

**“HEY YOU! TAKE A LOOK AT HOW COMPATIBLE NATIONAL CULTURES AND INNOVATION PERCEPTIONS MIGHT BE! IS IT A COINCIDENCE?”: A cross-cultural comparison between Brazilians and Americans**

**ANDRÉ LUIZ MENDES ATHAYDE**  
UNIVERSIDADE FEDERAL DE MINAS GERAIS (UFMG)

**SAMUEL SILVA**  
UNIVERSIDADE FEDERAL DE MINAS GERAIS (UFMG)

**EDIMILSON EDUARDO DA SILVA**  
UNIVERSIDADE FEDERAL DOS VALES DO JEQUITINHONHA E MUCURI (UFVJM)

**SIMARLY MARIA SOARES**  
UNIVERSIDADE ESTADUAL DE MONTES CLAROS (UNIMONTES)

**ERNANI MENDES BOTELHO**  
UNIVERSIDADE DO ESTADO DE MINAS GERAIS (UEMG)

**Agradecimento à órgão de fomento:**

The authors would like to thank the Minas Gerais State Research Support Foundation (FAPEMIG) for the financial support for the development of this study.

# **“HEY YOU! TAKE A LOOK AT HOW COMPATIBLE NATIONAL CULTURES AND INNOVATION PERCEPTIONS MIGHT BE! IS IT A COINCIDENCE?”: A cross-cultural comparison between Brazilians and Americans**

## **1 INTRODUCTION**

Innovation is defined as the implementation of a new or significantly improved product or process. This concept ranges from incremental improvements to substantial transformations, reflecting the breadth of transformations that can occur through innovation (Organization for Cooperation and Economic Development [OCED], 2005). Innovation brings with it new or optimized ways of performing tasks and processes, significantly impacting various economic sectors and restructuring industries (Schumpeter, 1934). It is an activity that involves both the recognition of a market need and the technical knowledge necessary to develop new solutions, demonstrating the importance of an environment that promotes experimentation and risk tolerance (Powell, Koput, & Smith-Doerr, 1996).

Innovation does not happen on its own. It passes through the hands of individuals who are inclined toward innovation and who have positive perceptions about it. The people who drive innovation processes are the true agents of change, enabling the improvement of organizations in various aspects and, therefore, feeding back into the innovation process and achieving new results (Schumpeter, 1934).

Investing in human resource development and training is inherently necessary to promote innovation. Technology does not emerge independently. It depends on people who are inclined to innovation to be developed. An innovator is someone who proposes different ideas and solutions to modify processes, products, and services and who exhibits characteristics such as creativity, adaptability, commitment, curiosity, leadership, motivation, and boldness. These attributes, linked to individual innovation, enable people to face challenges, generate value, improve quality of life, and, more broadly, contribute to national progress (Dyer, Gregersen, & Christensen, 2019; Wheatley, 2001; Corrêa, 2019). Mere investment in new technologies by organizations is not enough to secure their innovative leadership position (Lastres & Cassiolato, 2009).

The literature highlights the importance of innovation as a driver for economic and social development, being widely explored in organizational and macroeconomic contexts (Batista et al., 2025; Yao et al., 2023; Pucheta-Martínez & Gallego-Álvarez, 2023; Lee et al., 2022; Ullah et al., 2022; Marfo-Yiadom & Tweneboah, 2022; Tidd & Bessant, 2018; Schumpeter, 1934). However, comparative analyses of individuals' perceptions about innovation in different countries that discuss the possible influence of national culture on these perceptions do not occur with the same frequency (Athayde & Coutinho, 2023; Amidžić et al., 2022; Woodside et al., 2020; Perez-Penalver, Aznar-Mas, & Fleta, 2018).

Hofstede (2001) defines culture as a set of beliefs, values, and thought patterns shared by members of a given society, influencing how they perceive and assign meaning to various aspects of life. He views culture as the collective programming of the mind. Strong theoretical and empirical evidence has shown that innovative values, attitudes, and behaviors can be influenced by the culture of the country where individuals were born and raised (Hemesath & Tepe, 2024; Souza et al., 2024; Wang, 2024; Yao et al., 2023; Pucheta-Martínez & Gallego-Álvarez, 2023). Thus, considering that there may be compatibility between a country's culture and its citizens' perceptions about innovation, this study established the theoretical framework for intersecting the themes of innovation and national culture.

Our argument in this paper is not to demonstrate the importance and benefits of innovation, whether at the individual, organizational, or national level. There is no doubt about that, and the literature already demonstrates this relevance almost exhaustively. Our provocation, through this research, is: *since innovation is such an important topic, and considering that strong theoretical and empirical evidence in the literature has demonstrated that national culture influences values, attitudes, and behaviors, hence, perceptions about innovation within a country must be compatible with national cultural characteristics. That is, cultural variables cannot be overlooked as possible predictors of innovative values, attitudes, and behaviors.* Thus, this study constitutes an invitation for future studies that propose explanatory models of innovative values, attitudes, and behaviors not to overlook cultural variables.

In this sense, taking citizens of a developing country and a developed country as the research locus for this investigation, the guiding question of this research was: *What are the perceptions about innovation among Brazilians and Americans? Are the differences between the national cultures of Brazil and the United States compatible with their citizens' perceptions about innovation?* Brazil and the United States were chosen for comparison, first, because they are considered culturally distinct countries in a series of cross-cultural studies (e.g., Hofstede Insights, 2025; Caldeira & Athayde, 2024; Athayde & Coutinho, 2023). Second, the United States was chosen for comparison with Brazil because it is considered one of the most innovative countries in the world, according to the Global Innovation Index (GII, 2024). According to this global ranking of innovative countries, the United States ranks third, while Brazil ranks 50<sup>th</sup>.

Therefore, based on theoretical and empirical evidence from the literature addressing cultural differences between countries and their possible influence on individual values, attitudes, and behaviors (Borsatto, Bazani, & Amui, 2020; Athayde & Torres, 2022), this study aimed to explore the perceptions about innovation among Brazilians and Americans. To support the achievement of this general objective, the following specific objectives were established: i. to explore the existence of correlations between the perceptions about innovation among Brazilians and Americans and their sociodemographic characteristics, such as age, sex, number of children, and levels of education and income; and ii. to discuss possible differences in perceptions about innovation in light of the national cultures of Brazil and the United States.

To characterize Brazilian and American cultures, we used the six cultural dimensions proposed by Geert Hofstede (2011), considered the most widely adopted in cross-cultural studies (e.g., Vignoles et al., 2016; Athayde & Torres, 2022): (a) Power Distance, (b) Individualism, (c) Masculinity, (d) Uncertainty Avoidance, (e) Long-Term Orientation, and (f) Indulgence. These dimensions will be detailed in the literature review section and will be used to support the hypothesis raised for empirical testing.

Furthermore, to represent Brazilian and American perceptions about innovation, we used five variables from the World Values Survey (WVS) database, which is a global investigation of changes in individuals' political and sociocultural views. These variables were chosen because they represent perceptions about innovation, focusing on imagination, science, and technology - topics directly related to innovation. The survey sample consisted of 1,762 Brazilians and 2,596 Americans, whose secondary data were extracted from the WVS database (World Values Survey [WVS], 2025). Further details will be presented in the methodological procedures section.

This research is justified by the need to deepen the understanding of differences in national perceptions about innovation from a cross-cultural perspective, which are not

explored as frequently as research on innovation in the organizational context (Amidžić et al., 2022; Woodside et al., 2020; Perez-Penalver, Aznar-Mas, & Fleita, 2018), thus contributing to the advancement of scientific knowledge. Another reason justifying this research is the fact that almost all rankings of the most innovative countries in the world, such as the Global Innovation Index (GII), consider as classification criteria not how a country's citizens view innovation (positive or negative perceptions about innovation) or its propensity for innovation, but rather the number of registered patents, investment in science and technology, and the quality of universities, among others. These are highly relevant criteria; however, we understand that, given that innovation passes through the hands of innovative individuals (Schumpeter, 1934; Lastres & Cassiolato, 2009; Dyer, Gregersen, & Christensen, 2019; Wheatley, 2001; Corrêa, 2019), individuals' perceptions about innovation cannot be neglected, given their possible relationship with the implementation of innovation.

Regarding practical implications, this study can provide insights for formulating or adjusting public policies and business strategies that encourage innovation in a contextualized and culturally adapted manner. Addressing national perceptions about innovation and intertwining them with culture is relevant because the literature remains unclear as to which cultural dimensions are (in)compatible with national perceptions about innovation. Building this knowledge is essential for governments (within the context of national culture) and institutions (within the context of organizational culture) to enhance cultural characteristics that encourage innovative values, attitudes, and behaviors and dismantle cultural beliefs and values that impede them. At this point, we would like to revisit the title of this paper, which is an invitation to you, the reader: "Hey you! Take a look at how compatible national cultures and innovation perceptions might be! Is it a coincidence?" We, the authors, assume not. It is not a coincidence.

