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**Preferences for intuition and deliberation in decision-making in the public sector: Cross-cultural comparison of China, Taiwan, the Philippines, and the USA**

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# **Preferences for intuition and deliberation in decision-making in the public sector: Cross-cultural comparison of China, Taiwan, the Philippines, and the USA**

## **Abstract**

This paper explores hypotheses based on Hofstede's cultural framework showing that decision-makers' culture impacts their implicit choice. How people make decisions is tested through the behavioral dimension preference for intuition/preference for deliberation based on data from 1,233 employees in China, Taiwan, the Philippines, and the USA. The survey design was confirmed applying explanatory (EFA) and confirmatory (CFA) factor analyses. This study reveals that there is significant variation in individuals' intuitive and affective decision-making in the public sector across different countries. Individuals' deliberative decision-making is revealed to be impacted by cultural dimensions like long-term orientation and uncertainty avoidance. The study finds that Eastern countries with Guanxi (China, the Philippines, and Taiwan) have higher scores for intuitive/affective decision making than the Western countries (the USA).

**Keywords:** intuition; deliberation; decision style; virtue; cross-cultural analysis; China, Taiwan, the Philippines, the USA

## **Introduction**

Events that span political borders and the policies that respond to them, such as the Russia-Ukraine war, refugee crises and climate change, lead to higher uncertainty across societies. Cultural groups have come up with different individual-level responses amidst uncertain times, developing coping mechanisms to face challenges of everyday life. The cultural theory put forward in this study considers the distinctions that exist between the cultures of various nations. Public administrators around the globe need to be aware of administrative processes as well as human decision-making in a comparative perspective that reflects the peculiarities of different macro-cultures.

Different concepts at the interface of social science and psychology tackle how people make decisions in the public sector. The two core constructs of our contribution, decisions as part of administrative processes and as well as macro-cultural contexts, form a mainstay of comparative public administration research (for an overview, see Fitzpatrick et al., 2011; Van

Der Wal et al., 2021). Intuitions and emotions are more recognized to shape human behavior than was thought in the founding days public administration (for an overview, see Nørgaard, 2018). A reliable survey instrument to understand the relation between fast, emotional thinking as a preference for intuition and slow, cognitive processes of judgments and decisions as a preference for deliberation has been suggested in cognitive psychology (Betsch, 2004, 2008). Prior works in public administration have leveraged this instrument to throw light on administrators' decision-making (Svenson et al., 2022). However, only one third of the publications in comparative public administration take culture into account (Fitzpatrick et al., 2011). According to Nutt (2006), cultures “transfer and cumulate, create referents, and adapt to changing times and emergent needs. The attributes of culture are thought to mark off a group and show how it is distinct from other groups (p. 295). This study explores national and cultural factors that influence the behavioral dimension preference for intuition/preference in decision-making in the public sector.

In behavioral public administration (a subfield that advocates the integration of psychology and public administration) connections between macro level cultures and individual decision-making are gradually gaining more attention (e.g., Zhao & Khan, 2013; Ngoye et al., 2020). Fitzpatrick et al. (2011) suggested to recognize differences in governance contexts (institutions, administrative processes, and culture). Ngoye et al. (2020) used priming as a technique embedded in experimental designs for the assessment of cognitive processes, decisions, behavior, and actions in behavioral public administration. Bertelli and Riccucci (2022) criticized Ngoye et al. (2020) for failing to capture the embeddedness of institutional contexts. Zhao and Khan (2013) take macro-culture into account but suggest that more cross-cultural research is necessary.

The behavioral dimension preference for intuition/preference for deliberation has not received the attention, necessary for an application to the international realm (Svenson et al., 2022). We suggest that a cross-cultural consideration of these behavioral dimensions paves the way to explore how thinking preferences may be shaped by macro-culture. There is a dearth of research on the psychological underpinnings of decision-making processes within the public sector, particularly with regard to cultural influences (Edel, 2011; Pillay, 2008, Ugyel, 2021). Currently, very few studies in behavioral public administration highlight the peculiarities of macro-cultural assumptions across countries (Green, 1993; Jabbra & Dwivedi, 2004; Nutt, 1999,

2006; Kisner, 2016; Meyer & Hammerschmid, 2010; Morrison, 2010; Robinson, 2007). Meyer and Hammerschmid (2010) show that national culture impacts individual decision-making across Europe. Studying relations between well-established concepts in a range of cultural or organizational surroundings can serve to improve theory or come up with new implications (Meier, 2015). A deeper understanding of deliberative thinking and intuitive thinking can assist administrators in aligning their actions with the principles of self-management (see e.g., Georgianna, 2007), emotions (see, Alves et al., 2007), uncertainty avoidance (Stewart et al., 2011), power distance (Daniels & Greguras, 2014), virtue (Sadler-Smith, 2012; Svenson et al., 2022), etc. The preferences for thinking styles ‘may enable or impede the habituation of virtue’ (Sadler-Smith, 2012, p. 1), which is likely to vary across the globe (Svenson et al., 2020). The holism of the human experience and the interconnection of intellect, sensations, and emotion are ignored if only preferences for deliberation are considered (Mumby & Putnam, 1992). We address this gap by focusing on the behavioral dimension preference for intuition/preference for deliberation (Betsch, 2004, 2008) in China, Taiwan, the Philippines, and the USA.

Comparative studies of decision-making provide public management scholars with a practical means of studying cultural variation (Svenson et al., 2022; Guy, Mastracci, & Yang, 2019). The predominant approach of cross-cultural behavioral analysis begins with assessing the scores of macro cultural dimensions (Hofstede, 2016, 2021). Guy, Mastracci, and Yang (2019) analyze emotional labor, which is related to a preference for intuitive thinking. Their study within the public service paradigm across national cultures provided contextual understanding of behavioral public administration from multiple levels: individual, organizational, cultural, and situational, based on analysis of 12 different countries across 6 continents. However, this individual level study has not yet integrated findings with the behavioral dimension preference for intuition/preference for deliberation. Dealing with differences between national cultures requires not only knowing how to act in the right way, but also understanding the deeper assumptions and values that explain why some decision-making behaviors are better than others. Insights gained can be used to facilitate decisional routines that resonate well with the cultural context of administrators. Comparative research in thinking preferences (intuition and deliberation) and decision-making in different countries addresses administrative challenges in a global context and provides useful perspectives for practitioners. We are guided by the assumption that the preferences for intuition and deliberation are shaped by the deep-seated,

macro-level factor of culture. This study used a survey instrument based on 1,233 responses of working adults in China, Taiwan, the Philippines, and the USA, contributing towards the overarching question raised explicitly in behavioral public administration (Nørgaard, 2018): Is there a propensity of public administrators to use intuitive rather than deliberative thinking?

