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Theoretical Model to Evaluate the Impact of Consumer Behaviour on Business Performance

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ABSTRACT

This paper focuses on the problematic of how the different factors that tend to influence consumer behaviour: sociocultural; economic; personal; psychological, can positively affect the innovation cycle and, consequently, the business performance, in both quantitative and qualitative terms. Based on the existing literature, a theoretical model was conceptualized. This model, supported by nine operational propositions, was called "Model for the Evaluation of the Impact of Consumer Behaviour on Business Performance," because of the role that the factors system assumes on its execution and its consequent relation with the innovation cycle and business performance dimension. Following an empirical-formal methodology, the investigation process involved the collection of data through a questionnaire, applied to a representative set of SME's from the Portuguese economic fabric - resorting to a sampling universe associated companies of the Portuguese Entrepreneurial Association (AEP). It´s our objective and conviction, after the estimation process, through the application of a modelling process based on structural equations, to confirm the existence of positive and statistically relevant effects among the three dimensions that make up the developed model.

Keywords: Innovation, Consumer Behaviour, Performance, Products
JEL Classifications: M1, M30

1. INTRODUCTION

The study of consumer behaviour is a recent discipline. The first works go back to the 1960s, from the 20th century, but its intellectual origin transports us towards the end of the 19th century. Some authors, at the beginning of the 20th century, began to study how ads could use psychological principles in order to influence the consumer (Blackwell et al., 2005; Cardoso, 2009; Kardes et al., 2011). Today, it is important to evaluate whether the consumer, through different consumption patterns, social and economic levels, among others, can positively influence the innovation cycle of companies (Kaplan and Norton, 2004; OCDE, 2005; Ferreira et al., 2007; Rozenkowska, 2023; Šostar and Ristanović, 2023): product; process; marketing, and whether this effect has direct and/or indirect repercussions on business performance.

According to Mowen and Minor (2005, p. 3), consumer behaviour is defined as "the study of buying units and the exchange processes involved in the acquisition, consumption and disposition of goods, services, experiences and ideas. "This definition, by the way, is very simple, considering its broad meaning, it presents a set of important concepts, among them: exchange; acquisition; consumption; disposition. The consumer, who resides at one end of the exchange process, thus assumes a crucial, if not, a fundamental role in this commercially desirable relationship, which is aimed at transferring a "quantity of resources" between the two parties involved in the process.

Trade tends to occur between consumers and businesses, as well as between businesses and/or economic groups, but also in industrial buying situations. The acquisition tends to embody the factors that exert a positive influence on the choices, references and tastes of other consumers regarding the products and services that are available in the market. According to Mowen and Minor (2005), a significant part of research and/or research into consumer behaviour resides here, that is, search and selection of commodities that are no more than the product. Consumers can purchase a product to express to others certain behaviours, ideas and meanings about themselves.

Consumer research tends to analyze how consumers, in general, use the product or service they are using in practice, but also the experiences and/or experiences they derive from their use. Research on the consumption process is itself relevant for sectors of activity that are more oriented towards the provision of services, including transportation, leisure, training and consultancy. Finally, the provision tends to focus on what consumers do with the product or service itself, as it is they who use it and enjoy its applications. Here it is important to mention that this dimension is concerned with studying the level of satisfaction of other consumers after the purchase of a product or service (Mowen and Minor, 2005).

The study on consumer behaviour is nowadays in applied sciences, both in terms of practice and in terms of processes, such as: medicine; mathematics; chemistry; engineering; among others. For example, in medicine, the use of ancillary diagnostic tools becomes fundamental to determine strategies that can solve clinical problems of different pathologies. Therefore, consumer behaviour, as applied science, makes use of proven knowledge of economics, psychology, sociology, statistics, among other disciplines, to bring credibility, robustness and rationality to the process of research (Malhotra, 2004; Blackwell et al., 2005; Oliveira, 2012; Rozenkowska, 2023). Understanding consumer behaviour forces companies to enter the consumer's own mind to realize their true motivations, desires and needs, in order to develop their internal processes of innovation: product; process; marketing, with a view to their acquisition by the consumer, but also their loyalty and retention (Oliveira, 2012; Sheth, 2017, Šostar and Ristanović, 2023).

2. PROBLEMATIC

The actors who promote globalization are not exactly the governments or their leaders, who seek in partnership to build concerted policies, common markets and integrate economies, but rather multinational companies and business groups that ensure a good part of the production, the market and technology where the consumer also has a prominent role (Ramos, 2012). The market is an environment whose diversity is linked to the differences between consumers and businesses. Consumers differ by sex, age, nationality, among others, but also by the content of their activities, interests, preferences and opinions.