This study consists of five sections. In addition to this introductory section, which presents the theme, problem, objectives, and rationale, the theoretical foundation of the research will be presented, culminating in the development of a theoretically supported hypothesis for empirical testing. Subsequently, the methodological procedures adopted in the study to achieve its primary objective will be presented, such as the research design, the database, and the data analysis techniques. The results will then be presented and discussed in light of theory and previous studies on the topic. Finally, final remarks will be presented, outlining the study's contributions, and suggesting further research.

## **2 THEORETICAL REVIEW**

This section will present, in a summarized manner, the main attributes of people prone to innovation, the characteristics of Brazilian and American national cultures according to Geert Hofstede, and previous studies related to the topic, culminating in the raising of a hypothesis with theoretical support to be empirically tested in this study.

### **2.1 Attributes of people prone to innovation**

People drive innovation processes and are the effective agents of change. Innovation processes, which are driven by individuals who are proactive and inclined toward innovation, deliver the results expected by the organization, enabling its improvement in various aspects and, therefore, feeding back into the innovation process and achieving new results (Dyer, Gregersen, & Christensen, 2019; Schumpeter, 1934).

Simply investing in new technologies is not enough for organizations to ensure their innovative competitiveness. Knowledge and learning are inherently linked to the people who possess and develop them (Lastres & Cassiolato, 2009). Therefore, investment in human resource development and training has been increasingly emphasized as an essential element for fostering innovation. Technology does not emerge independently; it depends on people prone to innovation to be developed. An innovator is one who proposes different ideas and solutions to modify processes, products, and services. This requires creativity, adaptability, commitment, among other attributes (Dyer, Gregersen, & Christensen, 2019; Wheatley, 2001; Corrêa, 2019).

Most economic sectors are undergoing rapid technological change due to the digital revolution. Digital skills have become essential, regardless of professional profile. The competencies demanded by employers are shifting, with interpersonal skills integrating with technical skills, creating what is known as “T-shaped education”. In this context, the vertical component refers to technical capabilities, hard skills, while the horizontal element refers to transversal or behavioral capabilities, soft skills. The concept suggests that, in today’s innovation-focused job market, we need not just engineers, but also innovators with technical skills (Vladi et al., 2022).

The propensity for innovation is not just an inherent personality attribute, but a capacity that can also be developed, with varying ease of learning. Individuals and groups considered innovative are those who adopt behavior characterized by intentional actions to introduce and apply new ideas and skills. The innovative competencies of individuals and groups are factors that enable a person or a small group to consistently and successfully adopt innovative behavior. Expertise is the set of specialized knowledge acquired through information, theory, and experience, encompassing everything a person knows or can do in their field of activity and responsible for the technical quality of the innovation (Schumpeter, 1934).

Motivation is also an intrinsic attribute of creative and innovative processes. As the term itself suggests, motivation is the driving force that moves people and originates from a series of affective, intellectual, psychological, and physiological factors inherent to any human being, influencing their values, attitudes, and behaviors. Every change, every burst of creativity, begins with the identification of a problem or opportunity that someone considers significant. When people become interested in an issue, their creativity is instantly engaged (Wheatley, 2001).

Curiosity is closely linked to motivation and, indirectly, to innovation. Curiosity represents the desire to see, learn, be informed, uncover, achieve, understand, and investigate. Questioning is also a crucial element for innovation, as an inquisitive individual is one who opposes ideas accepted by the majority or those prevalent in certain circles, challenging the prevailing culture of their time or social circle and provoking controversies. If we want people to be innovative, we need to discover what is important to them and engage them in meaningful issues (Wheatley, 2001).

In this sense, Schumpeter (1934) defines innovative individuals as possessing a set of distinct characteristics, such as creativity, resilience, strategic vision, curiosity, and the ability to take calculated risks. These qualities, when cultivated through continuous development and training programs, enable organizations not only to keep pace with technological innovations but also to lead their industries by creating disruptive and effective solutions.

People prone to innovation have the ability to identify market opportunities, are resilient in the face of uncertainty, and possess a strategic vision that allows them to

implement and scale their innovations (Chiavenato, 2008). Furthermore, creativity and the ability to think “outside the box” are essential for facing challenges and seizing opportunities, as well as renewing products and processes. In this scenario, individuals are no longer valued solely for their knowledge, but for the practical application of that knowledge (Vale & Barbosa, 2020).

According to Vladi et al. (2022), the fundamental skills for developing innovative capabilities can be grouped into five categories: creativity, collaboration, critical thinking, communication, and self-direction. Studying the skills necessary to promote innovation requires understanding stakeholders’ individual perceptions regarding their needs for these competencies. Those involved in this process are considered key players in promoting innovation, and it is necessary to understand their perceptions of the concept of innovation, identify what they consider essential to driving innovation, and recognize what needs to be improved.

The success of young college students with limited physical infrastructure and startup capital, but who leveraged technology, market innovation, and the development of new products and services, led to the creation of multinational corporations from their dorm rooms, attracting global attention. Examples include Mark Zuckerberg, one of the founders of Facebook; Nathan Blecharczyk, Brian Chesky, and Joe Gebbia, founders of Airbnb; and Travis Kalanick and Garrett Camp, founders of Uber (Maia et al., 2021).

Regarding the origins of creativity, the prevailing view is that the capacity for creative thinking is genetically based. It is often assumed that innovators predominantly use the right hemisphere of the brain, implying a genetic inheritance of creative abilities, while the rest of the population uses primarily the left hemisphere, associated with logical and linear thinking, with little ability for creative thinking, which is fundamental to professional engagement and organizational vitality (Dyer, Gregersen, & Christensen, 2019).

In the context of business innovation, virtually all individuals demonstrate some skill stemming from creative or innovative thinking. The most important of these skills is “association” or “associative thinking”. Association occurs when the brain attempts to synthesize and make sense of new information, helping innovators discover new directions by making connections between seemingly unrelated questions, problems, and ideas. Innovative discoveries often occur at the intersection of different disciplines and fields (Dyer, Gregersen, & Christensen, 2019).

Given that one of the objectives of this study is to discuss possible differences in perceptions about innovation based on the national culture of Brazil and the United States, the next section will be dedicated to examining the main cultural characteristics of both nations based on Geert Hofstede.

## 2.2 Characteristics of the Brazilian and American national cultures according to Hofstede

When it comes to national culture, cross-cultural researchers do not generalize that all individuals within a country are similar, but rather rely on probability. That is, if an individual is randomly selected from a country, there is a greater likelihood that they will exhibit certain characteristics. This means that cross-cultural researchers recognize the existence of subcultures but treat national cultures as a predominant set of characteristics (Vignoles et al., 2016), an approach adopted in this study.

To characterize Brazilian and American national cultures, this research uses as a reference the six dimensions of national culture proposed by Hofstede (Hofstede, 2011), considered the most widely adopted in cross-cultural studies. These dimensions are

expressed through scores assigned to these dimensions on a scale from 0 to 100, with scores below 50 considered low and scores above 50 considered high: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-Term Orientation, and Indulgence (Hofstede Insights, 2025). The six dimensions of national culture will be presented in greater detail below and will be used to raise the study's hypothesis.

The Power Distance dimension addresses the unequal distribution of power in a society, reflecting how less powerful people expect and accept this disparity. It allows for a comparison of the degree of inequality between different societies. This dimension is directly linked to hierarchy within a society, highlighting the natural unequal distribution of power and the influence of power on behavior. Power Distance assesses how a society deals with differences in power and authority, including the expectation and acceptance of hierarchies and status differences between individuals (Hofstede, 2011).

In Brazil, a score of 69 on this dimension indicates a strong appreciation for hierarchy and a high acceptance of power inequalities as natural. This manifests itself in a culture where those in power enjoy superior privileges. In companies, the figure of the boss is highly respected, and symbols of social status play a significant role in communicating respect and social standing. The high score reflects the deep-rooted belief in Brazilian society that hierarchy should be respected and that inequalities between people are natural and acceptable. This scenario explains the prevalence of benefits and privileges among those who hold power compared to those less powerful in society. In the business context, leaders who assume full responsibility are common, while symbols of status and power play a significant role in indicating social status and communicating respect (Hofstede Insights, 2025).

