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Full Length Research Paper

Decision making styles East and West: Is it time to move beyond cross-cultural research?

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Cultural differences in decision making styles were explored using the conflict model of decision making (Janis and Mann, 1977). Six hundred and seventy three university students in Australia, Malaysia, and Singapore (Mean age of 20.2 years; SD=5.4) were tested on the Melbourne Decision Making Questionnaire (Mann, Burnett, Radford, and Ford, 1997) to explore cultural, gender, and age differences between these three countries. Vigilance scores were higher for Malaysian and Australian respondents compared to Singaporeans. Hyper-vigilance scores were higher for Malaysian while buck-passing and procrastination scores were lower for Malaysian than for Australian and Singaporean respondents. Women reported higher scores on hyper-vigilance than males for all three countries. However, buck-passing scores were significantly higher for women than men only for the Australian respondents. There were significant positive correlations between vigilant decision making and age, and significant negative correlations between non-vigilant decision making patterns and age. A country analysis indicated that these results were significant for the Australian and the Malaysian sample only. These results are discussed in terms of cultural differences, some of which are reflected in the Hofstede (2001) comparison of cultures on beliefs, values, and behaviours. Further research is suggested that may reflect aspects of the global shift towards more common patterns of thinking across culture, which is influenced by access to media and internet information, as well as increased travel and commerce in an attempt to understand how local decisions may have global impacts. Implications of this research suggest that culture may be too broad a concept and that other more sensitive variable should be examined when conducting cross-cultural research.

Key words: Decision making, vigilance, hyper-vigilance, procrastination, buck-passing, culture.

INTRODUCTION

We live in a global village where decisions made by an individual in one country may have far reaching consequences around the world. These decisions often have personal, social, political, economic, and environmental consequences. One has only to consider the consequences of decisions around the world that have resulted in the global financial crisis, environmental catastrophe, and acts of terrorism. However decisions can also have far-reaching personal ramifications, having been widely researched, including decisions that involve sexual behaviour (Ariely and Loewenstein, 2006; Chambers and Rew, 2003), partner selection (Saad et al., 2009), health care (Rlynn and Smith, 2007), risk-taking behavior (Lauriola et al., 2007; Vigil-Colet, 2007), consumer behaviour (Leo et al., 2005), and career (Tokar et al., 2003). Given the potential for influence in a wide range of spheres that many decision makers hold, it is important to study different patterns that appear to be

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involved when making decisions.

FACTORS INVOLVED IN DECISION MAKING

The information that is considered in making decisions is often obtained from the local sources of family, friends, and social institutions, and increasingly through the broader more impersonal sources of local and international media, and the internet. The validity and reliability of many of these sources of information may be questionable, depending upon the particular biases of the sources. Yet, these avenues of information may be very influential in the information taken into consideration in making specific decisions. For example, regional influences and views influenced by injustice and inequalities may form an important part of the perceptions that are conveyed which may be crucial in how this information is interpreted and what decisions are made as a result. Regardless of the model of decision making examined, the way that decisions are made is influenced by a range of personal and contextual variables including emotion (Andrade and Ariely, 2009), sensation seeking and locus of control (Baiocco et al., 2009), impulsivity (Crone, Vendel, and van der Molen, 2003; Vigil-Colet, 2007), hedonism (Cabanac, 1992), sensitivity to reward (Franken and Muris, 2005), culture (Albaum et al., 2007; Brew et al., 2001; Leo et al., 2005; Mann et al., 1985; Mann et al., 1998; Radford et al., 1993), gender and age (Lizarraga et al., 2007; Saad et al., 2009; Tharenou, 2008), and family differences (Tharenou, 2008). Thus, a wide range of individual differences have been explored.