While companies tend to be characterized by the type of industry, activity, services, but also by their marketing strategy, forms of product distribution and forms of communication (Ribas, 2006; Dória et al., 2013; Sheth, 2017). Consumer behaviour nowadays plays a predominant role not only in the way the company thinks the product or service, but also in the way it structures its strategy of penetration, promotion and distribution to the consumer. The company must pursue excellence in the process of creating value by creating differentiated proposals (products, goods, services, among others), which will create wealth for both its shareholders and its consumers and the market in general (Wahb, 2002; Nandakumar, 2010; Ramos, 2012; Šostar and Ristanović, 2023).

The creation of value is directly linked to the perception that the consumer comes to create about the company, the product or the service made available in the market. This value is, as a rule, perceived by the consumer through the degree of satisfaction created by the different attributes and/or benefits that a product offers (Ramos, 2012). Considering the context, some of the obstacles, potentialities and realities inherent in consumer behaviour were highlighted, although there is a tendency to value it as a determinant in the process of value creation, we are led to create a theoretical model that aims to answer the following question:

> "... to what extent does consumer behaviour have a positive influence on the innovation cycle of the company and how does it tend to reflect in business performance?"

3. MOTIVATIONS AND OBJECTIVES

The study of the proposed topic presents a double challenge: if it is true that it allows us to study and evaluate the real contribution of consumer behaviour to the development of business systems, it is also true that it allows us to study the reaction and adaptations to new requirements, such as the innovation of new management strategies, new products and services. Literature and research on consumer behaviour has followed a line of research based on the search for answers to questions of demand, selection and repeat purchase of a particular product, good or service. The breadth of the proposed issues covers diverse areas of consumption, such as: telecommunications; Cheers; bank clothing; education; sport; among others. Here the objective is focused on the best compression of behaviour patterns in order to determine management mechanisms that allow companies to:

- Develop the marketing mix
- Segment the market
- Position and differentiate the product or service
- Among others.

Nowadays some works appear whose line of research is to study the application of theoretical models, be they: Classics; contemporaries; avant-garde, in a confirmatory or mathematical approach, aiming at validating their presuppositions and conceptual dynamics. Thus, it is our motivation to continue this line of research, through the development and consequent application of a theoretical model that aims to study not only the different dimensions of the consumer, but also their implications in the dynamics of companies.

4. CONSUMER IN THE CENTER OF BUSINESS STRATEGY

Companies today recognize that the consumer is "king," therefore, with the ability to determine the success or failure of a product in the market. Marketers, by better understanding "attitudes," "whys," "how" that lead people to consume, tend to optimize not only existing products and services, but also to bring new and better ideas to market, to anticipate, influence and attract the consumer to the purchase. The analysis of consumer behaviour helps companies discover how to "please the king," that is, in other words, satisfy a desire or a need of one or more consumers and thereby leverage the performance of the company, the value of the brand and the market penetration of a particular product or service (Blackwell et al., 2005; Drolet et al., 2011; Ronald et al., 2015; Rozenkowska, 2023; Šostar and Ristanović, 2023).

Today's most effective marketing firms tend to reach the consumer with value propositions that are more attractive and distinctive because of their investment in development, innovation and research into new and better products and/or services. Thus, the search for methods that best allow consumers to influence, relative: Prices; promotions and; operations; will oblige companies to make an additional effort, not only in terms of innovation, but also in marketing, in order to retain and re-brand them, boosting the results and their market share (Blackwell et al., 2005, Gabriel and Lang, 2015, Nagle et al., 2016). The 21st century companies, due to the market, hypercompetitive and global, are now obliged to listen to the needs of the customer, therefore, the focus is no longer on "how can we influence the consumer" before "as the consumers can influence us." In this sense, the main objective of the companies for this century will be to "serve the consumer" (Blackwell et al., 2005).

The goal of any company is to deliver to "their" consumers more value than their competitors. The concept of value is the difference between what consumers are willing to give for a given product and the benefits they derive from it (Blackwell et al., 2005, Ehrhardt and Brigham, 2010, Saleem et al., 2015). Value-conscious awareness forces companies to emphasize the full value of their products and/or services not only in the overall perspective of their portfolio but also in the integrated perspective in package format or cross-selling. Today's quality alone is not synonymous with value, and therefore insufficient to sustain a competitive advantage in today's competitive and global landscape (Porter and Heppelmann, 2014).

