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The Impact of Culture on Creativity: How Cultural Tightness and Cultural Distance Affect Global Innovation Crowdsourcing Work

Roy Y. J. CHUA
Singapore Management University, royyjchua@smu.edu.sg

Yannig ROTH
Université Paris

Jean-François LEMOINE
ESSCA Ecole de Management

How Culture Impacts Creativity:

Cultural Tightness, Cultural Distance, and Global Creative Work

Roy Y. J. Chua

Singapore Management University

Lee Kong Chian School of Business

50 Stamford Road Singapore 178899

E-mail: royyjchua@smu.edu.sg

Yannig Roth

Université Paris 1 Panthéon Sorbonne

17 rue de la Sorbonne, 75005 Paris, France

E-mail : yannigroth@gmail.com

Jean-François Lemoine

ESSCA Ecole de Management

Université Paris 1 Panthéon Sorbonne

17 rue de la Sorbonne, 75005 Paris, France

E-mail: jflemoine30@hotmail.com

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ABSTRACT

There is increasing scholarly interest in how culture impacts creativity. This paper advances a new theoretical model to understand how culture impacts creativity in a global context. We theorize that creativity engagement and success depends on the cultural tightness (the extent to which a country is characterized by strong social norms and low tolerance for deviant behaviors) of both the innovator's country and the audience's country as well as the cultural distance between these two countries. Using field data from a global online creative crowdsourcing platform, we found that individuals from tight cultures are less likely than counterparts from loose cultures to engage in and succeed at foreign creative tasks; this effect is intensified as the cultural distance between the innovator and audience country increases. Additionally, tight cultures are less receptive toward foreign creative ideas. However, contrary to what current theorizing would predict, we found that in the cases of individuals innovating in their own or culturally close countries, cultural tightness increases the likelihood of engagement and success. Taken together, our findings expand current theorizing about how cultural tightness impacts creativity and demonstrate on how cultural norms impact creativity on a global scale. Theoretical and practical implications are discussed.

KEY WORDS: Cultural Tightness, Cultural Distance, Creativity, Globalization, Social Norms.

How does national culture impact creativity in the global economy? Scholars have begun to examine the critical notion that an individual's creativity—the production of ideas that are simultaneously novel and useful (Amabile, 1983, 1996)—is intimately linked to the cultural environment in which the individual is embedded (Lubart, 1990; Chiu and Kwan, 2010; De Dreu, 2010; Leung and Morris, 2010; Morris and Leung, 2010; Varsakelis, 2001; Wang, 2011). Culture, conceptualized as a set of shared knowledge, values, norms, and beliefs that unite a collective group, such as a country (Chiu and Hong, 2006), shapes cognition and motivation and consequently how one approaches creative problem solving (Leung et al., 2008; Chiu and Kwan, 2010; Morris and Leung, 2010).

Scholars are also increasingly cognizant that, because of the globalization of business, creative tasks themselves have begun to transcend national boundaries (Chiu and Cheng, 2007; Chua, Morris, and Mor, 2012). Many business challenges today entail solving problems creatively not just within but also outside one's own country (Gibson and Gibbs, 2006). For example, an American brand manager has to think creatively about how to best position brands both within the U.S. as well as in emerging economies such as China or India. Companies are also increasingly going abroad to source for knowledge to fuel innovation (Almeida 1996; Frost 2001). Recently, we witness a trend toward global creative crowdsourcing – organizations use the Internet to source creative ideas from across the globe to speed up their innovation cycles (Brabham, 2013; Howe, 2008; King and Lakhani, 2013). For instance, when a well-known Brazilian consumer product brand sought new ways to support social causes with the help of its customers online, the most creative ideas came from France, the United States, and Brazil. Cross-border creativity, if done right, has considerable potential to increase business

competitiveness in the global marketplace (IBM Corporation, 2010; Gartner Inc, 2013; Deloitte, 2014).

Despite recent growth in research that examines culture's influence on creativity, work in this area is still at a nascent stage; our understanding of how people think creatively and innovate in a global setting is still developing.[1] Specifically, we still lack a theoretical exposition and empirical demonstration of how a country's culture influences its people's motivation and ability to innovate both within and outside their own country. Research is also scant on how a country's culture impacts the likelihood that locals and foreigners will successfully innovate there. Recent theorizing by Gelfand and colleagues (2006) suggests that a particular cultural dimension, *cultural tightness*—the extent to which a society is characterized by strong social norms and low tolerance for deviant behavior—is a relevant antecedent to creativity because it socializes individuals to develop psychological adaptations characterized by caution, predictability, and discipline. Useful in some contexts (e.g., improving efficiency), these psychological adaptations generally inhibit creativity (Gelfand, Nishii, and Raver, 2006).

Gelfand and colleagues' (2006) theorizing on cultural tightness is a useful first step toward understanding culture's impact on creativity; yet it is not clear that cultural tightness is always detrimental to creativity. Tight cultures promote convergent thinking by socializing individuals to keep in line with social norms and rules. Although convergent thinking is often thought of as an antithesis to creativity, some scholars have proposed that it can also enhance creativity, e.g., in facilitating the selection of creative ideas to suit a given context (Cropley,

[1] Innovation is commonly defined as the successful implementation of creative ideas. Creativity is therefore often regarded as a precursor to innovation. However, according to Ford (1996: 1113), creativity plays a role throughout all phases of innovation (e.g., creative thinking is required in solving implementation related challenges). In this research, our primary focus is on creativity – the production of novel and useful ideas to solve a problem at hand. We adopt Ford (1996)'s stance and do not necessarily restrict the term creativity to any particular stage of innovation.

2006; Goncalo and Duguid, 2011). Thus, it is worth investigating when and how tight cultures could be beneficial to creative performance. In addition, Gelfand et al (2006)'s argument focuses on the innovator's culture and is silent on the role of the audience country – the locale in which an innovation or creative idea is intended for. Various creativity scholars have acknowledged that creativity success depends in part on the extent to which an audience is receptive to the proposed new ideas (Chiu and Hong, 2005; Csikszentmihalyi, 2003; De Dreu, 2010; Elsbach and Kramer, 2003; Ford, 1996; Hempel and Sue-Chan, 2010; Mueller, Melwani, and Goncalo, 2012). This notion is derived from the theoretical premise that whether or not an idea is considered creative is socially constructed within the domain or field in which creative work takes place (Csikszentmihalyi, 1990, 2003; Ford, 1996). The consideration of the audience country's culture, including how different it is from that of the innovator's country, is particularly relevant in a globalized business environment wherein people increasingly do creative work across national borders. Yet the effect on creative performance of an audience's cultural attributes is often under emphasized in organizational research.

Our present research aims to address the above gaps. We introduce a new theoretical model – the *Cultural Alignment Model of Global Creativity* – to explicate how culture impacts creativity in a global context. We argue that there are three cultural characteristics that are particularly relevant – (a) the innovator's country's level of cultural tightness, (b) the audience country's level of cultural tightness and (c) the extent to which the audience country's cultural content is close to that of the innovator's country (i.e., cultural distance). In order for an innovator to be successful in any given context, there must be "cultural alignment" (i.e., cultural fit or agreement) between the proposed solution and what the intended audience of the creative idea would find appropriate and acceptable (Csikszentmihalyi, 1999, 2003; De Dreu, 2010).

Cultural distance between the innovator's country and the audience country as well as the degree of cultural tightness in each country would determine whether there would be cultural alignment. In line with our interests in understanding creativity in a global context, we specifically examine in our model how cultural tightness and distance influence creativity in both foreign and local creative tasks. This distinction in the type of creative tasks allows us to modify current theorizing that cultural tightness is necessarily harmful for creativity (Gelfand, Nishii, and Raver, 2006). We argue and show that in certain circumstances (members of a tight culture doing creative work within their own culture, i.e., local creative tasks), cultural tightness can actually promote creativity. This finding implies that some degree of convergent thinking as engendered by tight cultures could be beneficial for creativity, challenging the dominant view in creativity research that divergent thinking is a prerequisite for creative performance.

More broadly, our research contributes to the ongoing dialogue about how culture impacts creativity. In a departure from extant cross-cultural research that tends to use a values-based approach toward conceptualizing culture (e.g., Hofstede, 1980; Schwartz, 1994; Schwartz and Sagie, 2000), we take a norms-based approach. Our work provides the first demonstration on how a culture's social norms (cultural tightness) promotes or inhibits creativity.

In the ensuing sections, we first review relevant research on culture and creativity before developing our theory and hypotheses. Our theory development is founded on the premise that a country's culture exerts a general effect on its people; at the same time we acknowledge that individual and situational differences might render some people more susceptible than others to culture's influence (Brockner, 2003; Eid and Diener , 200l; Gelfand, Erez, and Aycan, 2007; Leung and Cohen, 2011). We next describe the data used to test our ideas. Our empirical setting is a creative crowdsourcing platform that spans multiple countries on several continents, an ideal

context for investigating research questions on global engagement and success in creative endeavors. This empirical context also enables us to observe actual behavior embodying engagement and creativity performance. To deepen understanding of our results, we supplement our analyses with additional field interviews. Implications for practice and avenues for future research are then discussed.

CULTURE AND CREATIVITY

The rapid pace of globalization has sparked a surge of research on how culture influences creativity. Early research took a country comparison approach to document cultural differences in creative performance, often finding individuals from Asia (e.g., Japan and China) to be less creative than those from the West (e.g., U.S.) at a variety of laboratory tasks (Torrance, 1969; Ng, 2000; Niu and Sternberg, 2001, 2002, 2003; Noriko, Fan, and Van Dusen, 2001). One account is that the East-West difference might reflect stronger emphases on usefulness and practicality in the East and on novelty and originality in the West (Lubart, 1999; Noriko, Fan, and Van Dusen, 2001). Because conventional creativity tests developed in the West prize originality, Easterners often fall short on them. This account highlights the importance of taking into consideration the audience effect, in particular how creativity is judged in different cultures.

Another stream of research uses a values-based approach toward conceptualizing culture when studying its impact on creativity (e.g., Bechtoldt et al., 2010; Erez, and Nouri, 2010; Hofstede, 2001; Rank, Pace, and Frese, 2004; Schwartz, 1999; Shane, 1992); such research proposes explanations that invoke value-based constructs such as collectivism/individualism (Bechtoldt et al., 2010; Shane, 1992) and uncertainty avoidance (Shane, 1995). For example, using Hofstede's cultural values data and patent data, Shane (1992) found that individualistic and

non-hierarchical societies were more inventive than collectivistic hierarchical ones. Despite these scholarly efforts, evidence that cultural differences in creativity can be explained by stable values attributable to cultural conditioning is scant and inconsistent (see Leung and Morris, 2010).

Recent developments in cross-cultural psychology suggest that culture also resides in the social norms that guide behaviors (Zou et al., 2009). Norms are shared expectations about what constitutes appropriate behaviors in a given culture (Cialdini, Reno, and Kallgren, 1990; Zou et al., 2009). Individuals conform to social norms in their respective cultures in part because of the epistemic need to be assured that their judgments and behaviors are validated by the salient reference group (Festinger, 1950; Hardin and Higgins, 1996; Fu et al, 2007). Zou and colleagues (2009) found that well-documented cultural differences in cognition and behavior could be explained by individuals' perceptions of shared social norms within their cultures. Mok and Morris (2010) showed that bicultural individuals' creativity shifts depending on whether Asian or Western cultural norms are cued, suggesting that creative performance is cultural-context-dependent. When encoded as routines, procedures, and mental habits, social norms could very well shape how individuals perceive, approach, and solve creativity problems.

Research on organizational innovation also provides promising evidence that cultural norms might influence creativity processes and outcomes (Nagaoka and Walsh, 2009; Moorman, 1995; Khazanchi, Lewis, and Boyer, 2007; Varsakelis, 2001). For instance, Nagaoka and Walsh (2009) found that in the U.S., a culture characterized by loose social norms, inventions are more likely to arise from unexpected discoveries in unrelated R&D efforts than it is the case in Japan, a culture characterized by tight social norms. This finding implies that American inventors might be more willing to deviate from plans and explore unexpected routes and to take risks in the innovation process compared to Japanese inventors. Taken together, findings from prior

research seem to suggest that cultural norms in organizations and societies at large could indeed impact creative thinking and the innovation process.[2]

Cultural Tightness

Cultural norms have many dimensions, but the construct of cultural tightness is especially relevant to creativity. Gelfand et al (2006) defined cultural tightness as the strength of social norms and the degree of sanctioning within a given society. The notion of cultural tightness can be traced to early research in anthropology (Pelto, 1968), sociology (Boldt, 1978), and psychology (Berry, 1966, 1967; Triandis, 1989) that recognizes normative controls and sanctions as critical components of social functioning. High population density, resource scarcity, and a history of territorial conflict and environmental threats tend to contribute to an increase in a country's cultural tightness (Gelfand et al, 2011). These ecological challenges increase the need for strong norms and punishment of deviations to regulate and coordinate behavior in order to ensure the collective's survival. In societies with tight cultures, social norms are clear and reliably imposed and enforced, often with severe sanctions. In societies with loose cultures, social norms are usually unclear, and society as a whole tends to be tolerant of behaviors that deviate from norms[3] (Triandis, 1989). Compared to tight cultures, loose cultures tend to be less predictable, less orderly, and less efficient because they lack clear norms and consistent enforcement to regulate behavior (Gelfand, Nishii, and Raver, 2006). A recent 33-nation study by Gelfand and colleagues (2011) found countries such as Pakistan, Malaysia, Japan, Norway,

[2] The thesis that shared norms influence creative behaviors and performance does not imply that cultural differences in values play no role in determining creativity. Clearly, values can shape social norms as well as routines and procedures. Conceptually, however, values and norms are distinct. Values are relatively fixed, stable, and internalized; a values-based approach to culture suggests, therefore, that individuals approach creativity in accordance with their ingrained values regardless of social context. A norms-based approach focuses on how shared expectations within individuals' social environments shape their creative behaviors and, subsequently, their performance.

