

# Drivers of Consumer Decision Making- Comparative Analysis of Behavioral and Neuroeconomics Models

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**Abstract** When making choices, more precisely purchase decision making, the consumers are everything but rational. Behavioral economics is the whole science dedicated to examining this phenomenon. Freud has constructed the model that reveals the inner motivators for decisions, including the purchasing one as well. However, behavioral models are not solely enough as the practice has proved that consumers' brains are much more complex than it has been thought. There is always a good chance that habits will fail. Inconsistencies in the way consumer process information will be undone due to the presence of emotions. That is highly consistent with the fact that humans are not rational creatures meaning they are not governed solely by reason in any decision making process. This gives the ground for more enhanced research on decision making and introduction of the neurological aspects. Skeptical or not, currently there are inventions of the neural- economics combination that tend to be widely spread. Another suggestion in favor of neuroeconomics is that when used in different direction, it can lead to the search and choice of an appropriate empirical model.

**Keywords** Consumer Behavior • Behavioral Models • Neuroeconomics • Decision Making

## 1 Introduction

The main problem that the research aims to resolve is the understanding of consumer behavior, i.e. the motivation behind the purchase act. As there have already been vast of models to tackle this, authors intended to find the correlation between chosen ones in order to show whether there were gaps in behavioral models (Freudian model of psychoanalytic motivations) and fairly new area of neuroeconomics. The aim of this comparative analysis includes several points:

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- (a) Revealing the main postulates of Freudian model of psychoanalytic motivations as a model used for understanding the motivations behind purchase.
- (b) Understanding the gaps of the aforementioned models and research of alternatives to fill the gaps.
- (c) The use of neuroeconomics in explaining the motivations behind consumer behavior.
- (d) Comparison of the two aspects and showing whether consumer behavior needs to be viewed from different perspectives in order to be adequately understood.

Consumer behavior is constructed of various activities and consumer responses to outside stimuli can be expressed in different forms. All forms of the expressions/responses are dependent on each other. For instance, psychological responses can obtain in customer's head, when s/he imagines product, how it can be used, observing the characteristics of the product and relating them to own experience, needs and desires. On the other hand, expressive responses, for instance, are related to feelings and emotions, the way product influence customer's state of mind. In the end, example of social responses are the actions during the purchase decision making, or activity, including comparing prices, store atmosphere, ads, etc.

Understanding consumers is a long process and requires years of experience and examinations. When retailers understand desires, needs and reactions of their consumers, they can work on creating the loyal relationships between them and thus put basis for a long- term benefit for both sides. Customer needs are the number one consideration and factor in any B2C relationship. Vendors need to start from service that they can provide to ultimate consumer which implies: responsiveness, promptness, knowledge- ability, accuracy and accessibility (Kunz 2009). According to his research, Kunz (2009) concluded that in losing customers, 75% of reasons were because of the service quality, 13% referred to the product quality and the rest overlapped other reasons. The major role of consumer behavior is to provide the knowledge to marketers in order to create or adjust firm's offering on the market, so that both, the consumers' satisfaction and desired revenue goals are reached.

## 2 Behavioral Models

Study of decision making has been on the scene for quite some time already. Science assumed that all human knowledge and reason had come from the experience (Ornstein 1992). But it is almost absurd to imagine the mind as tabula- rasa. It needs to have some inbred premises to serve as a base for the learning and adapting process. Thus, for example, Freud supported Darwin when arguing that most childhood fears, like neurotic phobias, are phylogenetically endowed (Ornstein 1992).

Behavior has started to be in the focus. There are number of different approaches that have been developed in order to tackle different variables that will fill the gaps

of 'economic man' approach. Starting from 'economic man', there is psychodynamic, behaviorist, cognitive and humanistic approach that lean significantly on previously mentioned models. Gradually, economics shifted to behavioral economics. Essentially Behaviorism is a family of philosophies stating that behavior is explained by external events and influenced by factors external to the individual (Bray 2008). Furthermore, intrapersonal causation challenged the variables in behavioral approaches, which brought the Cognitivism on the stage. It is obvious that Cognitivism is related to cognitive psychology and it contributes in explaining intrapersonal processes from stimulus to response.

There are two types of Cognitive models: (1) analytical, which provides a framework of the key elements and factors influencing behavior; (2) prescriptive models, which provide guidelines to organize how consumer behavior is structured (Bray 2008). Analytical models are explained through Consumer Decision Model and Theory of Buyer Behavior, while perspective models include Theory of Reasoned Action and Theory of Planned Behavior. Present paper is not going to go further into the models, as authors want rather to show the path that has led to behavioral economics and further to neuroeconomics. Cognitive models seem to be quite close to satisfying the need for explaining the consumer behavior. However, there is a strong critic in explaining the particular aspects of behavior that are under the massive influence of emotions. Therefore, the humanistic approach seem to be the one providing the research of emotions, volition and egoism and observing the consumer as an individual (Bray 2008). Several theories were developed, out of which Bray (2008) mentioned The Theory of Trying and The Model of Goal Directed Behavior. It is clear that observing the consumers as individuals represents the imperative in case marketers want to understand the holistic view of the decision making process. Nevertheless, dealing with humans and exploring a human mind, emotions, motivations and experiences can trigger ethical questions. This can represent the main obstacle in researching the motivation for behavior.

