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CONSUMPTION ATTITUDES, DEBT AND THE PROCESSES OF MENTAL ACCOUNTS IN PERUVIAN UNIVERSITY STUDENTS

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ABSTRACT: Modern societies are accelerating industrialization and integrating consumerist dynamics, particularly focused on adolescents, a group that faces trade-offs affecting their decision-making. The objective was to determine the relevance of attitudes toward consumption and debt among economics students at the National University of San Marcos (UNMSM), based on their mental accounting. A quantitative methodology with a descriptive-correlational design was used. A sample of 197 students was analyzed through a structured 31-item questionnaire. Data were processed using Exploratory Factor Analysis (EFA) and correlation techniques, enabling the identification and evaluation of variable relationships. A strong link between rational consumption and austerity was confirmed, with minimal presence of irrational behaviors tied to hedonism. Regarding mental accounting, 90.3% of students employed System 1 (intuitive/automatic) for decision-making. Conclusions revealed a moderate relationship between consumption and debt attitudes. Most participants displayed a rational profile (89.1%) and adopted conservative debt attitudes. The study offers actionable insights and promotes responsible financial behavior.

Keywords: debt, university student, consumption, mental process, economic behavior, decision theory.

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INTRODUCTION

In the context of the contemporary economy, determined by an increasing complexity and dynamism, it is relevant to analyze consumer behavior, particularly in the younger sectors of the population. Neoliberalization processes have intensified a market logic that promotes a consumerist culture, affecting the construction of critical thinking. Instead of forming reflective and socially committed individuals, social institutions tend to reproduce models that position young people as uncritical consumers, immersed in a mercantilist spiral (Lapierre and Rozendaal, 2019).

According to Bermeo-Giraldo et al. (2019), the identified main factors contributing to high levels of indebtedness: the irrational and unconscious use of credit cards, the irregular behavior of credit counselors at the time of placing a personal loan or credit card, where they do not provide the necessary information to customers. In this regard, they propose the existence of a relationship between aspirations, inequality, poverty, and access to debt, in which the unsatisfactory dynamics of wages accentuate the feeling of exclusion and increase the risk of over-indebtedness in the most disadvantaged socioeconomic sectors as a way of accessing the symbols of success linked to consumption (Bogliacino and Maestri, 2014; Bogliacino and González-Gallo, 2015; Dalton et al., 2011; Vera et al., 2012).

Research has shown that individual attitudes and beliefs have a significant influence on spending and saving behaviors, and in mental accounting processes, play a key role in the evaluation of options and the allocation of resources (Shefrin and Thaler, 1988). Under this perspective, adolescents constitute a group of particular interest, not only because of their age condition in formation, but also because they represent an attractive space to incorporate commercial strategies that influence consumption patterns and allow anticipating future indebtedness behaviors (Sepúlveda et al., 2017; Barros et al., 2019).

Thus, the importance of mental account processes in consumer behavior has become apparent. Thaler (1985) found empirical evidence that individuals tend to exhibit a more liberal spending pattern with resources they perceive as “earnings” compared to their regular income. Similarly, Shefrin and Thaler (1988) proposed the influential “mental accounts”

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model to explain how individuals segregate their financial resources into different mental categories and manage them differently. These cognitive processes play a fundamental role in consumption and borrowing decisions, as they modulate the perception of gains and losses, as well as the evaluation of risks and benefits associated with such decisions.

Understanding these phenomena takes on particular relevance, given the growing access to financial products and the consumption trends observed in the population. Callupe and Porras (2023) noted that compulsive purchases and attitudes towards indebtedness are statistically significantly correlated. Consumption compromises the consumer's finances and emotional well-being, mainly because consumption has a significant impact on society.

In this line, the study was conducted in the population of university students of the Universidad Nacional Mayor de San Marcos of the Faculty of Economic Sciences, examining the relationship between consumption attitudes, indebtedness, and the mental account processes involved. This analysis is important because it will contribute to enrich the existing body of knowledge on consumer behavior in the Peruvian context, providing valuable information for the design of financial education strategies and programs aimed at promoting responsible consumption and healthy financial practices.