[3] The lack of strong norms in loose cultures could be in part due to subcultures within a society. For example, Harrington and Gelfand (2014) found variation in cultural tightness across 50 states in the U.S., a relatively loose culture. To date, no research has explored how subcultures contributed to the overall cultural tightness of a society.

China, and Singapore to score high on a cultural-tightness scale the researchers developed, whereas countries such as Ukraine, Hungary, Brazil, and Australia score relatively low. The level of cultural tightness in a country shapes the way individuals are socialized, which in turn impacts psychological adaptations at the individual level, influencing creative engagement (i.e., attempts at creative challenges) and success.

Cultural tightness is reflected in a society's institutional practices, influencing individual level cognition, motivation, and behaviors. Social institutions such as schools, families, religious bodies, and the justice system work in concert to foster certain psychological adaptations within individuals (Harrington and Gelfand, 2014). Tight cultures promote narrow socialization wherein there are highly developed systems of constraining, regulating, and monitoring behaviors (Arnett, 1995). Deviation from established norms are readily identified and sanctioned. Additionally, justice systems in tight cultures often impose stiff punishments for crimes (e.g., death penalty for corruption in China). In terms of everyday life, tight cultures are also linked to situational constraints that embody a restricted range of appropriate behaviors (e.g., in Singapore, eating and drinking is not allowed in the subway). Over time, these institutional practices collectively foster individual level psychological adaptations such as self-regulation, cognitive styles, and propensity toward change, all of which have implications for creativity[4].

Creativity-relevant psychological adaptations. Because socialization in tight cultures greatly impose constraints and limit behaviors, individuals in these societies develop a heightened sense of felt accountability and a prevention-focused self-regulation characterized by caution about avoiding mistakes (Higgins, 1996). They behave according to shared norms and

[4] To the extent that a society's cultural tightness shapes psychological characteristics of its members, these members may in turn influence the type of institutions that were developed in the society according to these characteristics (Gelfand et al 2006: 1230). Thus, it is likely that in tighter cultures, there may also be less diversity in the types of socializing institutions.

over time to develop high impulse control, self-monitoring, and self-censorship. Yet deviation from established norms is often required for creative performance (Warren, 2003; Morris and Leung, 2010). Prior research has shown that prevention-focused individuals are less adept at creative thinking than those who are more promotion-focused because creativity requires pushing boundaries and taking risks, behaviors that prevention-focused individuals tend to avoid (Friedman and Forster, 2001).

A country's cultural tightness also impacts its residents' cognitive style. Specifically, cultural tightness/looseness coincides with adaptor/innovator cognitive styles respectively (Kirton, 1976; Kirton 1994). Individuals with an adaptor cognitive style tend to accept the assumptions, theories, norms, and practices of the system in which they are embedded as a valid and legitimate starting point. Adaptors also prefer to build on rather than overhaul established solutions and procedures when solving problems. By contrast, individuals with an innovator cognitive style have greater appetite for radical change, often challenging current norms and the assumptions that accompany them. Indeed, prior research offered some evidence linking these two cognitive styles to creative behaviors. For example, Foxall and Haskins (1986) found that the adaptor/innovator styles correlate with several personality traits associated with innovativeness and has high validity in predicting creative behaviors in consumers. Janssen et al (2014) found that individuals with the innovator cognitive style are more likely than those with the adaptor cognitive style to voice unconventional and novel ideas.

With regard to the propensity to change, individuals from tight cultures are likely to be more resistant to change because such cultures promote adherence to existing norms and rules. In a study of the emergence of female leadership around the world, Toh and Leonardelli (2012) found that fewer women reach top leadership positions in tighter cultures. These researchers

reasoned that such cultures engender resistance to changing the organizational practices that traditionally prefer to place men in leadership roles.

In sum, current theorizing suggests a *negative* relationship between cultural tightness and creativity. Yet, to date, there is little direct empirical evidence supporting this claim[5]. One objective of this paper is to empirically investigate the proposed negative relationship between cultural tightness and creativity. More importantly, we seek to expand and revise current theoretical formulation of how cultural tightness influences creativity by examining its effect on creativity in the global economy wherein creative work transcends cultural boundaries.

CULTURAL ALIGNMENT MODEL OF GLOBAL CREATIVITY

We develop a new theoretical model to better understand culture's influence on creativity in a global context (see Figure 1). We argue that the effects of cultural tightness on creativity depend on whether an individual is engaging in a foreign or a local creative task. For foreign creative tasks, cultural distance —the degree to which two cultures differ— would intensify the negative effect of cultural tightness on creativity. The degree of cultural tightness in the audience country also plays an important role – it is harder for foreigners from distant cultures to do creative work successfully in a culturally tight country. We expect this effect to be accentuated when cultural distance increases. Conversely, for local creative tasks, familiarity and adherence with the local culture confers an advantage for the innovator, resulting in a positive relationship between cultural tightness and creativity. Underlying these proposed effects is the recognition that creativity is socially constructed and success depends on how well an idea or solution culturally fits the intended audience context (Chiu and Hong, 2005; Csikszentmihalyi, 1990, 1999, 2003;

[5] An exception is Harrington and Gelfand's (2014) recent finding that culturally tight states within the U.S. tend to have lower creative output as measured by number of patents per capita. This research is however conducted within a given country and does not involve between-nation analysis.

Hempel and Sue-Chan, 2010). A highly novel idea may not be culturally aligned with an audience's culture and thus rejected. An otherwise useful idea may not be deemed useful because it does not fit the local cultural context. In our model, we develop specific hypotheses for foreign and local creative tasks.

Throughout our hypotheses development, where appropriate, we further differentiated creative engagement from performance. Engagement has to do with one's motivation and self-efficacy to attempt a creative task whereas performance has to do with one's effectiveness at the task. Little research to date has explicitly examined creative engagement, i.e., whether or not an individual takes on a creative challenge in the first place. This distinction is useful to make because attempting a creative task does not necessarily guarantee success. It would be interesting to see whether cultural tightness and distance differentially influence creativity engagement and success.

[Insert Figure 1 about here]

Foreign Creative Tasks

Foreign creative tasks entail developing novel and useful ideas for a foreign audience or to solve a foreign problem. As global organizations increasingly adopt localized innovations and strategies to succeed in different national and regional markets, an increasing number of workplace creative projects are both culture-specific and foreign to the person tasked to complete it. For instance, an American company might want to increase the adoption of its technology in foreign markets, which was the case when a credit card company was looking for innovative ways via online crowdsourcing to increase the usage of its contactless payment technology in developing countries. Conversely, emerging brands might look for new ways to advertise their

brands in the global marketplace, as a Chinese health and beauty supplement brand did when sourcing ideas for its global advertising strategy.

Effects of the Innovator's Country's Cultural Tightness. We posit that foreign creative projects are inherently challenging because they call for creative solutions suited to a less-than-familiar audience. Research on the challenges faced by expatriates has found that working in an unfamiliar cultural context can be psychologically daunting (Earley and Ang, 2003). Even a foreign creative task that does not require the problem solver to travel overseas or to directly interact with foreigners calls for grappling with ideas and information from a culture different from his or her own. While such a challenge could be exciting to some, others might shun it.

We argue that an individual's origins in a tight culture or a loose one determines how motivated he or she will be to engage in foreign creative tasks. Individuals from tight cultures are socialized in an environment that emphasizes adherence to local rules and norms; failure to do so could result in sanctions. For these individuals to take on a foreign project and pursue divergent thinking effectively, they need to shed constraining local norms. The tighter the local norms, the harder it is for individuals to break away, having been socialized to think and behave within set parameters (Smith and Blankenship, 1991). Thus, faced with a foreign creative task, an individual from a tight culture might experience low creative self-efficacy — the confidence that one has the ability to produce creative outcomes (Tierney and Farmer, 2002). One important antecedent to creative self-efficacy is having sufficient domain knowledge and experience for the task at hand. Domain knowledge represents valuable resources that individuals can draw on for creative performance (Gist and Mitchell, 1992). Experiences in a given domain prepare one to engage in the complex process of generating and evaluating creative ideas (Amabile, 1988; Weisberg, 1999). However, when an individual is doing creative work in an unfamiliar culture,

critical knowledge about the cultural context might be lacking; additionally, if an individual comes from a tight culture that discourages deviation and change, he or she might find it harder to learn an unfamiliar cultural context. All of these would in turns lower the likelihood that one would attempt a creative challenge (engagement). Hence, we argue that the tighter the culture of an individual's country, the less likely he or she will be to engage in a foreign creative task.

Does it matter how different the foreign culture is from one's own? We believe so. When creative work transcends country boundaries, an important factor to consider is how culturally different the audience country is vis-à-vis the innovator's country. In organizational research, cultural distance between nations is typically operationalized in terms of differences between stable value systems; differences in value systems are a proxy for a broader range of differences, such as traditions, norms, customs, and local business environments (Shenkar, 2001; Tihanyi, Griffith, and Russell, 2005). Here, we argue that when the cultural distance between two countries is wide, the challenges of intercultural motivation and learning would be concomitantly greater. Furthermore, due to a greater knowledge gap, it is also more difficult for the innovator to grasp the preferences of the culturally distant audience and develop solutions that fit those local preferences. Indeed, Dachs, and Pyka (2010) found that cultural distance between a company's home and foreign host country is negatively related to the number of cross-border patents and that cultural similarity (e.g., sharing a common language) between two countries can considerably spur overseas innovation activity. Using patent data in the U.S. biotechnology industry, Phene and colleagues (2006) found that the geographical origin of new knowledge matters for innovation. Specifically, they found that it could be difficult to

understand, learn, and absorb foreign knowledge because unfamiliar institutional and cultural factors influenced how the knowledge was originally derived [6].

In this paper, we argue that cultural distance influences whether or not individuals are likely to engage in and succeed at creative tasks globally. When cultural distance between one's own country and an audience country is wide, individuals from tight cultures might feel uncertain of succeeding there because the local context embodies knowledge, values, norms, preferences and other conditions that differ strikingly from their own. This lowers their creative self-efficacy, decreasing the likelihood that they would engage the task. However, when the cultural distance is close, we expect that individuals from tight cultures would be less concerned about the cultural differences and hence more likely to attempt the foreign creative task.

Hypothesis 1a*: The tighter the culture of an individual's country, the less likely he or she will be to engage in foreign creative tasks.*

Hypothesis 1b*: The relationship in hypothesis 1a is moderated by the cultural distance between the individual's country and the creative task's audience country. The greater the cultural distance between the two countries, the stronger the negative effect of cultural tightness on engagement in foreign creativity tasks.*

Even if an individual from a tight culture gamely attempts a foreign creative task, the path to success is fraught with challenges. To better understand how cultural tightness might undermine creativity success, we draw on creative cognition research. The creative cognition approach toward creativity focuses on how individuals use cognitive resources and processes to produce new and useful ideas (Finke, Ward, & Smith, 1992; Ward, 2001). Creative ideas arise

[6] These researchers only considered whether the knowledge source was local or foreign to the U.S. They did not examine cultural distance between the U.S. and the foreign knowledge's country of origin.

from the interplay between two key cognitive processes. The *generative* process focuses on acquiring, accessing information and knowledge, and recombining them to produce new ideas. The *exploratory* process focuses on searching one's knowledge space for novel and potentially useful combinations of ideas as well as judging the viability of potential solutions. The psychological adaptations engendered by tight cultures influence these two cognitive processes. When dealing with a creative task, individuals from tight cultures are less adept at searching the idea space to generate novel potential solutions because their prevention focus self-regulation restricts how expansively they would explore an unfamiliar idea space. When choosing from among potential solutions, these individuals' adaptor cognitive mindset and low propensity to change would push them to go for solutions that do not deviate too much from currently known ones. The result would be lower creativity.

These challenges are compounded when the task at hand calls for thinking outside of one's own cultural domain. Moreover, innovators need to be able to foresee the preferences of their audiences when generating new ideas or solutions (Hempel and Sue-Chan, 2010; Ford, 1996). Thus, a deep understanding of the audience's local culture is crucial for developing ideas that will be effective for them (Chiu and Hong, 2005; Csikszentmihalyi, 1999). Such understanding is elusive if the audience's culture is different from one's own. Thus, we expect that individuals from tight cultures will be less likely to succeed at foreign creative tasks than those from loose cultures.

In a similar vein to our arguments for creativity engagement, we expect cultural distance to play a role. The more culturally distant an audience country is, the harder it would be for an individual to succeed there because the influences of a tight culture render them less apt to think divergently and to take risks, and yet doing so is precisely what is required if they are to perform

creative work successfully in a culture vastly different from their own. Hence, we expect the negative effect of cultural tightness on creativity success in foreign tasks to be accentuated when cultural distance increases.

