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CULTURAL VALUES AND VENTURE COGNITIONS ON THE PACIFIC RIM

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This study investigates the relationship between cultural values and venture cognitions in seven Pacific Rim countries to answer the question: What influences the manner in which individual entrepreneurs perceive strategic resources? Using responses to scale items confirmed in a factor analysis from 371 venture formation experts in Australia, Canada, Chile, mainland China, Japan, Mexico, and the United States, we examine how cultural values are reflected in expertise/schema-based cognitions that have been shown to affect entrepreneurial intentions. We also discuss the effects this level of cultural understanding might have for portions of the resource "advantage chain" and the importance of the strategic resource attribute "imperfect imitability." Our results show that cultural values have profound and very specific effects on venture cognitions, which has strategic implications for the globalization of emerging business. © *1999 John Wiley & Sons, Inc.*

Introduction

Recently, the countries on the Pacific Rim have been regularly grouped together in the many analyses of trading zones (e.g., a major Internet library search engine produced over 200 articles on Pacific Rim trade dated from November 1997 to February 1998 alone). According to recent observations, the globalization strategies for emerging businesses on the Pacific Rim must rely on better definition of competitive resources,[1] value-based competition,[2] a better understanding of customers,[3] and a better understanding of location-specific [4] and human [5] resources. Yet such an understanding of the nature of these necessary resources depends upon the perceptions of individual entrepreneurs in these various countries who are likely—because of distinct cultures—to evidence substantial differences in their ways of thinking.[6,7] As the twenty-first century dawns, these differences must be better understood, so that the globalization of emerging businesses can be based on sound strategies and the clear understanding of strategic resources.[8,9]

What influences the manner in which individual entrepreneurs perceive strategic resources? Busenitz and Lau[10] argue persuasively that, at the individual level of analysis, the cognitive processes of entrepreneurs are correlated with the social and environmental variables that frame cross-cultural venturing outcomes. Their model explicitly links cultural values proposed by Hofstede[11] with cognitions that then lead to entrepreneurs' intention to venture. With respect to the cognitive structure, or schemas of entrepreneurs, Busenitz and Lau specifically argue that entrepreneurs in different cultures "have different schemas regarding new venture creation," which ultimately affect opportunity, chances of success, and control over outcomes. They call for research that examines how cultural values are related to schema dimensions.

In response to this call, we explore the specific portion of the Busenitz and Lau

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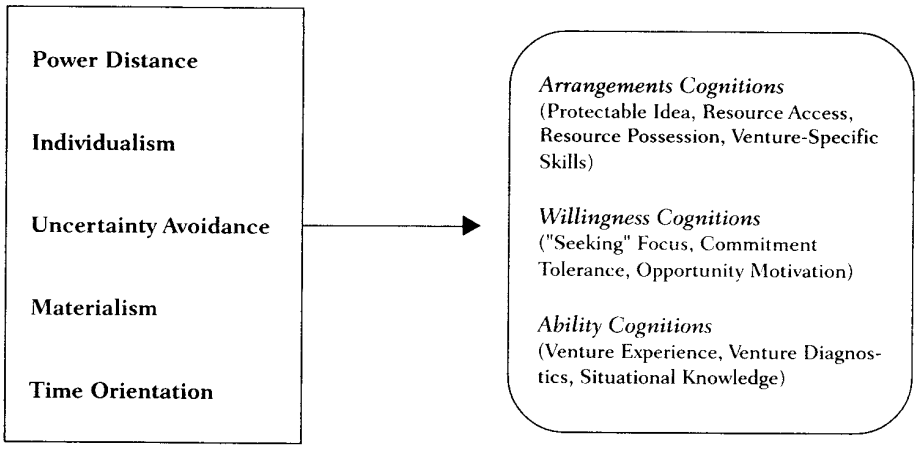

FIGURE 1. Research Model.

cross-cultural cognitive model of venture creation that links the country of origin-based Hofstede cultural values[11] and key cognitions of arrangements, willingness, and ability.[12, 13, 14] These cognition constructs are expertise-based schema dimensions that have been shown previously to affect entrepreneurial intentions. Shapero,[15] and Krueger and Carsrud,[16] refer to these dimensions as feasibility, propensity to act, and desirability. However, to be consistent with expert information processing theory (e.g., see Note 12, p 121) we utilize the construct labels common to that literature, but which describe, as do Shapero, Krueger, and Carsrud, the cognitions that lead to planned behavior.

Barney argues that for a resource to be strategic it must have the attributes of being valuable, rare, imperfectly imitable, and nonsubstitutable.

Our analysis centers on a representative group of major participants in Pacific Rim trade, which includes the NAFTA trading bloc (Canada, the United States, Mexico), Chile, Japan, Australia, and China. The proposed relationships in this study are illustrated in the research model shown in Figure 1.

Our reasoning for examining this particular relationship flows from the notion of the resource "advantage chain" [17] and the importance of the strategic resource attribute "imperfect imitability." Barney[8] argues that for a resource to be strategic it must have the attributes of being valuable, rare, imperfectly imitable, and nonsubstitutable. Imperfect imitability is of particular interest to entrepreneurship scholars, as nonimitability is requisite for the survival of an entrepreneurial firm, which often competes on the basis of only one product or service. Resources can be imperfectly imitable for one of three reasons. First, the resources may have been acquired through unique historical conditions that no longer exist. Second, resources can be imperfectly imitable because of causal ambiguity—a condition that exists when the precise linkage between the resources and sustained competitive advantage is either not understood or is understood only vaguely. Finally, resources can be imperfectly imitable because of social complexity, in which competitive advantage is based on teamwork, reputation, or culture.[18]

The same conditions that give rise to imperfect imitability among firms in one culture might also be expected to apply to imperfect imitability of entrepreneurial cognitions across cultures. That is, an increase in entrepreneurs' understanding of the impacts of culture on the cognitions of fellow entrepreneurs, prospective customers, suppliers, and so on, might be useful in the more precise identification of the strategic resources possible in the globalization of emerging business. Studies are needed that specifically relate cultural variables to venturing variables that apply more consistently across countries and cultures.[19] This study is a first step in attempting to identify such variables.