DEVELOPMENT

Consumer buying behavior, mental accounting, and buying attitude

The analysis of human behavior as an economic agent has been a topic of great interest in economic science in recent years. Analyzing consumer buying behavior is conditioned by various social, cultural, and personal factors, which determine the social class to which they belong and play a decisive role when it comes to their consumption (Delgado et al., 2018). In this sense, pointing out the motivations behind consumers' decisions is interesting, as it involves considering multiple variables, such as cultural, social, ethical, and ideological characteristics, and the level of access to information. Sánchez et al. (2020) mention that the analysis of consumer behavior defines human beings in terms of their multiple satisfaction needs and is influenced by external factors (cultural, subcultural, social class, reference group

and family) and internal factors (motivation, perception, learning, personality and attitudes) that influence their behavior.

Cultural and social factors influence individual consumer decisions and are immersed within these factors, and play an important role in the bias that the individual may have. Montoya et al. (2024) denote this as a bias, called behavioral imitation. In addition, subjective and psychological factors, such as age, life cycle stage, occupation, economic situation, lifestyle, personality, accessibility, motivation, perception, learning, beliefs, attitudes, and philosophy, are directly related to the consumer's characteristics. Meena (2023) mentions that cultural factors in consumer behavior are imperative in today's global marketplace and that preferences and decision-making processes are shaped by cultural values, norms, and rituals.

However, another factor is the economic situation and belonging to a social stratum, which are key in the purchasing preferences of individuals. Quintano and Denegri (2021) conclude, "consumption was installed as an articulator of the construction of identities and a central element in the definition of status, while credit was normalized as a structuring factor of social relations and personal life". In contrast, a person with a limited budget tends to opt only for what is necessary, avoiding exceeding their budget and without resorting to credit.

Decision making, a fundamental part of mental accounting, involves choosing a specific option or course of action among several alternatives to solve a problem (Wang and Ruhe, 2007). This process considers what is the best possible option and the associated opportunity cost, depending on the consumer's profile, which plays a fundamental role in their purchasing decisions. Therefore, the search for a way to systematize and categorize consumer behavior based on their analysis during the purchasing process is essential. In this case, the approach proposed by Kahneman (2012) with his systems I and II of mental accounts was used. Rationality has been the subject of study from various disciplines and perspectives due to its relevance as one of the mental functions that most influence decision-making, the purpose of which is to generate greater satisfaction (Gallegos-Daniel and Taddei, 2022).

Smith (1776) pointed out important concepts such as loss aversion, overconfidence, and self-control, highlighting the importance of prudence and moderation in financial decision making. It is also important to recognize that there are elements that enrich or distort the

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rationality of consumers. In this regard, Thaler (2018) has highlighted the growing relevance of behavioral economics, which combines elements of economics and psychology to examine how emotional and cognitive factors impact economic decisions.

Within behavioral economics is the theory of mental accounting, known as mental accounting, developed by Richard H. Thaler. The mental accounting phenomenon is based on the premise that individuals allocate their money differently when spending is labeled for a specific purpose. Individuals with rational constraints adopt internal control systems to organize and evaluate both their spending and saving (Vargas, 2021). Mental accounting, coined by Daniel Kahneman, allows a better understanding of how people evaluate financial, emotional, and cognitive events when making decisions.

Tversky and Kahneman (1974), in their work "Mental Accounts", state that people can make decisions more easily by dividing their resources and experiences into separate mental categories, known as "accounts". Among the most fundamental accounts, he distinguishes two forms of cognitive processing: "System I" and "System II", which affect our perception of gains, rewards, risks, and losses. System 1 acts automatically and impulsively, while System 2 is activated by analytical processes, anchored in rationality. System 1 is automatic, intuitive, involuntary, fast, and unconscious, while System 2 is slow, voluntary, and fully conscious (Moroni and Pereira, 2021). On the other hand, Kahneman (2012) narrates that human behavior as a whole is expressed through a dual system, composed of System 1 and System 2, and these are not independent of each other.

In this framework, heuristics and biases emerge mainly from the functioning of System 1. Heuristics and biases are the result of intuitive thinking, based on intuitions, feelings, and impressions, which are transformed into beliefs once processed through analytical thinking (Moya-Ponce and Madrazo-Lemaroy, 2023).

