

## **STUDENTS' PERCEPTION OF THE APPLICATION OF NUDGES**

### **PERCEPCIÓN DE LOS ESTUDIANTES SOBRE LA APLICACIÓN DE NUDGES**

### **PERCEPÇÃO DOS ALUNOS SOBRE A APLICAÇÃO DE NUDGES**

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**Received: October 31, 2023**

**Approved: March 22, 2024**

**DOI: <https://doi.org/10.22267/rtend.242502.259>**

#### **Abstract**

In this research it was examined how students of two private institutions perceive the nudges. Although the nudge theory has gained considerable popularity in international research, as it is reflected on recent articles in international magazines, it does not count on the recognition or implementation in a local context. In that way, with the developed research, knowledge is generated with regard to the population object of study and it is an important test about the possible implementations of deliberative and non-deliberative nudges in public policies. The methodology

used is a quantitative approach, descriptive method, snowball probabilistic sample technique and the test was carried out through chi square to determine gender perception. The results gotten showed that students are receptive to the use of nudge tool in their daily contexts. In conclusion, there is acceptance of the use of deliberative nudges and there is a little distrust of non-deliberative nudges, likewise, it is exposed that nowadays the nudge tool is discussed in top level international universities; nevertheless, in the Latin American context, its formulation is minimal.

**Keywords:** behavioral sciences; economy of education; educational policy; government policy; theory of decision.

**JEL:** A20; C44; D20; I28; Z18.

### **Resumen**

En esta investigación, se examinó cómo los estudiantes de dos instituciones privadas perciben los nudges. Aunque la teoría de los nudges ha ganado considerable popularidad en investigaciones internacionales, como se refleja en las publicaciones recientes de revistas internacionales, no goza de reconocimiento ni implementación en un contexto local. Así que, con la investigación desarrollada, se genera conocimiento respecto de la población objeto estudio y es una prueba importante acerca de las posibles implementaciones de los nudge deliberativos y no deliberativos en las políticas públicas. La metodología que se utilizó es de un enfoque cuantitativo, método descriptivo, técnica de muestreo probabilístico de bola de nieve y la prueba se realizó por medio de chi cuadrado para determinar percepción por género. Los resultados a los que se llegaron, mostraron que los estudiantes son receptivos al uso de la herramienta nudge en sus contextos cotidianos. En conclusión, hay aceptación para el uso de los nudge deliberativos y se desconfía un poco de los nudge no deliberativos, asimismo, se expone que en la actualidad la herramienta de los nudge se discute en universidades internacionales de primer nivel; no obstante, en el contexto latinoamericano es mínima su formulación.

**Palabras clave:** ciencias del comportamiento; economía de la educación; política educacional; política gubernamental; teoría de la decisión.

**JEL:** A20; C44; D20; I28; Z18.

## Resumo

Essa pesquisa explora as percepções dos estudantes em duas instituições privadas em relação aos "nudges". Apesar da considerável popularidade da teoria dos "nudges" em pesquisas internacionais, como evidenciado por publicações recentes em revistas globais, essa teoria não é reconhecida nem implementada no contexto local. Consequentemente, o estudo contribui com insights valiosos sobre a população em análise e representa uma avaliação crucial para possíveis aplicações de "nudges" deliberativos e não deliberativos em políticas públicas. A metodologia emprega uma abordagem quantitativa, utilizando um método descritivo e técnicas de análise estatística. Os resultados revelam que os estudantes estão receptivos à incorporação de estratégias de "nudges" em suas vidas cotidianas. Em conclusão, há uma aceitação geral para o uso de "nudges" deliberativos, enquanto "nudges" não deliberativos são recebidos com algum ceticismo. Além disso, destaca-se que, embora a ferramenta de "nudges" seja atualmente discutida em universidades internacionais de alto nível, sua formulação no contexto latino-americano ainda é mínima.

**Palavras-chave:** ciências comportamentais; economia da educação; política educacional; política do governo; teoria da decisão.

**JEL:** A20; C44; D20; I28; Z18.

## Introduction

Nudges is the name to a theory proposed by Sunstein & Thaler (2009a), which consists on an individual called architect of decisions who modifies a context in order to generate an impact on the individual behavior. In the international context, the nudge theory has had more presence in the United States and Great Britain since it has been used as a state, paternal tool in order to guarantee the welfare of citizens. State paternalism, referred by Sunstein (2017), cares for the individual welfare because cognitive science has shown that individual decisions are irrational. (Kahneman, 2012). Therefore, as decisions are bad and affect welfare, it is necessary that the State, by means of an architect, guides the citizens in order to improve the individual life as the life in general.

Nudges, based on behavioral economy, offer effective strategies to influence on the

behaviors and improve the welfare of citizens. Therefore, it is important to research about their use as they can overcome the cognitive biases and poor decisions that individuals often make in any election. By understanding how nudges can affect the decision – making choice positively, more effective interventions can be developed to promote healthy habits and civic culture that can be implemented in public policies. Besides, by investigating the effectiveness of nudges in specific contexts, practical low-cost strategies can be identified to improve the quality of life and foster a healthier culture.

On the other hand, a high number of researches in Anglo-Saxon and European countries are shown but a lack of nudge research in the Latin American area; hence, this project conceives the relevance of this topic because it is one of the theories that is being taken to the practice in developed countries and is being discussed in Law and Economy programs with the most international impact. Therefore, the purpose of this project consists of examining how students of two private institutions in the city of Armenia (Colombia), perceive the application of nudges by the State; This evaluation was carried out in 2003. The information collected is considered meaningful, as it indicates whether or not there are challenges in nudge applications in private universities and it represents a progress to propose nudge integration in public and educational policies.