The article proceeds as follows. Our discussion of the conceptualization of the variables in the model follows next, along with the hypotheses that are suggested in these relationships. Then, we outline our methods

and the results of our tests. The article concludes with a discussion of the state of the culture/cognition link as it applies to the strategies for the globalization of emerging businesses in the twenty-first century, and the implications for future research.

Theory

Cultural Values

Cultural values concern the way human societies organize knowledge and social behavior[20] into a fairly consistent set of cognitive orientations that reflect "a broad tendency to prefer certain states of affairs over others" (see Note 11, p 19). In this sense, cultural values may be viewed as problem-solving cognitions.[21,22] Because there are a limited number of common problems that societies face, and also a limited number of known responses,[23] cultural values may be described along relatively few dimensions. Hofstede,[11] for example, identified four dimensions of cultural values (power distance, individualism, uncertainty avoidance, and masculinity) that can be used to describe a given culture.

Power distance refers to the acceptance of inequality in power and authority between individuals in a society. Individualism represents a preference for acting in the interest of the self and immediate family, as opposed to collectivism, which represents an individual's acting in the interest of the group in exchange for their loyalty and support. Uncertainty avoidance captures individual discomfort with unstructured or ambiguous situations—the preference for certainty. The masculinity variable represents a belief in and emphasis on materialism and decisiveness rather than in/on service and intuition. McGrath et al.[24] have suggested that masculinity might be better conceptualized as "materialism," which we take up for the rest of this paper.

Hofstede and Bond [25] raised a question about the completeness of the dimensions for Asian respondents, suggesting an additional dimension termed "Confucian Dynamism," which Hofstede later termed "time orientation"[26]. The time orientation variable emphasizes persistence, thrift, a sense of shame, and ordering relationships by status—and observing that order. It also underemphasizes personal stability, protecting "face," reciprocal favors/gifts, and respect for tradition. Hofstede quantifies the variations in these values systematically by country.[11, 25] While many researchers have voiced concern over the use of Hofstede's dimensions and conclusions (e.g., Schwartz [27,28]), these dimensions have proven to be more stable and meaningful than many would have expected.[29]

Venture Cognitions

Social cognition theory considers that individuals exist within a total situation or configuration of forces described by two pairs of factors: one being *cognition* and *motivation*, and the other being the *person* in the *situation* (emphasis in original,[30] 4–5).[31] Social cognition theory holds that for a model to describe predictable individual behavior, such a model should approximate comprehensive cognitive reality (cognition and motivation, *and* the person-in-situation) as perceived by each individual (see Note 30, p 5). It must account for the decision-making behavior of individuals who, as a result of differential pattern recognition, differentially perceive a given situation.

Power distance refers to the acceptance of inequality in power and authority between individuals in a society.

In their cross-cultural cognitive model of venture creation, Busenitz and Lau propose a relationship between person-in-situation (cultural) variables and cognition-motivation (cognitive structure and start-up intention) variables to explain key outcome variables such as intention to venture. Although Busenitz and Lau propose the use of the Hofstede variables to represent cultural values, they leave open the operationalization of cognitions, due to the fact that "entrepreneurs have rarely been examined from a cognitive perspective" (see Note 10, p 26). Fortunately, prior work in the information processing branch of cognition theory suggests a framework for the representation and operationalization of variables that meet the cognition-motivation requirements of social cognition theory such that it can—taken together with the person-in-situation (cultural) variable—approximate comprehensive cognitive reality.

Information processing theorists Leddo and Abelson[12] identify three components of

the cognitive process that reveal the cognition-motivation link. These components relate to the use by individuals of knowledge structures.[32,33,34] Their findings suggest that these knowledge structure-related components can be observed empirically, making operationalization possible. Essentially, Leddo and Abelson find that the cognition-motivation link occurs at two key points in the cognitive process. These points occur either: (1) at the time of "entry" into a knowledge structure (e.g., beginning to think about venturing), or (2) as individuals engage in "doing" the things that serve the main goal for entry (e.g., work at venturing).

The inability to infer further knowledge from the literal cues in the problem statement is considered to be the primary reason for an individual's difficulty with problem solving.

"Entry" into the knowledge structure for a domain depends upon "having the objects in question."[12] For example, an expert helicopter pilot requires a helicopter, an expert seismic geologist a seismograph, an expert trauma physician a well-equipped emergency room. "Doing" means accomplishing the required actions, and depends upon two subrequirements: ability and willingness. Ability is defined as possessing the rudimentary techniques and skills necessary to a specialized domain (e.g., closing the deal may depend upon one's persuasive skill) (see Note 12, p 121). Willingness, in turn, is defined as the propensity to act.

In the case of venturing, the "entry" and "doing" action thresholds of expert information processing theory parallel the theoretical[35] and empirical[36] action thresholds that explain individual intentions to venture. Thus "entry" (the beginning processes of venturing) depends upon feasibility—specifically upon "arranging" to employ resources from that environment such as capital, opportunity, contacts, and so forth, and "doing" depends upon a combination of ability and willingness. Since information processing theory suggests that expert-level performance results from the cognitive processes of individuals who employ expert knowledge structures,[32,33,37] then it can be argued that venturing outcomes ought to be related to cognitions that contain the "entry"-based component arrangements cognitions and the "doing" components: willingness and ability cognitions.

Empirical observation of "entry" and "doing" cognitions is accomplished using person-in-situation cues to trigger responses that reveal portions of individuals' knowledge structures. The justification for using schema and/or heuristic recognition cues as empirical evidence of expert cognitions comes from expert and social cognition theory. The inability to infer further knowledge from the literal cues in the problem statement is considered to be the primary reason for an individual's difficulty with problem solving (see Note 32, p 99). And, the belief in one's own capacity to perform depends upon the assessment of personal and situational resources,[38] which we define as arrangements cognitions, and is discussed next.