This study addresses the calls by Breugh and Hammerschmid (2021), Eglene and Dawes (2006), Kuhlmann (2010), Pollitt and Boukaert (2017), Suzuki and Hur (2020) for more local and cultural-specific theories of public management and administration. We advance knowledge of the field by theoretically and empirically comparing whether and how national culture affects the differences in the cognitive processes of intuition and deliberation of decision-makers in different countries.

The study is organized as follows. The theoretical background consists of several parts. First, we present the behavioral dimension preference for intuition/preference for deliberation. Secondly, we present the distinctive attributes of the national cultures observed in the four countries. Thirdly, we link the likely shaping of the preferences for decision-making in the public sector to the cultural dimensions. We then move on to explain our methodology and discuss the results of the analysis. We conclude by highlighting contributions and limitations with a discussion of its implications for future research and practice.

## **Theoretical background**

### ***Cognitive approaches to decision-making***

The behavioral dimension preference for intuition/preference for deliberation (Betsch, 2004, 2008) is part of a group of cognitive approaches to decision-making, referred to as the dual process theory of thinking (Betsch, 2004, 2008; Guy, Mastracci & Yang, 2019; Kruglanski, 2013; Newman, Guy, & Mastracci, 2009; Sadler-Smith, 2012). Dane and Pratt (2007) define intuitions as “affectively charged judgments that arise through rapid, non-conscious and holistic associations” (p. 33). Effectively managing intuition is presumably a base skill for wise public sector decision outcomes (Rooney & McKenna, 2008; Svenson et al., 2022). Simon (1997) states that pattern recognition is the key process in intuitive decision-making, because it allows experts a rapid access to their tacit knowledge base to make quick and successful decisions. Simon (1997) regards decisions as a desirable research theme for the entire field of public administration. In order to effectively make sound decisions, it is necessary for individuals to

effectively regulate their own intuitions and possess the ability to anticipate decision-making within their respective work environment (for an overview, Svenson et al., 2023).

In this study, we used the dual thinking processes described in decision-making psychology (Betsch, 2004, 2008) to measure the behavioral dimension preference for intuition/preference for deliberation. A preference for intuition can also be conceptualized as System 1 (intuition and affect) and a preference for deliberation as System 2 (analysis and reason) (Kruglanski, 2013). The two processes underly human judgments, decisions and problem-solving. Although people can use both types of thinking, preferences for either type of thinking materialize (Betsch, 2004), and in this study we investigate, whether the macro-cultural context shapes these very preferences. Newman, Guy, and Mastracci (2009) distinguished between abilities of analysis and reason (System 2) and emotion work skills (System 1) in their study of public administration professionals' practice. The importance of the two thinking processes in decision-making has been acknowledged across public service policy sectors as well as countries and continents (Bhuyan, 2017; Guy, Mastracci & Yang, 2019; Mumby & Putnam, 1992; Newman, Guy & Mastracci, 2009; Nørgaard, 2018; Rooney & McKenna, 2008; Sadler-Smith, 2012; Sison, Hartman & Fontrodona, 2012). Our contribution shifts the focus from the distinction between public and private sectors (Svenson et al., 2022), towards the cultural specificities of decision-making style in different macro-cultures.

### ***National cultures and thinking style***

Crisis events that span the globe have become more obvious since the 2019 coronavirus outbreak. As we try to prepare for future decision-making in international public administration, national culture becomes an especially relevant influence factor as we investigate similarities and dissimilarities of individual decision-making across countries (see also, Meyer & Hammerschmid, 2010). Governance is globalized and administrators are required to operate within and across different national cultures. Consequently, comprehending thinking preferences in the context of national culture holds both theoretical and practical significance (Damasio, 2000, 2018; Zhang et al, 2015). Researchers have argued that national culture is a determinant of thinking preferences as used in self-management (for example, Alves et al., 2006; Georgianna, 2006), but there have been inconclusive answers.

Many scholars analyzed different aspects of culture, such as (1) culture as shared values, beliefs, attitudes, and norms developed in relationship to a group's environment (Gudykunst,

2004; Hofstede, 2001; House et al., 2002; House et al., 2004; Ralston et al., 1993); (2) national culture in the public sector (Grindle, 1997; Kisner, 2016, Knassmüller & Veit, 2016; Schedler & Proeller, 2007). Knassmüller and Veit (2016) analyzed the impact of national culture on the training of senior civil servants in Austria, Germany, the Netherlands, and Switzerland. Gudykunst (2004) describes culture as a system of knowledge that allows people to know how to communicate with individuals from a different culture and how to interpret their behaviors. The model of cultural orientations assumes a six-dimensional conceptual framework comprising power distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, long-term orientation, and indulgence (Hofstede, 1980, 2021; Hofstede & Bond, 1988). Ralston, Gustafson, Cheung, and Terpstra (1993) described culture as beliefs and values that are widely shared in a specific society at a certain point in time. Ralston, Holt, Terpstra and Kai-Cheng (1997) examined the potential impact of economic ideology and national culture on the individual work values of managers in the United States, the Philippines, Japan, and China.

Many scholars focused upon the Eastern and Western cultures and how it affected (1) decision-making in Asian societies (Kao, 1993; Lovett et al., 1999; Ralston, 1997; Su et al., 2017; Triandis, 1989; Trompenaars, & Hampden-Turner, 1998); (2) personal achievement and individual self-worth (Zhang et al., 2020); (3) on leadership style of decision – making (Bird & Mendenhall, 2016; Caligiuri & Tarique, 2012; Chabowski, Samieea, & Hult, 2016; Chen et al., 2018).

Ralston (1997) states, “While a range of behaviors certainly exists within each of these culture groups, important constants within the Eastern and Western cultures also differentiate them from one another (p. 179). Many scholars provide evidence that national cultures, thinking style, decision-making, managerial skills, and leadership vary across national cultures (Svenson et al., 2020).

The Global Leadership and Organizational Behavioral Effectiveness Program (GLOBE) study involved managers of 62 cultures who reported on cultural practice as well as societal values (House et al., 2002; House et al., 2004). Prior works (Svenson et al., 2020) assumes that people from different cultures have different ways of thinking, perception of problems, leading to more variation in workplace practices.

East Asians are more likely to engage in leadership behaviors that involve both control and flexibility in comparison to Westerners (Zhang et al., 2015). Leaders and managers in the



Confucian Asian country cluster show higher levels of institutional and in-group collectivism, than the Anglo country cluster (France, Booysen, & Baron, 2019). American cultures prefer charismatic, decisive, collaborative leaders (Hofstede, 2001).