Summing up, the project analyzed the perception of a population of students about nudge theory and what type of nudge they prefer. To do this, first it was exposed the political theory on which the nudge tool is based: that is the Libertarian paternalism. Second, it was explained what a nudge is and how the nudges classify (Sunstein, 2016a). Third, it was presented, through data, how the nudges have been used in different disciplines and their publications by countries. Fourth, it was explained the methodology used in this research, which consisted of surveys under the snowball model, a snowball probabilistic sample technique was done and the test was carried out through chi square to determine gender perception.

Finally, it was given the results and conclusions of the research. For the project it is important to ask what type of nudge people prefer, with the purpose of conceiving based - nudge policies in the future that can be applied in the regional context, in fact, Sunstein (2016b) has

exposed that the deliberative nudge policies in the Anglo-Saxon area are the ones which the citizens prefer.

## **Theoretical Framework**

### **Paternalism**

In Colombia, in general terms, there are two obstacles when public and educational policies are proposed. On the one hand, the lack of information about the needs of the citizens; on the other hand, the lack of persuasion of citizens. That is why the relevance of the nudge implementation in citizens in the local area, since this type of tool, with a paternal approach, would improve several areas related to individual and collective welfare. Libertarian paternalism influences on choices that impact the individual welfare. It stands out that these Anglo-Saxon theories try to be implemented, not as a universal theory, but as a proposal adapted to specific contexts, such as democratic and liberal States. The paternal State guides the individual decisions with the objective of improving people's welfare (Vipin,2010). Then, the paternalism is characterized by intervening in the freedom of an individual, justified only by considerations related to their welfare, happiness, needs, interests or personal values.

Sunstein (2017) states that the paternalism provokes certain rejection, in special for those Mill's followers (2013) with regard to his principle of freedom, since they consider that individuals must have the freedom of acting as they please and even at the cost of these decisions cause them harm.

Although it can be considered that they are referring to a type of paternalism that is more aggressive. The principle of freedom is taken because they think that each human being is the only one who knows his own tastes and consequently he will make the best decisions to satisfy them; but this seems to be a simple intuition, since empirical data prove that in reality the above does not happen.

The concept of libertarian paternalism differs from traditional forms of paternalism in that it tries to influence in people's behavior in a way that respects their freedom of choice. While

traditional paternalism tends to impose restrictions or decisions on individuals without their consent, the libertarian paternalism try to guide people's decisions in a way that allows them maintain their autonomy and freedom of choice. Instead of eliminating completely people's choices, the libertarian paternalism tries to design the election area in such a way that the beneficial decisions are easier to make without eliminating the possibility of choosing differently if they want (Sunstein & Thaler, 2003).

What libertarian paternalism states is that bad decisions are given because individuals have assumed a social context that question a little, as simple as buying food in the cafeteria, choosing a mortgage or asking for a loan for a vehicle. Although it must be clarified that there are varieties of paternalism, one will respect the goals of the individuals (libertarian paternalism) and the other one alters the choice of individuals' goals (aggressive paternalism). It explains that in the first, the State will provide means for people to make good decisions as saving money could be; in the other, the State would prohibit certain things like being able to get only one loan per citizen. About this, Sunstein (2017) mentions that:

This is an especially important topic to value the paternalism because government employees frequently care for the fact that people enjoy short-term benefits (smoking, spending or overeating) at the cost of long-term harm.

Econs give the corresponding consideration to long-term, but humans may well ignore it and when they do, maybe we will have one chance for the paternalism. [...] people might prefer to eat a big dinner, smoke, get angry, spend, drink, procrastinate or bet. The outcome of these choices could have serious harm effects in time 2 making your life worse. (p. 35)

Dworkin (1971) counts several examples of paternalist legislation, he argues that Mill used implicitly two types of argument, one utilitarian and the other one based on the absolute value of free choice. The utilitarian argument, however, can establish only a presumption, but not an absolute prohibition against the interference with the personal election; even the second type of argument allows certain types of paternalism. In all cases of paternalist legislation, tests must be done to demonstrate the exact nature of harmful effects (or beneficial consequences) to avoid (or achieve) and the probability they happen.

Several philosophers state that the paternalism has more to do with reasons than actions. They point the fact that there may be multiple bases for any action given, making it difficult to say when an action is motivated or justified by the protection or promotion of a person's good (Grill, 2007). For example, one reason to prohibit drunk driving is that it will reduce risks for drunk drivers, a typically paternalist logic; however, another important reason for this policy is that it will reduce the risks for other drivers on the road, a non-typically paternalist logic; therefore, it would be difficult to know if the policy itself is paternalist (Grill, 2011).

In this context, Rawls (2012) characterizes the autonomous behavior as the action based on principles to which we would consider as rational, free and equal human beings. The author argues that people in the original position would agree unanimously to a set of principles of justice, and that there is no violation of their autonomy as long as these principles are followed properly. It arises the question if people in the original position would consent to certain degree of paternalist treatment. Rawls (2012) suggests that it is rational for the parts to protect against their own irrational inclinations by consenting a penalty scheme that may give them a sufficient reason to avoid foolish actions and accept certain impositions designed to undo the unfortunate consequences of their reckless behavior.