Arrangements cognitions. In the formation of successful ventures, factors in the social environment affect cognition and influence results. Specifically, the cognitive construct of self-efficacy, derived from social cognitive theory,[39] is thought to play a primary role in relating individual judgments about a person's situation to consequences such as goal level and persistence, and ultimately to performance.[38] Thus, cognitions surrounding the sufficiency of venture arrangements are thought to play a primary role in venture outcomes.

Arrangements cognitions denote having the contacts, relationships, resources, and assets necessary to form a new venture. Without arrangements, "entry" into the cognitive process is precluded (see Note 12, p 121). At least four types of arrangements cognitions that affect cognition are evident in the entrepreneurship literature: (1) idea protection,[40,41] having (2) actual venture resources, or having (3) access to resources,[42,43] and (4) venture-specific skills.[44,45] Idea protection is accomplished with patents, copyright, franchise agreements, contracts, and other isolating arrangements that serve to prevent imitation[41] thus signaling to a prospective venturer that resources from the environment are available with some degree of certainty to support venture formation. Of course, preceding the need to protect intellectual and physical resources is the actual possession or access to resources. Thus, the extent to which a prospective venturer controls or has access to financial and human capital and other business assets and resources is also a necessary precondition for new venture formation.[43] Finally, venture-specific skills—the capability to effectively deploy the resources and make the most of protected

ideas—serve to encourage the successful formation of a venture. These four types of arrangements are needed for, or are advantageous to, successful new venture formation.[43]

There is growing recognition in the entrepreneurship literature that it is not merely arrangements surrounding the venturer that are central to new venture success but that there are characteristics of the venture itself that are systematically linked to the formation of successful ventures.[46] As noted in the preceding paragraph, having an idea that is protected from competition, a network of people and contacts that can aid or participate in the business, sufficient financial and other general business resources, and proprietary assets or capabilities that provide sustainable competitive advantage are all critical arrangements that have been individually linked to venture success. Thus, successful venturers are expected to recognize the importance of these arrangements and be particularly sensitized to their own shortcomings in these areas. This is because the assessment of personal and situational resource constraints is understood to affect an individual's self-efficacy,[38] which has been shown to be crucial for new venture formation.[13,14,36,47]

Willingness cognitions. Willingness cognitions consist of thoughts relating to commitment to venturing and receptivity to the idea of starting a venture. Successful venture formation requires willingness cognitions, which include: (1) a seeking focus opportunity, [47,48] (2) commitment tolerance, [49] and (3) motivation to pursue venture opportunities.[50,51,52] A seeking focus is an openness, orientation, and drive to seek out new situations and possibilities and to try new things. Commitment tolerance is a willingness to "put your money where your mouth is" and assume the risk and responsibility of new venture creation. Opportunity motivation is an attitude concerned with "getting on with the task" and the belief that missing an opportunity is worse than trying and failing.

Willingness dimensions such as the foregoing are thought to be necessary cognitive conditions for successful new venture formation.[10] Entrepreneurs need to be comfortable in new and uncertain situations, be prone to action, and be willing to demonstrate their commitment by investing time, money, and other resources in the venture. Successful venturers are expected to recognize the importance of these attributes[14,53] and to attribute them to their own situation[38] to a greater extent than will others, who may not appreciate the level of cognitive commitment needed to utilize venturing abilities.[14,16]

Ability cognitions. Ability cognitions reflect the possession of and capability to masterfully deploy the skills, knowledge, norms, and attitudes required to be successful in new venture development.[43] At least four cognitive dimensions of venturing ability appear in the entrepreneurship literature: (1) venture experience, (2) venturing diagnostic ability, (3) venture situational knowledge, and (4) opportunity recognition capability. Venture experience is the extent to which an individual has been directly involved in the start-up and running of a new venture.[54,55] Venturing diagnostic ability is the ability to assess the condition and potential of ventures and understand the systematic elements involved in new venture creation.[16,56,57] Venture situational knowledge is the ability to draw on lessons learned in a variety of ventures and apply those lessons to a specific situation.[43] Finally, opportunity recognition capability is the ability to see ways in which both customer and venture value can be created in new combinations of people, materials, or products.[58,59]

Commitment tolerance is a willingness to "put your money where your mouth is" and assume the risk and responsibility of new venture creation.

These experiences, knowledge, and abilities are thought to be necessary conditions for successful venture creation because common pitfalls can be avoided when they are effectively utilized.[43] Previous venture experience is critical both from a learning perspective and a credibility perspective when it comes to venture financing and the establishment of stakeholder relationships. Successful venturers also need to be able to assess the potential of the business, apply situational norms, and recognize opportunity to fully understand what is required for successful venture start-up. Through the assessment of personal constraints, the analysis of task requirements, and the attributional analysis of experiences (see Note 38, p 189, 203), these venturers are expected to recognize that these abilities are required for successful venture creation, and