This study adds an empirical analysis to previous academic literature. The impact of macro-cultural contexts on varying scores of intuitive/affective thinking preferences in their decision-making. The public administration research applying dual process theory of thinking has been carried out in single macro-cultures (e.g., Sobral et al., 2017), but to the best of our knowledge the few studies that seek to foster cross-cultural dialogue in public administration (e.g., Egel & Fry, 2017; Haque, 2019; Van der Wal et al., 2021) do not compare relations between macro-culture and preference for intuition and deliberation.

***Economic ideology***

Ralston et al. (1997) provided the definition of economic ideology as the “workplace philosophy that pervades the business environment of a country” (p. 180). The business environment and the political environment of a society can differ, e.g., combining ideologies of capitalism and socialism to some extent. Based on Ralston et al. (1997), capitalism is “a self-serving economic system where everyone looks out primarily for his/her own self-interests” (p. 180). Collectivism says that everyone should care about the good of everyone else, therefore collectivistic views of socialism say that everyone should work for the good of society and the group, putting the focus on the good-of-the-group (Ralston et al., 1997, 1998, 2008).

As stated by Ralston et al. (1997), the United States are an example of a country with both individual-oriented national culture and economic ideology and Taiwan is an Eastern country with a capitalistic economic ideology. China, while moving towards capitalism, is a country whose economic ideology still adheres to the collectivistic notions of Socialism (Ralston et al., 1997). Table 1 provides groups of national culture and economic ideology.

**Table 1.** Groups of national culture and economic ideology

<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>
Individual-oriented national culture with individualist economic ideology	Collective-oriented national culture with individualist economic ideology	Individual-oriented national culture with collectivist economic ideology	Collective-oriented national culture with collectivist economic ideology
The USA	Taiwan	The Philippines	China

*Source: Table created by authors based on Ralston et al. (1997)*

In this Table 1, Group 1 identifies individual oriented national culture with a capitalistic (individualistic- oriented) economic ideology (the USA).

Group 2 identifies collectivistic-oriented national culture with a capitalistic (individualistic- oriented) economic ideology (Taiwan). Taiwan is often ranked among the fastest-growing economies in Asia. In the 1980s, the government implemented institutional reforms, including trade liberalization and financial deregulation, to better integrate Taiwan into the world economy. Taiwan gained a commanding position in building high-tech industries and promoting entrepreneurship. Taiwan had achieved “the Taiwan Miracle — its authoritarian political system evolved into a democracy while its economy boomed” (Lin & Wong, 2016, p. 1).

Group 3 identifies individualistic-oriented national culture with a socialistic (collectivistic- oriented) economic ideology (the Philippines).

Group 4 identifies collectivistic-oriented national culture with a socialistic (collectivistic-oriented) economic ideology (China).

In Group 1 (the USA), both national culture and economic ideology encourage or reinforce an individualistic value system. In Group 4 (China), both support a collectivistic value system. In Groups 2 and 3, national culture and economic ideology do not intersect (Ralston, 1997).

We understand culture as “collective mental programming” (Hofstede, 2001, p. 12), which indicates “(1) collective captures the social dimension; (2) programming is representative of the behavioral dimension; and (3) the mind alludes to the cognitive dimension” (Alves et al. 2006, p. 343). Hypotheses 1 and 2 tackle the cultural dimension individualism versus collectivism, dealing with the “integration of individuals into primary groups” (Hofstede, 2001, p. 29). Since both national culture and economic ideology have an impact on the thinking style, people typically cooperate more, take more choices collectively (i.e., prefer deliberation), and perform better in groups in collectivistic societies. As a result, the individualism/collectivism dimension is determined by how much the completion of an administrative task is dependent on social ties (therewith training a preference for deliberative decision-making). The present study proposes the following hypotheses:

**H1:** *Individuals in countries with a collective-oriented national culture (Taiwan and China) have a higher mean for deliberative decision making than countries with individual-oriented culture (the USA and the Philippines).*

**H2:** *Individuals in countries with collective-orientated economic ideology (the Philippines and China) have a higher mean for intuitive/affective decision making than countries with individual-oriented economic ideology culture (the USA and Taiwan).*

### ***Decision-making in the public sector***

Many scholars (Breugh & Hammerschmid, 2021; Guy, Mastracci & Yang, 2019; Mastracci & Adams, 2019; Nørgaard, 2018; Sicora et al., 2021; Svenson et al., 2022) raised the following question in behavioral public administration: Is there a propensity of public administrators to use intuitive rather than deliberative thinking? Intuitive decision-making is understood differently across the public sector (see, Breugh & Hammerschmid, 2021; Mastracci & Adams, 2019; Sicora et al., 2021). Guy, Mastracci and Yang (2019) document a high variability of levels of emotional labor (of which a preference for intuition forms a part) in their global study. More recent works (Svenson et al., 2022) find that private sector decision makers are more conscious of using both intuition and deliberation than public sector decision makers.

Several scholars analyzed behavioral differences of public and private managers (Andersen, 2010; Bretschneider, 1990; Coursey & Bozeman, 1990; Hickson et al. 1986; Nutt, 1999, 1993, 2006; Svenson et al., 2022). Nutt (1999) highlighted public-private differences in the assessment of alternatives for decision making: “Decision makers in public organizations were found to be more successful when they sought out expert views and used hard data, [...] and private sector decision makers were more successful when they used analysis” (p. 305).

Some scholars (Guy, Mastracci, & Yang, 2019; Edel, 2011; Pillay, 2008, Ugyel, 2021) explore the psychology of decision making in the public sector based on culture. Kisner (2016) analyzed how macro-culture can impede public management reform efforts. Van Der Wal, Van den Berg, and Haque (2021) suggested that comparative public administration needs to become more context-sensitive to lead effectively across cultures. Guy, Mastracci, and Yang (2019) analyze a preference for intuitive thinking within the public service across national cultures in 12 different countries across six continents. Their study provided contextual understanding of behavioral public administration from multiple levels: individual, organizational, cultural, and situational. Several cultural characteristics of collectivist East Asian societies linked to

deliberation have been addressed by Min (2009), including the low value of public conversation, the great effect of social standing in talk, and the distinct characteristics of their cognitive reasoning processes.

The current investigation posits the subsequent hypothesis:

**H3:** *Individuals’ intuitive/affective decision-making in the public sector will display considerable variability of scores across all countries.*

***The relationship between the cultural background and the thinking processes***

Our examination of cultural background emphasizes its relationship with thinking processes. Hofstede’s cultural dimensions theory (Hofstede, 2001, 2021) provides a framework to describe the effect of a society’s culture on the values of its members, and how these values relate to behaviors. Table 2 presents the six cultural dimensions observed in the United States, China, Taiwan, and the Philippines.