### **Nudge theory**

Sunstein & Thaler (2009a) propose in their concept of nudge, a solution to the challenge of self-control and the problems arising from biases in decision-making and social pressure. They argue that it is possible to take advantage these potential risks to promote more accurate decisions at the individual level and thus enhance the welfare of society as a whole. Initially they introduce the notion of choice architect, where an individual is responsible for adjusting the environment in which others make decisions, such as a doctor presenting different treatment options to a patient. They emphasize the importance of structure choice, or choice architecture, which can significantly impact people's behavior, even ostensibly trivial details such as the sequence in which alternatives are presented. Therefore, they suggest that choice architects should strategically design the decision context and implement nudges to facilitate optimal decision making. Their approach, is known as liberal paternalism, seeks to expand freedom of choice while recognizing the legitimacy

of impacting people's behavior in order to increase their welfare. Furthermore, Thaler (2009) in other research deals with the issue of human rationality from a critical perspective, questioning the traditional notion that individuals always make rational decisions, arguing that there are situations in which people behave in a quasi-rational way, i.e. not completely rational, but predictably and systematically way. This approach recognizes that humans can be influenced by cognitive biases, emotions and information limitations when making economic decisions. It also stresses the importance of incorporating psychology into economic models of behavior, recognizing that human decisions do not always follow a strictly rational pattern (Thaler, 1980).

The architecture of decision aims to create nudges that are more likely to benefit people and less likely to harm them. The decision architect designs the choice environments and then designsthe nudges that subtly, or not so subtly, push it toward the choice that is good for the individual (Sunstein, 2015). A pushing should help make the right decision when it is difficult for most individuals. To do this, a decision architect knows in detail how people behave, because humans make mistakes and make mistakes all the time.

Some policies are structured as the form of mandates and prohibitions; for instance, criminal law prohibits theft and assault, others provide economic incentives such as subsidies or taxes such as those on alcohol and tobacco (Abellán,2006). In the case of *nudges*, the intention is to change certain contexts so that citizens are persuaded and make decisions on some behaviors (Sunstein & Thaler, 2009a; 2009b) This theory has been put into practice by Anglo-Saxon countries, even Cass Sunstein was an advisor to Barack Obama and implemented this theory in several contexts to modify the decision of citizens; all this, supported from cognitive psychology. (Sunstein, 2017). The latter is relevant because what they evidenced, based onthe studies of Kahneman (2012), is that individuals are not as rational as proposed by modernity, but it is irrational and precisely that is evidenced in the making of their daily decisions (food, loans, life insurance, driving way, among others).

One of the criticisms of the nudge theory is that it assumes that individuals are not rational, disregarding a whole modern proposal of rationalism; hence, some people see with



disdain that the individual is conceived as irrational (Conly, 2017; 2013). Another critique is that of Husak (1981) who suggests balancing the paternalistic interventions with respect to individual autonomy by challenging the notion of incompatibility between paternalism and moral autonomy. The author argues that moral autonomy can manifest itself in a variety of ways, and that there are different principles of autonomy that can support radically different positions on the justification for any interference, paternalistic or otherwise.

Some philosophers such as Waldron (2014) states that the nudge theory increases the rational capacity to guide towards the best decisions; this does not mean that there is disrespect for individual rationality. In short, the repudiation of nudge is to consider individuals as irrational, in fact, authors such as Schmidt (2019) state that this statement is erroneous because an agent's decision-making procedures are rational to the extent that, given the agent's psychological state, capabilities and tendencies, they are processes, which help him to achieve his goals reliably in that environment.

According to Schmidt (2019), Sunstein and Thaler's proposal does not constitute a vehement criticism of the rational subject, since they start precisely from the assumption that nudges will be implemented through architectures with specific characteristics in typical environments. Because of this, confidence is often placed in the rationalization of decision making that favors predetermined choices. This choice is presented as the default option in a decision-making environment function, and by adjusting it through a nudge to align with individual objectives, the procedure can be rationalized. In other words, this process becomes a method that, considering the mental structure and the decision-making environment, makes it possible to reliably achieve the objectives. This implies that, given the human rational character, one prefers to modify decision-making environments to get what is most beneficial for oneself, thus justifying the need for states to take responsibility for improving the welfare of their citizens (Schmidt et al., 2010). For example, the junk food law that requires foods containing sugar, sodium, saturated and trans fats to carry a label informing citizens of the percentage of that content (La Salle University, 2021).

Nudges are classified into two, deliberative and non-deliberative. This depends on the

system to which they refer, according to Kahneman (2012) humans make fast (intuitive) decisions and slow (logical) decisions. If nudges seek to persuade without the individual perceiving it, it refers to fast decisions (such as the restaurant menu example). On the other hand, if they seek to inform and generate reflection in the individual, it refers to slow decisions (such as the information that is in junk food about its components) (Sunstein, 2016a).

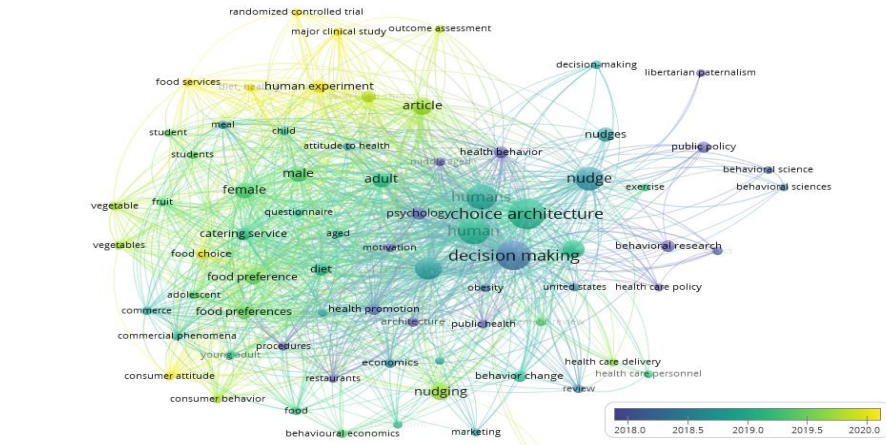
The aim is for nudges to point towards slow and logical decision-making, i.e. so that they are informative and known by citizens. In fact, transparency should be part of basic practice; for example, a government adopting a program that automatically enrolls people in a pension program or a large institution deciding to make healthy food more visible and accessible. In addition, it is necessary that these types of practices such as *nudges* should be reviewed by overseers and academia, because as mentioned, some consider that it mocks dignity because it influences individual decision making. One of the main advantages of nudges, unlike orders and restrictions, is that they avoid coercion. The public can review and analyze nudges just like government actions of any other kind (Sunstein, 2014).