TABLE I Rationale for Hypothesized Relationships

Variable	*Power Distance*	*Individualism*	*Uncertainty Avoidance*	*Materialism (Masculinity)*	*Time Orientation*
AR1 Protectable Idea	$H1_1$: + Collusion/scarcity is a basis for power. Thus, PD suggests PI.	$H1_8$: + Collective societies limit private property and the protection of individual ideas. Thus, I implies PI.	$H1_{17}$: – Protectable ideas are a condition necessary for UA's to venture. Thus, UA suggests PI.	N/A	$H1_{31}$: – Low TO means respect for tradition and stability. Thus, low TO suggests high PI.
AR2 Resource Access	$H1_2$: – In high PD countries "who you know" counts. Thus, high PD implies low RA for the society as a whole.	$H1_9$: + Individualistic cultures support private access to resources. Thus, high I suggests high RA.	N/A	$H1_{26}$: + Those scanning for wealth are more aware of resource sources. Thus, M suggests RA.	$H1_{32}$: – Thrift suggests access to required resources through savings. High TO suggests high RA.
AR3 Resource Possession	$H1_3$: – Those with power have resources. Thus, high PD suggests low RP for the society as a whole.	$H1_{10}$: + Collective societies limit the possession of venturing resources by individuals. Thus, I suggests RP.	N/A	$H1_{27}$: + Those who are materialistic should possess resources which they are trying to increase. Thus, M suggests RP.	N/A
AR4 Venture-Specific Skills	$H1_4$: – The distribution of available resources will be limited in high power distance societies. Thus, PD suggests low VSS.	$H1_{11}$: + Due to bureaucratic pressures, collectives should have fewer venture specific resources. Thus, high I suggests high VSS.	$H1_{18}$: – Societies with uncertainty avoidance are likely to discourage venturing, and thence the acquisition of venturing skill. Thus, high UA suggests low VSS.	N/A	$H1_{33}$: – High TO suggests high VSS through belief in an entrepreneurial posture.
W1 "Seeking" Focus	N/A	N/A	$H1_{19}$: – Those with high UA are not expected to "seek." Thus, high UA suggests low SF.	$H1_{28}$: + People who want rewards should be actively scanning for ways to obtain them. Thus, high M suggests high SF.	$H1_{34}$: – People with high persistence will have a high seeking focus. High TO suggests high SF.
W2 Commitment Tolerance	N/A	$H1_{12}$: + In collective societies, people will be unwilling to make individual commitments. Thus, high I suggests high CT.	$H1_{20}$: – Uncertainty avoiders tend to avoid making commitments also. Thus, high UA suggests low CT.	$H1_{29}$: + Those who want rewards tend to be willing to make commitments. Thus, high M suggests high CT.	$H1_{35}$: – High persistence implies commitment tolerance. High TO suggests high CT.
W3 Opportunity Motivation	$H1_5$: + Those socialized to power tend to engage opportunities. Thus, high PD suggests high OM.	N/A	$H1_{21}$: – Because opportunity suggests uncertainty, high UA suggests low OM.	$H1_{30}$: + Those who want rewards tend to act on opportunity. Thus, high M suggests high OM.	$H1_{36}$: – "Face" and personal steadiness/stability will have low OM. Thus low TO suggests low OM.

TABLE I Continued

Variable	*Power Distance*	*Individualism*	*Uncertainty Avoidance*	*Materialism (Masculinity)*	*Time Orientation*
A1 Venture Experience	$H1_6$: – Because hierarchy may limit the entree to experiences in ventures, high PD suggests low VE.	$H1_{13}$: + We expect people in low "I" societies to have group v. separate venture experience. High I thus suggests high VE.	$H1_{22}$: – People who avoid uncertainty are unlikely to have venture experience. Thus high UA suggests low VE.	N/A	N/A
A2 Venture Diagnostics	$H1_7$: – Because hierarchy may limit experiences in ventures, high PD suggests low ability in Venture Diagnosis.	$H1_{14}$: + Where all economic activity is collective, ventures and their diagnosis may be moot. High I suggests high Venture Diagnosis Ability.	$H1_{23}$: – Uncertainty avoiders should systematically lack the knowledge needed to diagnose ventures. Hence, high UA suggests low VDA.	N/A	$H1_{37}$: – High TO: persistence and sense of shame for "missing something" if a deal fails should motivate high VDA.
A3 Situational Knowledge	N/A	$H1_{15}$: + People in low "I" societies should know few stories of individual ventures thus having limited situational knowledge. High I thus suggests high SK.	$H1_{24}$: – The presence of uncertainty avoidance in venture situations should be minimal. High UA therefore suggests low SK.	N/A	$H1_{38}$: – Low TO should lead to low SK, and those with a high entrepreneurial posture would likely have higher SK.
A4 Opportunity Recognition	N/A	$H1_{16}$: + Not good to say "I" have an idea; s/b a group success scenario. Low I suggests low OR.	$H1_{25}$: – For UA's, things that are risky will not be seen as opportunities. High UA suggests low OR.	N/A	$H1_{39}$: – Those in tune with social contacts (high TO) will be higher OR than those who are tradition bound.

indicate the capability to use them. On the other hand, individuals who have not ventured, or who have ventured but not succeeded, may have a general idea of what is required but are not expected to have specific knowledge or the skill to use critical venture creation abilities.

Cultural Values and Cognition

Hofstede argues that cultural values lead to societal norms, which in turn lead to particular organizational and intellectual structures (see Note 11, p 373). Busenitz and Lau[10] suggest the existence of a direct causal relationship between cultural values and cognitions. Hofstede further argues that the stability of culture is based upon the systems of constant reinforcement that exist within societies. It is beyond the scope of this study to elaborate and test a model that includes all of the factors (education, early life experience in families and schools, political and economic realities, and socialization in organizations and institutions) that reinforce culture. However, in this study we do take the conservative first step of examining the relationship between cultural values and venture cognitions as defined previously in the article. That is, in this article we suggest the possibility that the situation-specific nature of venturing may have its own norms/cognitions—a global culture of entrepreneurship, if the reader will permit—which, rather than being created within a given

country, has been created[23] by the limited number of common problems that venturers face, along with a limited number of known responses.

Hence, with definition of the Hofstede cultural values[11] with respect to each country, and the variables that dimensionalize the arrangements, willingness, and ability attributes of expertise (prior section), the relationship between cultural values and the schemas of venturers may be mapped. In general, we expect high power distance to be negatively related to entrepreneurial cognitions, as high power distance may limit access to necessary resources and the opportunity to venture. We expect high individualism to be positively related to entrepreneurial cognitions, as high individualism is associated with private access to and ownership of resources and the expectation that individuals will provide for their own economic security. We expect high uncertainty avoidance to be negatively related to entrepreneurial cognitions, as high uncertainty avoidance is associated with individual discomfort for unstructured or ambiguous situations. We expect high materialism to be positively related to entrepreneurial cognitions, as those who actively seek wealth will be actively scanning for opportunities to obtain it. Lastly, we expect high time orientation will generally be positively related to entrepreneurial cognitions, as was predicted by Hofstede and Bond.[25]

We expect high uncertainty avoidance to be negatively related to entrepreneurial cognitions. . .