Hypothesis 2a*: The tighter the culture of an individual's country, the less likely he or she will be to succeed at foreign creative tasks.*

Hypothesis 2b*: The relationship in hypothesis 2a is moderated by the cultural distance between the individual's country and the creative task's audience country. The greater the cultural distance between the two countries, the stronger the negative effect of cultural tightness on success at foreign creativity tasks.*

Effects of the Audience Country's Cultural Tightness**.** Creativity scholars have recognized that innovators do not have complete control over the likelihood of their ideas' success in the marketplace; success depends in part on the audience's receptivity to novel ideas (Chiu and Hong, 2005; Hempel and Sue-Chan, 2010; Mueller, Melwani, and Goncalo, 2012). This recognition rests on the theoretical premise that creativity is socially constructed. Specifically, in developing a systems view of creativity, Csikszentmihalyi (1990, 1999, 2003) highlighted that the field (audiences within a specific domain) evaluate and select ideas produced by individuals within the domain. Whether or not an idea is accepted as creative depends on the field's evaluations according to its rules, norms, and preferences. Ford (1996) similarly argued that market preferences determine the viability of new products and services. Products or services that are too novel often fail in the marketplace because they lack legitimacy within the domain (Adlrich & Fiol, 1994). Indeed, psychological research suggests that the marketplace of ideas exhibits a bias toward ideas that are not overly counterintuitive, so as to maintain some

continuity with existing knowledge (Norenzayan et al., 2006). Building on the notion that audience receptivity matters when it comes to creativity success, we theorize further about how an audience country's degree of cultural tightness influences the likelihood of success at a creative task.

Cultures differ in their propensities to accept novelty and embrace change (Hofstede, 1980; Schneider and De Meyer, 1991; Buck and Shahrim, 2005). As noted earlier, tight cultures are more resistant to change than loose cultures, and less receptive to novel ideas that deviate sharply from existing norms (Gelfand, Nishii, and Raver, 2006; Toh and Leonardelli, 2012). It is also more difficult to do creative work in tighter cultures because new ideas and solutions must accord to the right degree with local norms. But the degree and type of novelty and usefulness that will work in a tight culture can be hard to calibrate, especially for a cultural outsider. Hence, we expect the cultural tightness of an audience country to be negatively associated with creativity success. Indeed, international business research has found that many U.S. retailers have been unsuccessful in Asian markets with tight cultures, such as South Korea and China, in part because their business models or products were incompatible with local cultures (Bianchi, 2008; Gandolfi and Strach, 2009; Gao, 2013).

Building on our earlier argument that a narrow cultural distance between an innovator's country and the audience country confers a familiarity advantage, we further expect the negative effect of an audience country's cultural tightness on the likelihood of success to be moderated by cultural distance. Specifically, when cultural distance decreases, the innovator should be more adept at developing new and useful solutions for the audience country because of his or her familiarity with its knowledge and norms. Thus, though it can be difficult to do creative work in a tight culture, innovators from similar cultures should enjoy an advantage over those from

distant cultures.

Hypothesis 3a*: The tighter the culture of the audience country, the more difficult it is for foreign innovators to succeed.*

Hypothesis 3b: *The effect specified in hypothesis 3a is moderated by cultural distance, such that the narrower the cultural distance between the innovator's country and the audience country, the weaker the negative effect of cultural tightness on the likelihood of success.*

Local Creative Tasks

Thus far, we have predicted that tight cultures inhibit individuals' creative thinking in foreign contexts. We contend that this effect is reversed when the creative task originates within the innovators' home culture, challenging them to come up with novel and useful ideas that are meant to target and eventually be implemented in their home countries. In other words, individuals from a tight culture could enjoy certain creativity advantages when doing creative work in their own cultures. Our prediction rests on the premise that in order for an innovator to do well in a given creative domain, he or she might understand the rules and opinions of the domain, generate and choose the most promising ideas to work on, and do so in a manner that would be accepted by the intended audience (Csikszentmihalyi, 1999:15). Because tighter cultures tend to have stronger and more restrictive norms with regard to ideas considered appropriately novel and useful, it is more difficult for foreign innovators to develop solutions suited to the local context. But individuals from those same tight cultures have the distinct advantage of knowing their own local norms well due to strong socialization, increasing their likelihood of engaging in and succeeding at local creative tasks.

Specifically, individuals from tight cultures, compared to those from loose cultures, should feel more confident and experience higher creative self-efficacy when attempting creative projects within their own cultures. This is because they are acculturated to adhere to clear social norms; also, audiences within their own cultures are more likely than those from loose cultures to adhere to the same norms. The preferences of the local audience are therefore easier to grasp, increasing confidence of success. Indeed, communications research suggests that an idea widely shared by a given audience can be effectively used to establish common ground for purposes of persuasion (Krauss and Chiu, 1998; Lau, Chiu, and Lee, 2001). In loose cultures, by contrast, norms are often unclear and not widely shared (Triandis, 1989); thus audience preferences are more pluralistic (Au, 1999), making it harder even for a local innovator to predict what solution will be well received. Moreover, individuals from looser cultures are less wedded to shared norms, and thus gravitate less strongly toward culturally familiar tasks.

Hypothesis 4*: The tighter the culture of an individual's country, the more likely he or she will be to engage in creative tasks in his or her own country (local creative tasks).*

Individuals from tight cultures might also have greater chances of success when doing creative work in their own cultures because successful creativity in such cultures requires deep understanding of local norms and preferences. Tight cultures may be unreceptive to novel ideas that do not fit their strong local norms (Toh and Leonardelli, 2012). The usefulness of potential solutions to problems must also meet highly specific local criteria. Because any new idea or solution must be acceptable to the intended audience to be considered a success (e.g., Csikszentmihalyi, 1990, 1999, 2003), individuals from tighter cultures should enjoy an advantage when doing creative work in their own cultures given their intimate knowledge of

widely shared local norms. From a creative cognition perspective, this means that they are better equipped to nagivate the idea space in which they are searching for insights; importantly, they are also better able to evaluate whether or not potential ideas would be a fit for the local cultural context. Individuals from loose cultures might be adept at divergent thinking and also familiar with their own cultures, but the lack of clear and widely shared local norms makes audience preferences and, consequently, success less predictable (Triandis 1989; Au, 1999). Thus, individuals from loose cultures may not enjoy any distinct advantages when doing creative work in their own cultures. Moreover, loose cultures confer a more even playing field for both local and foreign innovators given their less restrictive norms regarding what would constitute an appropriate solution. Thus local innovators in loose cultures are likely to face stiffer competition from foreign innovators, dampening their home field advantage.

> ***Hypothesis 5:*** *The tighter the culture of an individual's country, the more likely he or she will be to succeed at creative tasks in his or her own country (local creative tasks).*

Taken together, the above hypotheses constitute a comprehensive theoretical framework on how culture might influence creativity engagement and success in a global context. Specifically, by making the distinction between local and foreign creative tasks, we are able to develop new insights on when cultural tightness might harm or promote creativity. We indicate these hypotheses in the model presented in Figure 1.

METHOD

Empirical Background

We tested our hypotheses using data from a global creative crowdsourcing platform that we will call CrowdSourceInc[7]. CrowdSourceInc organizes creative contests for consumer-product brands and broadcasts them via the internet to a community of over 280,000 registered members from more than 160 countries. Client companies typically approach CrowdSourceInc with specific creative business problems, such as generating ideas for new products or services, product designs, brand positioning, or advertising campaigns. The problems featured on CrowdSourceInc typically entail product innovation (e.g., reinventing instant coffee for home consumption in Australia), packaging (e.g., designing a water bottle that embodies a French region's identity), marketing (e.g., persuading Malaysians to use a credit card company's contactless payment technology) or advertising (e.g., developing videos or print advertisements to illustrate the close relationship between a supermarket chain and Turkish families). These problems, which mirror those handled by innovation consulting firms, require substantive creativity to solve.

A team of strategic planners at CrowdSourceInc transforms the clients' business problems into creative briefs that are then posted online as contests. CrowdSourceInc's creative contests are broadcasted globally; participation is not restricted by gender, age, or country of residence.[8] Every project is organized as a contest with one or more potential winners; participants must submit their entries by a stipulated deadline (the format ranges from raw sketches to polished video advertisements, depending on the project.) Ordinarily, each contest has a predefined number of prizes for winning submissions, but the client company exercises

[7] CrowdSourceInc is a pseudonym; the name of the company has been concealed to protect its identity.

[8] Exceptions are made for creative contests with legal restrictions, such as contests for alcohol or tobacco products. Our data do not contain restricted contests.

complete discretion about choosing more winners, depending on the quality of submissions. Prizes are typically monetary rewards, ranging from 1,000 euros for idea-submission contests to 15,000 euros for contests that require video production.

Participants must be registered members of the CrowdSourceInc crowdsourcing platform (registration on the platform and participation to contests is free). Members read the creative brief on a given contest and decide independently whether or not to submit an entry to address the stated problem. Members choose contests on the basis of personal interest, availability, and personal assessments of whether they can tackle the task effectively enough to have a chance of winning (Parvanta, Roth, and Keller, 2013). Participants work independently on individual submissions.

At the end of a contest, the client company has access to all the submissions via a dedicated online platform. The client company then independently chooses the contest winners, based on the originality and relevance of the submissions' central ideas; the richness and quality of the submissions are also considered.[9] Because the clients are typically large international firms with global operations, their evaluators tend to be domain-area experts knowledgeable about the local culture of the audience country.[10] Thus, when assessing whether a submission is relevant to a given country, the evaluators consider the likelihood that it would be accepted and effective in that country's culture (i.e., potential for implementation success).

[9] Since 2012 (the year after we stopped collecting data), CrowdSourceInc's clients have been asked prior to launching a contest to distribute 100 points among four criteria: quality, relevance, originality, and narrative (whether the solution "tells a good story"). This exercise enables client companies to reflect on their expectations, CrowdSourceInc to tailor the creative brief to meet those expectations, and community members to gain better understanding of the judging criteria. Aggregate data on the judging criteria for 85 contests indicate that, on average, originality is the most highly weighted criteria (29 points), followed by relevance (28 points), narrative (23 points), and quality (20 points).

[10] The panel of evaluators may or may not be residents of the audience country; they are chosen because they are highly familiar with the culture of the audience country and thus well equipped to assess whether or not the proposed ideas would work in that context.

Since its inception in 2006, CrowdSourceInc has organized more than 600 contests and received over 75,000 submissions. For purposes of this paper, we had access to 99 creative contests between January 2010 and December 2011. A total of 11,671 members (68 percent male) were deemed active during that period (i.e., had entered at least one contest since joining the CrowdSourceInc platform) and are included in our analyses.

Key Measures

Engagement in and success at creative tasks. Our key dependent variables are whether or not an active member engaged in a particular creative task and whether or not he or she subsequently succeeded at it. We operationalize engagement by whether or not an individual submits an entry to a given contest (coded 1 if yes, 0 otherwise). Individuals rarely enter a given contest more than once given the significant effort a submission requires. We measured success as whether or not an individual's submission is selected as a winner (coded 1 if yes, 0 otherwise). Winning a prize suggests that one's submission is both original and useful, assessed in terms of relevance and quality. Because there is monetary reward associated with the prize, it can be construed as a tangible form of creativity success for the participant. As noted earlier, the number of winners varies with the quality of submissions to a given contest. The client company may award more prizes than was originally advertised; it does so primarily to legally own the ideas embodied in the good submissions: under CrowdSourceInc rules, intellectual property rights in the submissions are transferred to the client company once rewards were distributed and accepted. In our dataset, each contest on average awarded 5.29 prizes (the number of prizes ranged from 1 to 20).

A key strength of our measures of engagement and success is that they are based on actual behavior and performance outcomes. Prior creativity research has largely relied on subjective expert ratings and supervisor evaluations.

Foreign versus local contests. The creative contests in our dataset were culture-specific in that each task description asked for creative ideas targeting a specific country (Table 1 lists the audience countries in our dataset). Examples of the tasks include promoting a tourist destination to Americans, persuading Chinese consumers to try a new brand of premium whisky, proposing design ideas for a shopping mall in Spain, and creating a TV advertisement aimed at Egyptian consumers.

We defined a creative contest as foreign or local depending on the profile of the CrowdSourceInc member considering it. For example, a contest that targets Chinese consumers is defined as a foreign creative task for a non-Chinese member and as a local creative task for a Chinese member. Participants in our dataset represented numerous countries: France 25 percent, China 18 percent, Indonesia 11 percent, United States 6 percent, United Kingdom 5 percent, India 4 percent, Singapore 3 percent, Malaysia 2 percent, Spain 2 percent, Germany 2 percent, Italy 2 percent, Russia 2 percent, Brazil 1 percent, Hong Kong 1 percent, Ukraine 1 percent, South Korea 0.5 percent, and Australia 0.5 percent. As a result, 91 percent of contest–participant pairs were intercultural (foreign) in nature.

A participant's country was defined as his or her stated country of residence. We used data obtained from CrowdSourceInc: when participants register on the platform, they specify their country of residence. According to our interviews with CrowdSourceInc executives and participants, a participant's country of residence is also his or her country of citizenship in vast

majority of the cases. It is thus safe to assume that participants have been socialized by the social norms of their country of residence.