On the other hand, the United States scores 40 on this dimension, emphasizing the American premise of liberty and justice for all and reflecting a culture that values equal rights in all aspects of society and government. Within American organizations, hierarchical structures are more flexible and horizontal, with more accessible superiors, participatory and direct communication between managers and subordinates, and an emphasis on sharing information and consulting with subordinates (Hofstede Insights, 2025).

The Individualism dimension, in turn, explores the interdependence that a society maintains among its members, as well as the definition of self-image in terms of "I" or "we". In individualistic societies, people are expected to be more proactive, caring only for themselves and their immediate family. In collectivistic societies, individuals belong to internal groups that care for themselves in exchange for loyalty. Individualistic societies are marked by a focus on personal responsibility, while collectivistic societies are characterized by group integration (Hofstede, 2011).

In Brazil, a score of 36 on this scale indicates a strong sense of collectivity and integration into groups, especially represented by the family, from birth, with an emphasis on building trustworthy and lasting relationships, especially those within the extended family, including cousins, aunts, uncles, and grandparents. This aspect is relevant in the workplace, where loyalty and mutual protection are fundamental. Building trustworthy relationships is essential in business, and the preferred communication style is context-rich, with initial conversations to get to know each other before engaging in business. In the United States, a score of 60 reflects an individualistic culture. In American society, people are expected to take care of themselves and their immediate families, with a culture that values initiative, merit, proactivity, and independence. These differences between Brazil and the United States reflect distinct cultural perceptions regarding social interdependence and self-image

in terms of “I” or “we”, highlighting the particularities of each society regarding its social structure and cultural values (Hofstede Insights, 2025).

The Masculinity dimension addresses motivation and cultural values related to the pursuit of success and achievement. A high score on this dimension indicates a society driven by competition, achievement, persistence, and success, with the latter being defined by superior performance and meritocracy. Conversely, a low score suggests an emphasis on caring for others, quality of life, and well-being as pillars of success (Hofstede, 2011).

Brazil scores 49 on this scale, reflecting an intermediate position in terms of masculinity, without demonstrating a clear cultural preference. The United States scores 62 on this dimension, revealing a strong drive for achievement, success, persistence, competition, and recognition, evidenced in typical behavioral patterns. This drive is expressed and valued in American society, associated with the “striving to be the best they can be” and “the winner takes all” ideal. Americans tend to seek and publicly display their successes and achievements, fueled by a “can-do” mentality, which fosters the constant pursuit of improvement and rewards (Hofstede Insights, 2025).

The Uncertainty Avoidance dimension analyzes how different societies deal with the uncertainty inherent in the future, investigating whether they seek to control or accept what is to come. This dimension reflects the extent to which members of a culture feel threatened by ambiguous and uncertain situations and develop beliefs and institutions to avoid them (Hofstede, 2011). With a high score of 76, Brazil, like most Latin American countries, demonstrates a strong need for rules and legal systems that structure daily life as a kind of protection against the uncertain future and against risk. However, individual adherence to these laws is less rigid. Bureaucracy, laws, and rules are essential to creating a safer environment. On the other hand, the United States scores below average, with an intermediate score of 46 on the Uncertainty Avoidance dimension. This is reflected in a reasonable acceptance of new ideas and innovations, and a willingness to experiment. Americans tend to be more tolerant of diverse ideas and express their emotions less than cultures with higher scores. However, events such as 9/11 generated a significant increase in fear in American society, resulting in government monitoring and security efforts (Hofstede Insights, 2025).

The Long-Term Orientation dimension explores how different societies balance preserving established traditions and norms with adapting to present and future changes and challenges, prioritizing these goals differently. Societies with low scores tend to value long-established traditions and view social change with suspicion, while those with high scores adopt a more future-oriented approach, promoting innovation and progress (Hofstede, 2011).

With a score of 28, Brazil reveals a tendency toward a normative culture, emphasizing the search for absolute truths and respect for traditions, with less emphasis on saving for the future and a focus on immediate results. On the other hand, the United States scores 50 on this dimension, indicating no dominant preference. Americans demonstrate a propensity to analyze new information to verify its veracity, while maintaining a practical, results-oriented approach. Companies in the United States focus on short-term performance assessments, with financial reports issued quarterly, which encourages efforts for immediate results in the workplace (Hofstede Insights, 2025).

Finally, the Indulgence dimension assesses the degree to which people try to control their desires and impulses. Relatively weak control is called Indulgence, and relatively strong control is called Restraint. Cultures can therefore be described as Indulgent or Restricted (Hofstede, 2011). In Brazil, a score of 59 marks it as an Indulgent society. People in societies

classified by a high Indulgence score generally demonstrate a willingness to fulfill their impulses and desires regarding enjoying life and having fun. They have a positive attitude and a tendency toward optimism. Furthermore, they tend to place a greater degree of importance on leisure time, tend to act as they please, and tend to spend money as they wish. The United States, in turn, also scores as an Indulgent society (68), more so than Brazil. This, in combination with a normative score, is reflected by the following contradictory attitudes and behaviors: “Work hard and play hard” (Hofstede Insights, 2025).

Table 1 summarizes the scores of Brazil and the United States on the six dimensions of national culture according to Hofstede, which were used in this study to understand the nuances of the societies of these countries.

Table 1 – National culture dimensions

Cultural dimension	Brazil	United States
Power Distance	High (69)	Intermediate (40)
Individualism	Low (36)	Intermediate (60)
Masculinity	Intermediate (49)	High (62)
Uncertainty Avoidance	High (76)	Intermediate (46)
Long-Term Orientation	Low (28)	Intermediate (50)
Indulgence	Intermediate (59)	High (68)

Source: Adapted from Hofstede Insights (2025)

The next subsection will review some recent studies that have already intersected the themes of national culture and innovation.

### 2.3 Previous studies that have already intertwined national culture and innovation

Previous studies have investigated intersections between national cultures and innovation at the individual, organizational, and national levels. Some of these will be reviewed below, supporting hypothesis raising and the discussion of this research’s empirical findings.

Lim and Park (2013) investigated the impact of national culture based on Hofstede’s cultural dimensions on the adoption of innovative behaviors in two culturally distinct countries: the United States and South Korea. Among other findings, this study found that individuals from an individualistic culture like the United States were more innovative than individuals from a collectivist culture like South Korea. Furthermore, the results demonstrated that Americans’ lower Uncertainty Avoidance and greater Masculinity influenced their higher level of individual innovation compared to South Koreans.

Vladi et al. (2022) investigated innovation awareness in the public, private, and civil society sectors in Albania, analyzing the competencies required for innovation. The study assessed 44 skills related to creativity, collaboration, critical thinking, communication, and self-direction. The results suggest that innovation remains an abstract and undefined concept, mostly associated with creative and original thinking. According to the study participants, the most relevant skills related to innovation are related to networking. The top five skills identified as essential for innovation include interpersonal management, active listening, cooperation skills, motivation, and trust-building.

Through a theoretical study and taking as reference cultural differences between the United States and China, Wong, Everett and Nicholson (2008) discussed the influence of

national culture on innovation at the national level, concluding that, in general, Western cultures tend to be more innovative than Eastern cultures.

Hovne, Hovne, and Schøtt (2014) conducted a survey with 21,174 entrepreneurs from 38 countries to explore factors that influence individuals' innovative behavior and a country's innovation levels. The authors highlighted that formal education and national policies to promote entrepreneurship benefit innovation at both the individual and national levels. Furthermore, the authors emphasized that national cultures also predict innovation levels. Among other cultural characteristics, the authors highlighted that countries less averse to uncertainty tend to be more innovative.

Van Everdingen and Waarts (2003) analyzed the adoption of technological innovations by companies in 10 European countries and concluded that the variation in innovation adoption rates across countries suggests that national culture exerts a significant influence. In their sample, higher levels of Uncertainty Avoidance, Masculinity, and Power Distance negatively affected the adoption of technological innovations, while high Long-Term Orientation showed a significantly positive influence.

Jourdan Jr. and Smith (2021) investigated indices that measure different aspects of the innovative performance of 66 countries, examining their connections with national culture based on Hofstede's six cultural dimensions. The results indicated a high correlation between national culture and innovation. Higher levels of national innovation, measured by the Global Innovation Index (GII), were associated with high levels of Individualism and Indulgence and low levels of Power Distance and Uncertainty Avoidance.

Bockstedt, Druehl, and Mishra (2014) investigated the influence of national culture on measures of individual innovation, namely, the innovative behavior of individuals in an individual innovation contest. Among other findings, the authors demonstrated that higher levels of Uncertainty Avoidance have a negative effect on individual-level innovation.