As this is an exploratory study we felt it useful to examine each of the 55 potential relationships at the individual variable level, rather than at the higher order level discussed above. Table I provides our logic for each of 55 hypothesized relationships between Hofstede's five cultural values and the eleven expertise (venturer schema/cognition) variables that we have previously discussed (we hypothesize 39 relationships will be significant and 16 of the potential relationships will be not applicable). Based upon the foregoing research and logical development, it is expected that:

Hypothesis 1^{1-39}: Each cultural value will be related to the variables representing the Venture Cognitions of individuals in the manner shown in Table I.

Summary

In this section we have developed a portion of the Busenitz and Lau[10] cross-cultural cognitive model of venture creation into testable hypotheses. We now explain the data collection, measurement, and data analysis methods used to test the foregoing hypotheses.

Methods

Data Collection

To test the hypotheses in the conceptual model (Figure 1) data were collected from 863 respondents in the United States, Canada, Australia, Mexico, Chile, Japan, and China, all of whom had at least some business experience and 371 of whom were venture formation experts. Venture formation experts had either started a venture that was at least two years old, had started at least three businesses, one of which they deemed to be successful, or had extensive experience with venture start-ups as advisors or venture capitalists. At the present time, access to the sampling frames necessary to generate probability samples in international entrepreneurship research is problematic [60] as it is in much of social science research.[61] Thus, to answer the research questions within our target context, a purposeful sampling approach was utilized that relied on the combined judgment of the research team and local assistants to select, within countries, participants who reflected a range of business experiences, industries, education, and ages. These respondents were identified in one of two ways: through local chambers of commerce and small business development centers, or through contacts provided by local business schools. Respondents were business owners, entrepreneurs, mid-level employees from both public and private sectors, and (in the U.S. and Canada) included some business students (age 22 or older, with work experience). All respondents completed a structured survey instrument that was translated into their native language.

Care was taken to translate the instrument in a fashion meaningful to each culture. A native of each country, who spoke English as a second language, was selected to translate the instrument from English into the native

TABLE II Sample Characteristics

	U.S.	*CAN.*	*AUL.*	*MEX.*	*CHL.*	*JPN.*	*CHN.*	*TOTAL*
Sample Size (N)	201	163	61	187	34	53	164	863
Sex								
Male	148	124	42	120	23	50	116	623
Female	52	39	17	67	10	3	32	220
Median Age	30	25	35	27	36	43	30	30
Venture Formation Experts	67	65	30	103	23	31	52	371

language. Each question was talked through with the native to develop a shared understanding of the question. After the survey was translated, a native English speaker, who spoke the foreign language, translated the instrument back into English. Where discrepancies arose, both translators and one of the researchers would sit down to reconcile the differences. However, even with the care taken to translate the survey instrument, it is still limited by the fact that it was generated by North American researchers based upon research theory from predominantly Western journals.[62]

A pretested, self-administered, structured survey was personally delivered and retrieved from all participants by local assistants. This personal approach resulted in a 98 percent response rate (only a small number of the surveys were refused). To further improve representation and capture within country variance, data were collected from several locations within each country. Between countries, an attempt was made to create matched samples to limit the potential number of confounding variables. "Matching samples means that the respondents should be people who are as similar as possible in all aspects of their lives except for their nationality" (see Note 25, p 9). Thus, we attempted to match our samples in terms of business experience, age, sex, and education. Pretests were conducted in the United States, Canada, and Mexico.[13,53]

Of the 371 qualified respondents, 132 are from North America (67 from the United States, 65 from Canada), 126 are from Central and South America (103 from Mexico, 23 from Chile), 83 are from Asia (52 from China and 31 from Japan), and 30 are from Australia. Seventy-two percent of respondents are male, and this is consistent across all the countries, except for Japan where only 6 percent of respondents are female. The median age of respondents is 30 years, which is also consistent across countries except for Canada (median age of 25) and Japan (median age of 43). Respondents are found to also be reasonably matched in terms of education. The median level of formal education is a bachelor's degree in the United States, Canada, Mexico, and Japan and some college or university degree in Australia and Chile. In spite of these differences among the country subsamples, demographic profiles (Table II) suggest that the samples are reasonably matched, as Hofstede and Bond[25] recommend. Consequently, the sample is considered sufficient to test hypothesized relationships, at least in an exploratory fashion.

Between countries, an attempt was made to create matched samples to limit the potential number of confounding variables.

Measurement

The dependent construct of the model, Venture Cognitions, is measured using arrangements, willingness, and ability cognitions variables, which were measured using the sum of paired script cue items.[63] These items, listed in the Appendix, use paired script recognition and distracter cues consistent with an accepted script-scenario construction model.[64] Appropriate script and distracter cue items were derived from a review of the entrepreneurship and expert theory literature and from interviews with practicing entrepreneurs and nonentrepreneurs in the United States, and are thus grounded in both the theoretical and substantive domain.[65] For each conceptualized dimension of arrangements, willingness, and ability cognitions items were developed and

TABLE III Factor Analysis Results

	Arrangements Cognitions				*Willingness Cognitions*				*Ability Cognitions*			
	F1	*F2*	*F3*	*F4*	*F1*	*F2*	*F3*		*F1*	*F2*	*F3*	*F4*
Variable/Factor Loading												
V18	.52				V41	.61			V16	.70		
V20	.70				V33	.61			V29	.62		
V8	.59				V37	.68			V48		.54	
V45*	.48				V38	.47			V11		.70	
V3*	.29		.34		V7			.74	V40		.64	
V35		.83			V12			.77	V4			.56
V14		.75			V31		.72		V42	.35		.42
V47			.69		V28		.52		V44			.69
V36				.80	V32		.60		V9			.70
									V19			.60
									V27			.56
Percent of Variance	18.3	14.0	12.7	11.3		20.2	13.1	11.6		15.7	10.8	9.9	9.4

Note: Based on item loadings, arrangements cognition factors are labeled: "resource possession," "protectable idea," "venture-specific skills," and "resource access," respectively. Willingness cognition factors are: "seeking focus," "commitment tolerance," and "opportunity motivation." Ability cognition factors are: "situational knowledge," "opportunity recognition," "venture experience," and "venturing diagnostic ability."
*Removed from analysis because it loaded higher on an unintended factor than on the intended factor. Loadings of less than 0.25 are suppressed.

scored "1" for cue recognition and "0" for noncue recognition.