But the combination of this with other components, such as: Brand; Image; price; product attributes; that yes, it is reflected as an advantage. Consumers now choose the product or service that gives them "the greatest value," not necessarily the one that is most economical to them, but rather the one that gives them the highest total benefits. Companies now aware of the "enormous" influence of consumers on the innovation cycle of the company, are forced not only to listen but also to better understand their needs and desires, so as to "optimize their product portfolio" Not only with the purpose of serving them better, but also to retain them and retain them as clients (Blackwell et al., 2005). Innovation is a process of interactions in three dimensions: Product; process; marketing, whose objective is to create a value proposition that meets the desires and needs of the end customer. The proposal materializes the need in the form of a product and/or service and that after being experienced by the consumer will be evaluated (Kaplan and Norton, OCDE, 2005; Ferreira et al., 2007).

The company's investment in developing its innovation cycle should not be confined to one of the dimensions but rather to the whole, under penalty of being able to unbalance and/or compromise the system itself, creating "value propositions" quality and customer service that is lower than expected (Flynn, 2010). Moreover, direct investment in one dimension is not always the best option, sometimes opting for indirect investment, read, "development of the cycle as a whole" turns out to be the best option, because of the effect of the relation of interdependencies between the three dimensions (Kaplan and Norton, 2004, Novas, 2008, Ramos, 2012; Šostar and Ristanović, 2023).

Companies today have numerous tools available to monitor performance at the level of the different dimensions of the business innovation cycle. The various instruments are supported, as a rule, in financial and non-financial indicators that in an articulated way allow the company to better manage each of these variables. Today, in order to be competitive, it is not enough for them to be able to innovate at the product level, but also to innovate in the excellence of their internal processes, namely organization, knowledge and skills. The efficient management of these factors allows the company to be much more competitive and successful in the market (Wahba, 2002; Kaplan and Norton, 2004; Ramos, 2012).

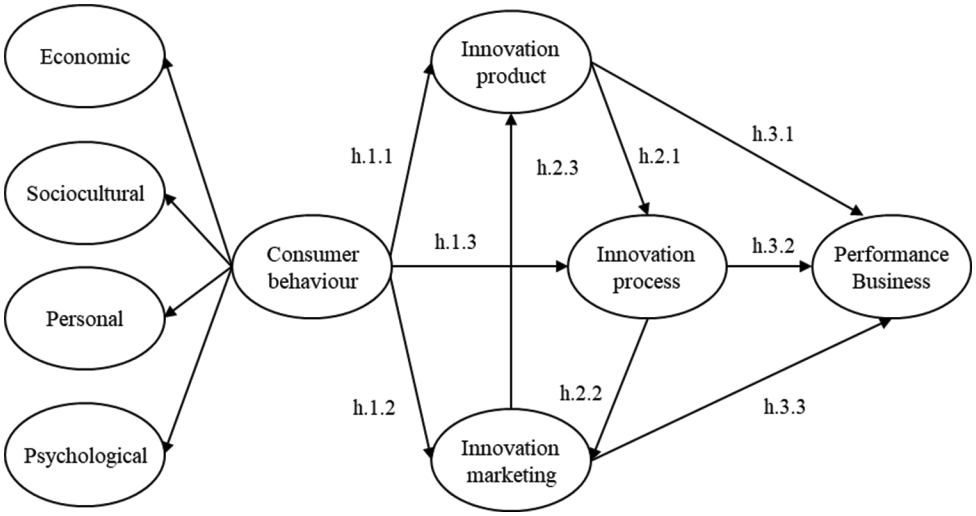
5. THEORETICAL MODEL AND HYPOTHESES TO BE INVESTIGATED

5.1. Global Perspective on the Model

The perspective presented here serves only and only to give a global and summary view on the model, which will be the object of further detail. The model predicts a set of positive interactions between consumer behaviour, the business innovation cycle and business performance.

The perspective results in a broad set of relationships among the four dimensions of consumer behaviour selected (i): Sociocultural; Economic; Personal and Psychological; the three dimensions of the business innovation cycle (ii): Product; Process and Marketing, as well as (iii): between the latter and, finally, (iv) between them and the business performance. The model has 9 latent variables, 8 of which are of an endogenous nature, related to the dimensions of consumer behaviour, business innovation cycle and business performance, and, finally, another exogenous variable of a higher hierarchical order relative to the consumer behaviour dimension itself (Figure 1).

Figure 1: Conceptual model for assessing the impact of consumer behaviour on performance



5.2. General Principles of the Conceptual Model and Hypotheses to be Investigated

Consumer behaviour is now recognized by the scientific community, entrepreneurs and marketers as a neuralgic area to be developed both in business terms and in academic terms. Companies nowadays already have departmental areas able to analyse and study market trends, in order to design their product offer, but also to listen to the needs and desires of their consumers. The scientific papers published in the area of consumer behaviour have sought to study the satisfaction of this on a particular type of product, service or even business area (Rojo, 1998; Vilas Boas, 2006; Hoppe et al., 2012, Lourenço, 2013, Laitala, 2014, Keller, 2016, Valente, 2017, Schaefer et al., 2017, Holzmann and Schmidb, 2018; Rozenkowska, 2023; Šostar and Ristanović, 2023).