### **Nudge research today**

In Figures 1 and 2, it is evident how nudge research has evolved in different disciplines, and how the concept has been changing or relating to others over the years, adding that there is an evolution in research. First, there is a focus on decision architecture; second, it shifts to decision making; finally, there is more specificity such as: diets, food preferences, health promotion, consumer attitudes, among others. Concerning Figure 3, it can be evidenced among countries that do research in several areas about the use of the nudge tool.

## Figure 1

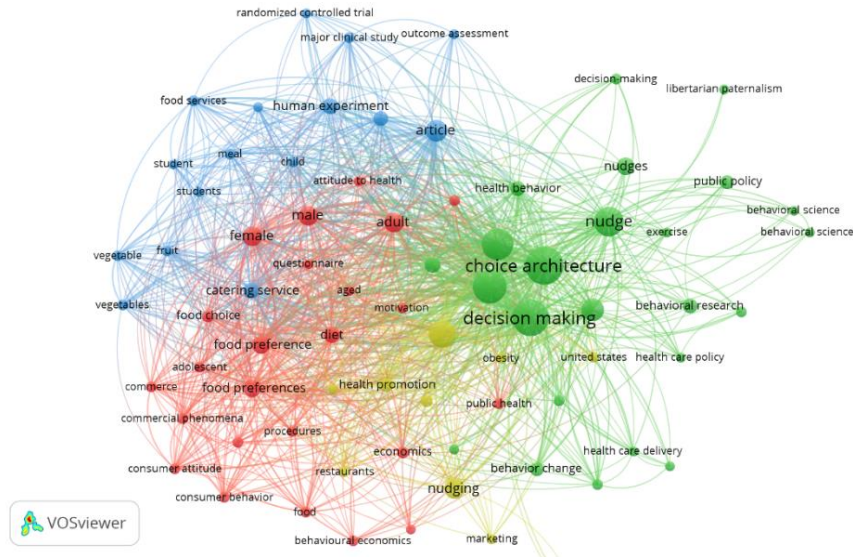
Evolution over the years of research related to nudges



Source: own production, based on VOSviewer.

## Figure 2

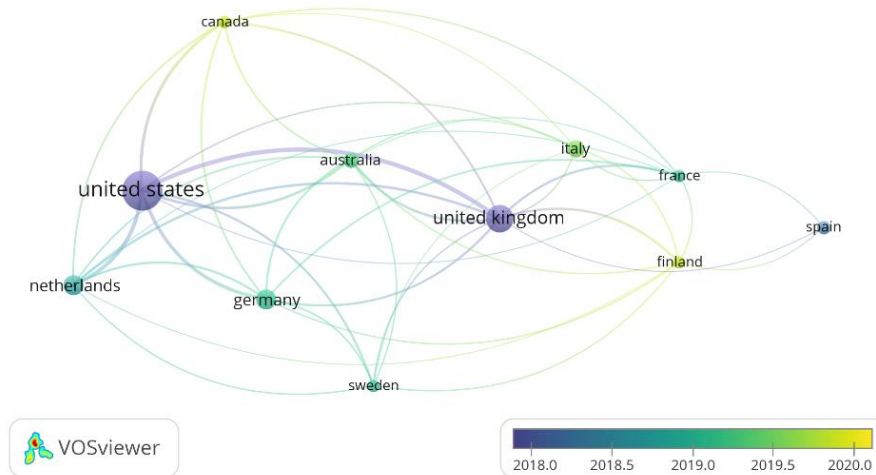
Lines of work (cluster)



Source: own production, based on VOSviewer.

**Figure 3**

*Countries in which a list of nudge research is reflected*



*Source:* own production, based on VOSviewer.