Conflict model of decision making

Individual differences have been identified in the conflict model of decision making (Janis and Mann, 1977), and may account for the manner in which decision stress from decision conflict is managed, and consequently the way decisions will be made. This study explores patterns of decision making within the context of culture, age, and sex. The countries of Australia, Malaysia, and Singapore are particularly interesting because all three are in the Asia-Pacific region where a common context is shared, each has an historical connection to an Anglo-Saxon past which has varying degrees of influence, and each has a dominant separate culture. In Australia, the dominant group is English, in Singapore it is Chinese, and in Malaysia it is Malay. There are also different degrees of cultural homogeneity between the three countries which could be reflected in decision making. Finally, according to Hofstede (1991) there are different goals, attitudes, beliefs, and behaviours for these countries which are reflected in Table 1. He identified five key dimensions that may impact on beliefs and behaviors: power distance (societal acceptance of an unequal distribution of power), Individualism/collectivism (individual or group as the centre for responsibility and action), masculinity/femininity (extent of differences in defined roles in the society),uncertainty avoidance (extent to which a society feels uncomfortable or threatened by uncertainty and ambituity), and long-vs. short-term orientation (extent to which a society accepts or rejects long term traditional values). We believe that to varying degrees, these dimensions may influence the way that decisions may be made in a culture. Hofstede (1980) argued that the individualist-collectivist dimension highlights differences between cultures that prioritize individual goals, needs and rights associated with individual initiative and utilitarian values more than those cultures that prioritize community needs, obligations and responsibilities influenced by the Confucian perspective of societal well-being. Thus, these differences could have a direct impact on decision making styles. Stewart (1986) questioned the wisdom in considering decision making across cultures, stating that decision making is predominantly a Western, individualist idea. Yet, the interactions between cultures and the proximity between the ones selected in the Asia-Pacific region provide for an interesting analysis of similarities and differences between these countries on decision making styles.

The conflict model of decision making used in this study suggests that decision making may generate psychological distress as the decision maker considers alternatives that may have differential impacts on self and others within the culture (Janis and Mann, 1977). The way this stress is managed, is conceptualized as influencing the style of decision making that is adopted. Janis and Mann (1977) identified a number of styles of decision making. They viewed *vigilant* decision making as the most effective style, which is a methodical approach utilizing a number of discrete stages which link clearly defined objectives to a consideration of a range of options with the final decision emerging from a careful assessment of the ramifications of each decision alternative. Thus, in the stages described in this style, the decision maker considers the goals or objectives of the situation requiring a solution, collects information relating to the goals, outlines the strategies for reaching those goals, evaluates each of the strategies in terms of their pros and cons, and reaches the decision that most effectively achieves the desired outcome with the minimal negative consequences. Vigilant decision making requires a cool headed approach when there may be decision conflict that would invite decision makers to be less considered in their approaches.

Other styles of decision making are impacted by the psychological distress, resulting in a number of less effective styles of decision making (Janis and Mann, 1977). For example *hyper-vigilance* is a style of decision making that is linked to substantial amounts of decision conflict or stress in the decision maker. The decision maker perceives that there is insufficient time or

Table 1. Comparisons of Hofstede's typology across cultures in Australia, Singapore, and Malaysia.

Country	Power/ Distance (Human inequality)		Uncertainty avoidance (Managing the future)		Individualism/ Collectivism (Individualistic orientation)		Masculinity index (Importance of ego goals)		Long term orientation (Importance of tradition)	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Australia	36	41	51	37	90	2	61	16	31	22
Malaysia	104	1	36	46	26	36	50	25	-	-
Singapore	74	13	8	53	20	39	48	28	48	9

inadequate information to make a carefully considered decision and searches somewhat impulsively for a solution that will alleviate the stress and hopefully deal with the problem through this rather haphazard and impulsive approach. This strategy manages the decision conflict and ends the stress, resulting in little consideration of the effects that a decision may have, but pragmatically, the strategy eliminates the decision conflict in an expedient way. Decision makers using this style are often accused of making "knee-jerk reactions" or "policy on the run", which is a common accusation levelled against politicians or other people in the public eye.

Another style of decision making, *buck-passing,* is a way of avoiding responsibility for a decision that has been made by suggesting that the decision is someone else's responsibility. This type of defensive reaction is often evident with people where decision responsibility is hidden behind a large bureaucracy. This eliminates the decision conflict by implicating someone else in the bid to avoid responsibility for the decision that either needs to be made or has already been made.

A final style of decision making, *procrastination,* involves the actual putting off of any attempt to make a decision. Here there is some recognition of responsibility for making a decision, but the decision maker feels so overwhelmed by the process that the decision is delayed or eventually by default is not made at all. Often the decision options appear to be contradictory, creating a complexity that minimizes the chance of a successful decision being made. Once again, we see this pattern in large bureaucracies. Frequently such a decision strategy will have little relevance if it is delayed for a sufficient period of time, or may never need to be made at all.