**Table 2.** Hofstede’s cultural dimensions scores for China, the Philippines, Taiwan, and the United States.

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long-term Orientation	Indulgence
	1	2	3	4	5	6
The USA	40	91	62	46	29	68
Taiwan	58	17	45	69	93	49
China	80	20	66	30	87	24
The Philippines	94	32	64	44	27	42

*Source: Created by authors based on Hofstede (2021).*

The individualism scores (91) for the United States indicate that Americans are significantly more individualistic, egalitarian, and democratic, as well as less accepting of abuse of power than individuals in China (20), Philippines (32), or Taiwan (17). Taiwan has the lowest score (17) on the individualism-collectivism dimension, which indicates that even though Taiwan has a capitalistic economy (free trade, competition, open market, private ownership etc.), it is still a society characterized by a collectivistic nature. The People’s Republic of China, with a score of 20, and the Philippines, with a score of 32, are considered collectivistic societies. This is manifest in a close long-term commitment to the member ‘group’, be that a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount and overrides

most other societal rules and regulations. The society fosters strong relationships where everyone takes responsibility for fellow members of their group. In collectivist societies offence leads to shame and loss of face, employer/employee relationships are perceived in moral terms (like a family link), hiring and promotion decisions take account of the employee's in-group, management is the management of groups.

The Philippines's high score on the power distance dimension (94) is reflective of a country where the power holders are very distant in society. The Philippines is a hierarchical society where people accept a hierarchical order in which everybody has a place, and which needs no further justification. Hierarchy in an organization is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to be told what to do and the ideal boss is a benevolent autocrat. It indicates that Filipinos are more accepting of inequalities than Americans, Chinese and Taiwanese. China scores high on power distance and low on individualism reflecting the beliefs that inequalities among people are acceptable in a collectivist society (Hofstede, 2016).

Taiwan has a score of 45 on masculinity. The Philippines scores 64, China scores 66, and the USA scores 62 on the masculinity dimension, and they may be considered masculine societies. In masculine countries people "live in order to work", managers are expected to be decisive and assertive, the emphasis is on equity, competition and performance and conflicts are resolved by fighting them out.

The uncertainty avoidance score of the Philippines is 44, the USA has a score of 46, which are both moderate. The score implies that Americans are tolerant, open to new ideas and change, do not require a lot of rules, and are less emotionally expressive when compared to other cultures (Hofstede, 2016). China scores low on uncertainty avoidance (30) indicating that the Chinese are comfortable with ambiguity; and that an adherence to laws and rules may be flexible to fit the situation (Hofstede, 2016). Taiwan has an uncertainty avoidance score of 69, which is the highest preference for avoiding uncertainty from the countries considered.

The Philippines' low score (27) on long-term orientation is the lowest score compared to the scores of the USA (29), Taiwan (93), and China (87). A very low score of 27 indicates that the Philippines are more normative than pragmatic. People in such societies have a strong concern with establishing the absolute truth; they are normative in their thinking. They exhibit great respect for traditions, a relatively small propensity to save for the future, and a focus on

achieving quick results. The Philippines and the USA are normative societies, which score low on long-term orientation, prefer to maintain time-honored traditions and norms. Persistence/perseverance, arranging relationships by status and following this order, thrift, and having a sense of shame are all valued in Confucian cultures like Taiwan (93) and China (Ralston, 1997), which score high on long-term orientation, they encourage to prepare for the future.

On the dimensions of power distance and uncertainty avoidance, the score of Taiwan are closer to Japan than to China (Hofstede, 2016). Countries with high scores maintain rigid codes of belief and behavior and are intolerant of unorthodox behaviors and ideas. In these cultures, there is an emotional need for rules (Hofstede, 2016). Chinese society has tried to reduce uncertainty by creating very bureaucratic procedures in many areas ranging from opening a business to signing contracts, obtaining bank loans etc.

The indulgence dimension is defined as the extent to which people try to control their desires and impulses, based on the way they were raised. Relatively weak control is called “indulgence” and relatively strong control is called “restraint”. Cultures can, therefore, be described as indulgent or restrained (Hofstede, 2021). The USA is part of the indulgent societies with a score of 68. Taiwan has a score of 49. With low scores of 24 and 42, the cultures of China and the Philippines are restraint societies. In contrast to indulgent societies, restrained societies control the gratification of their desires and have the perception that their actions are restrained by social norms and feel that indulging themselves is somewhat wrong.

Preference for deliberation is likely to be higher in long-term-focused cultures that place a high importance on the evolution of social positions, the blending of work and family obligations, and most outcomes resulting from long-term partnerships (Min, 2009). Preference for deliberation is likely to be higher in cultures with high uncertainty avoidance, that maintain rigid codes of behavior and have low tolerance for unconventional actions and ideas. A preference for deliberation is likely to work as a check to stay within the bounds of these two cultural dimensions.

Alves et al. (2006) suggested that cultures with long-term orientation value the development of social positions, the mix of business and family issues, and most things emerging from long-term relationships. In this study, we decided to use uncertainty avoidance in addition to long-term orientation to analyze the behavioral dimension preference for intuition/preference

for deliberation. Based on the theory and research results reviewed above, the present study proposes the following hypothesis:

**H4:** *Individuals working in the public sector in countries with highest long-term orientation score and highest uncertainty avoidance (Taiwan) will have higher scores of deliberative thinking than those working in countries with high long-term orientation score and lowest uncertainty avoidance score (China) and those working in countries with low long-term orientation score and uncertainty avoidance score (the USA and the Philippines).*

### ***Guanxi***

Scholars found that the primary influence within the Eastern culture is Confucianism (Ralston et al., 1997). Confucius' teaching of the importance of society, the group, and hierarchical relationships within a society has endured through the ages. As stated by Ralston et al. (1997, p. 179), Buddhism and Taoism, which are the main faiths in Eastern civilizations, share a common emphasis on the significance of the collective within society. Guanxi refers to having personal trust and a strong relationship with someone and can involve moral obligations and exchanging favors. Guanxi can be viewed as an extensive network of personal (Kao, 1993) or business relationships that allows parties' access to valuable resources (Su et al., 2007), and involves the development of a network of relationships that promote the accomplishment of business tasks (Lovett et al., 1999). Hwang et al. (2008) suggest that individuals who do not fulfill their obligations within the guanxi network experience a decline in their social standing within the group. This also would lead to the loss of face and loss of trust by fellow members of the circle.

Christian religion has been the primary influence in the West. The Protestant work ethic epitomizes the Christian emphasis on individual achievement (Ralston et al., 1997). Ralston et al. (1997) wrote that "a primary contrast underlying the difference between Eastern and Western cultures is the relative focus on the good-of-the-group (Collectivism) in the East versus the good-of-the-individual (Individualism) in the West" (p. 179). We propose that Guanxi will influence the intuitive thinking style for individuals in countries with Guanxi (Taiwan, the Philippines, China).