Decision makers have shifted the focus from economic models closer to psychology and human- oriented approach. Understanding the buyers urged for behavioral models. The scientist wanted to construct the model to reveal mechanism behind the "black box" of human psyche (Kotler 1965). Still, there is no generally accepted model and the enhancements and new approaches have been appearing regularly. Kotler (1965) presented five different models of buyer's "black box" namely: Marshallian model; Pavlovian model of learning; Freudian model of psychoanalytic motivations; The Veblenian model of social- psychological factors and Hobbesian model of organizational factors.

However, it is necessary to take into consideration that each of the models reveals only a part of the buyers psyche and there is a need for the more comprehensive approach to understanding the consumer behavior.

## 2.1 *Freudian Psychoanalytic Theory*

Motivation as a phenomena is a term widely used in both psychology and marketing. Based on the definition of motivation, the concept represents an emotion or desire operating on the will and causing to act (Merriam-Webster, n.d.). Therefore, motivation is the actual driver of behavior; consequently it is a driver of consumer behavior. Freud's genius was in his ability to relate everyday conflicts with their roots in the human ancestor heritage (Ornstein 1992). That proves that idea of human mind as blank piece of paper is ridiculous. And every human brain and mind is story for itself. Humans are both, biological and cultural beings.

Throughout the history many different theories have been developed to explain the motivation of human behavior in many different aspects, starting from purely biological aspect to more complex and deeper investigations (Pincus 2006). This paper focuses on one concrete theory that is used to explain consumer behavior and that is Freudian motivation theory. The theory had its roots in Freudian psychoanalytic theory, which was a result of Freud's experience and work. Freudian motivation theory has its significance for analyzing the key driver of consumers' behavior and the motives that trigger their purchase decisions. In other words, the unconscious desires and motivators should be the ones that trigger consumer behavior. He compared the mind with an iceberg in which the smaller part showing above the surface of the water represents the region of consciousness while the much larger mass below the water level represents the region of unconsciousness (Hall and Lindzey 1978). This is where all the motivation is coming from. Relating that to previous experiences that were mentioned above, certain characteristics of a product remind the consumer of certain event from the past. Therefore, it is important for marketers to understand those product elements and possibilities to use them in achieving specific emotional response with the consumers. In turns, it motivates them to make a decision about the final purchase.

## 2.2 *Application of Psychoanalytic Motivation to Consumer Research*

The Freudian theory explaining the motivation behind consumer behavior has its roots in psychoanalytic theory. There was an entire movement or *motivationists school* that studied psychoanalytic theories and models by Freud. It applied its techniques and theories to consumer behavior and investigated the triggers behind the consumer behavior (Pincus 2006). What is specific for this perspective on the consumer behavior is the difference in comparison to direct quantitative methods of consumer behavior research. In these methods, such as survey, research is usually conducted by asking the respondents openly and directly about their reasons behind their purchasing decisions. Opposed to this direct approach, the motivational model suggests examination of circumstances that were present when the act of

purchasing happened and in that way the researchers are trying to understand the hidden motivations of consumers (Pincus 2006).

Therefore, researching consumer behavior from a motivational point of view means implementing methods that are usually used in clinical psychology in the marketing research, with the focus on consumer behavior (Obrec 1999). The need for this perspective in marketing appeared when the focus moved from the marketer to the consumers. One of the main tools that developed in this form of research was depth interview, as form of an open discussion and conversation on a particular topic. Sources suggest that there are some specific groups of products that may benefit the most from the implementation of this type of research. Those groups are labeled as “low-involvement” products that are comparable in price, performance and quality such as soap, gasoline, foods and cigarettes (Obrec 1999). Perhaps the most important characteristic of these models and this type of research is in the fact that it shows a new perspective to researchers. This perspective allowed researchers to rethink the concept of consumers, their purchasing behavior, products and service in order to understand them better and provide the final value in an optimal manner.

### 3 The Development of Neuroeconomics

The human brain went through a long evolutionary process, during which different structures evolved and enabled the variety of patterns of response to outside stimuli (Martins 2011). Thousands of years ago, Euclid and Decartes developed theories to explain the geometry of rational choice which were based on postulates that one needed only to think in order to be rational (Politser 2008). However, the theories neglected that feelings also guide decisions and that the process itself was not as simple as it seemed. There has been a vast literature that criticized the aforementioned theories, because they investigated the power of the brain and thinking at the broader scale. Many economists overlooked the neural and psychological processes underlying choices (Politser 2008). As the brain represents the body’s captive audience, feelings are winners among equals (Damasio 2006). Implication of the additional knowledge would later motivate the development of neuroeconomics.