Now, some more recent research has explored the application of Structural Equations Modeling to consumer behaviour in order to validate theoretical models, whether they are more comprehensive or more specific (Haur et al., 2017; Bellini et al., 2017; Lee et al., 2017; Stewens et al., 2017; Kizgin et al., 2018; Lafit et al., 2018; Stefanini et al., 2018; Shin et al., 2018; Verma and Chandra, 2018; Rozenkowska, 2023; Šostar and Ristanović, 2023). The model idealized here is part of this last line of research, because it develops a theoretical model, which assumes a direct and positive influence of consumer behaviour in the innovation cycle and that this effect on the latter dimension is reflects indirectly and positively on business performance.

The behaviour of the consumer is assumed here through a set of factors that influence consumer behaviour, they are: Economic; sociocultural; personal; psychological, which tend to exert and/or contribute in a positive way to the development of business cycle and innovation (Kotler et al., 2005; Solomon, 2014). The business innovation cycle tends to cover several dimensions of the company and is not confined to the mere evaluation of quantitative indicators. Their study also incorporates qualitative indicators that aim to evaluate the quality of internal innovation processes and consumer satisfaction in general (Kaplan and Norton, 2004, OECD, 2005, Ferreira et al., 2007). Consumer behaviour here plays a crucial role in influence the success or failure of a particular company, business or product in the market (Wahba, 2002; Nandakumar, 2010; Novas, 2008; Ramos, 2012).

The conviction is that today this level of influence extends to the way the company strategically thinks about the innovation cycle, because professionals better understand the signals of consumers, develop more and better products, thus satisfying the "bigger" desires and needs of the consumers. It is our belief that consumer behaviour by influencing innovation cycles and business strategies will certainly also influence how they are organized internally to be more competitive, systematic and efficient with the market and their consumer. Considering the above and in the light of the available literature on the subject, the hypotheses of research are formulated in generic terms in the form of the following propositions:

H_1: Consumer Behaviour has a positive influence on the innovation cycle through the development of its dimensions: product innovation; process innovation; marketing innovation.

H_2: The dimensions intrinsic to the Innovation Cycle admit positive relations among themselves, which tend to contribute to the individual development of each dimension and the model itself in general.

H_3: There is a positive direct effect between the three dimensions of the Innovation Cycle and business performance.

The generic hypotheses: H_1, H_2 and H_3, presented above, are each operationalized by three operational hypotheses, therefore, in a total of nine hypotheses, as illustrated in the conceptual design model for assessing the impact of behaviour performance.

6. METHODOLOGY

6.1. Research Strategy Adopted

The research strategy used by the researcher requires a detailed justification of each of the methodological options, based on the objectives to be achieved. Thus, the research carried out falls within the group of empirical-formal research methodologies, which tend to include (Sousa, 2000; Novas, 2008, Ramos, 2012):

- The articulation of a set of hypotheses based on the theoretical component
- Checking the hypothesis group by crossing it with information about the phenomenon
- The critical reflection on the theory against the observed facts.

The investigation is simply quantitative using the exploratory method, in order to analyze the data collected by the questionnaire: Analysis of Variance. In a second moment, the confirmatory method, through the systems of structural equations.

6.2. Target Population and Sample Selection

The population to be considered for this research work are solely and exclusively for-profit business units with an annual turnover exceeding 2 million €, with a total number of persons employed in the service 10 and which are associated with the Portuguese Business Association. The population database compiled, in xls format, integrates companies from all sectors of economic activity, in Portugal, without exception. In addition, the information catalogued in the database has only the anonymous society (AS) and by quotas (limited partnership), leaving out the individual entrepreneurs, having been organized according to the following variables: Name of the Company; Number of Employees; Tax Number; Classification of Economic Activities (CEA) Section; (CEA) Subsection; Volume of business; email.

The initial database incorporates a total of 7,500 companies representing all sectors of economic activity except: public administration and defense (O); activities of households employing domestic staff (T); activities of international organizations and other extraterritorial institutions (U), according to the CEA-Rev.3. The research with a recourse to mathematical modelling techniques have resorted to final samples with more than 200 sample units (Farias and Santos, 2000; Green et al., 2006; Saghaei and Ghasemi, 2009; Walker et al., 2010, Ramos, 2012; Kizgin et al., 2018). In view of the above, the investigators established in 200 valid observations, the minimum number of sample units to be listed in the database, with is identified at 5%, due to the constraints identified, which is a conservative rate that forced to extracted 4,000 companies from the total of the sample.