After examining the complexity of mental accounting and its impact on purchasing decisions, it becomes relevant to address consumer purchasing attitudes. Understanding these attitudes is fundamental to gaining an understanding of consumer behavior in the marketplace and the factors that influence their purchase decision. When referring to consumer attitudes it is necessary to point out the nature of their behavior, in that sense Madrigal-Moreno et al.

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(2024) express that consumer behavior is characterized by the performance of activities such as evaluation, selection, purchase and use of goods and services; same that lead to the realization of mental and emotional processes, as well as the execution of physical actions aimed at satisfying desires and needs. Godoy et al. (2016) define consumer attitudes as a key element to explain purchasing behavior.

Understanding the attitudes (positive, negative, or neutral) that individuals have towards consumption and their access methods is relevant. According to Denegri et al. (2014), purchasing behavior is not unitary and does not present the same characteristics, but is closely related to consumer attitudes. These attitudes include tendencies such as rationality, impulsivity, and compulsiveness, which are decisive in purchasing decisions and need to be studied in depth.

Gallegos-Daniel and Taddei (2022) mention in their research that consumers make rational decisions, an approach known as the "economic man theory". However, despite what economic theory proposes, people's purchasing processes tend to be more emotional than rational, which leads to questioning this theory through behavioral economics. Also, Denegri Coria et al. (1999), cited by Denegri et al. (2021), offers a more concrete view by stating that, in the reflective or planned style, rationality is fundamental and the consumer makes efficient financial decisions, ordering his expenses according to need, utility, and associated costs. Contrary to the rational purchasing attitude is the impulsive attitude. In the economic field, impulsive buying behavior is understood as the act of acquiring things in a thoughtless way, but is articulated to other axes and variables that allow finding a greater dimension to the concept (Torres et al., 2018). This complex behavior of the individual is oriented to their material or psychological satisfaction.

However, the compulsive buying attitude is characterized by being recurrent, irrational and internally motivated by negative emotions (Leal and Baldanza, 2020). Compulsion is a vicious circle whose negative effects seem to be neutralized by buying, which causes moments of euphoria. It is important to note that compulsive behavior is considered a type of behavioral addiction, as it is characterized by a need beyond voluntary control despite the

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negative effects it entails (González López & Lemos, 2020, as cited in Andreassen et al., 2013).

In this context, Hernández-Orellana et al. (2023) point out that young people are a vulnerable population, since consumption provides them with access to symbolic objects that are part of their identity construction, which can lead them into debt. This vulnerability in young people makes research on this social group, particularly university students, more attractive. Hernández-Rivera and Flores-Lara (2022) point out that this group faces the need to make problematic financial decisions, because they do not have control over their emotions or because they lack the necessary knowledge to do so, and it negatively affects the development of their financial behavior, fostering bad practices and attitudes in their finances.

The interest of young university students in financial information has grown in recent years, as well as their concern for financial practices. Considering the problem of youth indebtedness, which is understood as a more or less favorable disposition towards indebtedness as a valid way to satisfy consumption needs and desires (Denegri et al., 2017). In the national situation, it is noteworthy that indebtedness in Peru has been the subject of recent studies, revealing a worrying growth, even in traditionally more austere regions. Research by Paredes-Pérez et al. (2023) point out that seven out of ten Peruvians, especially in socioeconomic level C, report having debts, also revealing that the highest rates of indebtedness are found in the north (76.7%) and east (75.2%) of the country, with 32% of the population indicating that their income is not enough to cover their debts.

Ramos (2021) analyzes the evolution and trajectory of credit in the Peruvian household economy, highlighting that, since the emergence of microfinance institutions in the 1980s, access to credit has become accessible, becoming a fundamental element of the family budget, both for acquiring consumer goods and for investing in family enterprises. In this context, we consider the classification of attitudes towards indebtedness proposed by Denegri et al. (2011), who establish three main categories: austere, hedonistic, and ambivalent.

According to Quintano and Denegri (2021), attitudes towards austere indebtedness reflect a cautious posture in the management of financial resources, with a negative predisposition towards indebtedness. Hedonism, according to Hirschman and Holbrook (1982), is related to

consumer behavior, in which the emotions derived from the purchase experience orient the individual towards a new vision. Ambivalent attitudes (Denegri et al., 2011) are the coexistence of attitudes that value saving and the measured use of resources, together with attitudes associated with the perception of credit as a means of rapid access to purchasing needs.