Amidžić et al. (2022) developed a study to explore the relationship between the national culture of five countries (Bosnia, Bulgaria, Croatia, Greece, and Slovenia) and national innovation indices, namely innovative entrepreneurial orientation (IEO). The study involved 10,047 participants and demonstrated the influence of national culture on the innovation levels of the countries analyzed.

Bonetto, Pichot, and Adam-Troiam (2022) conducted a cross-cultural study in 106 countries to explore the intersections between Hofstede's six dimensions of national culture and national innovation indices. The results showed that, of the six dimensions, only two were consistent in their relationships with innovation at the national level. Cultures that view change as necessary (high Long-Term Orientation) and are more open to violating norms and rules (low Uncertainty Avoidance) tend to promote innovation.

Bukowski and Rudnicki (2018) explored the possible influence of national culture through Hofstede's six cultural dimensions on national innovation indices measured by the Global Innovation Index (GII). Their findings demonstrated that high levels of Individualism and Long-Term Orientation positively influence national innovation levels.

Ullah et al. (2022) examined the factors influencing environmental innovation among 10,764 companies in 15 developing countries, with a specific focus on national culture. The investigation of developing countries was motivated by their distinct characteristics compared to developed countries, as they face shortages of skilled labor and technological knowledge, essential elements for technological advancement and innovation promotion. The results showed that high levels of Masculinity and Long-Term Orientation stimulate environmental innovation. High levels of Power Distance, Individualism, Uncertainty Avoidance, and Indulgence were negatively associated with environmental innovation.

Setiawan (2020), in turn, discusses the concept of responsible innovation as a promising approach for the more ethical adoption of emerging technologies, especially in developing countries. The importance of cultural context in the application of responsible innovation indicates that innovative dimensions may require adjustments according to the national cultural context. The study focused on the characteristics of Indonesia's national culture, a collectivist culture with high Power Distance, and its relationship with the adoption of technological innovations at the individual level. The author suggests that, in collectivist countries with high Power Distance, such as Indonesia, individuals feel less free to express their individual opinions, which goes against the essence of innovative behavior.

Finally, Woodside et al. (2020) conducted a study in 24 countries to explore the influence of national culture on national-level innovation, measured using secondary data from the Global Innovation Index (GII). The findings highlighted that different national cultural configurations influence entrepreneurial and innovative behavior.

As you might have noticed, none of these studies retrieved above intertwining national culture and innovation deal with perceptions about innovation, which constitutes a novel contribution of the present study.

## 2.4 Study hypothesis

Based on the literature review on the main attributes of people prone to innovation and on the cultural characteristics of Brazil and the United States according to the results of Hofstede's study (Hofstede Insights, 2025), and considering the results of previous studies that have already intersected the themes of national culture and innovation, a hypothesis was formulated to be empirically tested in this study.

*Study hypothesis: Given that the United States has lower Power Distance, higher Individualism, higher Masculinity, lower Uncertainty Avoidance, higher Long-Term Orientation, and higher Indulgence than Brazil (Hofstede Insights, 2025), it is expected that Americans will have more positive perceptions about innovation than Brazilians.* This hypothesis assumes that individuals more prone to innovation have more positive perceptions about innovation.

The hypothesis of this study is supported by the following arguments: a) the lower Power Distance of the United States compared to Brazil points to societies whose citizens do not view inequalities as natural, which, consequently, presupposes less decentralization of power and greater freedom to try something new and make decisions (Hofstede Insights, 2025); b) the higher Individualism of the United States compared to Brazil may be associated with greater autonomy and proactivity, typical characteristics of individuals prone to innovation (Vladi et al., 2022; Schumpeter, 1934; Corrêa, 2019); c) the higher Masculinity of the United States compared to Brazil is characteristic of cultures marked by valuing competition, victories, persistence, pragmatism, and success, which aligns with the values of innovation (Dyer, Gregersen, & Christensen, 2019; Schumpeter, 1934; Wheatley, 2001; Corrêa, 2019); d) the lower Uncertainty Avoidance of the United States compared to Brazil implies a greater propensity to take risks, also a typical characteristic of individuals favorable and prone to innovation (Schumpeter, 1934; Corrêa, 2019); e) the higher Long-Term Orientation of the United States compared to Brazil points to societies whose citizens view change as something natural, a kind of preparation for the future (Hofstede Insights, 2025); and f) the higher Indulgence of the United States compared to Brazil suggests greater optimism, which, applied to innovation, aligns persistence in trying something new, typical traits of individuals prone to innovation (Schumpeter, 1934; Corrêa, 2019).

### 3 METHODOLOGICAL PROCEDURES

The sample of the research consisted of 1,762 Brazilian participants and 2,596 American participants, whose data were extracted from the World Values Survey (WVS) database, an international study that has investigated, since the 1980s, changes in individuals' political and sociocultural perspectives, in addition to addressing, among other factors, socioeconomic and demographic data, aiming to better understand social trends and dynamics in different cultural and political contexts (WVS, 2025).

This research is conducted by renowned social scientists at universities around the world and covers a wide range of questions about social, economic, and political values, as well as socioeconomic and demographic data. The primary data collection method consists of face-to-face questionnaires, ensuring participant anonymity. Responses are recorded on conventional questionnaires ("paper and pen") or electronically through Computer-Assisted Personal Interviews (CAPI) (WVS, 2025).

The five variables chosen to represent Brazilian and American perceptions about innovation were those from the 294 variables in the WVS database. They were chosen for being directly related to the research object, focusing on creativity, science, and technology - topics directly related to innovation. These variables, as well as five sociodemographic characteristics, are summarized in Table 2.

Table 2: Study variables

Variable code in the present study	Variable code in the WVS database	Description	Variable type
Imagination	Q11	Importance given by respondents to teaching children about imagination.	Perceptions about innovation
Future changes	Q44	Respondents' opinions on future changes that place more emphasis on technology development.	
Impact on life	Q158	Respondents' agreement with the statement: "Science and technology are making our lives healthier, easier, and more comfortable".	
Opportunities	Q159	Respondents' agreement with the statement: "Due to science and technology, the next generation will have more opportunities".	
Impact on the world	Q163	Respondents' opinions on science and technology: "Is the world better or worse because of them?".	
Sex	Q260	Sex	Sociodemographics
Age	Q262	Age	
Number of children	Q274	Number of children	
Education	Q275R	Education	
Income	Q288R	Income	

Source: Adapted from WVS (2025)

For the question related to imagination (item Q11 of the questionnaire), respondents were presented with a list of qualities from which they were asked to choose those considered most important for stimulating and teaching children. Participants then had two response options: to mark imagination as one of these qualities or not (dichotomous nominal qualitative variable). For the question related to future changes (item Q44 of the questionnaire), participants were asked for their opinion on a scale with three possible answers regarding the question: “If future changes place more emphasis on technology, would you consider it 1-good, 2-indifferent, or 3-bad?” (ordinal qualitative variable).

For the question about impact on life (item Q158 of the questionnaire), respondents were asked to indicate their level of agreement, on a Likert-type scale (1932) from 1 to 10, with 1 being complete disagreement and 10 being complete agreement, with the statement: “Science and technology are making our lives healthier, easier, and more comfortable” (ordinal qualitative variable). Regarding the question related to opportunities (item Q159 of the questionnaire), respondents were asked to indicate their level of agreement, on a scale of 1 to 10, with 1 being complete disagreement and 10 being complete agreement, with the statement: “Because of science and technology, the next generation will have more opportunities” (ordinal qualitative variable).

Finally, regarding the question about the impact on the world (item Q163 of the questionnaire), respondents were asked to indicate their opinion on the question: “Is the world better or worse because of science and technology?”. The scale ranged from 1 to 10, with 1 being “much worse” and 10 being “much better” (ordinal qualitative variable).

To support data statistical analysis, IBM® SPSS® 20.0 (Statistical Package for the Social Sciences) software was used. Following Tabachnick and Fidell’s (2001) guidelines, the variables were first checked for normal distribution, to subsequently adopt the most appropriate statistical correlation and comparison tests (parametric or nonparametric). The Kolmogorov-Smirnov and Shapiro-Wilk normality tests demonstrated that the data were non-normally distributed.

The Coefficient of Variation (CV) was also presented, which is a measure of variability that measures the homogeneity of the data in relation to the mean. The CV value obtained is given as a percentage and is interpreted as follows: i) if the CV is above 30%, the data set is classified as heterogeneous; and ii) if the CV is below 30%, the data set is classified as homogeneous (Fávero et al., 2009).