Culture and decision making

Culture is one of the individual differences that have been considered in terms of decision making style. In a study of three Western cultures (USA, Australia and New Zealand) and three Eastern cultures (Japan, Hong Kong and Taiwan), Mann et al. (1998) found that vigilant decision making did not vary across these cultures, a finding confirmed in other cross cultural work in Spain (Saez de Heredia, Arocena and Gerate, 2004). However, the Eastern cultures in the Mann et al. (1998) study reported higher hyper-vigilant decision making styles than the Western cultures. A study comparing Australian and Chinese adolescents found that the Chinese scored marginally lower on vigilant patterns and higher on non-vigilant patterns of decision making than the Australian sample (Brew, Hesketh, and Taylor, 2001). These Chinese students (mainly from Hong Kong and Taiwan) were resident in Australia and the weak patterns may reflect the influence of Western individualist influences. However, this pattern of lower vigilant and higher non-vigilant patterns in an Asian culture was stronger for a study of decision making comparing Australian and Japanese adolescents (Radford, Mann, Ohta, and Nakane, 1993). While the research is conflicting, we expect that where participants are tested in their own countries, that vigilant decision making patterns will not vary between countries, but that non-vigilant patterns will be higher in Eastern than in Western countries.

Gender and decision making

In terms of gender differences, Mann et al., (1998) reported that males scored lower on buck-passing and hyper-vigilance than females. However, there were no differences between males and females on vigilance in decision making. A recent study focussed on age and gender as variables affecting decision making (Lizarraga et al., 2007). In their study, women appeared to be more concerned with the specific circumstances involved in the process that made the decision unique and also on the possible consequences of the decision, while men were more focussed on the analysis or the over-arching purposes of the decision. Generally, both males and females could retrieve and process information at a similar level. They interpreted the differences as relating to the social roles that are ascribed to males and females. However, a number of other studies have not found gender differences in decision making (Biaocco, Laghi and D'Alessio, 2009; Baiocco, Laghi, D'Alessio, Guerrieri and De Chiaochio, 2007; Franken and Muris, 2005; Loo, 2000; Spicer, and Sadler-Smith, 2005).

Because the instrument being used in this study is the same one used in other research reporting gender differences, (Mann et al., 1998); we expect to find gender differences with women scoring higher on non-vigilant patterns of decision making, while there will be no differences in vigilant decision making styles.

Age and decision making

In relation to age, younger people appeared to feel more stress around the social and emotional pressures related to the decisions to be made than did older people (Lizarraga et al, 2007). Similar age differences have also been found where younger and older adolescents are compared on rational styles of decision making (Baiocco, Laghi and D"Alessio, 2009). Thus, we expect to find age differences with older participants having higher vigilant decision making and lower non-vigilant decision making patterns.
Specifically, the following hypotheses were formed:

Asian respondents will score higher on non-vigilant decision making (hyper-vigilance, buck-passing, procrastination) than Australian respondents.
Women will score higher on non-vigilant decision making (hyper-vigilance, buck-passing, procrastination) than men.
Age of participants will be positively related to vigilant decision making and negatively related to non-vigilant decision making patterns (hyper-vigilance, buck-passing, procrastination).

METHODOLOGY

Participants

The Australian sample for the current study was collected between 2008 and 2009 and consisted of 336 respondents (65 males and 279 females) attending a university in Sydney, Australia where they were studying psychology, and received course credit for their participation. Respondents ranged between 18 and 69 years of age (M=20.2, SD=5.4). The Malaysian sample collected in 2009, consisted of 178 respondents (58 males and 129 females) attending a university in Kuala Lumpur where they were studying counseling. These respondents ranged between 18 and 60 years of age (M=24.9, SD=8.1). The Singaporean sample collected in 2008, consisted of 159 respondents (60 males and 99 females) attending a college in Singapore where they were studying psychology. Respondents ranged between 18 and 56 years of age (M = 19.9, SD = 6.4). The difference in mean age between countries was significant, Malaysians being significantly older than respondents from Australia and Singapore ($F = 47.25$, $p > 0.001$).

Measures

A questionnaire consisted of demographic questions and the *Melbourne Decision Making Questionnaire* (Mann, Barnett, Radford, and Ford, 1997). This scale was based on the Janis and Mann (1977) conflict model of decision making and consists of 22 items measuring the four styles of decision making discussed above: *vigilant* (sample item: I consider how best to carry out the decision); *hyper-vigilant* (sample item: I feel as if I'm under tremendous time pressure when making decisions); *buck-passing* (sample item: I prefer to leave decisions to others); and *procrastination* (sample item: I waste a lot of time on trivial matters before getting to the final decision). Items were rated on a 3 point scale of 1 (true for me), 2 (sometimes true for me), and 3 (not true for me), which were re-coded from 0 to 2. Alpha reliabilities for the subscales were *vigilance* (alpha=0.80, current study alpha = 0.74), *hyper-vigilance* (alpha = 0.74, current study alpha = 0.72), *buck-passing* (alpha = 0.87, current study alpha = 0.80), and *procrastination* (alpha = 0.81, current study alpha = 0.73).