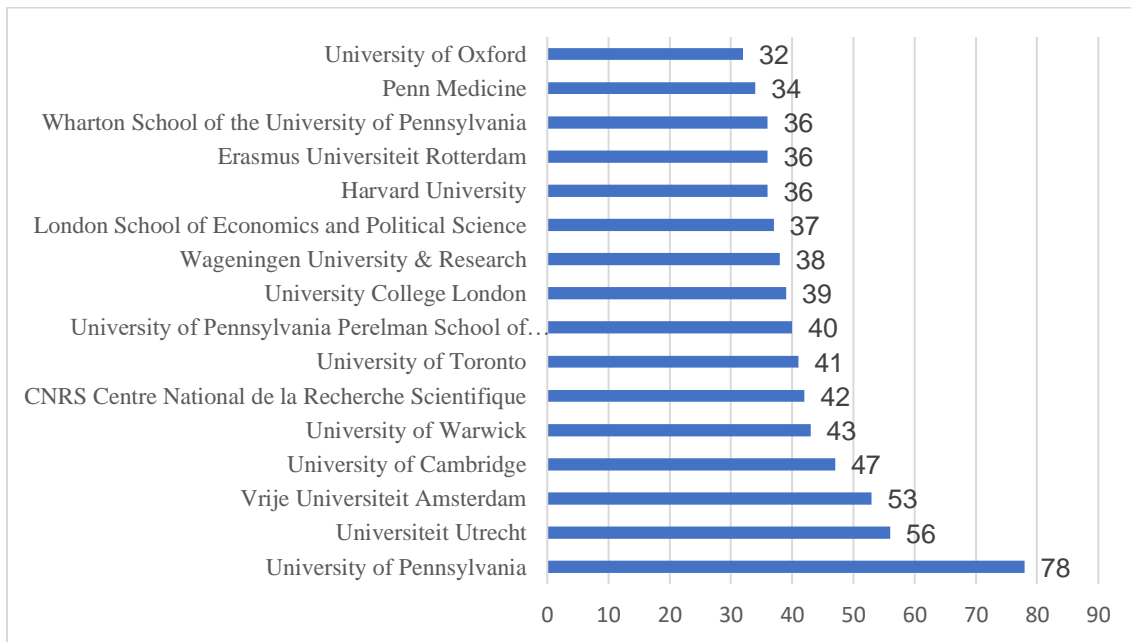
This statement is confirmed by examining some research from 2023 and 2024, which does not address theorizing about nudges, but rather the implementation of this tool in several areas. It is relevant to note that nudges are currently the subject of discussion in academia, and publications addressing this tool are numerous. Figure 4 illustrates the number of publications on nudges. International academic institutions over the last five years, while Figure 5 depicts the quantity of publications on nudges during the same period.

To validate the publications from various fields or disciplines, there is evidence of a large number of bibliographic references such as North America, Europe and Asia. For the area of good food practices, there is research such as Mannipa et al. (2023), Arno & Thomas (2016), Metcalfe (2020), Li et al. (2021), Lee et al. (2020), Yi et al. (2022), Ensaff (2021) and Erjavec et al. (2020). In the educational and environmental fields, Research studies such as those by Kurokawa et al. (2023), Laksmi et al. (2023), Buchholz & Musshoff (2021), Olson et al. (2022), Liang et al. (2023), Pennycook et al. (2020), Peer et al. (2019), Elia et al. (2022), Masaki et al. (2020), Nakamura (2021), Venema et al. (2018), Barker et al. (2021), and Eslambolchilar et al. (2010) have been conducted. In the realm of public transportation and mobility, studies such as

those by Hauslbauer et al. (2023) and Einfeld & Blomkamp (2021) are found. In the financial domain, research studies by Cai (2020), Harbers et al. (2021), and Holz et al. (2020) are present. Additionally, in the healthcare service provision domain, studies by Patel et al. (2018), Yoong (2020), Glasgow et al. (2021), Sasaki et al. (2021), Tanaka (2023), Roekel (2022), Ismaili et al. (2017), Talat et al. (2022), and Kwan et al. (2020) can be found.

**Figure 4**

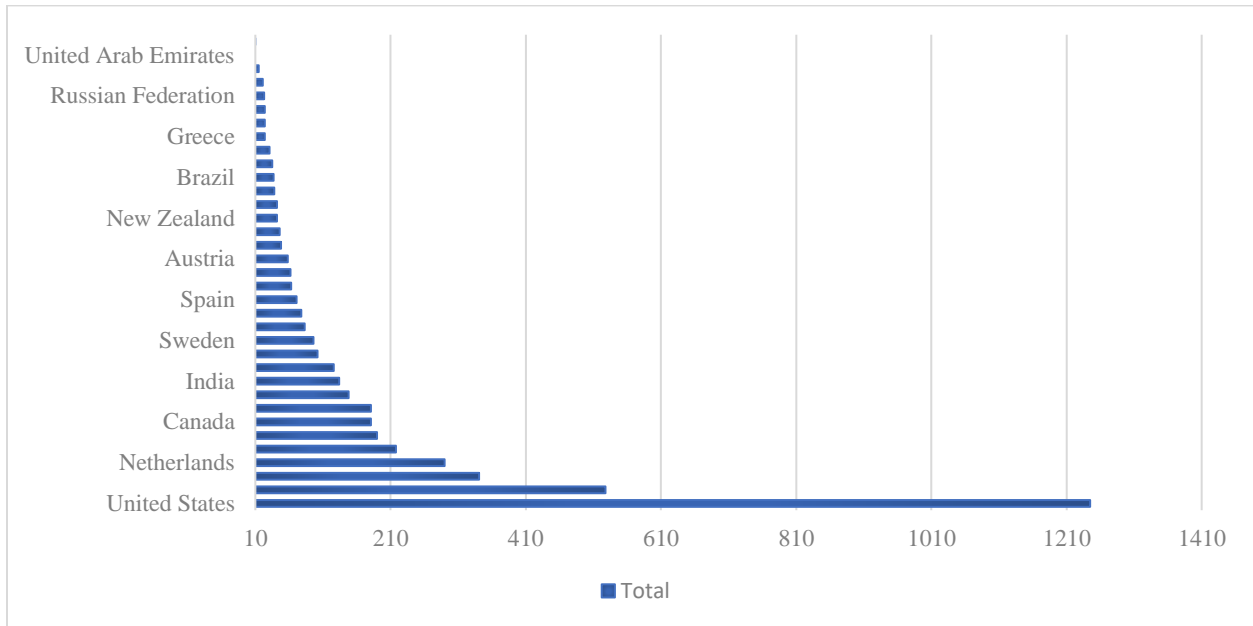
*Publications about nudges by universities (2018 – 2023)*



Source: own elaboration.

**Figure 5**

*Nudge publications by country (2018 – 2023)*



*Source:* own production.