Based on the theory and research results reviewed above, the present study proposes the following hypothesis:

**H5:** *Eastern countries with Guanxi (China, the Philippines, and Taiwan) have higher scores for intuitive thinking processes than the Western countries (the USA).*

## Methodology

### *Sample and data collection*

The data were collected as part of a larger online questionnaire on intuition (Launer & Svenson, 2023) and digital trust (Marcial & Launer, 2021) between March and August 2020. The participants filled in the online survey after invitations. In the USA invitations were sent from a participant recruitment agency. In China, Taiwan, and Philippines, invitations were sent as snowball sampling through social media by the first and the fourth author and their professional and private networks. These data were analyzed using Jamovi version 2.3. The final sample for this study consisted of 1233 participants (406 from China, 427 from the Philippines, 127 from Taiwan, and 273 from the USA). The age distributions are 20.8% for 28 years old or younger, 32.9% for 29-38 years old, 26% for 39-48 years old, and 20.3% for 49 years old and older. Gender distributions are 40% female, 8% not binary, and 52% male. The education has ranged by 9.8% Ph.D., 25.8% Master, 7.9 % Vocational, 49.4% Bachelor, and 7.1% High school or lower degrees. The years of experience levels of the participants are 5% for less than 3 years, 24.5% for 4-10 years, 41.8 % for 11-20 years, 21% for 21-30 years, and 8.1% for 31 years and more. Unfortunately, no precise country population statistics are available due to the state government's ongoing restrictions and changes during the Covid-19 pandemic. Therefore, no weighting approach was used because, according to Krosnick (1999), representative sampling is sometimes less significant and, according to Brehm (1993), adjusting for demographic biases has very little effect when applied to correlational analysis. The country related details are in the Table 3.

**Table 3.** Demographics

	China (n=406)	The Philippines(n=427)	Taiwan (n=127)	The USA(n=273)
Age				
28 and younger	38.1 %	16.4 %	47.3 %	21.3 %
Range 29-38	40.4 %	27.4 %	35.9 %	48.8 %
Range 39-48	15.8 %	22.7 %	11.0 %	29.9 %
49 and older	5.7%	33.5 %	5.9 %	-
Gender				
Female	49.0 %	38.2 %	37.7 %	22.0 %
Not binary	1.7 %	8.2 %	4.4 %	35.4 %
Male	49.3 %	53.6 %	57.9 %	42.5 %



	China (n=406)	The Philippines(n=427)	Taiwan (n=127)	The USA(n=273)
<b>Education</b>				
PhD	7.4 %	15.9 %	3.3 %	11.0 %
Master	14.3 %	29.3 %	24.2 %	54.3 %
Vocational	8.1 %	1.9 %	18.3 %	5.5 %
Bachelor	58.1 %	51.5 %	42.9 %	28.3 %
High school or lower	11.8 %	1.3 %	11.4 %	0.8 %
<b>Professional experience</b>				
Less than 3 years	6.0 %	4.8 %	3.7 %	5.5 %
4-10 years	35.3 %	20.5 %	19.0 %	10.2 %
11-20 years	42.3 %	45.2 %	46.2 %	22.0 %
21-30 years	12.3 %	19.6 %	24.2 %	44.9 %
31 years and more	4.3 %	9.8 %	7.0 %	17.3 %

### ***Instruments***

For measuring decision-making styles, the Preference for Intuition and Deliberation (PID) scale (Betsch, 2004) was used to assess 14 items that scored relatively high factor loadings. The items are measuring individuals' preferences for intuitive and rational decision-making styles on a 4-point Likert response type from 1 (strongly disagree) to 4 (strongly agree). The higher scores indicate the increased preferences in relation to decision-making styles. Since the original scale was developed in a certain culture, we have used both the explanatory (EFA) and confirmatory (CFA) factor analyses for determining measurement validity. In the first step, we have employed Primary Component Analysis (PCA) for exploring the components, "eigenvalues greater than one" criteria, and "varimax rotation" technic to maximize the variance of squared loadings on a factor. In the second step, we have used maximum likelihood estimation method to confirm the determined factorial structures in the CFA. For the cut of values of model fit, the ratio of chi-square to degrees of freedom ( $X^2/df < 3$ ), Tucker Lewis index ( $TLI > .90$ ), comparative fit index ( $CFI > .90$ ), and root mean square error of approximation ( $RMSEA < .08$ ) were used for accepting the structures. We have tested the factorial structures for the whole sample and each country in the analyses. Furthermore, we have calculated Cronbach's alpha coefficients for determining the internal consistencies for the reliability.

### **Findings**

#### ***The Validity and reliability of the PID scale***

The findings from the EFA conducted on the entire sample, as presented in Table 4, have revealed that the scale maintains its original two-factor structure. This structure accounts for 65% of the total variance and consists of 11 items, with factor loadings ranging from .67 to .82. Accordingly, the CFA results have shown that the two-factorial construct of PID has acceptable fit indices for the whole sample ( $X^2/df= 4.32$ ,  $TLI=.98$ ,  $CFI= .98$ ,  $RMSEA= .052$ ). After confirming the factorial structure for the whole sample, we have tested the confirmed factorial structure for each country. We have firstly explored and then confirmed the items and factorial structures for each country as conducted for the whole sample.

The results show that the two-factorial structure and selected items are valid for participants from China (EFA: explained variance is 43% and factor loadings ranged from .52 to .73; CFA:  $X^2/df= 2.42$ ,  $TLI=.90$ ,  $CFI= .93$ ,  $RMSEA= .059$ ), the Philippines (EFA: explained variance is 73% and factor loadings ranged from .67 to .89; CFA:  $X^2/df= 2.88$ ,  $TLI=.97$ ,  $CFI= .98$ ,  $RMSEA= .066$ ), Taiwan (EFA: explained variance is 65% and factor loadings ranged from .68 to .87; CFA:  $X^2/df= 2.04$ ,  $TLI=.93$ ,  $CFI= .95$ ,  $RMSEA= .091$ ), and the USA (EFA: explained variance is 73% and factor loadings ranged from .79 to .87; CFA:  $X^2/df= 3.08$ ,  $TLI=.93$ ,  $CFI= .95$ ,  $RMSEA= .088$ ).

After confirming the factorial structure, the calculated Cronbach's alpha coefficient of deliberation is .90 for the whole sample, .72 for China, .94 for the Philippines, .82 for Taiwan, .89 for the USA, and for intuition it is .85 for the whole sample, .68 for China, .88 for the Philippines, .91 for Taiwan, .83 for the USA. All the results have indicated that the PID scale is valid and reliable for the sample.

For the convergent and divergent validity, the AVE (Average variance extracted) and CR (composite reliability) scores of the factors are calculated for each decision-making style. According to the results, the AVE and CR scores for the total sample and each country are at acceptable levels (should be higher than .50 for AVE and .70 for CR; Fornell & Larcker, 1981) with a minor limitation for China (AVE for Deliberation=0.49 and Intuition=0.48).