Procedure

Hypotheses were to be explored using a cross sectional approach with Australia, Singapore, and Malaysia respondents. These questionnaires were administered through a paper and pencil survey for most of the students in Malaysia and through a secure web based on-line survey for the remainder of the respondents. Following ethics approval at Macquarie University, flyers or questionnaires were distributed so that respondents could opt to complete the survey. The statistical methods used to analyse this data include univariate analysis of variance and person's product moment correlational analysis.

RESULTS

Hypothesis 1

Hypothesis 1 predicted that Asian respondents would score higher on non-vigilant decision making styles than Australian respondents. We tested this hypothesis with a univariate analysis of variance on all decision making styles. The results are presented in Table 2. Vigilant decision making scores were higher for Malaysians and Australians than for Singaporeans ($F = 8.00$, $p > 0.001$), which was unanticipated as no differences were expected between the three countries on this variable. Hyper-vigilance scores were higher for Malaysians than for respondents from the other two countries ($F = 5.32$, $p = 0.005$). Buck-passing scores were higher for Singaporeans and Australians than for Malaysians ($F = 5.00$, $p = 0.007$). Finally, procrastination scores were higher for Australian and Singaporeans than for Malaysians ($F = 4.08$, $p = 0.02$). The hypothesis was partially supported as the Malaysian sample reported higher scores on hyper-vigilance than the Australian sample. This finding was not confirmed for the Singaporean sample, as their results were similar to those of the Australian sample, contradicting the hypothesis. The patterns for buck-passing and procrastination were lower for Malaysians on these two variables than for Australians and Singaporeans, and were in the opposite direction to the hypothesis. Thus, the hypothesis was rejected for buck-passing and procrastination. It is interesting to note that the patterns obtained on all non-vigilant decision making patterns

Table 2. Means and standard deviations (in brackets) and a univariate analysis of variance for the decision making variables across country samples.

Decision making variable	Australian sample (n = 336)	Malaysian sample (n = 178)	Singaporean sample (n = 159)
Vigilance	1.59 (0.40)	1.64 (0.33)	1.48*** (0.40)
Hyper-vigilance	1.04 (0.46)	1.16** (0.41)	1.04 (0.37)
Buck-passing	0.93 (0.51)	0.80** (0.41)	0.91 (0.42)
Procrastination	0.91 (0.49)	0.79* (0.41)	0.86 (0.43)

*P < 0.05; **p <0.01; ***p <0.001.

Table 3. Means and standard deviations (in brackets) and t tests for decision making variables by sex and country.

Decision making variable	Australia		Malaysia		Singapore	
	Males (n = 64)	Females (n = 272)	Males (n = 43)	Females (n = 134)	Males (n = 60)	Females (n = 99)
Vigilance	1.61 (0.33)	1.59 (0.41)	1.62 (0.34)	1.65 (0.32)	1.41 (0.47)	1.52 (0.35)
Hyper-vigilance	0.92 (0.51)	1/07* (0.44)	0.93 (0.44)	1.24* (0.38)	0.92 (0.35)	1.11** (0.37)
Buck-passing	0.82 (.51)	0.96* (.50)	0.76 (.39)	0.81 (.41)	0.90 (0.40)	0.92 (0.44)
Procrastination	0.89 (0.47)	0.92 (0.49)	0.79 (0.40)	0.80 (0.42)	0.78 (0.43)	0.91 (0.43)

*P < 0.05; **p <0.01; ***p <0.001.

were similar between Australians and Singaporeans rather than those results between Singaporeans and Malaysians, as was predicted by the hypothesis.

Hypothesis 2

Hypothesis 2 predicted that women would score higher on non-vigilant decision making patterns than men. We tested these results using t-tests comparing the means of males and females of each of the three countries. The results are presented in Table 3. Women in all three countries scored higher on hyper-vigilance than men (Australian: t= -2.27, p=.02; Malaysian: t= -4.06, p > 0.001; Singaporean: t= -3.22, p=0.002). In addition, women in Australia scored higher on buck-passing than did men (t= -1.98, p=0.03). Thus, the hypothesis was partially supported with the results for hyper-vigilance for all three countries and for buck-passing in Australia.