6.3. Data Collection Technique: Questionnaire

The design of the questionnaire obliges the researcher to accomplish several phases: Identify the information to be obtained; choose the interview method; plan the questions; think over the structure; to test in a small sample of respondents. Without these phases, the quality of the questionnaire could jeopardize the research to be carried out (Hill and Hill, 2009). The questionnaire developed for this research follows a logical structure and consists of five major questions. The first is a generalist and has

Table 1: Matrix of consumer effects on the innovation cycle

Effects of consumer behaviour system			
On:	**Indirect effect**	**Direct effect**	**Total effect**
Product innovation	0.335	0.226	0.561
Process innovation	0.252	0.188	0.440
Marketing innovation	0.254	0.334	0.588

(*) A non-significant relationship from a statistical point of view
(**) Standardized values

Table 2: Matrix of effects for the innovation cycle

Effects of:	Innovation process		Operations process		Client process	
On:	**Indirect effect**	**Direct effect**	**Indirect effect**	**Direct effect**	**Indirect effect**	**Direct effect**
Product innovation	-	0.108	(**)	0.339	0.597	0.065
Process innovation	0.319	0.034	-	0.108	(**)	0.211
Marketing innovation	(**)	0.181	0.513	0.055	-	0.108

(*)Relationship not considered in model
(**) Standardized values

Table 3: Matrix of effects on business performance

On:	Effects of:	Outsourcing	Innovation	Operations	Client
Performance	Direct effect	(**)	(***)	0.653	(***)
	Indirect effect	0.287	0.231	0.071	0.138
	Total effects	0.287	0.231	0.724	0.138

(*)Relationship not considered in model
(**)A non-significant relationship from a statistical point of view
(***) Standardized values

Table 4: Hypotheses and decisions

Relations	Hypothesess	Decision
CBehaviour → Product innovation	h1.1	Not rejected
CBehaviour → Process innovation	h1.2	Not rejected
CBehaviour → Marketing innovation	h1.3	Not rejected
Product innovation → Process innovation	h2.1	Not rejected
Process innovation → Marketing innovation	h2.2	Not rejected
Marketing innovation → Product innovation	h2.3	Not rejected
Product innovation → Performance	h3.1	Rejected
Process innovation → Performance	h3.2	Not rejected
Marketing innovation → Performance	h3.3	Rejected

the objective of providing a response regarding the degree of acceptance of consumer opinion in the creation of products by companies operating in Portugal. The second question is of a technical nature and aims to evaluate the nature and the effect of the different dimensions of factors influencing consumer behaviour in the innovation cycle of the company. The third question follows the same technical line and aims to evaluate the degree of development of the different dimensions that make up the innovation cycle: Product; process; marketing. The fourth question is also technical, since it aims to estimate the efficiency of the company in achieving a set of objectives: Quantitative and qualitative. Finally, the fifth question, which is of a general nature, is only intended to collect a set of information capable of characterizing the sample of companies that will participate in the research.

Questions one, two, three and four follow a Likert type measurement logic with seven points, which allows to obtain from the respondent population greater accuracy of response. The 7-point Likert scale is widely used in research studies in Marketing, Management, Finance, Sociology, among others (Cabrita, 2006, Novas, 2008, Ramos, 2012 and Kizgin et al., 2018).

While question number five, by its objective, follows a logic of multiple choice, since it allows the company to select the option that best suits according to: sector of economic activity; Number of persons employed; volume of business; respondent function; among others. It should also be mentioned that the questionnaire produced here is inspired by others already applied in previous research, both at the level of the structure itself and at the level of some of its questions, having been optimized and adjusted to the object of study that supports the present work of research (Pépece, 2002; Cabrita, 2006; Novas, 2008; Ramos, 2012; Kizgin et al., 2018).

6.4. Modeling Technique and Estimation Method to Apply

The application of systems of structural equations configures three types of approach and that per se are different: (i) merely confirmatory; (ii) analysis of competing models; (iii) model development. The strategy considered is a logic of model development, that is, a more interactive application, because if the initial theorized model presents a weak adjustment, it is our goal to improve it and adjust it, in order to achieve at a model and/or admissible solution (Ramos, 2012). The "estimation method" to be used is that of "maximum likelihood" that aims to estimate the parameters that maximize likelihood in observing the covariance matrix of the sample, i.e., as the sample size increases the estimates tend to population parameter with normal distribution.