Neuroscience often incorporates economic models to explain brain functions, both when researching the decision making or acquisition during learning and the data is compelling because it reveals previously inaccessible truths (Clithero et al. 2008). As neurobiology and economics alone did not solve many puzzles in decision making, more integrated view emerged and initial glimpse of the field in the mid- 1990s suggested that blending these two sciences might help understanding human abilities (Politser 2008). Thus the neuroeconomics was born, defined as the convergence of the neural and social sciences, applied to the understanding and prediction of decisions about rewards, such as money, food, information acquisition, physical pleasure or pain, and social interactions (Clithero et al. 2008). Simply

said, the use of neuroscience in economics referred to the application of knowledge from neuroscience to better understand certain economic phenomena.

### ***3.1 Neuroeconomics Contribution***

There has been a question related to how information about neural mechanisms can actually contribute to the economics and is there any mutual gain after all. The importance of the neuroeconomics for economic theory in general was explained in the papers published in 2004 and 2008 that provided both the insight in its potential benefits and deep skepticism (Glimcher 2009). Neuroeconomics positions itself as a discipline that takes into consideration the role of different motivations and does not describe behavior solely in terms of a single complete preference ordering (Martins 2011). As the brain is complex organ and decision making is much more than logical flow of events, the science needs to rely on emotions and feelings as well. Some neuroeconomics studies have already tried to sketch the correlates of expected utility functions from direct neural measures (Politzer 2008). According to some authors, there are in general two trends within neuroeconomics, where one explains the subjective utility and preferences whilst the other focuses on using neuroscience knowledge to improve economic models (Martins 2011). If this is taken into account, decision making and choices are mostly consumers related and the role of emotions in influencing brain can certainly help economists to retrieve conclusions. So far, neuroeconomics has already provided contributions to the study of how neural mechanisms influence preferences, choices and subjective well-being (Martins 2011). It has been shown that in some studies related to choice, when making economic decisions, neural activity in several brain regions reflects values of choice alternatives (Hunt 2014). Other studies within neuroeconomics argued that besides neural activity, response times (RT) and eye movements played significant role in explaining decision making process (Krajbich et al. 2014). Despite some authors question the relevance of the neuroeconomics, others advocate that neuroeconomists' findings can improve economic information about particular economic phenomena and can help economists improve conjectural models and explanations (Aydinonat 2010).

## **4 Data and Method**

This research focused mainly on the qualitative content analysis of scientific literature. In order to achieve research goals, an exploratory review of theoretical background has been conducted. Authors reviewed the Freudian model of psychoanalytic motivations, its advantages and limitations from the secondary data. Based on gathered and selected secondary data, a comprehensive comparative analysis

was conducted. State of art has helped authors to evaluate the critics of Freudian perspective and overview how the neuroeconomics can add the missing value.

## 5 Findings

When making choices, more precisely purchase decision making, the consumers are everything but rational. Behavioral economics is the whole science dedicated to examining this phenomenon. Freud has constructed the model that reveals the inner motivators for decisions, including the purchasing one as well. However, behavioral models are not solely enough as the practice proved that consumers' brains are much more complex than it has been initially thought. Under this chapter, authors will show how neuroeconomics, besides some arguments against, can fill the gaps that exist within behavioral studies.

### 5.1 *Criticism of Freudian Perspective*

Freudian perspective of consumers and their behavior had a lot to offer but as everything else it was a subject of criticism. Therefore, the biggest argument against this research stated how it was almost impossible to differentiate thoughts a person would act upon with those that served as a substitute for an action (Obrec 1999). As Obrec (1999) explained in marketing terms this meant that these methods allowed researchers to discover some unconscious drivers and motivations behind buying a product but it did not reveal whether this motivation would be turned into action of purchasing or would they just remain as a substitute for that action.

Another criticism advocated the idea that these models were relying on Freud's theory and that therefore they were trying to impute sexual motivation to some ordinary and everyday purchasing decisions of consumers (Obrec 1999). Even though motivational theory showed relations to notions about sexual motivation from Freud psychoanalytic theory, these sexual explanations for purchasing decisions and behaviors did not include information that marketers could have actually used.