We determined the creative task's audience country by coding the task descriptions. Most task descriptions in our dataset clearly specify the market of interest (e.g., a Japanese advertising agency sought creative insights into unique aspects of Japanese culture). Four coders from CrowdSourceInc who were familiar with the contests independently coded the data; inter-rater agreement was high (Fleiss' kappa for four raters = 0.90) and differences were resolved by discussion.

***Cultural tightness*.** Data on countries' cultural tightness was gathered from a recent study by Gelfand and colleagues (2011), who surveyed 6,823 respondents representing a range of occupations from 33 countries and five continents. Cultural tightness was assessed on a six-item Likert scale that taps the extent to which social norms are clear, pervasive, and reliably imposed in a given country. Sample items include "In this country, if someone acts in an inappropriate way, others will strongly disapprove," "There are many social norms that people are supposed to abide by in this country," and "People in this country almost always comply with social norms." A higher score signifies a tighter culture. In our dataset, the countries that scored highest on cultural tightness were Pakistan (12.3), Malaysia (11.8), India (11.0), Singapore (10.4), and South Korea (10.0); those that scored lowest were Ukraine (1.6), Estonia (2.6), Hungary (2.9), Israel (3.1) and the Netherlands (3.3).

Gelfand and colleagues (2011) painstakingly verified construct validity and the reliability of the scale. They found high within-country agreement in every country ($r_{within\text{-}group}$ = 0.85) and high between-country variability (ICC(1) =0.13); the scale also has good reliability at the country level (alpha = 0.87). The cultural-tightness construct is related to, but distinct from, other known

cultural dimensions (e.g., Hofstede's cultural values and Schwartz's value dimensions). For example, cultural tightness is moderately correlated with Hofstede's concepts of individualism ($r = -0.47$, $p<0.01$) and power distance ($r = 0.42$, $p <0.05$), but not significantly correlated with uncertainty avoidance ($r = -0.27$, ns), masculinity ($r = -0.08$, ns), or long-term orientation ($r = -0.05$, ns). Importantly, cultural tightness is correlated in expected ways with ecological variables (e.g., population density and natural-disaster vulnerability) and with socio-political variables (e.g., a history of territorial conflicts and openness of media). (For details on these analyses, review Gelfand et al., 2011). Emerging research is beginning to link Gelfand and colleagues' cultural-tightness data in theoretically meaningful ways to organizational outcomes such as emergence of female leadership (Toh and Leonardelli, 2012) and to psychological outcomes such as subjective well-being (Plaut et al., 2012). In sum, we can be confident that the cultural-tightness data is a well-validated and reliable measure.

We matched the 33-country cultural-tightness data to the participants' countries of residence and to the creative tasks' audience countries in our own dataset. Data points whose countries lacked a tightness score were treated as missing data. Overall, our data is matched with 32 of the 33 cultural-tightness scores.

Cultural distance. We computed the cultural distance between a participant's country and a creative task's audience country by using Hofstede's five cultural dimensions (Hofstede, 1980; Hofstede, Hofstede, and Minkov, 2010): individualism, masculinity, uncertainty avoidance, power distance, and long-term orientation. Hofstede's set of cultural dimensions is arguably one of the most comprehensive collections of cultural dimensions documented in our field, spanning a large number of countries. Specifically, we adhered to Kogut and Singh's (1988) procedure in computing an aggregated score that represented the cultural distance

between two countries based on their distances on the five dimensions. Cultural distance is zero for local contests (when the participant's country and the task's audience country are identical) and positive for foreign contests (when the participant's country and the task's audience country differ). This method of computing cultural distance has gained acceptance and is widely used in international business research (e.g., Kogut and Singh, 1988; Benito and Gripsrud, 1992; Shane, 1994; Barkema, Bell, and Pennings, 1996).[11] To further verify that this approach is valid, we examined sample scores for key countries derived from our dataset and found them to have face validity. For instance, the cultural distances between the United States and China (4.61), Singapore (4.03), India (1.87), and the United Kingdom (0.43) are in an order that one would expect. Hence we are confident that the measure we used adequately captures cultural differences between countries.

Control Variables

Several other factors might also influence individuals' likelihood of engaging in and of winning creative contests on CrowdSourceInc. Some of these control variables apply exclusively to the likelihood of engagement (e.g., the amount of the reward and the number of concurrent contests); others apply exclusively to the likelihood of success (e.g., the creative contest's audience country).

Gender, prior experience, and expertise. Prior research by Jeppesen and Lakhani (2010) suggests that being an outsider to a given problem domain (that is, being female or non-expert) increases the likelihood of winning online scientific problem-solving contests. Our empirical context is different—consumer-product-oriented innovation rather than scientific problem

[11] There are many versions of cultural-distance computations (e.g., Drogendijk and Slangen 2006; Newman, 2012). This paper uses the most widely adopted method, that of Kogut and Singh (1988), to maintain continuity and facilitate comparison with the existing literature.

solving—but it is nevertheless useful to control for the potential influence of these variables. We did not expect gender to exert any particular impact, but expertise and prior experience submitting entries on CrowdSourceInc seemed apt to increase an individual's self-efficacy, and thus his or her likelihood of engaging in and winning creative contests. We coded the gender variable 1 if male and 0 if female. We quantified expertise in the field of media, marketing, and advertisement using a self-report categorical scale (4 = professional, 3 = semi-professional, 2 = amateur, 1= student). Prior experience was operationalized as the number of an individual's prior submissions on CrowdSourceInc. We then controlled for all three variables.

Reward (log). The monetary reward for winning a given contest can motivate participants to enter. This variable is captured in thousands of euros. Following Jeppesen and Lakhani (2010), we controlled for the reward amount only when predicting submission to contests; the size of the reward is likely to play a more significant role in motivating engagement than in winning.

Number of ongoing concurrent contests. Typically, multiple contests are under way simultaneously on CrowdSourceInc. Because participants are unlikely to enter multiple contests at the same time, we expected that the greater the number of concurrent contests, the lower the likelihood that a given contest would be chosen. We measured the number of concurrent contests by counting the average number of other "live" contests (i.e., those whose deadlines had not yet arrived) throughout the duration of a focal contest. This variable is relevant only to our prediction of engagement in creative tasks.

Gross Domestic Product (GDP). Our data covers countries with vastly different local conditions, including wealth and access to education and other resources; thus it is important to control for the influences of these factors. We used a country's 2010 per-capita GDP as a proxy for access to resources that would facilitate creativity thinking. We controlled for the GDP of the

participant's country when predicting engagement and for that of both the participant's country and the audience country when predicting success.[12].

Analytical Strategy

Activity on the CrowdSourceInc creative crowdsourcing platform entails two main stages: (1) submission to contests (engagement) and (2) selection of winners (success). Thus, when predicting success, there is an inherent self-selection bias that would not be taken into consideration by simple regression analyses. Performing simple regression analyses would therefore result in biased coefficient estimates, due to omitted variables, that would affect both the decision to participate and the results (Hamilton and Nickerson, 2003). To control for this self-selection bias, we used a two-stage Heckman-Probit model, whose first stage predicts submission to a contest and whose second stage predicts winning . To facilitate this analysis, we first matched each of 99 contests to every active member of the CrowdSourceInc community (at the time, 11,671 individuals), resulting in 1,155,429 contest–participant pairs. We next compared the contest end dates with the dates of the participants' enrollment in CrowdSourceInc,

[12] Note that we generally did not control for country effects (cultural tightness, and GDP) on the audience-country end when predicting engagement. Interviews with CrowdSourceInc executives revealed that participants rarely think about such factors when deciding whether or not to enter a contest. Instead, submission decisions are based on the amount of the reward, personal interest, and self-efficacy. To support our claim that participants primarily considered certain factors when deciding whether or not to engage a given creative tasks, we interviewed 31 members of CrowdSourceInc. For each interview, among other questions, we asked members the question: "When you see a new contest of a newly available contest, what do you look at in order to decide if you will participate or not?" Members were asked to talk about all the reasons that would make them decide to participate in a contest. Where necessary, the interviewer probed for details and clarification. We next conducted a basic content analysis using the resultant interview transcripts, grouping together recurring themes found in the responses, a commonly used technique to quantify and analyze the occurrence of themes in interview settings (Hsieh & Shannon, 2005; Weber, 1990). Results indicate that the top three reasons for participation are (a) creative inspiration (count of 22)– whether or not participants find the task interesting, (b) confidence in doing a good job (count of 19) – whether or not participants have the skills and resources to get the work done well; and (c) size of the reward (count of 13)– the larger the reward, the more likely a participant would consider participating. Other less prevalent factors include time availability and brand appeal of the task (for tasks involving consumer products). Nowhere in our interviews did participant mention any characteristics of the audience country. Thus we are confident that certain factors, while important for predicting success, are not relevant for predicting submission.

eliminating instances when the contest ended before the participant joined, resulting in 850,435 usable data points. For all valid contest–participant pairs, we then matched the data with our external data sources, such as Gelfand and colleagues' (2011) cultural tightness, GDP, etc. After taking into consideration missing data from various sources, we ended up with 636710 contest-participant pairs (74.9 percent of the valid dataset).

We used STATA's *heckprob* command to run the two-stage analyses, clustering at the participant level because error terms for a participant who entered multiple contests might be correlated.[13] The first stage models participants' self-selection as part of the submission sample; the second stage models the discrete outcome in which a given submission is or is not selected as a winner. The second-stage estimation includes an error-correction term obtained from the first-stage estimation. As noted above, the first-stage estimation examines a member's decision to enter a contest as a function of his or her country's cultural tightness and cultural distance (our key predictors), alongside such control variables as reward amount, gender, prior experience, expertise, number of concurrent contests, and GDP. The second-stage estimation examines the selection of winners as a function of cultural tightness (of both the participant's country and the contest's audience country) and cultural distance, taking into account control variables such as gender, prior experience, expertise, and GDP. This type of analysis has been used in similar research on online crowdsourcing platforms (Cassiman and Veugelers, 2006; Jeppesen and Lakhani, 2010).

[13] Multiple participants enter a given contest, but they complete their creative work and submission independently; thus there are unlikely to be strong correlations among the error terms associated with multiple participants' entry into the same contest. Nevertheless, we ran corresponding analyses clustering at the contest and found the same results.

Results

Preliminary analyses. Tables 2A and 2B present the correlations and descriptive statistics for variables used in first- and second-stage Heckman probit regressions respectively. Table 3 presents the results. Model 1 presents a baseline analysis involving cultural distance and the key control variables. The stage-1 estimations indicate that the greater the cultural distance between a participant's country and the contest's audience country, the less likely he or she is to enter that contest ($b = - 0.073$, $p < 0.01$); for those who did enter (stage 2), the greater the cultural distance between a participant's country and the audience country, the less likely he or she is to win the contest ($b = - 0.067$, $p < 0.01$). Unsurprisingly, the larger the reward, the more likely a participant is to enter a contest ($b = 0.319$, $p < 0.01$). The more concurrent contests there are, the less likely it is that a participant will enter a given contest ($b = -0.086$, $p < 0.01$), presumably because there are more options to choose from.

The participant's country and audience country's GDP per capita control variables showed some interesting effects. For stage-1 estimation, we included only the participant's country's GDP because submission is more likely to be influenced by the participant's country's economic condition than by that of the audience country. For stage-2 estimation (winning), we included both the participant's country's GDP and the audience country's GDP. Results indicate that a participant's country's per capita GDP is negatively associated with likelihood to enter a given contest ($b = -0.005$, $p < 0.01$) but positively associated with the likelihood of winning a contest once entered ($b = 0.006$, $p<0.01$); participants from richer countries are less likely to enter a creative contest presumably because they have less motivation to pursue monetary rewards and thus are more selective about entering contests, but those who do so are more likely to win presumably because better resources help them hone their submissions.

Participant's expertise and prior submission experience also impact engagement and success in expected manners. Specifically, self-reported expertise predicts both first-stage submission (professional: $b = 0.094$, $p < 0.01$; semi-professional: $b = 0.050$, $p < 0.05$; amateur: $b = 0.004$, $p > 0.05$) and second-stage success (professional: $b = 0.254$, $p < 0.01$; semi-professional: $b = 0.168$, $p < 0.05$; amateur: $b = -0.129$, $p > 0.05$). Number of prior submissions also matters in that participants with more prior submissions to CrowdSourceInc are more likely to enter ($b = 0.009$, $p < 0.01$) and win creative contests ($b = 0.008$, $p < 0.01$).

Hypotheses testing. In testing our hypotheses, we first focus on predictions pertaining to foreign creative contests. We examine how a participant's country's cultural tightness impacts submission and success (hypotheses 1a and 2a) and whether these relationships are moderated by cultural distance (hypotheses 1b and 2b). We then investigate how cultural tightness of an audience country influences foreign innovators' likelihood to succeed there (hypotheses 3a and 3b). Next, we turn to hypotheses on local creative contests, testing whether participants from tighter cultures are more likely to engage and succeed in creative tasks in their own countries (hypotheses 4 and 5).