In this context, the analysis of consumer behavior and their attitudes towards consumption and indebtedness is fundamental to understanding and anticipating their actions in the market. This approach must be comprehensive, considering the psychological, economic, social, and cultural factors that influence purchasing decisions.

METHODOLOGY

The research responds to a descriptive and correlational cross-sectional study, using attitudinal scales towards purchasing and indebtedness. It is descriptive because it mentions characteristics of a given population and does not generate a commitment to explain phenomena, and it is correlational because it seeks to identify the degree of relationship between variables, evaluating their association without establishing causality. According to Creswell, J. W. and Creswell, J. D. (2018), descriptive and correlational studies are part of quantitative approaches that examine statistical relationships and describe phenomena systematically at a given time.

The study population consisted of students of the Faculty of Economic Sciences (FCE) of the Universidad Nacional Mayor de San Marcos (UNMSM), including both men and women. The sample was selected randomly, applying probability sampling criteria. A sample size of 197 students was determined, considering a confidence level of 95%, a margin of error of 5%, and an expected proportion of 0.5, common parameters when no specific prior data is available. This approach made it possible to guarantee the statistical representativeness of university students in the evaluation of their consumption and indebtedness attitudes.

Likewise, a questionnaire was designed consisting of 30 questions distributed in four blocks: socioeconomic characteristics, mental accounts, consumption habits and attitudes towards

consumption and indebtedness, using a closed response format with Likert scales, The Attitudes towards **Indebtedness Scale** (Denegri et al., 2021, p. 29), is included, which evaluates hedonistic and austere attitudes through 11 items in each subscale. **The Consumption Styles** Scale, initially developed by Luna-Arocas and Fierres (1998) and adapted by Denegri et al. (2014), which consists of 18 items, is also incorporated. Finally, the Mental Accounts, a concept based on the postulates of Tversky and Kahneman (1974), who investigate how individuals organize and value their spending through heuristics and systems of thought, are analyzed. All these instruments have demonstrated validity and reliability in previous studies, which supports the analysis performed.

In this sense, the research was conducted in two stages. In the first stage, virtual surveys were implemented to collect data from participants. However, in order to increase the number of respondents, a second stage of data collection was carried out in person, where flyers containing the same questions of the virtual form were distributed. The students surveyed were guaranteed that their answers would be anonymous, thus protecting their personal information. The duration of each survey ranged from 3 to 8 minutes.

Finally, the information was processed using SPSS v. 27, following a three-stage analysis. First, the reliability of the scale of attitudes towards consumption and indebtedness was evaluated using Cronbach's alpha statistic. Second, a factor analysis was performed to identify the underlying dimensions. Subsequently, percentiles within a 95% confidence interval were determined to establish scores. Next, the variables were recoded, and the recoded consumption and indebtedness variables were crossed. Finally, a Pearson correlation analysis was performed to examine the relationship between the consumption and indebtedness variables.

Regarding mental accounting, the related questions were grouped and the corresponding percentiles were determined. Then, the variables were recoded and a frequency table was generated to describe the systems found; this process allowed us to obtain a comprehensive view of both consumption and indebtedness behavior and the mental accounting systems employed by the participants.

RESULTS

A descriptive analysis of the profile of 197 students of the Faculty of Economic Sciences of the UNMSM was carried out, 42.6% are women and 57.4% are men, with a male predominance. Seventy.6% are between 18 and 21 years old, while 26.4% are between 22 and 25 years old, 0.5% are between 26 and 30 years old, another 0.5% are 30 years old or older, and 2% are younger than 18 years old. Regarding the academic year, 50.8% are in their second year, 33.5% in their third year, while for the fourth and fifth year, there is a lower incidence, 6.1% and 5.6%, respectively. Finally, the first year shows 4.1%.

To test the hypotheses, exploratory factor analysis using the Varimax method was used. According to Cape (2024), it is a technique used to simplify the interpretation of the factors by maximizing the variance of the squared loadings between the variables, which leads to a clear separation of the factors and improves the understanding of the relationships. The consumption scale was processed with 18 items and a 6-scale response format; completely disagree (1), strongly disagree (2), somewhat disagree (3), somewhat agree (4), strongly agree (5) and completely agree (6). Likewise, an internal consistency analysis was performed using Cronbach's Alpha, which yielded an α (0.713), indicating that the reliability of the instrument is considered acceptable.