Likewise, it is proven in the density figures, the countries that are dedicated to nudge research in more specialized terms, showing the United States as the country that has been most dedicated to it, something that is not surprising because the advocators of the proposals are researchers from that country, but what is relevant is the influence in European countries (Figure 3). Finally, it is evident that Latin American countries are absent, since their participation in researchers on decision-making based on the concept of nudge is limited, adding that this happens because their publications are not stored in specialized and world-class databases.

### **Methodology**

In order to assess the students' opinion about nudges and their level of familiarity with them, a survey was conducted starting with the description of the population according to gender, age, educational level and social class. Subsequently, there are questions on a Likert scale of 1-5, with an open-ended question, about the concept of nudge, 16 questions about nominals and about whether they agreed or disagreed with deliberative and non-deliberative nudges. Finally, a

conceptualization and examples of that type of nudge are given. It should be added that, given the difficulty to access the population, the snowball survey model was used, where interested students participated and shared the surveys with acquaintances, in order to achieve maximum representativeness of the sample. The methodology is used with non-probabilistic snowball sampling, since it was expected that the surveyed population would grow as the trial developed, allowing to have results without incentive bias and with population diversity. The chi-square test is applied to dichotomous questions to determine if there are differences in perception between two groups, men and women.

Of the 197 respondents, 29 demonstrated an adequate understanding of the concept of nudge. When asked for a definition, these participants mentioned the word nudge or expressed ideas close to the definition, such as the use of positive reinforcement and indirect suggestions to induce group decisions and actions. It focuses on small actions with the potential to modify both individual and collective behavior, with the goal of improving decision making by changing people's environment. In short, it is a way to influence decisions and behaviors at both the individual and group levels. The next section of the survey addresses the opinion on the above-mentioned nudges, without respondents being certain whether they are deliberate or not.

The purpose is to assess the degree of acceptance towards state intervention in their lives. Tables 1 and 2 show the questions that were asked to inquire about the perception of deliberative and non-deliberative nudges.

**Table 1**

*Deliberative nudges*

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<b>Number of the corresponding question</b>	<b>Question: Do you agree with the following nudge?</b>
1	In order to reduce childhood obesity, government authorities are bringing out an educational initiative that provides parents with

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	information to guide them towards healthier choices for their children.
2	To reduce obesity in the general population, the State requires a label indicating how many calories a dish has in chain restaurants (such as McDonald's, Burger King, KFC, Domino's and others).
3	In order to prevent over-consumption of salt, authorities require the inclusion of labels on products stating: this product contains high levels of salt, which may have harmful effects on your health.
4	In order to prevent loss of life and road accidents, the government implements educational campaigns that use graphic images to dissuade people from using their cell phones while driving.
5	In order to reduce the intake of harmful foods, a labeling system known as traffic lights is mandatory, in which beneficial foods will be marked with a green icon, harmful foods with a red icon, and neutral foods with a yellow icon.
6	In order to prevent excessive consumption of food and tobacco, the government requires movie theaters to present educational messages against smoking and overweight before showing movies.
7	To reduce childhood obesity, the State suggests that school cafeterias change the name of vegetables to names that refer to their health properties, for example, naming carrots as x-ray carrots.
8	In order to address electricity waste, government authorities are proposing (but not forcing) electric utilities to automatically enroll their users in a higher green energy tariff, from which they will be able to unsubscribe at any time.

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*Source:* own production, based on Cerezo et al. (2021).



**Table 2**

*Non deliberative Nudges*

<b>Number of the corresponding question</b>	<b>Question: Do you agree with the following nudge?</b>
1	In order to avoid excess food consumption and tobacco, it is established the obligation for companies to use subliminal advertising in movie theaters like advertisements that are shown so briefly, that people do not perceive them consciously.
2	In order to reduce pollution derived from trips, the government imposes the Airlines the obligation of incorporating a small fee for carbon emissions for travelers in their fares. They can be exempt from paying it if they notify expressly their decision to the company.
3	In order to prevent deaths due to lack of organ donors, it is approved a law that oblige people to decide if they want to be organ donors when they renew their driver's license.
4	In order to stop the increase of obesity, the authorities impose to the supermarkets the obligation of not to have candies in the cash register areas.
5	To reduce the consumption of unhealthy food, the State demands that the healthiest products be always put on the top of the menu lists in restaurants.
6	To reduce environmental pollution and fight against obesity, the State demands school restaurants to have one no-meat day a week.
7	In order to prevent the consumption of unhealthy food, the government legislates a law that requires large supermarket chains put the healthiest food in prominent and visible places for customers.

8 To fight against obesity, the State demands the reduction in the pack size to battle the high consumption of processed food. procesados.

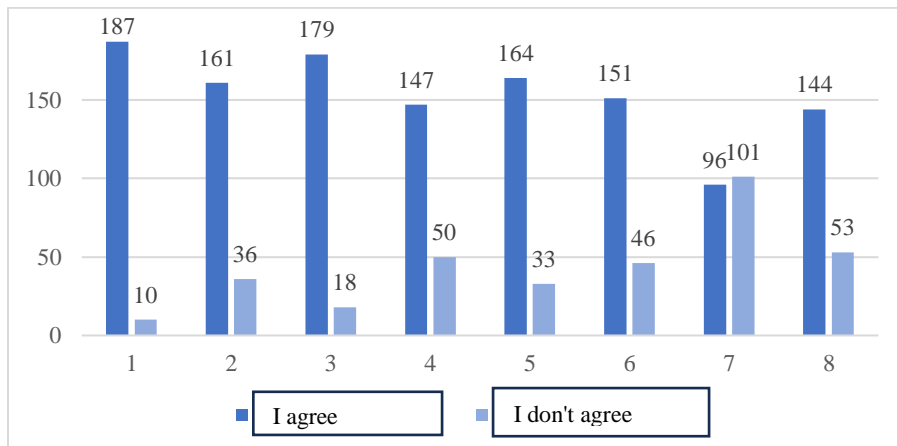
Source: own production, based on Cerezo et al. (2021).