Model 2 adds the participant's country's cultural tightness to both stage-1 and stage-2 estimations, and adds the audience country's cultural tightness to the stage-2 estimation. Results indicate that the tighter the culture of a participant's country, the less likely he or she is to enter a given contest ($b = -0.022$, $p < 0.01$). Upon entry, cultural tightness of a participant's country did not have any main effect on the likelihood to win a given contest ($b = -0.003$, $p > 0.05$).

Model 3 adds the participant's country's cultural tightness x cultural distance interaction term to both stage-1 (submission) and stage-2 (success) estimations to test hypotheses 1a, 1b, 2a, and 2b. The interaction terms are significant in both stage-1 ($b = -0.041$, $p < 0.01$) and stage-2

estimations (b = -0.042, p <0.01). The patterns of interaction are depicted in Figures 2A and 2B respectively. Figure 2A shows that, for foreign creative tasks, when the cultural distance between a participant's country and the audience country is equal to the mean or +1 standard deviation, the greater the cultural tightness of the participant's country, the less likely he or she is to enter the contest (simple slope analyses at mean level cultural distance: chi-sq = 25.49, $p < 0.01$; simple slope analyses at +1 SD cultural distance: chi-sq= 90.59, $p < 0.01$). When cultural distance is low (i.e., - 1 SD), the cultural tightness of the participant's country had a positive effect on his or her likelihood of entering a foreign contest (chi-sq = 14.70, $p < 0.01$). This finding for low cultural distance is consistent with our prediction for local contests where cultural distance is zero.

Let us now consider the effects on winning. Here, we see a similar pattern of findings. Figure 2B shows that, for foreign creative projects wherein the cultural distance between a participant's country and the audience country is equal to +1 standard deviation, the greater the cultural tightness of the participant's country, the less likely he or she is to win (simple slope analyses at +1 SD cultural distance: chi-sq= 5.89, $p < 0.05$). Cultural tightness of the participant's country however has no significant effect on winning at mean level cultural distance (chi-sq = 0.17, $p = 0.68$). At low cultural distance (i.e., - 1 SD), the effect of the participant's country's cultural tightness on winning a foreign contest is positive and significant (chi-sq = 5.34, $p < 0.05$), suggesting that participants from countries with tight cultures are more likely to succeed in creative contests from foreign countries that are culturally close to their own. These findings jointly offer partial support for hypotheses 1a and 2a, in that cultural tightness is negatively associated with engagement in and success at foreign creative tasks. The hypotheses seem, however, to apply mainly to situations in which the cultural distance between a

participant's country and the audience country is moderate to high. When cultural distance is low, the effects are consistent with our predictions for local contests.

The analyses thus far also offer considerable evidence that hypotheses 1a and 2a are moderated by the cultural distance between a participant's country and the audience country such that the greater the cultural distance, the stronger the negative effect of cultural tightness on engagement in (hypothesis 1b) and success at foreign creative tasks (hypothesis 2b). Specifically, for foreign creative contests, the negative effect of cultural tightness on submission is significantly stronger at a high level (+1 SD) of cultural distance than at the mean level (moderate cultural distance: chi-sq = 25.49, $p < 0.01$; +1 SD cultural distance: chi-sq= 90.59, $p < 0.01$; chi-sq difference = 65.10, $p<0.01$). As for winning of foreign contests, the negative effect of cultural tightness gains strength as we move from moderate to high cultural distance (moderate cultural distance: chi-sq = 0.17, $p = 0.68$; +1 SD cultural distance: chi-sq= 5.89, $p < 0.05$).

Let us now consider hypotheses 3a and 3b. Looking at model 2, we see that the tighter the audience country's culture, the less likely a given participant is to win the contest ($b = -0.078$, $p < 0.01$). Recall that client firms can award as many winners as there are good submissions so as to obtain the intellectual property rights to these submissions. We next regressed the number of winners at the contest level on the audience country's cultural tightness, controlling for the number of submissions; results indicate that contests in tighter cultures indeed tend to award fewer winners ($b = - 0.41$, $p = 0.05$). Additionally, we found that audience country's cultural tightness did not significantly influence the number of submissions. These findings support hypothesis 3a, which predicts that a tight culture in an audience country makes it more difficult for creativity efforts to succeed there because of more stringent selection

criteria. In model 3, the negative association between an audience country's cultural tightness and general creativity success remain significant and in the expected direction ($b = -0.091$, $p < 0.01$).

To check whether the effect of the audience country's cultural tightness interacts with cultural distance (hypothesis 3b), we added this specific interaction term in model 4. Results indicate that the interaction effect is not significant, suggesting that cultural distance did not matter ($b = 0.013$, $p > 0.05$). Simple slope analyses further revealed that at low (-1 SD), moderate (mean), and high (+1SD) cultural distance, tighter audience country cultural tightness was associated with lower creativity success (low cultural distance: chi-sq = 9.65, $p < 0.01$; moderate cultural distance: chi-sq = 23.32, $p < 0.01$; high cultural distance: chi-sq = 25.68, $p < 0.01$). Taken together, there is support for hypothesis 3a but not hypothesis 3b: the tighter the culture of the audience country the more difficult it is for foreign innovators to succeed there but cultural distance between participant and audience did not matter. We will discuss this finding further in the Discussion section.

To test the hypotheses concerning local contests (hypotheses 4 and 5), we examined the effect of a participant's country's cultural tightness on entering and winning local creative contests (those in which the cultural distance between a participant's country and the audience country is zero). Figure 2A shows that at zero cultural distance, the greater the cultural tightness of a participant's country, the *more* likely he or she is to enter a creative contest. Simple slope analysis is significant (chi-sq = 62.45, $p < 0.01$). A similar pattern characterizes winning, such that the greater the cultural tightness of a participant's country, the more likely he or she is to win a creative contest (simple slope analysis: chi-sq = 9.48, $p < 0.01$). Taken together, these results provide support for hypotheses 4 and 5: individuals from tighter cultures are more likely

to engage in and succeed at creative tasks from their own country. As an example, we see in our dataset that when a global supermarket chain wanted to expand its appeal to Turkish families, the best idea came from a local Turkish innovator – Turkey has a tight culture.

Robustness checks

Missing data analyses. Because we combined our data from CrowdSourceInc with secondary data on cultural tightness and cultural distance, there is inevitably missing data. We addressed missing data concerns using the multiple imputation strategy (Rubin, 1987). In this approach of missing data analyses, rather than filling in a single value for each missing value, one replaces each missing value with values drawn from a set of plausible values modeled based on other variables in the dataset. In our analyses, we focused on missing values for cultural tightness (on both participant and audience end) and cultural distance because these are our key predictors taken from secondary sources and have the highest rate of missing values. We conducted 15 imputations in our analyses using the *mi* command in STATA. Specifically, missing values for the three key variables are imputed 15 times to generate 15 "complete" datasets. Next, these 15 datasets are analyzed using our original analytical model. The results from these 15 datasets are subsequently combined to derive a single set of results for inference purposes. The results showed that all the main effects involving cultural distance, cultural tightness (participant and audience) and the associated interaction terms are statistically significant and consistent with our results reported in Table 3. Thus we are confident that missing secondary data would not materially change our findings.

Other cultural values. We also took further steps to verify whether the hypothesized effects would hold up after controlling for other cultural values and dimensions. Specifically, we

ran two additional models including, respectively, Hofstede's five cultural dimensions (individualism, masculinity, uncertainty avoidance, power distance, and long-term orientation) and some of Schwartz's creativity-related cultural values (freedom, creativity, respect for tradition, broadmindedness, and curiosity) as control variables in both stages. All of the previously reported effects remained significant despite including these numerous additional cultural variables. Thus we are confident that our findings are highly robust and unlikely to be explained away by other cultural factors.

Supplementary evidence

To deepen our understanding of the findings above, we conducted interviews to learn why most submissions to online creative contests fell short and did not win an award. Our goal is to supplement our main study's findings with observations from the field. We randomly selected five France-based contests from our dataset; for each contest, we further selected 10 to 12 submissions from the pool that did not win any award. About half of these submissions were from local innovators whereas the rest were from foreign innovators. We focused on French contests because our research site is based in France, enabling us to recruit three marketing experts familiar with the local market to evaluate the failed submissions. These experts, blind to the origins of the submissions, were interviewed on why they thought each submission failed to be selected as a winning entry by the client company. By understanding why submissions failed, we hope to illuminate the factors that underlie creativity success and provide further corroborating evidence for our thesis.

Consistent with our main thesis, many submissions seemed to fail because they either lacked understanding of the audience market or the degree of novelty was not accurately

calibrated for the intended audience. For example, referring to a contest for creating promotional videos to promote awareness of female condoms in France, one expert said "*the creator added some animations, and this is typically the kind of short movies that is popular in Asia. I am not sure that is adapted to the French market.*" Referring to an entry submitted to a contest that aimed to redesign the bottle of a French water brand, one expert commented on how an idea might be disturbing to the French audience – "*If it hasn't won a prize it is because the French market is not used to this kind of designs. I don't know if it would have been successful… maybe it could have worked, but maybe it could have disturbed the audience in France too.*" Another evaluation for an entry submitted to the same contest indicates "*This would be too distant in France, actually, which is still their major market. […] But for the core of the market…this would be too much of a stretch."* Taken together, these interview feedback appear to support our argument that cultural alignment in term of both usefulness and novelty is important for creativity success in the global context. Other reasons on why submissions failed included – submission not aligned with the client company's vision or positioning, submission did not meet requirement or specification stipulated, poor execution, solution is not feasible for implementation, and tough competition from other submissions. A list of these reasons with accompanying quotes from the experts is presented in Table 4.

To see if submissions from local and foreign innovators differ, we explored why submissions from each category failed. We found evidence that although local submissions may have a good understanding of the local French market, the ideas they embodied are less novel than those from foreign submissions. In fact ideas from local submissions are more likely to be seen as adaptation than innovations. For example, commenting on a contest for generating gift ideas for the French clientele of a cosmetic brand, an expert said this about a failed local

submission, "*It's not very novel as this kind of gift already existed for a long time. You can find them in any kind of shops in France […] if I'm not mistaken. The only new thing is the drawings on the mirror."* Commenting on a contest for gathering new reality TV show ideas for France, an expert evaluated a local submission as such "*It is not very original. See winning criteria: 'we won't accept ideas that are adaptations of existing shows'. This one is clearly an adaptation of existing shows.*" Conversely, foreign submissions are seen as novel, presumably because they draw on ideas unfamiliar to local audiences. For instance, commenting on a submission to the contest for the French water brand's bottle design, an expert said "*It's totally novel, but a bit too far from the usual bottle shapes that we can see in France. It might perturb the consumer*." This comment suggests that despite the higher level of novelty, this foreign submission was gauged to be unlikely to be successful in France because its ideas might be too far-fetched and thus not well accepted by French consumers. It is also interesting to note that foreign submissions often contain elements that were judged to be more acceptable for other cultures than France. For example, referring to a contest in which individuals were asked to personalize a car (roof, mirrors, dashboard and rims) with designs inspired by French Luxury, an expert said "*Maybe in Russia it could have worked… I don't know why. Or in China or anywhere, but in France, this is not… The symbol of the animal, the reptile, it is not a very popular or appreciated animal in France*." Thus, while foreign ideas have the potential of being profitably applied across cultures to achieve creativity, cultural fit with the local context is critical for success.

Regarding cultural tightness, our interviews also revealed evidence consistent with our thesis that individuals from tight cultures might be less prone to thinking out of the box when doing creative work overseas. For example, when asked about a failed submission from a culturally tight country (tightness score 11.0) to the contest that asked participants to propose

new reality TV shows for France, an expert said "*Putting celebrities in funny situations, or uncomfortable situations, is really not something new…[The company was] looking for something new. They were looking to really create a big buzz around something that has never been done before. That's the only reason why it didn't succeed.*" For another foreign submission from a tight culture (tightness score 11.0), submitted to the water bottle design contest, an expert said,*"[This submission did not win] because it's not original, it's been seen before. […] We had so much creativity around the volcano and the Auvergne, [and] this is only about a label that has the name of the brand on an image of a volcano – that's all – and really the bottle is not original. This can't be owned by [this brand], which has such a strong identity. They would lose all their identity if they would go for a bottle like this, that is so common.*" Here, beside the lack of originality this submission also seems to lack familiarity with the client company's brand positioning in the French consumer market. Indeed as the expert further suggested, this submission fell short both in terms of novelty and usefulness. Taken together, our interview observations added contextual richness to the findings in our main study, providing useful supplementary evidences that corroborate with our key arguments.

DISCUSSION

In this research, we develop and test a new theoretical model –*Cultural Alignment Model of Global Creativity* – on how culture influences creativity in the global context. We theorize that creativity engagement and success depends on three key factors: the innovator's country's cultural tightness, the audience country's cultural tightness, and the cultural distance between the innovator's and audience's country. We argue that the effects of cultural tightness on creativity depend on whether an individual is engaging in a foreign creative task, which entails developing

novel and useful ideas for a foreign audience, or a local creative task, which involves creatively solving a problem for one's own country. Cultural tightness influences whether or not individuals can think divergently to derive novel yet useful ideas as well as how receptive a country is to foreign creative ideas; additionally, cultural tightness and cultural distance jointly influence whether there would be cultural alignment between the proposed creative ideas and their intended audiences. Using data from a global crowdsourcing platform, we found that an individual from a tight culture is less likely than a counterpart from a loose culture to engage in and succeed at foreign creative tasks that are culturally distant. The greater the cultural distance, the stronger the negative impact of cultural tightness. Further, our results suggest that the tighter the culture of the audience country, the lower the likelihood of creativity success in that country for foreign entrants. In the case of local creative tasks, contrary to what current theorizing would predict, cultural tightness increases the likelihood of engagement and success. Taken together, these findings provide unprecedented demonstration on how cultural norms impact creativity on a global scale.