Secondly, the factorial validity analysis was performed, where the communalities and factor loadings of the items in each dimension were obtained, eliminating items 1, 6, 7, 8, 10, 12 and 15. The final scale was composed of 11 items: 13, 14, 16, 17 and 18 in the “Impulsivity” factor, 2, 3 and 4 in the ‘Rational’ factor, and 11, 9 and 5 in the “Compulsivity” factor. These three principal components explain 65.068% of the total variance, as shown in Table 1.

Table 1

Total variance explained (consumption attitude)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	a % of variance	% cumulative	Total	a % of variance	% cumulative	Total	a % of variance	% cumulative
1	3.348	30.436	30.436	3.348	30.436	30.436	3.202	29.113	29.113
2	2.725	24.776	55.213	2.725	24.776	55.213	2.098	19.075	48.188
3	1.084	9.855	65.068	1.084	9.855	65.068	1.857	16.879	65.068
4	0.899	8.168	73.236						
5	0.737	6.698	79.934						
6	0.580	5.269	85.203						
7	0.468	4.252	89.455						
8	0.385	3.503	92.958						
9	0.313	2.841	95.799						
10	0.269	2.447	98.246						
11	0.193	1.754	100.000						

Note. Own elaboration.

The results in Table 1 were grouped and the 2.5 and 97.5 percentiles, centered around the distribution mean, were established as reference values. These values delimit the 95% confidence interval. The dimensions of the consumption scale were recoded. Table 2 shows the distribution of the three factors found: “rationality”, ‘impulsivity’ and “compulsivity”, 89.1% of the sample is within rationality, 9.3% within impulsivity and 1.6% belongs to compulsivity.

Table 2

Consumption attitude score (grouped)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rational	172	87.31	89.1	89.12
	Impulsive	18	9.14	9.3	98.45
	Compulsive	3	1.52	1.6	100
	Total	193	97.97	100	
Missing	System	**4**	**2**		

Note. Own elaboration.

While in Table 3, use is made of the second scale of attitudes toward indebtedness, Cronbach's alpha statistic was calculated with an α (0.718), which shows acceptable reliability. The scale was composed of 10 items, of which numbers 3, 7, 8, 8, 9 and 10 load

significantly on the first factor “austerity”, while 2,6,11 correspond to the second factor ‘hedonism’ and items 1 and 6 belong to the third factor “ambivalent”. These 3 principal components explain 69.997% of the total variance.

Table 3

Total variance explained (indebtedness attitude)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	a % of variance	% cumulative	Total	a % of variance	% cumulative	Total	a % of variance	% cumulative
1	3.954	39.535	39.535	3.954	39.535	39.535	3.901	39.010	39.010
2	2.108	21.078	60.614	2.108	21.078	60.614	1.996	19.964	58.973
3	0.938	9.383	69.997	0.938	9.383	69.997	1.102	11.023	69.997
4	0.743	7.427	77.424						
5	0.683	6.831	84.255						
6	0.505	5.045	89.300						
7	0.407	4.067	93.367						
8	0.302	3.020	96.387						
9	0.236	2.358	98.745						
10	0.126	1.255	100.000						

Note. Own elaboration.

The results were grouped and two percentiles 2.5 and 97.5 were chosen, these values delimit the 95% confidence interval. The dimensions of the indebtedness scale were recoded. Table 4 shows the distribution of factors: austere (91.8%), hedonistic (7.2%) and ambivalent (1%). In addition, a test of association was carried out by constructing a contingency table to assess the degree of relationship between consumer attitudes and attitudes towards indebtedness.

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Table 4

Indebtedness attitude score (grouped)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Austere	179	90.90	91.80	91.8
	Hedonistic	14	7.10	7.20	99.00
	Ambivalent	2	1.00	1.00	100
	Total	195	99.00	100	
Missing	System	2	1		

Note. Own elaboration.