The method is robust to violation of the presumption of normality in the manifested variables if the asymmetry (sk) and kurtosis (ku) do not exceed 2 and 7, respectively. Only just above these values is considered a serious violation of data normality and is suggested by the adoption of another estimation technique (Curran et al., 1996; Kline, 2005; Finney and Distefano, 2006; Hair et al., 2009, Ramos, 2012, Maroco, 2014). The evaluation of the quality of the model is, as a rule, carried out through a set of tests and indexes. The commonly used test, although articulated with others, is the X^2 test of adjustment, which is a test of the discrepancy function whose effect is minimized when adjusting the model. Here the objective is to test the hypothesis H_0: $\sum=\sum(\theta)$ where it is stipulated that the population covariance matrix is equal to the covariance matrix implied by the this model, instead of the hypothesis H_1: $\sum\neq\sum(\theta)$ which contradicts the term of equality of the initial hypothesis.

7. CONCEPTUAL MODEL VALIDATION PROCESS

7.1. Estimation and Confirmatory Analysis of the Conceptual Model

After the analysis and selection of the indicators related to each of the constructs that make up the generic model of structural equations: Evaluation of the impact of consumer behaviour (CB) on innovation cycle (IC) and business performance (BP); it is now essential to study the relations between the manifest and/or observable variables, to conclude the validity of the measurement model. The final model reflected below (Figure 2) reflects not only the optimized indexes of adjustment quality, following the iterative process, but also the causal relationships that are statistically significant between the different latent variables of the model (Appendix 1).

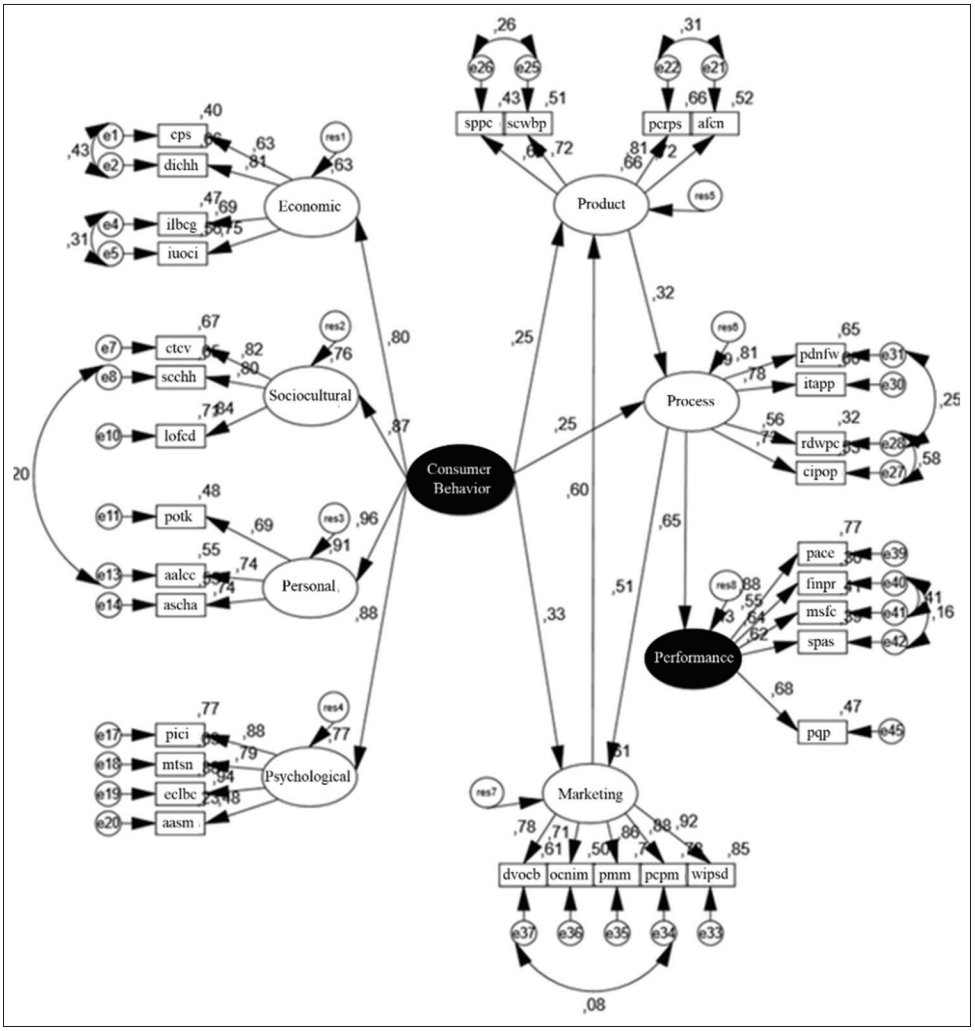
Standardized results: X^2/df = 2.642; CFI = 0.886; GFI = 0.820; PCFI = 0.791; PGFI = 0.688 and RMSEA = 0.075.