Considering the types of variables analyzed and following Field’s (2013) guidelines, Table 3 summarizes the statistical tests adopted for the correlation tests between the sociodemographic characteristics of Brazilians and Americans and their perceptions about innovation.

Table 3 – Statistical tests adopted for association between variables

	Sex (Q260)	Age (Q262)	Number of children (Q274)	Education (Q275R)	Income (Q288R)
Imagination (Q11)	Chi-square	Spearman	Spearman	Chi-square	Chi-square
Future changes (Q44)	Mann-Whitney	Spearman	Spearman	Spearman	Spearman
Impact on life (Q158)	Mann-Whitney	Spearman	Spearman	Spearman	Spearman
Opportunities (Q159)	Mann-Whitney	Spearman	Spearman	Spearman	Spearman

Impact on the world (Q163)	Mann-Whitney	Spearman	Spearman	Spearman	Spearman
----------------------------	--------------	----------	----------	----------	----------

Source: Research data (2025)

Next, to compare Brazilians and Americans regarding variables related to innovation, considering the types of variables and following guidelines from Field (2013), Table 4 summarizes the statistical comparison tests adopted.

Table 4 – Statistical tests adopted for comparison between Brazilians and Americans

Perceptions about innovation	Statistical test adopted
Imagination (Q11)	Chi-square
Future changes (Q44)	Mann-Whitney
Impact on life (Q158)	Mann-Whitney
Opportunities (Q159)	Mann-Whitney
Impact on the world (Q163)	Mann-Whitney

Source: Research data (2025)

Finally, the results were discussed based on the theory regarding the characteristics of Brazilian and American national cultures (Hofstede’s Cultural Model), the main attributes of people prone to innovation, and previous studies that intersect national culture and innovation.

## 4 RESULTS AND DISCUSSION

This section presents and discusses the results obtained in this study. Initially, the samples from Brazil and the United States will be described. Next, the results of statistical tests between the sociodemographic characteristics of Brazilians and Americans and their respective perceptions about innovation will be presented. Finally, the results of statistical tests between Brazilians and Americans for perceptions about innovation will be presented, thus allowing the empirical testing of the hypothesis raised in the study.

### 4.1 Characterization of research participants

The Brazilian and American samples were comprised of a balanced number of men and women, with a slight predominance of women in Brazil and men in the United States. The other sociodemographic characteristics of the respondents, including age, number of children, education, and income, are summarized in Table 5. The income and education levels (low, intermediate, and high) were contextualized to the reality of each country, as mentioned in the original WVS database.

Table 5 – Sociodemographic characteristics of the samples

Sociodemographic characteristic	Brazil (N=1,762)		United States (N=2,596)	
	Male	Female	Male	Female
Sex (Q260)				

	45.4%	54.6%	53.5%	46.5%
Age (Q262)	Mean 43.56 years		Mean 43.42 years	
Number of children (Q274)	Mean 1.83 child Low 42.4%		Mean 1.52 child Low 1.8%	
Education (Q275R)	Intermediate 41.8% High 15.8% Low 40.7%		Intermediate 46.8% High 51.4% Low 20.4%	
*Income (Q288R)	Intermediate 53.6% High 5.7%		Intermediate 71.3% High 8.3%	

Source: Research data (2025). \*Note. The original WVS database does not present the monetary values of what is considered low, middle, and high income in each country, it only highlights that such a scale was weighted for the context of each country participating in the survey.

The Brazilian sample was typically characterized by individuals with an average age of 43.56 years, 1.83 children, low to intermediate education, and intermediate income. The American sample, in turn, was typically characterized by individuals with an average age of 43.42 years, 1.52 children, intermediate to high education, and intermediate income. Table 6 summarizes the characteristics of the Brazilian and American respondents regarding innovation.

Table 6 – Brazilian and American perceptions about innovation

Variables related to innovation	Brazil (N=1,762)	United States (N=2,596)
Imagination (Q11): Importance given by respondents to teaching children about imagination.	Important: 15.3% Not important: 84.7%	Important: 34.0% Not important: 66.0%
Future changes (Q44): Respondents' opinions on future changes that place more emphasis on technology development.	Mean: 1.40 Standard deviation: 0.67 <i>Inverted scale from 1 to 3</i>	Mean: 1.51 Standard deviation: 0.61 <i>Inverted scale from 1 to 3</i>
Impact on life (Q158): Respondents' agreement with the statement: "Science and technology are making our lives healthier, easier, and more comfortable".	Mean: 6.71 Standard deviation: 2.93 Scale from 1 to 10	Mean: 7.25 Standard deviation: 2.32 Scale from 1 to 10
Opportunities (Q159): Respondents' agreement with the statement: "Due to science and technology, the next generation will have more opportunities".	Mean: 7.13 Standard deviation: 2.90 Scale from 1 to 10	Mean: 7.15 Standard deviation: 2.32 Scale from 1 to 10
Impact on the world (Q163): Respondents' opinions on science and technology: "Is the world better or worse because of them?".	Mean: 6,22 Standard deviation: 3,12 Scale from 1 to 10	Mean: 7,56 Standard deviation: 2,23 Scale from 1 to 10
Coefficient of Variation (CV)	50.16%	29.49%

Source: Research data (2025)

Because the scale for variable Q44 is inverted in the original WVS database, the lower the mean for this question in Table 6, the more positive respondents' perceptions about innovation. Thus, Table 6 shows that, among the five variables chosen to represent Brazilian and American perceptions about innovation, Brazilian respondents had a more positive perception about innovation in a single variable (Q44), and Americans in four (Q11,

Q158, Q159, and Q163). Furthermore, Americans' opinions regarding the five variables were more homogeneous ( $CV < 30\%$ ).

#### 4.2 Correlations between sociodemographic characteristics and perceptions about innovation

Table 7 presents the correlation matrix between the sociodemographic characteristics of Brazilians and their respective perceptions about innovation.

Table 7 - Sociodemographic characteristics and innovation – Brazil

	Sex (Q260)	Age (Q262)	Number of children (Q274)	Education (Q275R)	Income (Q288R)
Imagination (Q11)	Sig: 0.021* Cramer's V: 0.055	$\rho$ : 0.079 Sig: 0.001*	$\rho$ : 0.112 Sig: 0.001*	Sig: 0.001* Cramer's V: 0.108	Sig: 0.001* Cramer's V: 0.099
Future changes (Q44)	Sig: 0.104	Sig: 0.123	Sig: 0.524	$\rho$ : -0.056 Sig: 0.024*	Sig: 0.210
Impact on life (Q158)	Sig: 0.039*	$\rho$ : 0.048 Sig: 0.047*	Sig: 0.089	Sig: 0.077	Sig: 0.742
Opportunities (Q159)	Sig: 0.448	Sig: 0.194	Sig: 0.145	$\rho$ : -0.068 Sig: 0.006*	Sig: 0.464
Impact on the world (Q163)	Sig: 0.004*	Sig: 0.250	Sig: 0.179	$\rho$ : -0.105* Sig: 0.001*	Sig: 0.059

Source: Research data. Note: \* Statistically significant correlation ( $p < 0.05$ )

Statistically significant correlations ( $p < 0.05$ ) were identified between variable Q11 (Imagination) and all sociodemographic characteristics analyzed. The findings indicated that Brazilian men, younger, with fewer children, and with higher levels of education and income consider, more strongly, that imagination is an important characteristic to be stimulated in children.

Only one statistically significant correlation ( $p < 0.05$ ) was identified between variable Q44 (Future Changes) and the sociodemographic variable education. The results suggested that Brazilians with higher levels of education believe, more strongly, that it will be a good thing if future changes place greater importance to technology.

Statistically significant correlations ( $p < 0.05$ ) were identified between variable Q158 (Impact on life) and the sociodemographic variables sex and age. The findings indicated that older Brazilian men agree more strongly that science and technology are making our lives healthier, easier, and more comfortable.

A statistically significant correlation was also found between variable Q159 (Opportunities) and the sociodemographic variable education. The results suggested that Brazilians with lower levels of education agree more strongly that the next generation will have more opportunities because of science and technology.

Finally, statistically significant correlations were identified between variable Q163 (Impact on the world) and the sociodemographic variables sex and education. The results showed that Brazilian men and those with lower levels of education agree more strongly that the world is a better place because of science and technology.

In turn, Table 8 presents the correlation matrix between the sociodemographic characteristics of Americans and their respective perceptions about innovation.