**Table 4.** Factor Analysis Results

	Explanatory factor analysis				Confirmatory factor analysis					
	KMO	BT	TVE	FLs	$X^2/df$	TLI	CFI	RMSEA	AVE	CR
PID scale		(df)								
Total sample	.91	6899.7 (55)	64.99	from .67 to	4.32	.98	.98	.052	D=0.63 I=0.56	D=0.90 I=0.87

PID scale (n= 1233)	Explanatory factor analysis				Confirmatory factor analysis					
	KMO	BT (df)	TVE	FLs	X <sup>2</sup> /df	TLI	CFI	RMSEA	AVE	CR
China (n= 406)	.78	715.5 (55)	43.18	from .52 to .73	2.42	.90	.93	.059	D=0.49 I=0.48	D=0.80 I=0.82
Philippines (n= 427)	.93	3402.8 (55)	73.22	from .67 to .89	2.88	.97	.98	.066	D=0.74 I=0.61	D=0.93 I=0.89
Taiwan (n= 127)	.84	796.2 (55)	64.66	from .68 to .87	2.04	.93	.95	.091	D=0.67 I=0.52	D=0.91 I=0.84
USA (n= 273)	.83	1524.9 (55)	72.98	from .79 to .87	3.08	.93	.95	.088	D=0.69 I=0.61	D=0.92 I=0.89

KMO= Kaiser-Meyer-Olkin Measure of Sampling Adequacy, TVE= Total Variance Explained, BT= Bartlett's Test of Sphericity Chi-square (degrees of freedom), FLs= Factor loadings, X<sup>2</sup>/df= The ratio of chi-square to degrees of freedom, TLI= Tucker Lewis index, CFI= Comparative fit index, RMSEA= Root mean square error of approximation, D= Deliberation, I=Intuition

After determining the items representing the decision-making styles, we have calculated means, standard deviations, normality statistics and correlations for the whole group and for each country (see Table 5).

According to the results, Taiwan has the highest (M=3.54, SD=1.10) and China (M=2.97, SD=.56) has the lowest mean values for deliberation, and the Philippines (M=3.17, SD=.76) has the highest and the USA (M=2.53, SD=.74) has the lowest mean values for intuition. All the calculated normality statistics are in the acceptable range between -1.96 to 1.96. The correlations between deliberation and intuition are -.44 for the whole sample, -.14 for China, -.59 for the Philippines, -.42 for Taiwan, and -.24 for the USA.

**Table 5.** Means, Standard deviations, Normality Statistics and Correlations

	Deliberation			Intuition			Correlations (Del. & Int.)
	Mean (SD)	Skew.	Kurt.	Mean (SD)	Skew.	Kurt.	
Total sample	2.88 (.87)	-.85	-.15	2.87 (.76)	-.33	-.38	-.44**
China	2.97 (.56)	-.67	.81	2.81 (.54)	-.37	.93	-.14**
Philippines	2.54 (1.10)	-.31	-1.43	3.17 (.76)	-.71	.01	-.59**
Taiwan	3.54 (.44)	-.89	.62	2.72 (.94)	-.44	-1.33	-.42**

USA	2.99 (.77)	-.66	-.32	2.53 (.74)	.12	-.55	-.24**
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Skew. = Skewness, Kurt. = Kurtosis, Del. = Deliberation, Int.= Intuition

### ***Hypothesis testing results***

For testing the hypotheses, ANCOVA was performed to compare the effects of country or group differences on decision-making styles. All the analysis was conducted using the Jamovi version 2.3. We have allocated each country into value orientation or regional groups according to related hypotheses. We have conducted ANCOVA to compare decision making styles between groups by adding the cultural value scores as covariates. The means, estimated marginal means, standard deviations, and F-statistics for each analysis were reported.

Table 6 presents the results of the analysis for comparing country differences on the decision-making styles. For the preference for deliberation there are significant differences across countries ( $F= 53.2, p<.01$ ). The results show that Taiwan has significantly highest mean level ( $M= 3.53, SD=.07$ ) among the other three countries, the Philippines has significantly lowest mean level ( $M= 2.54, SD=.04$ ). There is no significant mean difference between China ( $M= 2.98, SD=.04$ ) and the USA ( $M= 3.00, SD=.05$ ). For testing the H1, nations with collective cultures and individual cultures were categorized based on their individualism ratings, which were then included as covariates. Based on the results, it can be concluded that the collective culture group ( $M= 3.11, SD=.03, EMM= 3.26, SD= .04$ ) exhibits a considerably higher mean level compared to the individual culture group ( $M= 2.72, SD=.03, EMM= 2.61, SD= .03$ ), even after correcting for individualism scores ( $F= 54.7, p<.01$ ). Based on these results H1 is supported.

**Table 6.** Cultural differences in deliberative decision making

	<i>IND</i> <i>Score</i>	<i>Mean</i> <i>(SD)</i>	<i>F-statistics</i>	<i>Orientation</i> <i>groups</i>	<i>Mean</i> <i>(SD)</i>	<i>Estimated</i> <i>marginal</i> <i>mean</i> <i>(SE)</i>	<i>F-statistics</i>
China	20	2.98 (.04)	53.2**	Collective culture	3.11 (.03)	3.26 (.04)	54.7**
Taiwan	17	3.53 (.07)		( <i>Taiwan &amp;</i> <i>China</i> )			
The Philippines	32	2.54 (.04)		Individual culture (the	2.72 (.03)	2.61 (.03)	
The USA	91	3.00 (.05)		<i>Philippines &amp;</i> <i>the USA</i> )			

Note: Individualism (IND) score entered as covariate for ANCOVAs in the group analysis

For the H2, the economic ideology groups are grouped by adding countries' individualism scores as covariates (see in Table 8). The empirical findings regarding intuition across different countries indicate that the Philippines exhibits the highest average level of intuition (M= 3.18, SD=.03), while the United States demonstrates the lowest mean level (M= 2.54, SD=.04) compared to the other countries. This disparity in means is statistically significant (F= 48.5, p<.01). Based on the findings, it can be observed that the collective-oriented economic ideology group, consisting of the Philippines and China (M= 3.00, SD=.02, EMM= 2.99, SD=.02), exhibits a significantly higher mean level compared to the individual culture group, comprising Taiwan and the USA (M= 2.60, SD=.03, EMM= 2.61, SD= .04). This difference remains significant even after controlling for individualism scores (F= 41.6, p<.01). These results have support the H2.