Because the individual items are independent pieces of evidence of the scripts, they are specified as being formative indicators (see Note 61, p 54) and are added together to create interval scaled variables.[63] Formative indicators define, or give rise to, the construct, but are not a reflection of it. As each item helps to define the meaning of a construct, affirmative responses to all items are not required from an individual respondent to capture construct meaning. For example, an increase in the pool of people and assets that a respondent controls (Appendix, Item 20) is one indication of a script relating to resource possession. However, a respondent may have a resource possession script that is based on the possession of other resources and not about changes in their available pool of people and assets. Since formative indicators are independent components of a construct, they may not be highly correlated. Consequently, it is inappropriate to expect unidimensionality at the construct level, and it is inappropriate to assess reliability at the item level with Cronbach's alpha, which is based on interitem correlation.[66]

Formative indicators define, or give rise to, the construct, but are not a reflection of it.

Principal components analysis (employing a minimum Eigen value of 1 and varimax rotation), appropriate for formative indicators,[61] was used to assess construct validity.[67] As illustrated in Table III, support was found for the four conceptualized dimensions of Arrangements Cognitions, the three conceptualized dimensions of Willingness Cognitions, and the four conceptualized dimensions of Ability Cognitions. Two variables (V3 and V45) were dropped from the analysis because of mixed loadings and/or higher loadings on an unintended factor. While one other variable (V42) resulted in a mixed loading, it was retained as it loaded most significantly on the intended factor.

In light of the significance of the loadings and their general conformance with construct conceptualization and theory,[68] the cognition scales were judged to be acceptable for further analysis. Items were summed by factor (dimension) and these dimensions were summed to create a continuous scales of arrangements, willingness, and ability cognitions.[63]

The cultural values construct was measured using the Hofstede (see Note 11, p 315), and Hofstede and Bond (see Note 25, p 12) country scores. The nine Pacific Rim countries analyzed in this study were grouped into three categories for four of the five cultural dimensions (Table IV). Uncertainty avoidance

TABLE IV Categorical Country Groupings by Cultural Dimensions (Based on Hofstede and Bond[25] Country Scores)

	Power Distance	*Individualism*	*Uncertainty Avoidance*	*Masculinity*	*Time Orientation*
High	Chile Mexico	Australia Canada United States	Mexico Japan China Chile	Japan Mexico	China Japan
Medium	China Japan	Japan Mexico	N/A	Australia Canada United States	Chile Mexico
Low	Australia Canada United States	Chile China	Australia Canada United States	Chile China	Australia Canada United States

scores were dichotomous between the nine countries and so two categories were used for this dimension. China was not part of the original Hofstede[11] study and so scores were approximated based upon the results of the McGrath et al.[24] study. In this study, McGrath et al. found that China and Taiwan were similar in regards to individualism and materialism, and so Taiwan's scores were used on these two dimensions for grouping purposes. However, for power distance and uncertainty avoidance the authors found that Taiwan had moved closer to the United States, and so higher scores were attributed to China than Taiwan on these two dimensions. In addition, no scores were available for Mexico and Chile on the time orientation dimension. These countries were grouped together as medium on this dimension, as the only comparison point in Latin America was Brazil, which would have grouped at a mid-level on this dimension.

Our overall approach to the testing of the 39 hypotheses previously presented is conservative to reflect the preliminary nature of this research; while we run the risk of not finding any potential relationships, we are more certain of significant findings. In this study we were particularly interested in the affects of culture on the cognition of new venture formation experts, and for this reason selected the 371 respondents, which were classified in this manner, for analysis. As we were interested in the directional effects of culture on cognition, a simple correlation analysis was performed on the data (Table V).

Results and Discussion

We find that cultural values have a significant relationship to Venture Cognitions, although not always in ways that we expected. Of the 39 hypothesized relationships, only 11 were not supported. Of the remaining 28 significant relationships, 15 received support or strong support for a relationship in the predicted direction, while 13 were shown to be related in a direction that is opposite to that predicted. Surprisingly, 9 of the 16 potential relationships classified as "not applicable" in our conceptualization (Table I) were also shown to have significant relationships. Thus, we find that over two-thirds of the relationships between cultural values and venture cognitions are significant (Table VI), although not necessarily as predicted.

We find that cultural values have a significant relationship to Venture Cognitions, although not always in ways that we expected.

We found general support for our hypotheses on power distance as it relates to venture cognitions. The one contrary finding may be related to the fact that our sample is restricted to respondents with power in those high power distance countries. This would explain why those countries high in power distance did not rate the distribution of available resources as limited. As our hypothesis suggested in general, we believe it to be fundamental for those looking to start new ventures in high power distance countries to partner with local individuals who have the proper social and economic status, to assure access to essential resources.

We found support for our hypotheses on individualism in two-thirds of the cases as it

TABLE V **Means, Standard Deviations, Correlations**

	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Protectable Idea	2.43	1.10															
2. Resource Access	0.75	0.77	.02														
3. Resource Possession	0.38	0.49	−.02	.06													
4. Venture-Specific Skills	0.62	0.49	.19***	−.00	−.01												
5. Seeking Focus	2.37	1.17	.16***	.05	−.06	.05											
6. Commitment Tolerance	0.81	0.78	−.07	.12*	.11*	-.06	.12*										
7. Opportunity Motivation	1.65	0.95	.25***	.06	−.03	.10	.20***	.08									
8. Venture Experience	1.14	0.89	.03	.11*	.20***	.00	.13*	.00	.00								
9. Venture Diagnostics	1.30	0.98	.12*	.15***	−.04	.15**	.16**	−.06	.16**	.14**							
10. Situational Knowledge	0.71	0.72	−.01	.05	.03	-.06	.16**	.10	.05	.20***	.17***						
11. Opportunity Recognition	1.91	0.91	.15**	.08	.05	.11*	.13*	−.09	.05	.07	.11*	.06					
12. Power Distance	2.10	0.88	.33***	−.21***	−.25***	.27***	.04	−.21***	.16**	−.26***	.07	−.19***	.18***				
13. Individualism	1.77	0.77	−.25***	.20***	.13*	−.25***	−.08	.19***	−.18***	.06	−.24***	.18***	−.09	−.71***			
14. Uncertainty Avoidance	1.87	0.99	.30***	−.20***	−.17***	.31***	.05	−.21***	.13*	−.14**	.17***	−.21***	.17***	.91***	−.88***		
15. Masculinity	1.84	0.73	.08	−.01	−.07	.10	−.05	−.05	−.09	−.17***	−.16**	−.04	.16**	.36***	.29***	.19***	
16. Time Orientation	2.21	0.79	.20***	−.15**	−.05	.29***	.06	−.18***	.08	.02	.24***	−.18***	.12*	.61***	−.88***	.88***	−.04