Table 8 – Sociodemographic characteristics and innovation - United States

	Sex (Q260)	Age (Q262)	Number of children (Q274)	Education (Q275R)	Income (Q288R)
Imagination (Q11)	Sig: 0.241	$\rho$ : 0.107 Sig: 0.001*	$\rho$ : 0.120 Sig: 0.001*	Sig: 0.001* Cramer's V: 0.097	Sig: 0.343
Future changes (Q44)	Sig: 0.001*	$\rho$ : -0.056 Sig: 0.005*	$\rho$ : 0.041 Sig: 0.040*	$\rho$ : -0.072 Sig: 0.001*	Sig: 0.057
Impact on life (Q158)	Sig: 0.001*	$\rho$ : 0.040 Sig: 0.041*	$\rho$ : -0.120 Sig: 0.001*	$\rho$ : 0.211 Sig: 0.001*	$\rho$ : 0.053 Sig: 0.008*
Opportunities (Q159)	Sig: 0.061	Sig: 0.591	$\rho$ : -0.061 Sig: 0.002*	$\rho$ : 0.138 Sig: 0.001*	$\rho$ : 0.051 Sig: 0.010*
Impact on the world (Q163)	Sig: 0.001*	$\rho$ : 0.123 Sig: 0.001*	$\rho$ : -0.113 Sig: 0.001*	$\rho$ : 0.249 Sig: 0.001*	$\rho$ : 0.075 Sig: 0.001*

Source: Research data. Note: \* Statistically significant correlation ( $p < 0.05$ )

Statistically significant correlations ( $p < 0.05$ ) were identified between variable Q11 (Imagination) and the sociodemographic variables age, number of children, and education. The findings indicated that younger Americans, those with fewer children, and those with higher levels of education more strongly believe that imagination is an important characteristic to be stimulated in children.

Statistically significant correlations ( $p < 0.05$ ) were identified between variable Q44 (Future Changes) and the sociodemographic variables sex, age, number of children, and education. The results suggested that older American men, those with fewer children, and those with higher levels of education more strongly believe that it will be a good thing if future changes place greater emphasis on technology.

Statistically significant correlations ( $p < 0.05$ ) were identified between variable Q158 (Impact on Life) and all sociodemographic characteristics analyzed. The findings indicated that older American men, those with fewer children, and those with higher levels of education and income agree more strongly that science and technology are making our lives healthier, easier, and more comfortable.

Statistically significant correlations were also found between variable Q159 (Opportunities) and the sociodemographic variables number of children, education, and income. The results suggested that Americans with fewer children and higher levels of education and income agree more strongly that the next generation will have more opportunities because of science and technology.

Finally, statistically significant correlations were identified between variable Q163 (Impact on the world) and all sociodemographic characteristics analyzed. The results showed that older American men, those with fewer children, and those with higher levels of education and income agree more strongly that the world is better because of science and technology.

Table 9 summarizes the sociodemographic characteristics that presented statistically significant correlations ( $p < 0.05$ ) with the variables related to innovation in the two contrasted countries.

Table 9 – Summary of correlations found

	Brazil	United States
	Males	Younger individuals
Imagination (Q11)	Younger individuals Individuals with fewer children	Individuals with fewer children Individuals with higher education

	Individuals with higher education Individuals with higher income	
Future changes (Q44)	Individuals with higher education	Males Older individuals Individuals with fewer children Individuals with higher education Males
Impact on life (Q158)	Males Older individuals	Older individuals Individuals with fewer children Individuals with higher education Individuals with higher income Individuals with fewer children Individuals with higher education Individuals with higher income Males
Opportunities (Q159)	Individuals with lower education	Older individuals Individuals with fewer children Individuals with higher education Individuals with higher income Individuals with higher education Individuals with higher income Males
Impact on the world (Q163)	Males Individuals with lower education	Older individuals Individuals with fewer children Individuals with higher education Individuals with higher income

Source: Research data (2025).

Considering both countries together, it can be seen that education was the sociodemographic characteristic most associated with innovation-related variables (a total of nine correlations identified, four in Brazil and five in the United States). This result is noteworthy because, out of these nine correlations, seven suggested that individuals with higher levels of education have more positive perceptions about innovation. Furthermore, out of the six correlations identified between sex and innovation variables, all of them indicated that males had more positive perceptions about innovation.

It should also not be forgotten that, considering both countries together, most correlation coefficients indicated weak associations (coefficients close to 0.1) according to the reference values suggested by Field (2013). In Brazil, the strongest correlation (0.108), albeit weak, was identified between individuals with higher levels of education and agreement that imagination is an important quality to be fostered in children. In the United States, similarly, the strongest correlation (0.249), albeit moderate, was identified between individuals with higher levels of education and agreement that the world is a better place because of science and technology.

#### 4.3 Comparison between Brazil and the United States regarding perceptions about innovation

Having presented the main correlations between the sociodemographic characteristics of Brazilians and Americans and their perceptions about innovation, Table 10 summarizes the variables related to innovation with statistically significant differences ( $p < 0.05$ ) between Brazilians and Americans, which will be discussed in light of the cultural characteristics of Brazil and the United States.

Table 10 – Comparison between Brazilians and Americans regarding innovation

Variables regarding innovation	Significance level
Imagination (Q11)	0.000*
Future changes (Q44)	0.000*

Impact on life (Q158)	0.000*
Opportunities (Q159)	0.000*
Impact on the world (Q163)	0.000*

---

Source: Research data (2025). Note: \*Statistically significant difference ( $p < 0.05$ )

As can be seen in Table 10, statistically significant differences ( $p < 0.05$ ) were identified between Brazil and the United States for the five innovation-related variables analyzed. Cross-referencing Table 6 (Brazilian and American perceptions about innovation) and Table 10 (comparison between Brazilians and Americans regarding innovation), the results indicate that, among the five variables, Brazilians demonstrate a more positive perception about innovation in a single variable (Q44), and Americans in four (Q11, Q158, Q159, and Q163).

Thus, the data support our assertion that Brazilians believe, more strongly than Americans, that if future changes place greater emphasis on technology, this will be a good thing. On the other hand, Americans believe, more strongly than Brazilians, that teaching children imagination is important; that science and technology are making our lives healthier, easier, and more comfortable; that, because of science and technology, the next generation will have more opportunities; and that the world is better because of them.

According to the previously proposed hypothesis, considering that the United States has lower Power Distance, higher Individualism, higher Masculinity, lower Uncertainty Avoidance, higher Long-Term Orientation, and higher Indulgence compared to Brazil (Hofstede Insights, 2025), it was expected that Americans would have more positive perceptions about innovation than Brazilians. Regarding the responses to the variables, Americans demonstrated homogeneity in their opinions. Therefore, the aforementioned hypothesis can be considered accepted.

First, given the cultural dimension of Power Distance, it was expected that, overall, Americans would have a more positive perception about innovation compared to Brazilians, considering that Brazil strongly accepts hierarchies and power inequalities as natural. This results in a culture that values the authority and privileges of those in power. In contrast, the United States reflects a greater emphasis on equal rights and more flexible organizational structures, where communication is participatory and direct (Hofstede Insights, 2025). Considering that innovation is facilitated in more flexible environments where the new is not viewed with suspicion, this difference suggests that the American business environment, characterized by greater accessibility to hierarchies and encouragement of collaboration, may foster a more conducive context for innovation compared to the more hierarchical and rigidly structured environment of Brazil.

Athayde and Coutinho (2023) believe that a lower Power Distance promotes a more effective flow of information between individuals, encompassing both coworkers and superiors, resulting in more accessible, informal, direct, and participatory communication, which creates an environment more prone to innovation, as is the case in the United States. According to Van Everdingen and Waarts (2003), higher levels of this dimension negatively affect the adoption of technological innovations. In countries with high Power Distance, individuals feel less free to express their individual opinions, which goes against the essence of innovative behavior (Setiawan, 2020).

Regarding the cultural dimension of Individualism, Americans were expected to demonstrate a more positive perception about innovation compared to Brazilians, due to their higher Individualism. Individualistic societies, such as the United States, emphasize

proactivity, personal autonomy, merit, and independence, displaying a self-image based on the “I”. In contrast, Brazilian society reveals a propensity for collectivity and integration into groups, especially within the family context, where loyalty and the building of lasting bonds are valued. This cultural distinction suggests that, in the workplace, Brazilians prioritize building bonds of trust before engaging in negotiations, while Americans tend to emphasize individual responsibility (Hofstede Insights, 2025). Proactivity, a characteristic of individualistic individuals (Hofstede Insights, 2025), is one of the hallmarks of people prone to innovation (Vladi et al., 2022; Schumpeter, 1934; Corrêa, 2019).