## Results

The total population surveyed answered, as it is shown in figures 6, 7 and 8, to whether or not they agree or disagree with the following nudges. With regard to knowing the concept of nudge as it can be noticed in Figure 9.

**Figure 6**

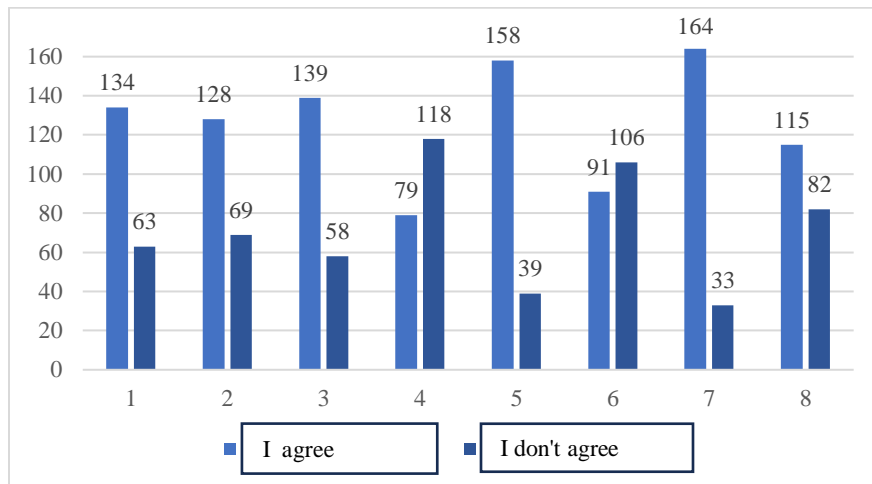
*Answers about the deliberative nudges.*



Source: own production.

**Figure 7**

*Answers about the non-deliberative nudges.*



*Source:* own production.

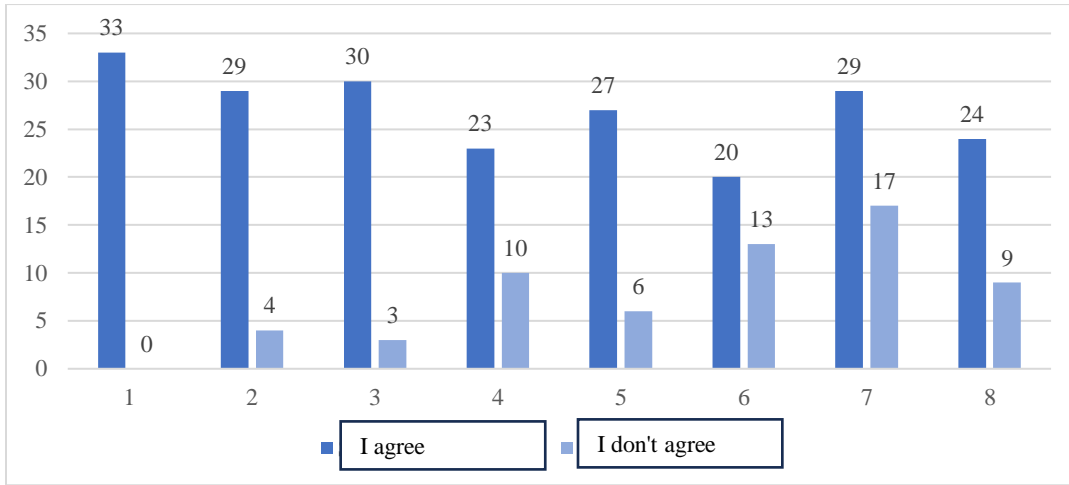
Of special interest is the population that knows about nudges, represented by 33 people.

The characterization of this group shows that the 39% belong to social stratum two and the 27% to the social stratum three.

With regard to the semester, the 21% correspond to the seventh semester and the 60% of the people that know about the nudges are women. The results of this group, compared to deliberative and non-deliberative nudges are:

**Figure 8**

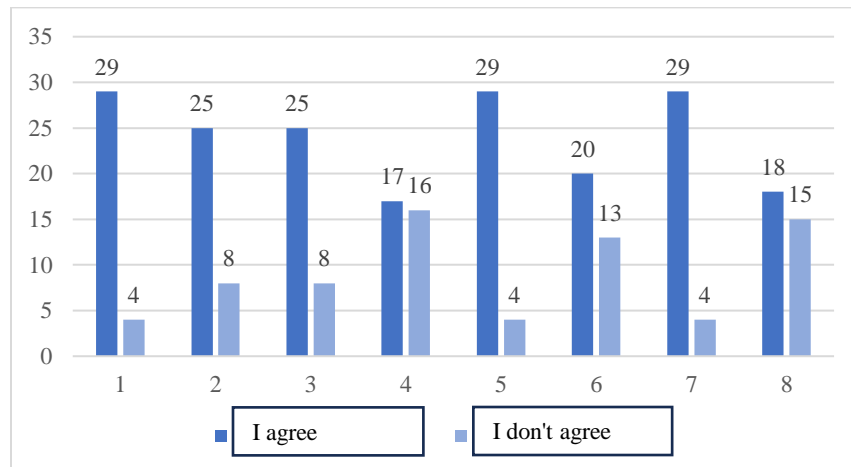
*Answers of people who know the nudge concept – deliberative nudges*



*Source: own production.*

**Figure 9**

*Answers of people who know the nudge concept – non-deliberative nudges*



*Source: own production.*

On the other hand, the chi square test is done to determine whether the characteristics of gender, age and career influence on the decision of supporting the nudges or not supporting them, as deliberative or non – deliberative (Table 3).