n = 371
*p < .05.
**p < .01.
***p < .001.

TABLE VI **Findings**

Variable	*Power Distance*	*Individualism*	*Uncertainty Avoidance*	*Materialism (Masculinity)*	*Time Orientation*
AR1 Protectable Idea	$H1_1$: + Strong Support	$H1_8$: + Strong Contrary	$H1_{17}$: – Strong Contrary	N/A	$H1_{31}$: – Strong Contrary
AR2 Resource Access	$H1_2$: – Strong Support	$H1_9$: + Strong Support	N/A	$H1_{26}$: + No Support	$H1_{32}$: + Contrary Finding
AR3 Resource Possession	$H1_3$: – Strong Support	$H1_{10}$: + Support	N/A	$H1_{27}$: + No Support	N/A
AR4 Venture-Specific Skills	$H1_4$: – Strong Contrary	$H1_{11}$: + Strong Contrary	$H1_{18}$: – Strong Contrary	N/A	$H1_{33}$: + Strong Support
W1 "Seeking" Focus	N/A	N/A	$H1_{19}$: – No Support	$H1_{28}$: + No Support	$H1_{34}$: + No Support
W2 Commitment Tolerance	N/A	$H1_{12}$: + Strong Support	$H1_{20}$: – Strong Support	$H1_{29}$: + No Support	$H1_{35}$: + Strong Contrary
W3 Opportunity Motivation	$H1_5$: + Support	N/A	$H1_{21}$: – Contrary Finding	$H1_{30}$: + No Support	$H1_{36}$: + No Support
A1 Venture Experience	$H1_6$: – Strong Support	$H1_{13}$: + No Support	$H1_{22}$: – Support	N/A	N/A
A2 Venture Diagnostics	$H1_7$: – No Support	$H1_{14}$: + Strong Contrary	$H1_{23}$: – Strong Contrary	N/A	$H1_{37}$: + Strong Support
A3 Situational Knowledge	N/A	$H1_{15}$: + Strong Support	$H1_{24}$: – Strong Support	N/A	$H1_{38}$: + Strong Contrary
A4 Opportunity Recognition	N/A	$H1_{16}$: + No Support	$H1_{25}$: – Strong Contrary	N/A	$H1_{39}$: + Support

+/– represents the hypothesized relationship
Support $p < .05$.
Strong Support $p < .001$.
Contrary Finding $p < .05$.
Strong Contrary $p < .001$.

relates to Venture Cognitions. The contrary findings in this classification may also be due to the sampling bias mentioned above. As our sample includes only those who run their own businesses or who have achieved some success in the business world, it is not hard—in retrospect—to imagine the contrary results we found in this classification. Of importance to practitioners is the difference in willingness and ability factors that potential partners and employees will bring to their organizations. Practitioners will generally succeed where they are able to work with the differences rather than against them.

The results of our tests of uncertainty avoidance and time orientation cannot be explained in the same way as those of power distance and individualism, and as we were

generally unsuccessful in predicting empirical relationships we will not offer suggestions for either classification.

We find that the cultural value of materialism/masculinity is largely unrelated to venture cognitions, except in the ability cognitions areas of venture diagnostics and venture experience, where these constructs are negatively correlated, and in the area of opportunity recognition, when the correlation is positive. Since we conceptualized all three of these relationships as not applicable, we have no prior theory to explain the finding. A post hoc reason might spring from the desirability construct found in the intentions literature[15,16,36] which might suggest that those who desire wealth would have the experiences and abilities related to that desire, once again revealing more about competitive and human resources.

Another general finding is that the construct, seeking focus, is shown to be unrelated to any of the cultural values dimensions. This finding indicates to us that willingness cognitions (and thus competitive resources) are shaped mainly by commitment tolerance and somewhat (power distance, individualism, and uncertainty avoidance) by opportunity motivation.

Our exploratory experience in hypothesizing and testing these relationships has been instructive. First, we learned how unlikely it is that—unaided—one can use logic and a "one-country" perspective to predict the venture cognitions of individuals in other countries. This suggests caution in making suppositions about venturers in other cultures. But, second, we also learned that the culture/cognition connection proposed by Busenitz and Lau[10] is robust insofar as we have tested it. This, we think, is good news for international entrepreneurship scholars and practitioners who are attempting to extend the study, or practice, of emerging business in the global setting through the search for what is systematic in human behavior.

The search for what is systematic in human behavior is the search for civilization.

Conclusion

The search for what is systematic in human behavior is the search for civilization.[69] But though systematic, cultures have very different solutions for the relatively few fundamental problems that confront mankind[11,23]; one of which is to provide for economic security (see Note 69, p 3). In this article we argue that, at the individual level of analysis, the cultural values of entrepreneurs will have a differential effect on cognitions related to venturing, due to differences in the ways that various cultures around the Pacific Rim approach the quest for economic security. Specifically, we have used the theory of planned behavior,[15] which has previously been shown to predict entrepreneurial intentions,[16] to test the link between cultural values and venture cognitions as it has been proposed in a cross-cultural cognitive model of venture creation.[10] As we have demonstrated the presence of this link, further research that explores the more complete culture/cognition/entrepreneurial intention linkage of the Busenitz and Lau Model seems warranted.