Theoretical Contributions

This research makes several theoretical contributions. First, it contributes to current understanding of how culture impacts creativity by developing a new theoretical model outlining culture's influence on creativity on both the innovator's and the audience country's ends. We also consider the cultural distance between the innovator's country and audience country. Our model represents the first to take a comprehensive view of global creativity, emphasizing the importance of considering audience country's culture as well as the cultural gap between the innovator's country and audience country. This theoretical development is a significant departure

from current analyses of culture's influence on creativity. Existing work tends to compare country effects – for example, Asians are often found to be less creative than Westerners (Torrance, 1969; Ng, 2000; Niu and Sternberg, 2001, 2002, 2003; Noriko, Fan, and Van Dusen, 2001). Rather than simply pinpointing differences between countries, we unpack the effects of culture by examining the construct of cultural tightness. A key strength of this approach is that it identifies a specific dimension of cultural norms and then builds arguments on theories associated with this cultural dimension.

Our theoretical model highlights how culture impacts *cross-border* creativity engagement and success. Current research has paid limited attention to how an innovator's cultural background impacts his or her ability to do creative work across national borders. Our research addresses this important gap by highlighting that in the global economy, producers and receivers of creative products may very well come from different cultural backgrounds and there is therefore a need to better understand how the degree of cultural differences between countries influence creativity success. The finding that the greater the cultural distance, the less likely one is to engage in and succeed at foreign creative tasks underscores the challenges in global creative work. Importantly, inherent in this finding is the theoretical underpinning that creativity engagement and success depends in part on whether there is some degree of cultural alignment between the innovator's country and the audience country. Indeed, our unexpected finding that individuals from tighter cultures are more likely to engage and succeed in foreign creative tasks from culturally similar countries provides further support for this cultural proximity argument. Individuals from tighter cultures have greater adherence to their local norms, giving them a creativity advantage when the norms of a foreign country are highly similar to those of their own. Additionally, observations from field interviews of experts examining non-winning submissions

also supported our argument that the lack of cultural alignment (both in terms of usefulness and novelty) between submissions and the audience context are factors that cause ideas to be rejected.

Our theoretical model is also one of the few that directly examine the effect of an audience's culture on creativity success. We found that the tighter a given culture, the harder it is to successfully do creative work within it, presumably because tight cultures' rules and norms are hard to satisfy. We had expected this effect to be stronger when the cultural distance increases between an innovator's country and the audience country (hypothesis 3b). But we did not find support for this hypothesis. Further analyses reveal that, within a tight culture (+1 standard deviation from the mean), cultural distance does not appear to matter much for creativity success. This finding suggests that tight cultures are equally unforgiving to foreign innovators, regardless of how culturally similar the countries of these foreign innovators are to that of the audience culture. One explanation could be that audiences in tight cultures are somewhat "xenophobic" and are therefore generally unreceptive to any foreign ideas – even if the ideas come from a culturally similar place. Another explanation could be that an audience country's tight culture constitutes a strong situation (e.g, Benjamin Jr and Simpson, 2009) that is difficult to overcome regardless of how familiar one might be with the culture. Taken together, our new theoretical model and findings can spur other scholars to further develop theories on cross-border creativity.

Second, the present research also speaks directly to current theorizing about how cultural tightness impacts creativity. Gelfand and colleagues (2006) theorized that cultural tightness generally undermines creativity. Although we found some evidence supporting this proposal, we also found the relationship between cultural tightness and creativity to be more complex than was previously thought. One finding that enriches existing theory pertains to the moderating

effect of cultural distance when a creative task is foreign to the innovator. That the negative effect of cultural tightness on creativity engagement and success increases with cultural distance implies underlying mechanisms such as motivation (perceived creative self-efficacy) and cognitive ability to engage with unfamiliar ideas. From a motivational perspective, it could be that individuals from tight cultures find it challenging to work with unfamiliar foreign ideas and thus experience low creative self-efficacy with respect to foreign tasks, deterring them from engaging such tasks. Moreover, even if these individuals attempted a creative task in a culturally dissimilar context, they lack the ability to generate creative solutions to foreign problems because their adaptor cognitive style and prevention-focused self-regulation constrain their cognitive flexibility.

More broadly, empirical evidence that tight cultures can indeed inhibit individuals' ability to generate novel ideas is consistent with the notion that a culture of tolerance is an important predictor of cities' creativity (Florida, 2002). Overall, our work in combination with that of Florida (2002) emphasizes the importance of a society's cultural norms and cultural climate in nurturing creative talent.

Third, the present research has implications for creativity theories. Creativity research to date has greatly emphasized the importance of divergent thinking (Baer, 1993, 1996; Torrance, 1998; Guilford, 1956; McCrae, 1987). Yet some scholars have argued convergent thinking has a critical role to play as well (Cropley, 2006; Goncalo and Duguid, 2011). For instance, Goncalo and Duguid (2011) found that in teams whose members are not particularly creative, conformity to individualist norms boosts creative performance. Cropley (2006) argued that convergent thinking helps an innovator evaluate ideas with an eye to practicality and implementation. While divergent thinking is great for generation of novel ideas, convergent thinking is required to

ascertain if these ideas would be useful for a given problem context. Our finding that individuals from tight cultures are especially apt at doing creative work in their own cultures is consistent with this argument. Tight cultures have narrow tolerance toward overly novel solutions. Thus, the innovator needs to be able to correctly sieve through the set of novel ideas to identify those that would work in the given local context. This effort requires intimate knowledge of the local cultural norms and a willingness to adhere to them. In sum, our work adds to a small growing effort that highlights the importance of convergent thinking in the creativity process.

Fourth, our research has implications for a related but separate body of research that examines how experiences with foreign cultures impact individuals' creative performance (e.g., Leung et al., 2008; Cheng, Sanchez-Burks and Lee, 2008; Maddux, Adam, and Galinsky, 2010). A central theme in this research is that experiences with foreign cultures have the potential to promote creativity via increased access to diverse perspectives and knowledge. But whether such benefits are realized depends on a range of individual-level moderating factors such as degree of cultural-identity integration (Cheng, Sanchez-Burks and Lee, 2008) and intercultural learning (Maddux, Adam, and Galinsky, 2010). Our research suggests that socio-environmental factors, such as the cultural tightness of the society in which one is embedded, also play a critical role. Innovators from tight cultures appear less likely than those from loose cultures to draw on ideas from foreign cultures while performing creative work. This finding jointly with recent evidence that indirect experience of intercultural conflict in one's social environment can undermine multicultural creativity (Chua, 2013), highlights the effects of the broader socio-cultural context on creativity.

Our work also speaks to recent research on intercultural creative collaboration in dyads (Chua, Morris, and Mor, 2012). Although our theory about cross-border creativity focuses on the

individual level of analysis, it inherently involves applying one's own cultural perspectives and knowledge in a different cultural context. Chua and colleagues (2012) found cultural metacognition (awareness of one's own and others' cultural assumptions) to be an important predictor of success at intercultural creativity. Our research is consistent with this finding in that, to the extent that a tight culture socializes individuals to adhere to established norms, it can make it harder for them to critically question assumptions about their own cultures and those of the audience country. The result is lower effectiveness at drawing on multiple cultural perspectives and knowledge during creative work. Taken together, this study and prior research emphasize the importance of overcoming the normative constraints of one's own culture before one can be effective at creative works in a multicultural environment.

Fifth, our findings suggest that it is fruitful to differentiate engagement from performance in creativity research. Greater motivation to undertake local creative tasks does not necessarily result in greater success, but engagement is a necessary condition for success. Specifically, if we examine figures 2A and 2B, we see that the point of inflexion for cultural distance's moderating effect on creativity engagement and success differs. At mean level of cultural distance, individuals from tighter cultures are less likely to engage foreign creative tasks, yet once they attempted these tasks, they are not necessarily less likely to succeed compared to counterparts from less tight cultures. These results suggest that culture's impact on creativity engagement and success might not directly mirror each other in terms of the magnitude of influence. It therefore behooves creativity researchers to carefully distinguish creativity engagement and success.

Lastly, our findings contribute to research on open approaches to innovation through mechanisms such as creative crowdsourcing. Thus far, the literature on open and distributed innovation has always considered "crowds" as a relatively homogenous set of individuals or

companies (Zheng , Li and Hou, 2011; Prpic et al, 2014; Zheng et al, 2014). To our knowledge, our work is the first to investigate how the cultural heterogeneity of crowds (participants) and companies (clients) impact participation and performance in global creative problem-solving. Prior research had found that social (being a woman and thus an outsider to the scientific establishment) and technical marginality (being an expert in a field other than the task's focal field) could enhance performance in distributed scientific problem-solving (Jeppesen and Lakhani, 2010). Our results indicate that "cultural marginality" seems to have the opposite effect if one comes from tight cultures – the greater the cultural distance, the lower the likelihood of creativity engagement and success at foreign creative tasks. This negative effect disappears for innovators from loose cultures. This finding suggests that the effects of marginality on performance on crowdsourcing platforms is likely to be contingent on other factors such as the cultural environment that the innovator comes from.

Limitations and directions for future research

Like all research, this work has some limitations. First, we treat cultural tightness as a uni-dimensional construct, though two countries may have similar degrees of cultural tightness but qualitatively different norms and rules. For example, Singapore and South Korea have similar cultural-tightness scores (10.40 and 10.00 respectively), but Singapore's cultural tightness stems primarily from laws and norms promulgated by the government to regulate behavior, whereas South Korea's stems from the strong norms that characterize a culturally homogenous society. It is plausible that qualitatively different forms of tight culture exert different effects on creative outcomes. Depending on the source of norm regulation and the particular domain in which society is tight, different types of creativity could be at stake. For example, though it is a

culturally tight society, Singapore has one of the world's most innovative cuisines. Thus, it would be worthwhile for future research to unpack the cultural-tightness construct into more nuanced dimensions. For example, future research could identify specific social domains (e.g., family life, work life, etc.) in which to measure cultural tightness. It would also be interesting to find out how cultural tightness in different spheres of life correlate. This new research direction is consistent with recent work by Chatman et al (in press) arguing that it is important to consider the content of cultural norms and not just its intensity and level of consensus.

Another shortcoming of the prevailing treatment of cultural tightness is that data is collected at the country level (Gelfand et al., 2011), thus overlooking regional differences within a country. Indeed, research by Plaut and colleagues (2012) found Boston and San Francisco to exhibit different levels of cultural tightness: people in Boston are more likely to perceive clear prevailing social norms than people in San Francisco. The researchers attributed this difference to the two cities' different historical and institutional roots. More recent research by Harrington and Gelfand (2014) mapped wide variations in cultural tightness across 50 states in the U.S., further demonstrating within-country differences. Given these evidences, documentation of within-country differences would make for more precise predictions in future research.

Second, although our measure of creativity success has the strength of being a concrete real-world outcome – whether or not a prize was awarded to a solution, this measure does not capture whether or not the solution would in fact work well for the client in the targeted cultures. However, our supplementary evidence (Table 4) revealed that implementation issues such as costs, complexity, and risks are clearly taken into account during the winner selection process. Thus, our creativity success measure is not completely devoid of implementation-related considerations. Nevertheless, the research site we worked with had not systematically tracked

implementation of winning solutions. Should this data become available, future research should investigate whether cultural tightness impacts the actual successful implementation of proposed solutions. However, this approach will have to take into consideration additional implementation-related factors, including the organization's ability to "absorb" external knowledge (Cohen and Levinthal, 1990) or political processes such as gaining access to resources and obtaining executives' buy-in (Katz and Allen, 1982).

Additionally, our creativity measure does not differentiate between incremental versus path-breaking ideas. Incremental ideas extend and improve upon existing ones whereas breakthrough ideas bring about whole new perspectives or insights. Innovation research has however made this distinction, suggesting that different kinds of organizational routines and procedures, some of which might be influenced by national culture, could foster different types of innovation (e.g., Herbig and Palumbo, 1996; Nelson and Winter, 1982; Walsh and Nagaoka, 2009). Thus, a fruitful area of future research is to investigate how cultural tightness and cultural distance impacts the type of ideas that are generated. One speculation is that creative ideas from tight cultures might be more incremental in nature than those from loose cultures.

Third, our measure of cultural distance is also a possible limitation. Although Kogut and Singh's (1988) formula for computing cultural distance has been widely used in international business research, it has also been subject to critiques. For instance, scholars have argued that this measure is based on Hofstede's dated cultural dimensions (1980), which might not apply to contemporary contexts (Shenkar, 2001; Taras, Steel, and Kirkman, 2012). However, some researchers have argued that it is premature to dismiss this widely used computation (Drogendijk and Slangen, 2006; Newman, 2012). Drogendijk and Slangen (2006) compared computations using different sets of value dimensions, including Schwartz's (1994) world value dimensions,

and values data based on a survey of managerial perceptions; they found the explanatory power of the Hofstede-based and Schwartz-based measures to be comparable, and those based on managerial perception to be lower. Moreover, research that uses other formulations often finds empirical results similar to those generated when using Kogut and Singh's (1988) method (e.g., Barkema and Vermeulen, 1997; Berry, Guillen, and Zhou, 2010; Newman, 2012). We acknowledge that our measure of cultural distance is not perfect, but voluminous research has used it to produce theoretically meaningful results and conclusions. Future research could attempt to replicate our findings when a more compelling method of computing cultural distance is developed.