Despite these critics marketing research still relies on motivational theories, especially in the field of advertising when companies want to understand why consumers behave in certain ways. Even though this form of qualitative and explorative research goes much deeper into the matter and motivations of consumers in comparison to some other traditional marketing research methods, it still relies on the rationality of consumers and their willingness to share information with the interviewer. This is the potential gap of the theory and this approach, because it does not take into consideration the subconscious of the respondents. Respondents are willing to share and open up only to a certain point, the rest they either choose not to share or they are not aware of some emotions and attitudes they

possess. The goal of research should be to overcome superficial and verbal responses that tend to be characteristic for most of traditional marketing research techniques and to uncover subconscious, hidden and latent motivations, emotions, reactions which would be valuable input for marketers. Trends show that researchers in the domain of consumer behavior are shifting to methods that are helping bridge this gap and access domains that are difficult to examine with the usage of traditional marketing research. Hence, this gap represents a potential for neuroeconomics and its approaches to research, which will be further elaborated in this paper.

## ***5.2 Filling Gaps with Neuroeconomics***

It is natural to assume that the argument for better understanding the decision making and motivations by revealing the brain processes will be the cause of skepticism. There are certainly conceivable paths to relevant and significant achievements, which may or may not bring success (Glimcher 2009). However, skeptical or not, nowadays there are inventions of this neural- economics combination that tend to be widely spread, such as neuromarketing. Moreover, in order to understand the behavior and motivations behind purchase act, there is a need for a wide range of tests and experimentation. In addition, there is a whole range of affective states and not only one explained by individual behavioral theories such as Freud's. In principle, with comprehensive data, theorists would be able to validate, reject or refine certain hypotheses, but this fails in practice, as it is not possible to obtain all data about all behaviors (Clithero et al. 2008). Therefore, neuroeconomics can improve efficiency of collecting and interpreting data about human states.

Another suggestion that goes as an advantage of neuroeconomics is that when used in different direction, it can lead to the search and choice of an appropriate empirical model. Glimcher (2009) point out that it can be used to make out- of- sample projections. What mainstream economist should not dismiss is that the endogenous neural variables will prove useful, because it might help imputing the missing conventional variables in cases where they are not available (Glimcher 2009). Moreover, Glimcher (2009) advocates the possibility that neuroeconomics can fill the gaps and provide the tests of both standard and nonstandard (behavioral) theories of decision making even though the difficulty lays in standard economic theory (neoclassical and modern) having the agnostic approach to decision making process. According to some studies, neurobiological knowledge can introduce constraints and integrating fMRI and genetics may be critical for producing mechanistically complete and biologically plausible explanations of behaviors (Clithero et al. 2008).

The investigation of neural correlates of some behavioral economic parameters of choice clarified why some violations of axioms may occur or be justified (Politzer 2008). This is another aspect where the neuroeconomics can touch base

with the question of consumer behavior. Therefore, there are already some proposed models that accurately capture choice probabilities of subjects making choices, purchase decisions or discounting decisions. The group of authors developed neuroeconomics drifting diffusion model (DDM) that could give insights into the potential suboptimalities of individual decision making and show that the time it takes to make decision provides an informative signal about people's preferences (Krajbich et al. 2014). Their research noted that neuroeconomic models such as DDM provided strong ties between traditional choice behavior and non-choice measures, such as attention or brain activity. These results addressed important concerns about the ability of neuroeconomics to provide useful alternatives to existing models of economic behavior and striving to replace current array of behavioral models with more unified approach towards decision making (Krajbich et al. 2014).

## 6 Conclusions, Limitations and Future Research

There is always a good chance that habits will fail and inconsistencies in the way consumer process information will be undone for the simple reason- presence of emotions. That is highly consistent with the fact that humans are not completely rational creatures, meaning that they are not governed solely by reason in any decision making process. This gives the ground for more enhanced research on decision making and introducing neurological aspects. As some studies argue, behavioral economic research can certainly continue without neuroscience, but the increased efficiency will omit (Clithero et al. 2008). Conclusions and findings about human brain and its reactions during choices or decisions can unify the cognitive and neural theories of human behavior and thus provide more comprehensive understanding of it. Clithero et al. (2008) concluded that the joint investigation of brain and behavior would lead to greater success than either discipline could achieve in isolation.

One of the main limitations of this research paper is focusing on one model (Freudian). The continuation of this empirical research might be in further investigation of all models listed by Kotler (1965) and mentioned under the second chapter of the present paper. Furthermore, the paper is purely theoretical comparison and future research on this topic may want to conduct experiments to empirically confirm (or reject) certain postulates. Additionally, there is always a possibility that certain literature is missed in the research scope, due to the lack of availability or access.

Elaborating neuroeconomics in general, one of the major disadvantages could be the expensiveness of the equipment needed to conduct experiments in the both lab and field. However, this fairly new science attempts to take advantages of the strengths of both neurobiology and economics thus incorporating the aspects of well-being (Politsier 2008). Although behavioral sciences can solely explain certain

behavior traits, the understanding of processes behind can reveal the completely new reference point for further interdisciplinary studies.

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