Hypothesis 3

Hypothesis 3 predicted that age would be positively related to vigilant decision making and negatively related to non-vigilant decision making patterns. We tested this hypothesis using a Pearsons product-moment correlation analyses. The results are presented in Table 4. Correlations were significant, with age positively related to vigilance (r = 0.08, p > 0.05), and negatively related to non-vigilant patterns of decision making (Hyper-vigilance: r = -0.16, p >0.001; Buck-passing: r = -0.18, p > 0.001; Procrastination: r = -0.15, p > 0.001). Because of the different spread of age in the three samples a correlational analysis was conducted by individual country. In this analysis, vigilant decision making was not significantly correlated with age in any of the three countries (Australia: r = 0.09, p = 0.09; Malaysia: r=0.00, p = 0.98; Singapore: r = 0.13, p = 0.11). In Australia, the non-vigilant patterns of decision making were significantly correlated with age (Hyper-vigilance: r = -0.14, p=0.01; Buck-passing: r = -0.20, p > 0.001; Procrastination: r = -0.15, p = 0.006), while in Malaysia, only hyper-vigilance(r = -0.34, p> 0.001) and procrastination (r = -0.18, p = 0.02) were significantly correlated with age. For Singaporeans, there were no significant correlations between decision making style and age (Hyper-vigilance: r = -0.15, p = 0.07; Buck-passing: r = -0.09, p = 0.26;

Table 4. Pearson's product moment correlations between decision making variables and age.

Decision making variable	Total sample age (n = 673)	Australian sample age (n = 336)	Malaysian sample age (n = 177)	Singaporean sample age (n = 159)
Vigilance	0.08 *	0.09	0.00	0.13
Hyper-vigilance	-0.16***	-0.14**	-0.34***	-15
Buck-passing	-0.18***	-0.20***	-0.13	-0.09
Procrastination	-15***	-0.15**	-0.18*	-0.07

*P < 0.05; **p <0.01; ***p <0.001.

Procrastination: r = -0.07, p = 0.36). Thus, the hypothesis was partially accepted.

DISCUSSION

Cultural differences and decision making

We expected that vigilant decision making would not differ between the three countries, but found that Singapore respondents scored lower than Australians and Malaysian's. Thus, Australians and Malaysians scores were congruent with some previous research on vigilant decision making (Mann et al., 1998; Saez de Haredia et al., 2004). However, these results were incongruent with other research (Brew et al., 1991; Radford et al., 1993), where differences in vigilant decision making were found between Western and Eastern countries, resulting in congruence between Australian and Singaporean samples. However, in these previous findings, the Eastern samples did not include Singapore and Malaysia. Hofstede's (2001) comparison of cultures as presented in Table 1 may help in explaining these results in relation to Singapore, as Singapore has the lowest masculinity index and individualistic orientation. If vigilant decision making is linked to masculine ways of thinking, and attuned to individualistic societies, as has been suggested (Stewart, 1986), then the results for Singapore appear to follow in that these respondents report lower vigilant decision making scores.

We predicted that non-vigilant decision making styles (hyper-vigilant, procrastination, and buck-passing) would be higher for Singaporeans and Malaysians than for Australians. The results confirmed this hypothesis when comparing Australians and Malaysians in relation to hyper-vigilance, and are in line with past research (Brew et al., 1991; Mann et al., 1998; Saez de Haredia et al., 2004; Radford et al., 1993). However, for the other decision making styles of buck-passing and procrastination, Malaysians scored lower than the other two countries, and were thus in the opposite direction of the prediction and of past research. These findings may reflect the unique nature of the sample. While there are studies of other Eastern countries, other research on decision making in Malaysia was not found; there may be some unique aspect of the culture that has not been previously studied. Furthermore, the sample was drawn from a Muslim university that reflects a wide geographical area which would require above average planning and drive and possibly taking an active role in decision making that is inconsistent with buck-passing and procrastination. The Malaysian sample was also significantly older than the samples from the other two countries. Of course, we are unable to assess the role that religion might play in the responses from this sample. The conflicting scores for the Malaysian sample may also reflect the contrary dynamic involved in hyper-vigilance on one hand, and buck-passing and procrastination on the other in terms of grappling with complex decisions, as hyper-vigilance involves over attention to detail and the other processes involve under attention to detail related to particular decisions. Little research in the past has focussed on the differences between hyper-vigilance and the other two patterns of buck-passing and procrastination. This dynamic, coupled with the age differences between samples may in part explain these results.

