity to experiment with cases where there is no past history. But reaching the zero level of history in the case of social sciences proves impossible. Moreover, in the case of metals the traces of their past may be erased by demagnetization, while in other fields such concepts would raise impossible questions. In the case of consumer behaviour for instance the question is whether one may erase part of the human recent hysteresis, as with metals, in order to teach the individual to behave in a certain manner. The difficulties in assessing the hysteresis in human behaviour are easily illustrated by the individual consumer hysteresis. The continuous adaptation of individuals to fluctuating prices and incomes which alters consumer preferences is a generally accepted fact. The difficulties refer to the impossibility to know the effect of the last experience on consumer behaviour until it actually takes place that is when one observes the very thing intended to be predicted (Georgescu-Roegen, 1996).

#### **4. Consumer Behaviour: The Impact of the Crisis**

The financial crisis has impacted consumer behaviour determining consumers to become more economical, more attentive, and to weigh more carefully their options. The crisis is providing the frame for the emergence and development of a new type of consumers, more considered and more rational. The level of anxiety perceived by consumers has known considerable augmentation, leading to a reconsideration of their priorities concretized in the general reduction of spending, the postponement of high value purchases or the decrease in consumption of leisure and entertainment goods, and the decrease of impulse and indulgence purchases.

The situation is reflected by the results of the Nielsen Global Online Consumer Confidence Survey (2011), with the Global Confidence Index

declined in the second quarter of 2011 to 89, the lowest level in six quarters. The data for the second quarter of 2011 revealed that consumers have returned to a recessionary mindset, after a year of improving though still cautious spending. The spending intentions declined as well, only 27% (compared to 35% twelve months before) considered the present time as appropriate to buy the things wanted and needed.

Other studies (Euro RSCG Worldwide, 2010) proclaim the advent of a new type of consumers who perceive the recession as an opportunity to chase away their former consumption patterns and embrace instead a more considered approach. As the economic situation becomes more uncertain, it is only natural for consumers to become more rational. The new consumer turned away from overconsumption and mindless excess in order to take a more considered stance to spending. Moreover, a vast majority of respondents claim they would not go back to their previous consumption patterns should the economy recover.

Therefore, taking into account the phenomenon of hysteresis and considering its application to the issues raised in this paper, one may resume that in case the budget - restrained by the economic crisis - returns to the previous level the consumption patterns might not do the same or at least not at the same pace. The changes in consumption patterns caused by the budget limitations may be persistent, the restraints imposed by the economic crisis leaving visible traces. And it would be only rational to assume that to some degree the crisis has determined structural changes in consumer behaviour, given the unprecedented magnitude of the crisis.

In our opinion the external impact of the global economic crisis has indeed determine structural changes in the consumption patterns in almost all markets of the world – its magnitude and its already prolonged duration come to support this assertion. Furthermore, the vast mediatization of its effects and of the ubiquitous fear of a relapse adds to the already installed state of uncertainty, advising for caution and making rather improbable a sudden return to the old consumption patterns in the event of a return to the previous budgetary conditions.

## **5. Conclusions**

We all noticed the changes occurred in consumer behaviour; they are obvious and undeniable natural consequences of an unfriendly economic

environment, dominated by uncertainty. The research conducted in this field has revealed that the crisis has determined the emergence of a new type of consumer, more attentive, more rational, and less prone to impulse behaviour; a consumer looking for substance, for meaning and purpose and determined to change their buying ways.

The concept of hysteresis has been successfully used to explain the behaviour of various economic systems and has been repeatedly recalled as far as consumer behaviour is concerned. It represents a memory effect, or in other words it induces the easy to relate to idea that previous experiences are persistent, impacting present consumption. This paper attempted at describing the concept of hysteresis, at presenting a list of its most consequential applications to economics and at evoking its actuality in the field of consumer behaviour given the current economic context. Natural to relate to at an intuitive level, the phenomenon of hysteresis can hardly be contested. Furthermore, the global crisis provides a generous ground for empirical testing which will, in our opinion, further the study and application of hysteresis to economic systems and especially to consumer behaviour.

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