Fourth, it should be noted that our research did not measure individual differences in multicultural experience and cross-cultural competence. Prior research has established that individual differences, such as cultural metacognitive ability (Chua, Morris, and Mor, 2012), overseas experience (Maddux and Galinsky, 2009), and multicultural experiences (Leung and Chiu, 2008, 2010), matter for creativity. Given the scale of our dataset (more than 11,000 participants), we are unable to measure these variables without having to discard a substantial portion of valuable data due to non-responses. Future research in other empirical settings could examine how individual-differences variables interact with cultural tightness. For example, individuals with high intercultural competence might find a foreign creative project less intimidating, weakening the negative effect of cultural tightness.

We believe that this research provides a good starting point for scholars to further study the impact of culture on creativity. One fruitful future direction might be to differentiate between organizational culture and national culture (Tellis, Prabhu, and Chandy, 2009). Gelfand and colleagues (2006) argued that national culture to some extent shapes organizational culture; but

organizational culture might at times trump national culture (Nelson and Gopalan, 2003). It would be interesting to explore how cultural tightness at the country and organizational level interact to influence creativity and other outcomes of interest. One possibility is that a loose corporate culture might compensate for, or even overcome, the detrimental effects on creativity of a tight national culture. Another avenue for future work is to examine how tight cultures might be used strategically to gain an advantage in innovation.

Although the present findings highlight the creativity pitfalls of cultural tightness, one might wonder what the effects would be if a tight culture contain strong norms that foster creativity. Indeed, Toh and Leonardelli (2012) found that although fewer women reach top leadership positions in tight cultures, if the culture espouses egalitarian values, tight cultures had even more women in leadership positions. In a similar vein, it is possible that tight cultures with creativity-fostering norms might actually have positive effects on creative performance. Future research should investigate what these creativity-fostering norms might be and how they interact with the general effect of cultural tightness that involves strong rules and sanctions. Additionally, future research can also look at cultural tightness's effect on innovation implementation. To the extent that tight cultures are efficient and well regulated, they might perform especially well at implementation of creative ideas (Katz, Casey, and Aiman-Smith, 2005; Wong, 2002). The challenge then is to pinpoint how societies or organizations can, at the same time, mitigate the negative effect of cultural tightness on creative idea generation.

Practical Implications

By shedding light on how culture influences creativity on a global scale, this research also offers insights for practitioners. First, given our finding that individuals from tight cultures are less

likely to engage in and succeed at unfamiliar creative tasks than those from loose cultures, organizations and even entire societies might be well advised to nurture looser cultural norms to facilitate global creativity and innovation. Practically, this goal could be operationalized by fostering cultural diversity within a company, promoting tolerance of counter-normative ideas, and facilitating creative exchanges across national boundaries.

Furthermore, our finding that individuals from tight cultures tend to have greater creativity success within their own countries (compared to individuals from loose cultures doing creative work in their own countries) suggest that it might be beneficial for some countries to look inward for innovation. The notion that creativity arises from accessing foreign knowledge has its limitations when the culture of the intended audience is tight. Thus, cross-border creativity may not work equally well for all nations and it behooves some countries to focus inward for their next breakthrough.

Our research also has implications for the crowdsourcing industry. Understanding differences in creative engagement and performance across cultures can help organizations and innovation intermediaries better orchestrate crowdsourcing on a global scale (Brabham, 2012; Bayus, 2013). Our findings suggest that crowdsourcing organizations ought to take cultural factors into consideration when soliciting creative ideas from abroad. Organizations seeking creative contributions from foreign countries should carefully explain the cultural context of problem to be solved.

Conclusion

There is no doubt that culture shapes creative thinking and innovation, but pertinent research is still in a nascent stage. This paper contributes to the growing body of literature by documenting

how countries' cultural tightness and cultural distance influence creativity in a global setting. The theoretical model we advance in this paper broadens prevailing theoretical formulations on how culture influences creativity (e.g., Lubart, 1990; Shane, 1995; Lubart, 1999; Bechtoldt et al., 2010; Morris and Leung, 2010; Leung and Morris, 2010). Given the critical roles of globalization and innovation in determining individual and business success in the twenty-first century, we hope that future research will build on our findings to further understanding of how culture influences creativity.

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Figure 1: Cultural Alignment Model of Global Creativity

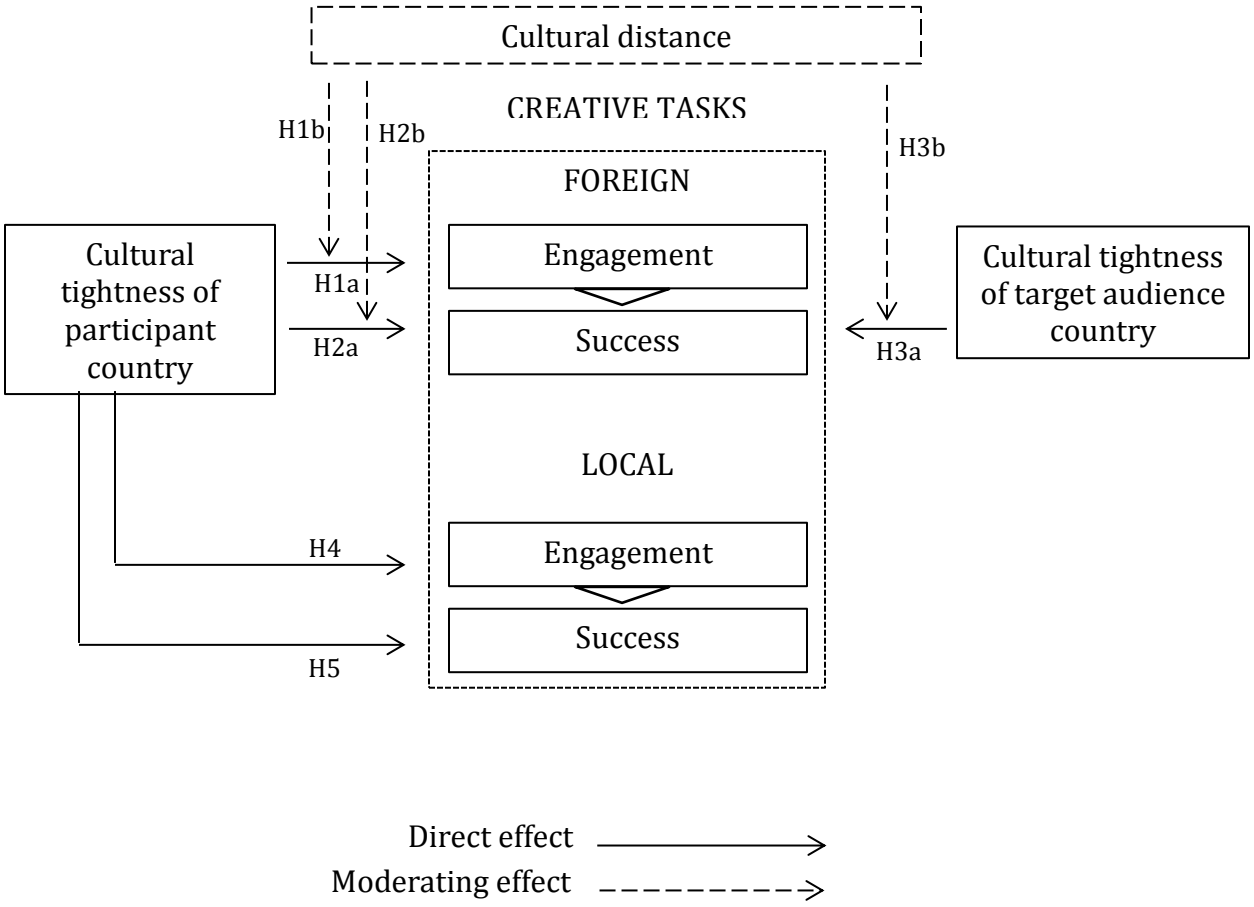

Figure 2A. Interaction Effects for Stage-1 Estimation: Entering Creative Contests

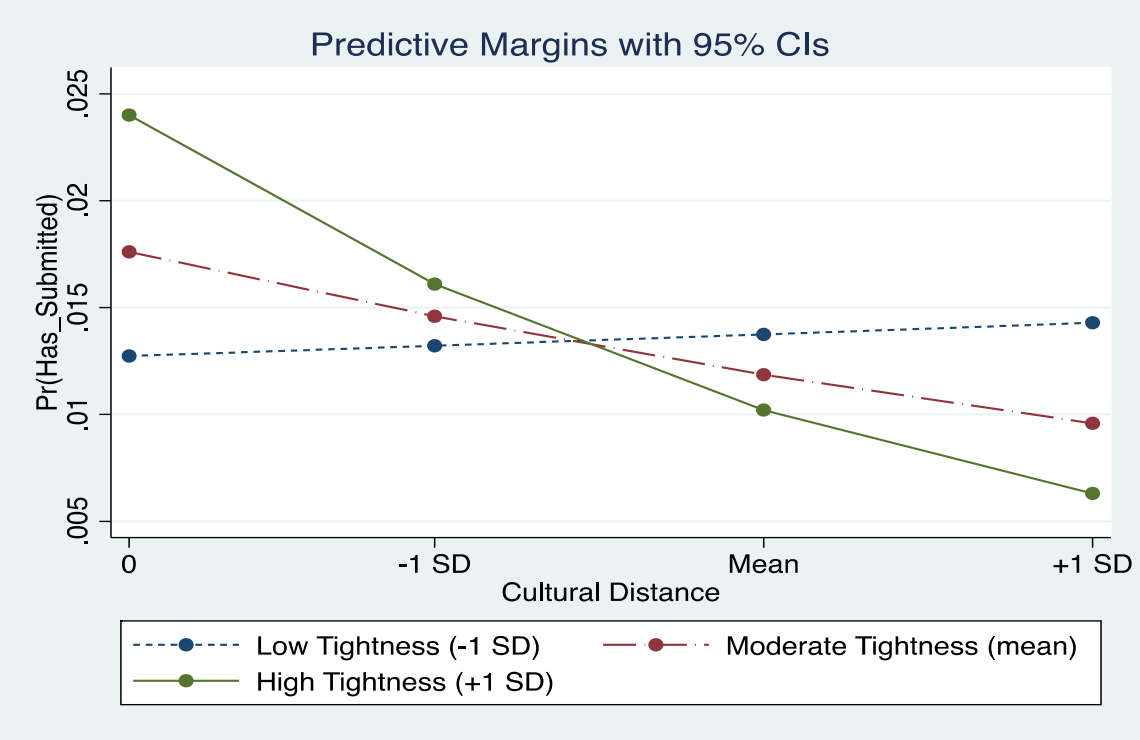

Figure 2B. Interaction Effects for Stage-2 Estimation: Winning Creative Contests

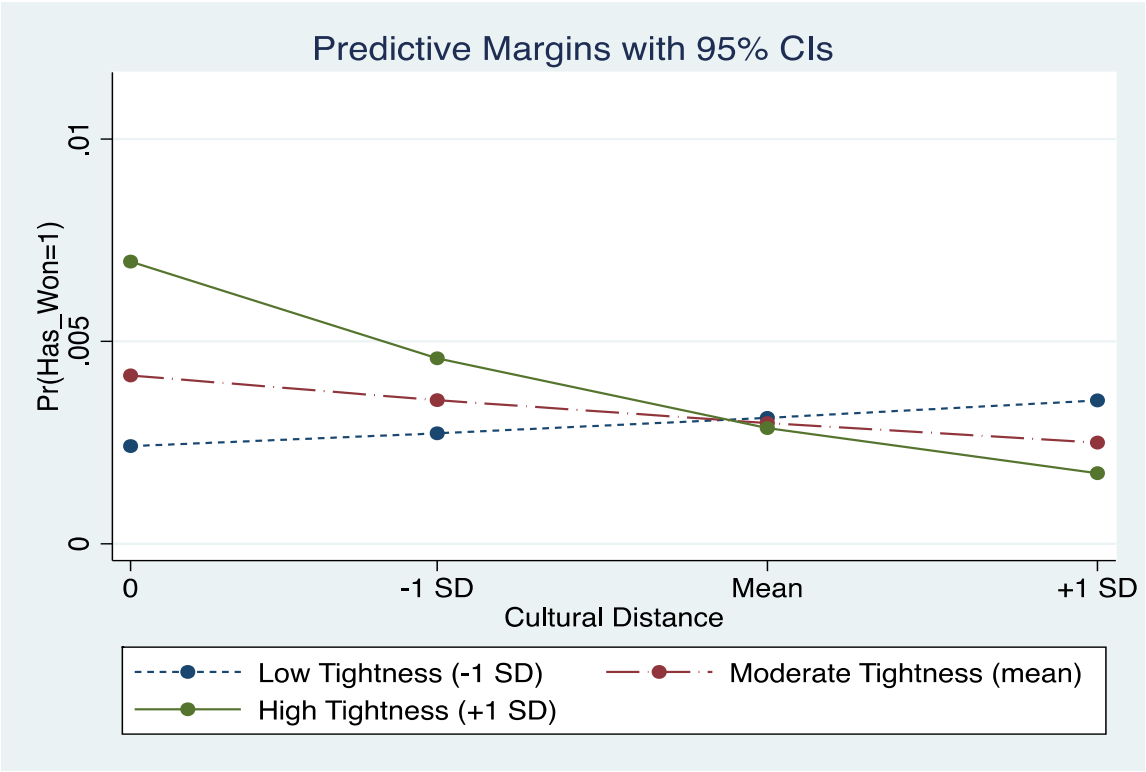

Table 1. Audience Countries for Creative Contests

Audience Country	Number of Contests
Australia	1
China	6
Egypt	2
Finland	1
France	20
Germany	1
Hong Kong	2
India	3
Indonesia	1
Italy	1
Malaysia	1
Netherlands	2
Singapore	20
South Korea	1
Spain	3
Switzerland	7
Turkey	1
United Kingdom	14
United States	12
Total	**99**