Why are such tests important? We suggest that when the manner in which individual entrepreneurs perceive strategic resources is better understood, the globalization of emerging businesses is more likely to be based on sound strategies.

Recently—with its application at the societal level of analysis—the resource-based view of strategy has been used to explain strategic outcomes beyond those at the firm level.[18] Entrepreneurship is a field where the resources associated with individual entrepreneurs is important. We have therefore hypothesized the ways in which cultural values will impact individual arrangements, willingness, and ability cognitions related to venturing in seven Pacific Rim countries (Table I). One notion in resource-based theory suggests that this kind of specific understanding of resource "stocks" (the cross-cultural state of solutions of venturing problems) should therefore point to the types of "flows" that are needed to improve sustained competitive advantage.[8,70] Many strategic battles can thereby be won before they are even fought,[18] with greater economic security being the result.

To reach this level of pragmatism future research must endeavor to illuminate the differences between the cognitions of successful and unsuccessful entrepreneurs or non-entrepreneurs. Without this understanding it will be impossible for us tailor the type of educational programs necessary to bring about the appropriate cross-cultural knowledge of resource stocks and flows.

Overall, this study gives us the opportunity to open a window into the nature of Venture Cognitions as they are influenced by cultural values. Specifically, we found that power distance and individualism are associated with venturer cognitions in a fairly reliable manner. Further, our findings support the conceptualization of cross-cultural venture cognitions proposed by Busenitz and Lau[10], and reveals more about the specific nature of the relationships involved. It is our hope that the observed relationships can serve as a foundation for better venturing research, strategy, and practice, as emerging businesses go global in the twenty-first century.

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APPENDIX

This questionnaire helps you to identify your personal approach to getting involved with a new business. Please CIRCLE THE LETTER (a) OR (b) TO SHOW THE ANSWER WHICH DESCRIBES YOU MOST CLOSELY.

Arrangements Conditions

R1—Protectable Idea

14. My new venture is/will be:
(a) protected from competition by patent, secret technology, or knowledge
(b) based on a product or service with no "barriers to entry"

35. My new venture is/will be:
(a) protected from competition by franchise or other territory restrictions
(b) based on a product or service which may experience a lot of competition within a territory

R2—Resource Access

36. I could:
(a) raise money for a venture if I didn't have enough
(b) provide an investor with a lot of very good ideas for a new venture

45.** I:
(a) can often see opportunities for my plans to fit with those of other people
(b) rarely find that results match what I expect

R3—Resource Possession
3.** I have more highly developed contacts in the:
(a) new venture area specifically
(b) community generally

8. I own assets such as:
(a) proprietary technology, patents, or an operating business
(b) mutual funds, real estate, or savings accounts

18. I presently:
(a) control acquisition or expansion funds in an ongoing business, or have my own funds available for venturing
(b) will need to raise financing for my venture from third parties

20. In the last three years:
(a) the size of the pool of people and assets I control has grown
(b) I have not extended my business control over people or assets

R4—Venture-Specific Skills
47. I am very:
(a) good at a specialty that is in high demand
(b) well-rounded, with broad expertise in a variety of areas

Willingness Cognitions
W1—Seeking Focus
33. Would you say you are more:
(a) action-oriented
(b) accuracy-oriented

37. Do you want things:
(a) open to possibilities
(b) settled and decided

38. I have:
(a) enormous drive, but sometimes need others' help to complete projects
(b) a high respect for service, generosity, and harmony

41. Are you more comfortable in:
(a) new situations
(b) familiar territory

W2—Commitment Tolerance
28. If you had additional money to put to work, would you put it into a venture:
(a) where you have a "say," even if there is no track record
(b) managed by those you trust, who have a proven track record

31. I don't mind:
(a) being committed to meet a regular payroll if it means that I can have a chance at greater financial success
(b) giving a little of the value I create to the company that hired me

32. I am looking for a:
(a) place to invest my resources
(b) better way to manage my resources

W3—Opportunity Motivation
7. When investing in a new venture, I think it is worse to:
(a) wait too long, and miss a great opportunity
(b) plunge in without enough information to know the real risks

12. Is it worse to:
(a) waste your time thinking over an opportunity
(b) commit time and money to a cause that may not succeed

Ability Cognitions
A1—Venture Experience
4. If asked to give my time to a new business I would decide based on how this venture fits:
(a) into my past experience
(b) my values

42. I feel more confident:
(a) that I know a lot about creatmg new ventures
(b) in my overall business sense

44. When I see a business opportunity I decide to invest based upon:
(a) how closely it fits my "success scenario"

(b) whether I sense that it is a good investment

A2—Venturing Diagnostic Ability

9. When confronted with a new venture problem I can:
(a) recall quite vividly the details of similar situations I know about
(b) usually figure out what to do, even if it is by trial and error

19. New ventures, small business, and entrepreneurship:
(a) are distinctly different disciplines
(b) have much in common, especially the need for sharp guesswork

27. I am more:
(a) aware of many new venture situations; some which succeeded, and others which failed, and why
(b) familiar with my own affairs, but keep up on business in general

A3—Venture Situational Knowledge

16. It is more important to know about:
(a) creating new ventures
(b) business in general—staying diversified

29. New venture success:
(a) follows a particular script
(b) depends heavily on the pluses and minuses in a given situation

A4—Opportunity Recognition

48. I often:
(a) see ways in which a new combination of people, materials, or products can be of value
(b) find differences between how I see situations and others' perspective

11. When someone describes a problem with a new business I:
(a) recognize key features of the problem quickly, and can suggest alternatives from examples I can cite
(b) use my instincts to suggest questions which should be asked to solve the problem

40. The new venture stories I recall:
(a) illustrate principles necessary for success
(b) are a telling commentary on the foibles of human nature which can rarely be predicted

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Notes: ** Removed from analysis due to mixed loadings and loading higher on an unintended construct.
*** These items formed a unique factor labeled "opportunity recognition."