Jourdan Jr. and Smith (2021) also point to a strong correlation between higher levels of national innovation and high levels of Individualism. Furthermore, problem-solving ability is a hallmark of innovative people, suggesting that, when faced with challenges, more individualistic individuals tend to be more likely to resolve their own difficulties and seek alternative approaches to solving them. In collectivist societies, individual innovative talents can be masked by collective proclaiming (Schumpeter, 1934; Corrêa, 2019).

Given the cultural dimension of Uncertainty Avoidance, it was expected that, in general, Americans would show a more positive perception about innovation compared to Brazilians. The United States’ lower score on this dimension, in contrast to Brazil, suggests that Americans are more accepting of new ideas and innovative products and are more willing to experiment with new or different things (Hofstede Insights, 2025). Furthermore, studies indicate that high levels of Uncertainty Avoidance can negatively impact innovation at the individual level (Bockstedt, Druehl, & Mishra, 2014). Individuals who strive to innovate are characterized by boldness, courage, adaptability, and a willingness to take risks, which may even involve a certain degree of recklessness (Dyer, Gregersen, & Christensen, 2019; Wheatley, 2001; Corrêa, 2019).

The cultural dimension of Masculinity, in turn, addresses the appreciation of competition, achievement, success, assertiveness, commitment, persistence, and pragmatism - some of the key attributes of individuals prone to innovation, according to Dyer, Gregersen, and Christensen (2019), Wheatley (2001), and Corrêa (2019). Thus, the United States’ higher score on this dimension compared to Brazil’s points to a more positive perception about innovation among Americans. Furthermore, studies by Lim and Park (2013) have shown that Americans’ greater Masculinity influenced their higher levels of individual innovation.

Regarding the cultural dimension of Long-Term Orientation, Americans were also expected to have a more positive perception about innovation than Brazilians. Van Everdingen and Waarts (2003) observed that higher levels of Long-Term Orientation have a significantly positive influence on the adoption of technological innovations. The United States scores high on this dimension, which is common in societies whose individuals view change as a natural part of life and prepare for the future, plan, persevere, and exhibit high adaptability - traits closely linked to innovation (Dyer, Gregersen, & Christensen, 2019; Wheatley, 2001; Corrêa, 2019). Brazil, on the other hand, scores low on this dimension, closer to societies that value the maintenance of well-established traditions, beliefs, and customs - values that align with the essence of innovation. Brazilians are highly concerned with establishing absolute truth and are normative in their thinking, focusing on achieving quick results. Americans, on the other hand, believe that truth depends largely on the situation, context, and time, and demonstrate the ability to easily adapt traditions to new conditions (Hofstede Insights, 2025).

Finally, Americans were expected to have a more positive perception about innovation than Brazilians due to their higher scores on the cultural dimension Indulgence.

According to Hofstede (2011), Indulgence is characteristic of individuals who tend toward optimism, a typical trait of innovative people (Schumpeter, 1934; Corrêa, 2019). According to Jourdan Jr. and Smith (2021), higher scores on the cultural dimension Indulgence are associated with high levels of national innovation. Although both countries are considered indulgent, Americans stand out above Brazilians. According to Hofstede (2011), indulgent people have a positive attitude linked to optimism, in addition to exhibiting a willingness to fulfill their impulses and desires. Santos, Gibim, and Wechsler (2020) emphasize that optimism can be considered an attribute of a creative person, since optimistic individuals tend to take greater risks and seek innovative solutions to the problems they face.

Being optimistic implies recognizing that reality is often fleeting and full of challenges. This attitude demands discernment and a responsible approach when dealing with obstacles, fostering a future-oriented vision. It is essential to maintain an open mind to stimulate idea generation, examine the context, and formulate dynamic scenarios and perspectives that favor decision-making and the implementation of changes. Furthermore, a greater willingness to accept risks may be linked to the pleasure of innovation (Schumpeter, 1934; Corrêa, 2019).

Analyzed as a whole, the results demonstrated a high compatibility between the characteristics of the national cultures of Brazil and the United States and national perceptions about innovation. These results reinforce the relevance of researching innovation from a cross-cultural perspective, an approach not yet as commonly explored in the literature on innovation as this study dared to undertake. Furthermore, the knowledge advancement provided by this research, based on data, is to suggest that indexes of the world's most innovative countries also consider the characteristics and perceptions of their citizens regarding innovation and the possible influence of national culture on these factors, in addition to criteria already used such as the number of registered patents, investment in science and technology, and the quality of universities.

## 5 FINAL REMARKS

The study's objective was achieved: to explore Brazilian and American perceptions about innovation, discussing possible differences in light of the national cultures of Brazil and the United States. The theoretically supported hypothesis was empirically tested and found that Americans have more positive perceptions about innovation than Brazilians. This finding was consistent with the cultural dimensions proposed by Hofstede (Hofstede, 2011; Hofstede Insights, 2025), reinforcing the importance of developing this topic from a cross-cultural perspective, which remains underexplored in the literature. Therefore, this study contributes to filling this theoretical-empirical gap.

Education level emerged as the sociodemographic characteristic most strongly associated with innovation, indicating that individuals with higher levels of education tend to have more positive perceptions about innovation in both countries analyzed. Furthermore, correlation tests revealed that sex was the sociodemographic variable with the most consistent results between Brazilians and Americans. In both contexts, all observed correlations between sex and innovation showed that males are associated with a more positive perception about innovation, which can be partially attributed to the cultural dimension of Masculinity.

By intersecting the themes of innovation and national culture, this study presents theoretical implications that suggest that *more positive perceptions about innovation are*

*associated with lower levels of Power Distance and Uncertainty Avoidance and higher levels of Long-Term Orientation, Masculinity, Individualism, and Indulgence.*

The results of this research also have practical management implications for business leaders, public officials, human resources professionals, and psychologists. Human resources management policies and practices, for example, can benefit from considering the cultural particularities of innovation in the countries where they are developed. Furthermore, by analyzing the similarities and differences between an emerging country and the world's largest economy, one can reflect on the significant implications raised by this study. Organizations, especially multinational companies that employ people from different nationalities, can benefit from understanding the relationship between culture and innovation, as already suggested by Athayde and Coutinho (2023).

This research, therefore, reinforces that culture can influence individuals' values, attitudes, and behaviors. The differences observed between Brazil and the United States demonstrated alignment with the cultural characteristics of both countries analyzed. It is important to note that this study does not claim that national culture is the sole or primary reason for more or less positive national perceptions about innovation. Rather, this research seeks to highlight the importance of considering cultural variables in attempts to understand the values, attitudes, and behaviors related to innovation within society. Cultural dimensions were not adopted in this study as predictive variables in the statistical tests, but were used as theoretical support for discussing the empirical results regarding perceptions about innovation.

This study explored perceptions about innovation, taking as a reference the five variables contained in the WVS database directly related to the research object, focusing on creativity, science, and technology, topics immersed in the theme of innovation. This means that the results could be different if other variables or a larger number of variables were available. Therefore, we suggest that future studies explore other variables related to innovation and compare the Brazilian reality with that of other culturally distant countries, as well as with other countries that are benchmarks in innovation. Furthermore, other cultural characteristics can be added to enrich the discussion provided by Hofstede's cultural dimensions, such as patriarchy, paternalism, and the "*jeitinho brasileiro*" ("Brazilian way of life") in Brazil.

In this study, cultural characteristics served to discuss the differences identified in perceptions about innovation. Therefore, as a research agenda, we suggest that future studies consider cultural variables (Hofstede's six cultural dimensions) as predictors in statistical models explaining perceptions about innovation and other innovation-related values, attitudes, and behaviors, which can be explored through regression analysis or structural equation modeling (SEM). This will allow identifying the percentage of variability in dependent variables that can be explained culturally.

At last, we hope that the arguments and data presented in this study have enabled you, the reader, to answer the question posed in its title with greater confidence. Given the importance of innovation at the individual, organizational, and macroeconomic levels, and considering the theoretical and empirical evidence in the literature that points to the influence of national culture on individual values, attitudes, and behaviors, national culture should not be neglected in studies about innovation. The high compatibility between the two topics is no coincidence.

## ACKNOWLEDGEMENTS

The authors would like to thank the Minas Gerais State Research Support Foundation (FAPEMIG) for the financial support for the development of this study.