Table 5 shows that for the austere attitude of indebtedness 93.0% have a rational attitude, in the case of the hedonistic attitude 11.8% are associated with the impulsive attitude and the ambivalent attitude is associated with compulsive in 0.0%. A positive and significant association is shown between indebtedness attitudes and consumption attitudes, with a correlation value of 0.166. This correlation is statistically significant at the 0.05 level ($p = 0.022$), suggesting that, although the relationship is not very strong, there is a slight tendency.

Table 5

Cross-tabulation of consumption attitude score (grouped) and indebtedness score (grouped)

	Austere	Hedonistic	Ambivalent
Rational	159	14	2
	93.00%	82.40%	66.70%
Impulsive	11	2	1
	6.40%	11.80%	33.30%
Compulsive	1	1	0
	0.60%	5.90%	0.00%

Note. Own elaboration.

For the analysis of the block of mental counting questions, scores were initially inverted, since the results were presented in reverse system 2 = 1 (rational); system 1 = 2 (irrational). In Table 6, the results were grouped and set according to intervals, choosing two percentiles centered around the mean (7.0964) of the distribution, namely the values 2.5 (5.0 points) and

97.5 (9.05 points), which thus define the 95 % reference interval. The minimum score for the exercise was 5.0 and the maximum 10.0.

Table 6

Descriptive analysis of the mental account scales.

Total Cuentas Mentales	
Valid	197
Missing	0
Std. Deviation	126,404
Variance	1,598
System 2	5.0000
System 1	10

Finally, the descriptive analysis indicating the distribution of the factors was carried out: system 1 has 174 cases (88.3%), with a minimum score of 6 and a maximum of 10; while system 2 has 23 cases (11.7%), with a minimum score of 5 and a maximum of 5.5. In general, the scores observed range between 5 and 10. Likewise, the results of the mental account system were examined according to attitude towards consumption, as detailed in Table 7. 89.4% of respondents with rational consumption attitudes used system 1 (rational), while 13.0% of respondents with impulsive attitudes used system 2 (irrational). This explains a rational tendency in the analysis of the cases, represented by system 1 and rational attitudes towards consumption.

Table 7

Descriptive analysis of the mental account scales.

	System 1	System 2	Total
Rational	152	20	172
	89.40%	87.00%	89.10%
Impulsive	15	3	18
	8.80%	13.0%	9.30%
Compulsive	3	0	3
	1.80%	0.00%	1.60%

Note. Own elaboration.

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RESULTS DISCUSSION

The results indicate that 87.3% of the students adopt a rational approach in their consumption decisions, in line with the consumer theory proposed by Varian (1992), which proposes maximizing utility under certain restrictions. This behavior shows how students choose the options that generate the greatest satisfaction for them, reflecting a clear logic in their choices.

As for indebtedness, 90.9% of respondents prefer to maintain an austere attitude. This behavior is consistent with Modigliani and Brumberg (1954) study, "life-cycle hypothesis," which explains how people tend to avoid debt while seeking financial stability. Moreover, this tendency is aligned with the risk aversion described by Arrow (1971), as students prefer to avoid potential losses.

On mental accounts, Thaler (1985) states that people organize their finances by dividing them into categories. In this study, we found that most students (89.4%) used a reflective approach, identified as System 1, to structure their decisions. On the other hand, System 2, associated with quicker and more emotional responses, was less common, but appeared in situations of less analysis.

CONCLUSIONS

From the analysis, three profiles were identified among the students: rational (89.1%), impulsive (9.3%) and compulsive (1.6%). Rational students showed a clear connection between their consumption decisions and indebtedness, opting for conservative strategies, where 93.0% avoided imprudent indebtedness.

The study also revealed a moderate relationship between consumption, indebtedness and the use of mental accounts. Although it was observed that rational students tend to prioritize austerity, the correlation found was low (0.166), suggesting that the connection between these factors is not as strong as expected.

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Finally, the rational, impulsive and compulsive profiles reflect different ways of approaching finances. The predominant rational profile prioritizes planning and deliberate decisions, while the less common impulsive and compulsive profiles are related to more intuitive and less controlled behaviors. It is important to encourage financial education among students of different careers in order to extend this type of responsible attitudes to a wider public, promoting a more conscious consumption and an adequate management of the personal budget.

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