The analysis of the trajectories between factors revealed that the trajectory between process performance $B_{Proc.Perf.}$ = 0.598; SE = 0.061; $\beta_{Proc.Perf.}$ = 0.65; P = 0.001) is the one with the greatest weight. Followed by the trajectory between consumer behaviour (CB) → Marketing ($B_{CC.Mak.}$ = 0.345; SE = 0.059; $\beta_{CC.Mark.}$ = 0.33; P = 0.001). The other two trajectories between: Consumer behaviour → Produt and Consumer Behaviour → Process, have slightly lower values, but in any of them the results are statistically significant: ($B_{CC.Prd.}$ = 0.231; SE = 0.063; $\beta_{CC.Prd.}$ = 0.25; P = 0.001) and ($B_{CC.Mark.}$ = 0.236; SE = 0.092; $\beta_{CC.Mark.}$ = 0.25; P = 0.001). The observed indices for the initial model of M_g although less expressive do not lead to rejection of the proposed conceptual model, this is, the non-rejection of H_0 of the model is not null H_0: $M_{g\,F} \neq 0 \rightarrow M_{g\,I}$, since the rejection of H_1 of the model is null H_1: $M_{g\,F} = 0 \rightarrow M_{g\,I}$. The already optimized final model of M_g presents for the absolute adjustment quality indicators: X^2/df and Gfi values of 2.642 and 0.820, respectively.

The index X^2/df already reflects a reasonably good level of adjustment quality. Whereas the Gfi index falls within the acceptable range, but whose result is understood as suffering. The relative adjustment quality indicators Cfi and Ifi although presenting acceptable but rather poor values, 0.886 and 0.887, respectively, by the way, are not the most suitable for small sample sizes. Thus, it is important to place some caution in its evaluation, so as not to lead to improper analyzes (the probability of inadequate analysis is greater if the sample size of respondents is larger).

The parsimonious adjustment quality indexes Pgfi, Pcfi and Pnfi present values of 0.688, 0.791 and 0.741, respectively. Any of

Figure 2: Causal model for global consumer model



these indexes already reflects a good level of adjustment quality, e.g., within the parameters recommended for the index effect. The Rmsea index that assesses the level of population discrepancy for the final model M_g and which has the objective of verifying whether the adjusted model is next to the real model or not. In this case, was enciphered, 0.750, which is considered as a good adjustment. The Rmsea index was also tested for a 90% confidence break whose value obtained is also considered as a good adjustment (with a probability of 90% the Rmsea in the population is situated between 0.690 and 0.800, which means that has a good quality of adjustment). Finally, the quality of the calculated indices allows us to consider that the final M_g model, in general, reflects a good level of adjustment quality.

7.2. Analysis of Direct and Indirect Effects on the Global Model

The effects of the system of factors influencing consumer behaviour on each of the vertices of the innovation cycle tend to extend beyond the causal relationship established between them and each factor, whether these relationships are very significant or not. Beyond this direct effect, there is also a set of indirect effects resulting from the original circular configuration inherent in the business innovation cycle. When these indirect effects are combined with the direct ones, they generally reflect the total effect that one variable has on another (Table 1).

Given the above, the circular presumption proposed by the specialized literature for the business innovation cycle is considered valid, i.e., the output created by one variable is taken as input for the next variable, and so on. Furthermore, the proposed circular system is also responsible for a set of indirect effects resulting from subsequent relationships, which are worth mentioning (Table 2):

The matrix of direct and indirect effects generated by the different dimensions of the innovation cycle on business performance is now presented, and no less importantly, the indirect effect caused by the system of factors influencing consumer behaviour on performance, mediated by the innovation cycle (Table 3).

The results obtained for the total overall effects clearly show the impact of process innovation on business performance. The indirect effect of the system of factors influencing consumer behaviour on business performance, mediated by the innovation cycle, is still quite considerable, which further confirms its relevance for business management in general. The indirect effects

created by both dimensions: product innovation and marketing innovation on business performance, through the circular structure, while positive and statistically significant, are, in themselves, modest, particularly those reflected by the marketing dimension.

8. SUMMARY CONCLUSION AND LIMITATIONS

Based on the results of the questionnaires, we conclude that the overwhelming majority of companies surveyed today tend to consider "consumer behaviour" as a key factor in the design of their innovation strategy, but also to incorporate it into the product.

The sectors of economic activity that most tend to value Consumer Behaviour in their innovation strategy, according to the tendency of response, are: Information and communication activities, Agriculture, animal production, hunting, forest and fishing, i.e., with average 6,20 and 6,13, respectively, but whose aggregate representativeness at the base does not exceed 8.7%.