**Table 7.** Economic ideology differences in intuitive decision making

	<i>IND Score</i>	<i>Mean (SD)</i>	<i>F-statistics</i>	<i>Economic ideology groups</i>	<i>Mean (SD)</i>	<i>Estimated Marginal mean (SE)</i>	<i>F-statistics</i>
The Philippines	32	3.18 (.03)	48.5**	Collective culture ( <i>the Philippines &amp; China</i> )	3.00 (.02)	2.99 (.02)	41.6**
China	20	2.82 (.03)					
Taiwan	17	2.72 (.04)		Individual culture ( <i>Taiwan &amp; the USA</i> )	2.60 (.03)	2.61 (.04)	
The USA	91	2.54 (.04)					

Note: Individualism (IND) score entered as covariate for ANCOVAs in the group analysis

Table 8 shows the results of the analysis for comparing sector and country differences in intuitive decision making style for the public sector. Individuals from the public sector have significantly higher mean level (M= 3.02, SD=.04) than the private sector (M= 2.70, SD=.02) in intuitive decision making (F= 41.0, p<.01). Accordingly, the country related results have presented that there are significant differences among all paired countries except the pair of China-USA (M<sub>Difference</sub>= -.00, SD=.11, t= -.16). In terms of preference for intuition, Taiwanese public sector respondents have a significantly higher mean level (M= 3.44, SD=.08) while Chinese respondents have a significantly lower mean level (M= 2.77, SD=.08). These results have partially supported H3 with the exception of the China and USA comparison.

**Table 8.** Public sector differences in intuitive decision making

<i>Groups</i>	<i>Mean (SD)</i>	<i>F-statistics</i>	<i>Public sector</i>	<i>Mean (SD)</i>	<i>F-statistics</i>	<i>Contrasts</i>	<i>Difference (SD)</i>	<i>t</i>
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Public	3.02 (.04)	41.0**	The Philippines	3.06 (.06)	14.2**	China	.29 (.09)	2.93**
						Taiwan	-.38 (.10)	-3.72**
			China	2.77 (.08)		The USA	.27 (.10)	2.57**
						Taiwan	-.67 (.11)	-5.82**
						The USA	-.00 (.11)	-0.16
Private	2.70 (.02)		Taiwan	3.44 (.08)		The USA	.65 (.12)	5.40**
			The USA	2.79 (.08)		-		

For testing H4, the country related differences in the public sector have been analyzed by adding countries' long-term orientation and uncertainty avoidance scores as covariates (see in Table 10). For the preference for deliberation, three comparison groups of countries (Taiwan, China, and the USA and the Philippines) have been analyzed by adding the uncertainty avoidance and long-term orientation scores separately. After controlling for uncertainty avoidance ( $F= 12.6, p.01$ ), the mean scores for deliberation in the first analysis show that Taiwan has the highest (EMM= 5.68, SD= 1.49), the USA and the Philippines group is in the middle (EMM= 2.56, SD=.11), and China has the lowest (EMM= 1.34, SD= 1.05) mean scores. In the second analysis, the USA and the Philippines group has significantly the highest (EMM= 7.90, SD= 5.20), China is in the middle (EMM= -3.76, SD= 4.42), and Taiwan has the lowest (EMM= -4.44, SD= 5.20) mean scores for the deliberation after controlling for long-term orientation ( $F= 12.6, p<.01$ ). Regarding the uncertainty avoidance requirement, these data only partially support H4.

**Table 9.** Public sector differences in deliberative decision making

	<i>UNAV Score</i>	<i>Mean (SD)</i>	<i>Estimated Marginal mean (SE)</i>	<i>F-statistics</i>	<i>LONG Score</i>	<i>Estimated Marginal mean (SE)</i>	<i>F-statistics</i>
Taiwan	69	3.43 (.10)	5.68 (1.49)	12.6**	93	-4.44 (5.20)	12.6**
China	30	2.93 (.09)	1.34 (1.05)		87	-3.76 (4.42)	
The USA and the Philippines	46 & 44	2.71(.06)	2.56 (.11)		29 & 27	7.90 (5.20)	

Note: Uncertainty Avoidance (UNAV) and Long-term orientation (LONG) scores entered as covariate for ANCOVAs in the analyses

Taiwanese respondents score highest on deliberative thinking, this may partly be explained through the countries entrepreneurial and technology-driven economy. Taiwan's public and private sectors work together to create the Taiwan Miracle. Lin and Wong (2016, p.6)

pointed out that the public sector's advice had a strong influence on business owners' actions. The government's influence lessened as Taiwan transitioned from an authoritarian to a democratic and free market society.

Table 10 presents the results of regional differences in intuitive decision-making by adding individualism as a covariate. For the preference for intuition there are significant differences across countries ( $F= 48.5, p<.01$ ). The findings indicate that among the other countries, the Philippines has the mean level that is considerably higher ( $M= 3.18, SD=.03$ ), while the USA has the lowest mean level ( $M= 2.54, SD=.04$ ).

**Table 10** The differences in intuitive decision making across regions

	<i>IND Score</i>	<i>Mean (SD)</i>	<i>F-statistics</i>	<i>Regional groups</i>	<i>Mean (SD)</i>	<i>Estimated Marginal mean (SE)</i>	<i>F-statistics</i>
The Philippines	32	3.18 (.03)	48.5**	Eastern culture (the Philippines, China & Taiwan)	2.97 (.02)	3.40 (.05)	72.8**
China	20	2.82 (.03)					
Taiwan	17	2.72 (.04)					
The USA	91	2.54 (.04)		Western culture ( <i>the USA</i> )	2.54 (.04)	.98 (.19)	

Note: Individualism (IND) score entered as covariate for ANCOVAs in the group analysis

For testing the H5, Eastern (the Philippines, China & Taiwan) and Western (the USA) countries are grouped as regional groups by adding countries' individualism scores as covariates. The results have indicated that the Eastern culture group has significantly higher mean scores ( $M= 2.97, SD= .02, EMM= 3.40, SD= .05$ ) than the Western country group ( $M= 2.54, SD= .04, EMM= .98, SD= .19$ ) for intuitive decision making ( $F= 72.8, p<.01$ ). The findings have supported H5. This study found that Eastern countries with Guanxi (China, the Philippines, and Taiwan) have higher scores for intuitive/affective decision making than the Western countries (the USA).

### Discussion and conclusions

The findings indicate that national culture is significant for deliberative thinking and intuitive/affective thinking in the four countries. Commonalities between countries, regardless of

the variables studied, are sometimes predictable and sometimes surprising. It is hardly surprising that there is as much variation within a region as there is across countries. Similar variations were discovered by Hofstede (2010), who looked at cultural traits and Guy, Mastracci and Yang (2019), who investigated emotional labor in public service provision. There are big differences between most countries with regard to culture and decision making preferences, but not between the USA and China, when it comes to a common preference for intuition. This finding is somewhat surprising, given the differences in how the public sector in the USA and China works. We are suggesting that this finding be investigated more in the future, considering culture-specific preferences for intuition (see, Sison et al. 2012; Svenson et al., 2022). Table 11 summarizes the evaluation of the hypotheses.