## REFERENCES

- Amidžić, R., Leković, B., Fazekas, T., & Matic, M. (2022). The relationship between national culture and innovative entrepreneurial orientation: an analysis for the Southeast European countries. *Facta Universitatis Series: Economics and Organization*, 19(1), 1-12.
- Athayde, A. L. M. & Coutinho, H. I. S. (2023). Innovation Individual Characteristics: A Cross-Cultural Comparison Between Brazilians and Americans. *Revista de Administração, Sociedade e Inovação - RASI*, 9(1), 11-24.
- Athayde, A. L. M. & Torres, C. V. (2022). Employees' use of sources of guidance at work: a cross-cultural comparison between the United States and Brazil. *Internext*, 17, 1-21.
- Batista, M. C. P. et al. (2025). Políticas Públicas de Ciência, Tecnologia e Inovação no Mercosul e a Incorporação dos Princípios ESG. *Cadernos de Prospecção*, 18(1), 105–119.
- Bockstedt, J., Druehl, C., & Mishra, A. (2014). Problem-solving effort and success in innovation contests: The role of national wealth and national culture. *Journal of Operations Management*, 36(1), 187–200.
- Bonetto, E., Pichot, N., & Adam-Troïan, J. (2022). The Role of Cultural Values in National-Level Innovation: Evidence from 106 Countries. *Cross-Cultural Research*, 56(4), 307–322.
- Borsatto, J. M. L. S., Bazani, C., & Amui, L. (2020). Environmental regulations, green innovation and performance: An analysis of industrial sector companies from developed countries and emerging countries. *Brazilian Business Review – BBR*, 17(5), 559-578.
- Bukowski, A. & Rudnicki, S. (2018). Not Only Individualism: The Effects of Long-Term Orientation and Other Cultural Variables on National Innovation Success. *Cross-Cultural Research*, 53(2), 1-44.
- Caldeira, S. F. & Athayde, A. L. M. (2024). A importância dada ao trabalho: uma comparação transcultural entre o Brasil e os Estados Unidos. *Revista de Carreiras e Pessoas – ReCaPe*, 14(13), 467-487.
- Chiavenato, I. (2008). *Gestão de Pessoas*. Rio de Janeiro: Elsevier.
- Corrêa, R. (2019). API – Atributos de Pessoas Inovadoras. *Cadernos: Inovação para Administração de Pessoas*, 1, 21-34.
- Fávero, L. P. L., Belfiore, P. P., Silva, F. L., & Chan, B. L. (2009). *Análise de dados: modelagem multivariada para tomada de decisões*. Rio de Janeiro: Elsevier.
- Field, A. (2013). *Discovering statistics using IBM SPSS Statistics*. London: Sage Publications.
- Global Innovation Index – GII (2024). *Which are the most innovative economies in 2024?* Available at: [https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024\\_WEB3lite.pdf](https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024_WEB3lite.pdf). Access on: 24 mar. 2025.
- Dyer, J., Gregersen, H., & Christensen, C. M. (2019). *DNA do inovador: dominando as 5 habilidades dos inovadores de ruptura*. 1a. ed. Rio de Janeiro: Altas Books.

- Hemesath, S. & Tepe, M. (2024). Multidimensional preference for technology risk regulation: The role of political beliefs, technology attitudes, and national innovation cultures. *Regulation & Governance*, 18(4), 1-20.
- Hofstede, G. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, California: Sage Publications.
- Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. *Online Readings in Psychology and Culture*, 2(1), 1-26.
- Hofstede Insights (2025). *Country Comparison Tool*. Available at: <https://www.hofstede-insights.com/country-comparison-tool?countries=brazil%2Cnetherlands>. Access on: 20 mar. 2025.
- Hovne, A. S., Hovne, B. S., & Schøtt, T. (2014). Entrepreneurs' innovation benefitting from their education and training and from national policy and culture: a global study. *International Journal of Entrepreneurship and Small Business*, 23(1/2), 127-144.
- Jourdan Jr., L. & Smith, M. (2021). National culture dimensions as predictors of innovation, creativity, and entrepreneurship. *Journal of Global Business Insights*, 6(2), 154–171.
- Lastres, H. M. M. & Cassiolato, J. E. (2009). Sistemas de inovação: políticas e perspectivas. *Parcerias estratégicas*, 5(8), 237-256.
- Lee, H.-S., Chernikov, S. U., Nagy, S., & Degtereva, E. A. (2022). The Impact of National Culture on Innovation: A Comparative Analysis between Developed and Developing Nations during the Pre- and Post-Crisis Period 2007–2021. *Social Sciences*, 11, 1-14.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 140, 5-55.
- Lim, H. & Park, J.-S. (2013). The Effects of National Culture and Cosmopolitanism on Consumers' Adoption of Innovation: A Cross-Cultural Comparison. *Journal of International Consumer Marketing*, 25(1), 16–28.
- Maia, T. F., Silva Júnior, P. A. M. e, Nóbrega, J. C. da S., & Bezerra Neto, F. das C. (2021). Entrepreneurship in Brazil, innovation and startups. *Research, Society and Development*, 10(6), 1-13.
- Marfo-Yiadom, E. & Tweneboah, G. (2022). The role of national culture in financial innovation and bank stability transmission. *Cogent Economics & Finance*, 10(1), 1-27.
- Organization for Cooperation and Economic Development – OCED (2005). *Manual de Oslo: diretrizes para coleta e interpretação de dados sobre inovação*. Paris: OECD.
- Perez-Penalver, M. J., Aznar-Mas, L., & Fleta, B. M. (2018). Identification and Classification of Behavioural Indicators to Assess Innovation Competence. *Journal of Industrial Engineering and Management*, 11(1), 87-115.
- Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology. *Administrative Science Quarterly*, 41, 116-145.
- Pucheta-Martínez, M. C. & Gallego-Álvarez, I. (2023). Firm innovation as a business strategy of CEO power: Does national culture matter? *Business Strategy and the Environment*, 33, 1865-1886.
- Santos, M. C., Gibim, Q. G. M. T., & Wechsler, S. M. (2020). Relação entre criatividade e otimismo: percepção de adultos. *Revista Ibero-Americana de Criatividade e Inovação*, 1(1), 41–50.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press.
- Setiawan, A. D. (2020). The influence of national culture on responsible innovation: A case of CO2 utilization in Indonesia. *Technology in Society*, 62, 1-12.

- Souza, P. V. S. de, Dalcero, K., Ferreira, D. D. M., & Paulo, E. (2024). The impact of environmental innovation and national culture on ESG practices: a study of Latin American companies. *Academia Revista Latinoamericana de Administración*, 37(2), 246-264.
- Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics*. New York: Harper Collins.
- Tidd, J. & Bessant, J. (2018). Innovation management challenges: From fads to fundamentals. *International Journal of Innovation Management*, 22(5), 1-13.
- Ullah, S., Agyei-Boapeah, H., Kim, J. R., & Nasim, A. (2022). Does national culture matter for environmental innovation? A study of emerging economies. *Technological Forecasting & Social Change*, 181, 1-13.
- Vale, I. & Barbosa, A. (2020). Gallery Walk: uma estratégia ativa para resolver problemas com múltiplas soluções. *Revista de Educação Matemática, Sociedade Brasileira de Educação Matemática*, 17, 1-17.
- Van Everdingen, Y. M. & Waarts, E. (2003). The Effect of National Culture on the Adoption of Innovations. *Marketing Letters*, 14(3), 217–232.
- Vignoles, V. L. et al. (2016). Beyond the “East-West” Dichotomy: Global Variation in Cultural Models of Selfhood. *Journal of Experimental Psychology: General*, 145(8), 966-1000.
- Vladi et al. (2022). Mapping Stakeholders Perceptions on Innovation Skills, through the Borich Needs Assessment Model: Empirical Evidence from a Developing Country. *Acta Polytechnica Hungarica*, 19(8), 49–68.
- Wang, T. (2024). Exploration of the Inheritance and Innovation Carrier of National Culture in the Teaching Model of Art Design Major in Higher Vocational Colleges: Integrating Lijiang Baisha Murals into Higher Vocational Art Design Curriculum System. *Journal of Contemporary Educational Research*, 8(1), 165-172.
- Wheatley, M. J. (2001). We are all innovators. *Leader to Leader*, 20, 11-21.
- Woodside, A. G., Megehee, G. M., Isaksson, L., & Ferguson, G. (2020). Consequences of national cultures and motivations on entrepreneurship, innovation, ethical behavior, and quality-of-life. *Journal of Business & Industrial Marketing*, 35(1), 40-60.
- Wong, Y.-Y., Everett, A. M., & Nicholson, J. D. (2008). National culture and innovation capability: some observations concerning Chinese-Americans. *Management Research News*, 31(9), 697–712.
- World Values Survey – WVS. (2025). *Online data analysis*. Available at: <https://www.worldvaluessurvey.org/wvs.jsp>. Access on: 20 mar. 2025.
- Yao, J., Marescaux, E., Ma, L., & Storme, M. (2023). A contingency approach to HRM and firm innovation: The role of national cultures. *Human Resource Management*, 62, 685-699.