The most represented sectors in this study are: Manufacturing and wholesale and retail trade, with 25.3% and 14.8%, respectively, tend to present average values in the order of 5.44 and 5.96, i.e., one slightly below those mentioned above. Now, regarding the situation of incorporating it into the development of the product here, the sector that values it most is Real Estate Activities, e.g., with an average of 7.00, but only whose respondents do not go beyond 5.0%. The most represented sectors have equally appreciable mean values, e.g., 5.86 and 6.17, respectively.

The estimation process resulted in the elimination of two causal relations that the theory established in the conceptual model. Their elimination also leads to the rejection of the operational hypotheses formulated, e.g., according to the model, since they did not have statistical significance in order to be considered. The conclusion to be drawn here is, only and only, that the relations that the theory made between the variables, were not relevant and statistically significant, so as to be taken into account in the final model for the evaluation of the impact of consumer behaviour in the cycle innovation and business performance. The Table 4 below reflects the summary of the causal relationships established by the model - research hypotheses - as well as the decisions made by the investigator resulting from the estimation process:

In conclusion, the results obtained through the estimation process reveal the existence of positive and statistically significant causal relationships between consumer behaviour and the three dimensions of the business innovation cycle. Moreover, the results obtained in the circular relationship between the different dimensions of the innovation cycle, which means that all of them positive and statistically significant, tend to exert an indirect positive effect of consumer behaviour on the innovation cycle as a whole. Although not all the causal relationships established between the dimensions of the innovation cycle and business performance have proved to be positive and statistically significant, which led to the elimination of two relationships. The results of the estimation process are considerable, without compromising the validity of the global model that was developed within the framework of this research project.

After the data presente above, we are considering that the behaviour of the consumer, today is assumed as a factor of great importance for the life of most companies, which must be taken into account and considered when formulating the different strategies, in particular, the fact that it is taken into account by the decision-making bodies of the companies allows them not only to collect different stimuli that can contribute to the individual development of each of the dimensions of the innovation cycle, but also of the latter as a whole. The concept developed here for consumer behaviour is no more than the sum of all its dimensions: Economic: Sociocultural; Personal; Psychological, which, as we have seen, has a positive effect on the company's innovation cycle, with a reflection on business performance.

This study leads to the conclusion that the consumer behaviour, is a factor of high importance for the life of most companies, which must be considered when formulating the different strategies, in particular, the company's innovation strategy. The fact of consumer behaviour be considered by the decision-making bodies of the companies not only allows them to collect different stimuli that can contribute to the individual development of each of the dimensions of the innovation cycle, but also contribute to the development of the innovation cycle as a whole.

This research developed the concept for consumer behaviour in the perspective of the sum of all its dimensions: Economic: Sociocultural; Personal; Psychological, which, as we have seen, has a positive effect on the company's innovation cycle, with a reflection on business performance.

Regarding the limitations, it should be noted that the estimation process did not confirm two of the causal relationships initially identified in the literature. These were considered as not statistically significant, leading to their rejection, e.g., non-confirmation. However, if we consider the relations formulated above to be valid, then further investigation will be necessary in order to confirm and validate them.

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APPENDIX

Appendix 1: Legend of theoretical model

Economic	
cps	Consumer price sensitivity
dichh	Disposable income of the consumer and his household
ilbcg	Inflation level in basic consumer goods
iuocl	Impact of unemployment on consumption levels
Sociocultural	
ctcv	cultural taste and consumer values
scchh	Social class of the consumer and his household
iofcd	Influence of the family in the consumption decision
Personal	
potk	Professional occupation and technical knowledge
aalcc	Age and life cycle of the consumer
ascha	Asset situation of the consumer and his aggregate
Psychological	
pici	Perception and interpretation of consumption incentives
mtsn	Motivation to satisfy a need
eclbc	Experience accumulated and lived by the consumer
aasm	Anxiety and stress management
Product	
sppc	Streamline the product development cycle
scwbp	Surprise the competition with new and better products
pcrps	Promote continuous research of new products and services
afcn	Anticipating future consumer needs
Process	
pdnfw	Promote and develop new forms of work
itapp	Invest in technology and process automation
rdwpc	Reduce downtime and waste in the production cycle
cipop	Continuously improve production and organization processes
Marketing	
dvocb	Develop the value of the company's brand
ocnim	Opening of the company to new national and international markets
dpmm	Distribute and provide the market in the desired time-to-market
pcppm	Properly communicate and promote the product on the market
wipsd	Work on the image of the product to stimulate demand
Performance	
paoe	Productivity and operational efficiency
finpr	Financial profitability
msfc	Management of structure and financing costs
spas	Sales of products and services
ppq	Product and process quality