**Table 11. Summary evaluation of the hypotheses**

	<b>Hypothesis</b>	<b>Accepted/rejected</b>
<b>H1</b>	Individuals in countries with collective orientation national cultures (Taiwan and China) have a higher mean for deliberate/rational decision making than countries with individual-oriented cultures (the USA and the Philippines).	<b>Supported</b>
<b>H2</b>	Individuals in countries with collective orientation economic ideology (the Philippines and China) have a higher mean for intuitive/affective decision making than countries with individual-oriented economic ideology culture (the USA and Taiwan).	<b>Supported</b>
<b>H3</b>	Individuals' intuitive/affective decision making in the public sector will display considerable variability across countries.	<b>Partially supported</b>
<b>H4</b>	Individuals in countries with highest long-term orientation score and highest uncertainty avoidance (Taiwan) will have higher scores of deliberative thinking in the public sector than countries with high long-term Orientation score and lowest uncertainty avoidance score (China) and countries with low long-term Orientation score and uncertainty avoidance score (the USA and the Philippines).	<b>Partially supported</b>
<b>H5</b>	Eastern countries with Guanxi (China, the Philippines, and Taiwan) have higher scores for intuitive/affective decision making than the Western countries (the USA).	<b>Supported</b>



Affect- and cognition-based decision-making is crucial in human relationships, given uncertain times, improving mutual understanding cannot be overrated. This study can better prepare managers for international public administration environments in China, Taiwan, the Philippines, and the USA. Global public administration with a foundation in behavioral science can help to build and sustain practical wisdom (Rooney & McKenna, 2008) considering the peculiarities of macro-cultural contexts (for Asia see, Haque, 2019).

The findings of this study are consistent with suggestions by Haque (2019), as well as Bertelli and colleagues (2020), who highlight challenges associated with public administration scholarship in Asia. In order to advance the research agenda, we undertake the effort of consolidating data independently, given the constraints on data accessibility. Additionally, we engage in rigorous testing and expansion of theories to effectively fulfill the crucial role of promoting citizen democracy (Bertelli et al., 2020).

We agree with Van Der Wal, Van den Berg, and Haque (2021) that the field of comparative public administration should strive to facilitate the bridging of cultural barriers, so enhancing its capacity to successfully lead across diverse cultural contexts (see also, House et al., 2004). We suggest a thorough cultural study and training for global leaders before they are deployed to a foreign country to lead the local workforce. In addition, local employees need to have cultural training as well so that they can understand where the global leaders come from and how to work effectively.

Each country has its unique cultural values and norms, and the appropriate thinking and decision making style depends on various factors. Egel and Fry (2017), suggest that cross-cultural research benefits from defining leadership behaviors and organizational practices in different contexts. While we see potential for new theories and models to aid in cross-cultural understanding and rapprochement (see, Egel & Fry, 2017), our contribution used existing theories and concepts to highlight how preferences for intuition and preferences for deliberation guide behaviors to different degrees in the societies we have surveyed.

### **Practical implications**

This study has several important practical and managerial implications. First, this study makes an important contribution to understanding decision-making in the public sector across multiple cultures. The findings of this study hold practical significance for individuals involved in public administration and those engaged in cross-cultural leadership training. The results of our study

demonstrate that the curricula and scope of global leadership programs can be enhanced by adaptations to cultural contexts. Public organizations are required to offer targeted training programs that align with the national culture of the individuals involved. This holds true for both public and private enterprises whose organizational cultures and personnel are deeply ingrained in and uphold religious beliefs and practices as significant aspects of their professional endeavors (Egel & Fry, 2017).

The organization derives advantages from enhanced understanding prior to establishing multicultural management groups. This includes effectively adapting and aligning leadership and management methods in the public sector with the national culture. Researchers, scholars, practitioners, and managers can benefit from this study as it provides more empirical results regarding the decision making style of working adults in public sectors in four countries including China, Taiwan, the Philippines, and the USA. Other possible issues to follow up are the ways of signaling emotion/affect (more subtle and less subtle) (see, ten Brinke, & Adams, 2015), that are peculiar to macro-cultures, but have so far not been addressed in public administration.

There has been a dearth of analyses into the thinking styles of managers in the public sector (Nørgaard, 2018), few studies in comparative public administration take culture seriously (Fitzpatrick et al. 2011; Van Der Wal et al., 2021) and the present-day crises certainly highlight the need for future research into virtuous practice in public administration (Svenson et al., 2022).

The results of our study may represent a significant practical contribution and help increase our understanding of the importance of the effect of culture on decision-making in the public sector. Managers can help their public organizations create a vision and mission that integrates different cultural values (Egel & Fry, 2017). This study found that to bridge the cultural divide and increase efficiency while fostering progressive effects, public sector officials must have a thorough understanding of country cultures. Kisner (2016) suggested that adjusting reforms beforehand, particularly in culturally dissonant settings, may minimize regressive effects and thus save time, money, and effort. The findings of this study suggest that policymakers should be advised to take some preemptive measures prior to initiating reforms to facilitate their implementation based on national culture, reforms should be tailor-made for each country's cultural and institutional profile.

### **Limitations and Future Studies**

There are a few limitations that may affect the generalizability of the findings in this study. One of the limitations of our study is the limited population of respondents in the four countries. Thus, the generalizations of this study's results are limited since it is not necessarily representative of the population of China, Taiwan, the Philippines, and the USA.

A second limitation of the current study is the possibility of common method variance. All the data were collected using a single survey instrument. Future studies could collect data through a longitudinal or time-series studies which would enable the effects of different thinking styles to be analyzed over time.

The current study's reliance on self-report, which is based on introspective experience, presents a third limitation. Nosek, Hawkins, and Frazier (2011) indicate that introspectively derived measurements (like surveys) may be affected by the individual's motivation to report, limitations in their introspective ability and in their ability to translate their mental content into a report. Ngoye et al. (2020) therefore suggest experimental designs to research further influences on the motivations and behaviors of public administrators, as well as administrative decision making.

Despite the above limitations, this study does represent an avenue for future research and provides several interesting research directions for future theorizing and empirical investigation, extending this line of research of cross-cultural comparative public administration (see, Van Der Wal et al., 2021). We suggest three specific areas for future research. First, future studies need to include the observation of interaction and in-depth interviewing of public service workers (Svenson & Freiling, 2019), line and middle managers, and students in data collection in different countries. Second, future studies can duplicate the research with a greater number of countries. Third, because this study focused on the country levels, future research can use the regional perspective in exploring cultural boundaries and effects.

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