On the other hand, Singaporean scores were no different than the Australian scores for the three non-vigilant decision making styles (hyper-vigilance, buck-passing, and procrastination) in contrast with previous research (Brew et al., 1991; Radford, et al., 1993; Mann et al, 1998; Saez de Haredia, et al., 2004). These results may reflect aspects of the nature of the Australian comparison sample that has three times as many women as men where women score higher than men on hyper-vigilance and buck-passing. Thus, the scores for Australia may be somewhat elevated, and thus similar to the Singaporean scores. There may also be some similarities between Australia and Singapore related to their familiarity with Western styles of tertiary education, training, and business that may reflect lower levels of non-vigilant decision making styles in these results. However, this can only be speculative as there are no objective ways of assessing this with the present research.

Gender and decision making

We predicted that women would score higher than men on non-vigilant patterns (hyper-vigilance, buck-passing, and procrastination). This was confirmed for all women in the sample for hyper-vigilance but only for Australian women for buck-passing. These significant results support previous research (Lizarraga et al., 2007; Mann et al., 1998) for hyper-vigilance and for buck-passing for the Australian sample. However, a number of other studies found no such differences, confirming the other non-vigilant styles of decision making (Biaocco et al., 2009; Baiocco et al., 2007; Franken and Muris, 2005; Loo, 2000; Spicer and Sadler-Smith, 2005). There were no significant differences on gender for procrastination in previous research (Mann et al., 1998) which is a similar finding for the current study. Thus, these results are largely supportive of previous research and in line with our hypotheses, except for buck-passing in the two Eastern samples which may be explained by the proportionally larger number of female respondents in the Australian sample than in the other two samples.

Age and decision making

We predicted that vigilant decision making would be positively associated with age and non-vigilant patterns would be negatively associated with age. Overall, there was support for this prediction in our results. However, when considered by country, the support was apparent for Australian and Malaysian respondents for hyper-vigilance and procrastination which is in line with previous research Baiocco et al., 2009; Lizarraga et al., 2007). In contrast to previous research, there were no significant findings between age and decision making styles for the Singaporean sample. This may be an artefact of the Singaporean sample which was the youngest sample with the smallest age range of the three samples.

Patterns between countries

The study compares three close neighbours in the Asia-Pacific region at a time when there is significant immigration and business relationships between the three countries. For example, travel of residents between these three countries is extensive. While there are differences in terms of visas, Australia has a visa rating for Malaysia and Singapore which is similar to that of Western countries. Thus, many similarities have been found and may be related to the close regional ties between these countries. The main limitation is the age range, and the difficulty in getting more males in the university samples that makes these findings non-representative of the population and also presents skews on age and gender that may influence some of the results. Furthermore, the results are self report and suffer from all of the difficulties that are apparent with such surveys. In spite of these potential difficulties, many of the findings are consistent with previous research, and differences that have been found, raise some interesting questions for future research.

While the patterns between countries are not entirely consistent, there may be other factors influencing the results suggesting that further research is warranted. This research could focus on factors that have a direct connection to tourism, immigration, and commerce, and possibly the influence of the family in various countries to determine the relationship between decision making styles and these variables. There are factors that may be influential in decision making than culture per se. Factors such as religion and nationalism could have a major influence in decision making patterns, which may be more relevant than an over-arching culture. Possibly some of these differences are reflected in the unexpected results reported in the Malaysian sample which was exclusively a Muslim sample. Some of the similarities between Australian and Singaporean respondents may relate to increasing connections between these two countries, particularly through education, travel, and commerce. Thus, some of the findings in this research may relate to the global environment in which we live, and research designed to address these international patterns could prove to be productive in terms of decision making. Finally, the gender differences may also suggest that there is more than one model of decision making that might be effective. As suggested by Stuart (1986), vigilant decision making may reflect a masculine way of thinking about decision making, and while it may have something to offer, perhaps there are other models that might be influenced by female thinking that could also be useful. For example, hyper-vigilant decision making may be a more appropriate response than procrastination and buck-passing which reflects a lack of taking responsibility. Again, this might be a suggested interpretation from the Malaysian results where non-vigilant decision making patterns were reported to be in opposite directions, even though vigilant decision making did not differ from the Australian responses. These ideas are only speculative and would require more research to help in understanding many of the decisions that are made in countries that have a great impact around the world. In the complex world, is may be time to move beyond simple cultural differences to understand complex phenomena like decision making.

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