**Table 3**

*Chi<sup>2</sup> Test*

<b>Gender</b>	<b>Nudge 1 deliberative</b>		
	<b>Yes</b>	<b>No</b>	
<b>Female</b>	104	3	107
<b>Male</b>	83	6	89
	187	9	196
<b>F expected</b> (value reported in tables of chi <sup>2</sup> test )	102,086735	4,91326531	
	84,9132653	4,08673469	
<b>Calculated chi</b>	0,03585759	0,74504101	
	0,04310969	0,89572346	1,7197317
<b>G.L</b>	1		
<b>Chi tables</b>	3,841		

*Source:* own production.

In this case for nudge 1, of the deliberative nudge list, the gender is not a significant factor since independent answers are generated. This test must be done to 16 nudges and for the mentioned categories to have a better analysis. Besides, the people who are surveyed are explained the concepts with examples so that they can mention if they prefer deliberative or the non-deliberative nudges. The 69 % choose the deliberative nudges. It draws the attention that people who tend for the non-deliberative nudges at the moment of deciding whether they agreed or not with the nudges mostly choose the deliberative nudges.

### **Conclusions**

Firstly, the criticism to the use of the nudge tool is not convincing to the extent that it bases on a political aspect such as the libertarian paternalism. Understanding that the idea is to be able to change contexts in order to improve the decisions that affect the individual and

collective welfare. Likewise, it is clarified that the teleology of the nudges is not to create campaigns to generate a better trade of a product or service, since it is an object of study of marketing that even has already been done with a net emphasis on sales and the use of the mechanism to persuade the individuals consumers.

Secondly, according to the figures generated with the VOS viewer software, it is presented that nudge research, in its American origin, has had acceptance and discussions in European countries, involving that it is an area that generates a large amount and a tool that is being discussed in a top-level academic context. On the other hand, with regard to the Latin American area, there is no evidence of research about the nudges, it happens because it has not been of interest and lack of knowledge of current discussions like the nudges. Also, that the programs of Humanities in the local context have dedicated to continue with purely theoretical discussions and the proposal of these Anglo-Saxon economists and philosophers is to sort out real problems which based on theories are possible to take to the practice and research helped by the statistics.

Third, it is crucial to stand out that the research provides unexplored data like the perception of nudges. The results suggest that students are open to accept modifications in their environments that guarantee a more efficient decision-making in special when deliberative nudges are implemented. It is worth to point out that since students are familiar with the nudge theory before the survey or understand it by answering it, it reflects a general disposition on the part of students to use nudges in order to improve the decision- making in terms of individual and collective welfare.

Fourthly, like the trends of the Anglo-Saxon countries, the population accepts the usage of the nudge tools for their use in the context of economy, health and food. Likewise, the research explains that nudges are a tool that does not have a generalized rejection although there are students who care a little for the use of the non-deliberative nudges.

Fifth, the relevance of this research is stated by providing a deeper comprehension about the acceptance of a theory that has not been developed completely yet in the Colombian context and which, consequently, presents a significant potential to influence the formulation of public

politics in the region. Besides, its contribution extends to stimulate the generation of new discussions in the academic field and promote the academic speech update, specially by recognizing the influence of the behavioral economy. On the other hand, the research assumes a comparative approach by analyzing the perceptions in diverse contexts, specifically, contrasting the Latin American panorama with Anglo-Saxon countries. This approach allows not only to identify possible divergences in the acceptance and application of the theory in different cultural and socioeconomical environments, but also to extract lessons that can be applied in the design and implementation of government policies.

Sixth, the article recognizes some common limitations, but stands out strengths that overcome these limitations. A common limitation is the absence of previous research in the Colombian context about nudge perception; however, the strength of the study lies in proving a deeper comprehension about this topic in the region. Another limitation is the lack of interest or knowledge about nudges in the Latin American area. Despite this, the study contributes to stimulate new academic discussions and update the academic speech in the region. Likewise, there is a lack of research about nudges in Latin America, nevertheless, the study offers lessons that can be applied in the design and implementation of government policies in the region.

### **Ethical considerations**

The research project does not imply a risk that affects the security of the subjects of the research and the researchers; it protects the absolute confidentiality in the management of the information provided; it guarantees the permission for access to information of people interested.; it doesn't present any type of conflict of interests related to funding sources. Likewise, it considers strategies to broadcast results to institutions, subjects or communities participating of the research. To collect information, the corresponding informed consents were signed. In the consent the Project was presented briefly, its purpose, methodology, duration, expected impacts, possible risks, confidential management of information and the socialization of results.

### **Conflict of interest**

All the authors made significant contributions to the document and declare that there is no conflict of interest related to the article.

### **Author contribution statement**

Jorge Andrés Tafur Gómez: Research, conceptualization, Resources, Writing – Original draft, Writing: review and edition, Funds acquisition, Visualization, Supervision, Project administration.

Jhully Paulin Martínez Giraldo: Research, Conceptualization, Methodology, Software, Validation, Formal analysis, Data curation.

### **Funding source**

Article resulting from the research project: “Perception of students of two private universities in the city of Armenia (Quindío) about the application of nudges by the State” financed by Alexander von Humboldt University Corporation.

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**How to cite this article:** Tafur, J. & Martínez, J. (2024). Students' perceptions of the application of nudges. *Tendencias*, 25(2), 190-218. <https://doi.org/10.22267/rtend.242502.259>