Table 2A. Correlations and Descriptive Statistics for Stage-1 Estimation

	Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1	Has submitted	0.01	0.12	0	1	1.00										
2	Cultural distance	2.19	1.41	0	11.00	-0.02*	1.00									
3	Cultural tightness of participant's country	7.08	1.78	1.60	12.30	0.01*	0.06*	1.00								
4	Reward (log)	1.63	0.72	-0.69	3.91	0.07*	0.12*	0.00	1.00							
5	Gender	0.68	0.47	0	1	0.01*	-0.02*	0.02*	-0.00	1.00						
6	Amateur	0.25	0.43	0	1	-0.01*	-0.02*	-0.05*	-0.00*	-0.01*	1.00					
7	Semi-professional	0.23	0.42	0	1	0.00*	-0.01*	-0.07*	-0.00*	0.07*	-0.31*	1.00				
8	Professional	0.21	0.41	0	1	0.01*	0.01*	-0.06*	-0.00	0.06*	-0.30*	-0.28*	1.00			
9	Prior submissions	4.54	11.06	0	356	0.07*	-0.01*	0.00	-0.01*	0.02*	0.01*	0.01*	0.01*	1.00		
10	Average number of concurrent contests	7.74	2.34	1	12.43	-0.06*	-0.03*	0.01*	-0.03*	-0.00*	-0.01*	-0.01*	-0.01*	-0.02*	1.00	
11	GDP of participant's country (in thousands)	23.82	18.14	0.32	103.57	-0.02*	-0.10*	-0.54*	-0.02*	-0.06*	0.06*	0.02*	-0.02*	0.02*	-0.05*	1.00

* $p < 0.05$

Table 2B. Correlations and Descriptive Statistics for Stage-2 Estimation

	Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1	Has won	0.04	0.20	0	1	1.00										
2	Cultural distance	1.92	1.43	0	7.84	-0.02*	1.00									
3	Cultural tightness of participant's country	7.16	2.01	1.60	12.30	-0.03*	-0.19*	1.00								
4	Cultural tightness of audience country	8.23	2.10	3.30	11.80	-0.12*	-0.07*	0.12*	1.00							
5	Gender	0.71	0.46	0	1	0.02	-0.03*	0.04*	0.05*	1.00						
6	Amateur	0.22	0.42	0	1	-0.04*	0.01	-0.04*	-0.04*	-0.04*	1.00					
7	Semi-professional	0.24	0.43	0	1	0.03*	0.01	-0.02	-0.03*	0.01*	-0.30*	1.00				
8	Professional	0.24	0.43	0	1	0.04*	0.03*	-0.03*	-0.01	0.06*	-0.30*	-0.32*	1.00			
9	Prior submissions	11.07	22.76	0	356	0.08*	0.00	0.07*	-0.12*	0.05*	-0.00	0.07*	-0.01	1.00		
10	GDP of audience country (in thousands)	39.73	14.12	1.40	70.57	-0.03*	0.13*	-0.04*	-0.03*	-0.02*	0.03*	-0.01	-0.01	-0.02*	1.00	
11	GDP of participant's country (in thousands)	20.34	18.07	0.32	103.57	0.07*	0.12*	-0.47*	-0.12*	-0.03*	0.08*	-0.01	-0.01	0.02*	0.05*	1.00

* $p < 0.05$

Table 3. Heckman Probit Model for Predicting Entering and Winning a Contest

	Model 1	Model 2	Model 3	Model 4
Second Stage: Win a contest				
Constant	-3.307**	-3.140**	-3.185**	-3.209**
	(0.101)	(0.171)	(0.167)	(0.166)
Key Predictors:				
Cultural distance	-0.067**	-0.063**	-0.043*	-0.047*
	(0.015)	(0.019)	(0.019)	(0.019)
Cultural tightness of participant's country	-	-0.003	-0.008	-0.015
		(0.020)	(0.020)	(0.020)
Cultural tightness of audience country	-	-0.078**	-0.091**	-0.089**
		(0.017)	(0.019)	(0.019)
Cultural tightness of participant's country X Cultural distance	-	-	-0.042**	-0.040**
			(0.011)	(0.011)
Cultural tightness of audience country X Cultural distance	-	-	-	0.013
				(0.009)
Control variables:				
Gender (1=male)	0.044	0.052	0.052	0.0053
	(0.051)	(0.062)	(0.062)	(0.061)
Amateur	-0.129	-0.086	-0.089	-0.086
	(0.068)	(0.083)	(0.083)	(0.083)
Semi-professional	0.168**	0.220**	0.208**	0.211**
	(0.065)	(0.080)	(0.080)	(0.079)
Professional	0.254**	0.226**	0.215**	0.217**
	(0.060)	(0.075)	(0.074)	(0.074)
Prior submissions	0.008**	0.007**	0.007**	0.007**
	(0.002)	(0.002)	(0.002)	(0.002)
GDP of participant's country (2010)	0.006**	0.007**	0.007**	0.008**
	(0.001)	(0.002)	(0.002)	(0.002)
GDP of audience country (2010)	0.001	-0.001	-0.000	-0.000
	(0.001)	(0.002)	(0.003)	(0.003)

	Model 1	Model 2	Model 3	Model 4
First Stage: Submission to a Contest				
Constant	-2.141**	-2.189**	-2.164**	-2.164**
	(0.027)	(0.035)	(0.035)	(0.034)
Key Predictors:				
Cultural distance	-0.073**	-0.088**	-0.062**	-0.062**
	(0.004)	(0.004)	(0.004)	(0.004)
Cultural tightness of participant's country	-	-0.022**	-0.034**	-0.034**
		(0.006)	(0.007)	(0.007)
Cultural tightness of Participant's country X Cultural distance	-	-	-0.041**	-0.041**
			(0.003)	(0.003)
Control variables:				
Reward (log)	0.319**	0.337**	0.326**	0.326**
	(0.008)	(0.010)	(0.010)	(0.010)
Gender (1=male)	0.013	0.039*	0.034*	0.034**
	(0.014)	(0.016)	(0.016)	(0.016)
Amateur	0.004	0.009	0.009	0.009
	(0.017)	(0.019)	(0.019)	(0.019)
Semi-professional	0.050*	0.064**	0.059**	0.059**
	(0.017)	(0.023)	(0.023)	(0.023)
Professional	0.094**	0.084**	0.079**	0.079**
	(0.019)	(0.021)	(0.021)	(0.021)
Prior submissions	0.009**	0.008**	0.008**	0.008**
	(0.002)	(0.001)	(0.001)	(0.001)
Number of ongoing concurrent contests	-0.086**	-0.082**	-0.082**	-0.082**
	(0.002)	(0.003)	(0.003)	(0.003)
GDP of participant's country (2010)	-0.005**	0.007**	-0.007**	-0.007**
	(0.000)	(0.000)	(0.001)	(0.001)
Number of observations (Stage 1)	806873	636710	636710	636710
Number of censored observations	795595	629023	629023	629203
Number of uncensored observations (Stage 2)	11278	7687	7687	7687
Wald's test of indep. Equations (chi-sq)	116.29**	99.77**	103.15**	108.76**
Chi-sq difference (compared with previous model)	-	31.54**	175.85**	2.47

Note: Number in bracket denotes robust standard error.

Table 4: Reasons Why Some Submissions Did Not Win

Reasons	Sub-categories	Sample quotes
Usefulness	Solution not aligned with the vision or the positioning of the company	"There is a lack of addressing the core benefit that the brand would like to be developed." (EXPERT 3, CONTEST A, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
		"The idea is really far away from the 'Creative Technologies' positioning of the mother brand." (EXPERT 3, CONTEST C, FOREIGN SUBMISSION, TIGHTNESS SCORE 5.4)
		"This design puts the brand more in an occasion-based positioning around practicality, around convenience. […] It pushes the brand into different territories, and they would like to stay the reference on the market. As the reference on the market, you can have other varieties that address this benefit of practicality, convenience, but not the core. The core is home consumption." (EXPERT 3, CONTEST E, FOREIGN SUBMISSION, NO TIGHTNESS SCORE)
		"[This idea has] low perceived value and [is] not acting on the core promise of the brand [which is to] show the impact of botanical beauty" (EXPERT 3, CONTEST A, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
		"I think it could work, but I think it's not the role of a beauty brand to offer this kind of products. If it would be offered by a pharmaceutical company or as a medication […] I think it would be more relevant. It doesn't fit with the image of a beauty brand" (EXPERT 1, CONTEST A, FOREIGN SUBMISSION, TIGHTNESS SCORE 7.9)
	Lack of understanding of the French market and/or its consumers	"[I am] not sure if this concept is feasible in France, people may not be altruistic enough to participate." (EXPERT 2, CONTEST D, FOREIGN SUBMISSION, TIGHTNESS SCORE 5.1)
		"I think his design would have been more appealing to foreigners than to French people. Because, for French, the 'Fleur de Lys' is not very

Reasons	Sub-categories	Sample quotes
		attractive. It's part of their history and not something they want to be reminded of." (EXPERT 1, CONTEST C, FOREIGN SUBMISSION, TIGHTNESS SCORE 5.4) "The creator added some animations, and this is typically the kind of short movies that is popular in Asia. I am not sure that is adapted to the French market." (EXPERT 2, CONTEST B, FOREIGN SUBMISSION, TIGHTNESS SCORE 3.5) "Maybe in Russia it could have worked… I don't know why. Or in China or anywhere, but in France, this is not… The symbol of the animal, the reptile, it is not a very popular or appreciated animal in France." (EXPERT 2, CONTEST C, FOREIGN SUBMISSION, TIGHTNESS SCORE 5.4)
	Does not meet creative brief requirement or specification	"[The submissions] does not really answer this specific requirement from the client: 'Your video must show the positive side of female condoms to give people the incentive to try them'." (EXPERT 2, CONTEST B, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "The client specified in the brief that he would prefer African type of actors. This may explain why it did not win as there were only Caucasian and Asian actresses in this video." (EXPERT 2, CONTEST B, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "I think it's not appropriate to the brief because we were looking for something that is aspirational and that is linked to the "botanical beauty" concept, which it is not because the bubble gum idea seems very chemical and it's not linked in any way to plants and ecological beauty." (EXPERT 1, CONTEST A, FOREIGN SUBMISSION, TIGHTNESS SCORE 7.9)
Novelty	Lack of novelty	"It is something that we find on every street corner or in corners in beauty shops. So maybe something was missing in this idea to differentiate it from already existing mirrors." (EXPERT 2, CONTEST

Reasons	Sub-categories	Sample quotes
		A, LOCAL SUBMISSION, TIGHTNESS SCORE 6.1) "[The client] has done this before in the past. Hence it is not seen as something very new to them." (EXPERT 1, CONTEST A, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "I think [this submission did not win because the brand was] looking for a bigger shift […] we have [received] many creations that propose that." (EXPERT 1, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "It looks similar to many bottles we have in France, I am not sure it would have stood out enough." (EXPERT 2, CONTEST E, FOREIGN SUBMISSION, NO TIGHTNESS SCORE) "Putting celebrities in funny situations, or uncomfortable situations, is really not something new. We are really close to the reality shows and these types of program. [The company was] looking for something new. They were looking to really create a big buzz around something that has never been done before. That's the only reason why it didn't succeed" (EXPERT 3, CONTEST D, FOREIGN SUBMISSION, TIGHTNESS SCORE 11.0) "[This submission did not win] because it's not original, it's been seen before. […] We had so much creativity around the volcano and the Auvergne, [and] this is only about a label that has the name of the brand on an image of a volcano – that's all – and really the bottle is not original. This can't be owned by [this brand], which has such a strong identity. They would lose all their identity if they would go for a bottle like this, that is so common." (EXPERT 1, CONTEST E, FOREIGN SUBMISSION, TIGHTNESS SCORE 11.0)
	Excessive novelty	"This would be too distant in France, actually, which is still their major market. […] But for the core of the market, which in France is the still

Reasons	Sub-categories	Sample quotes
		water variety, this would be too much of a stretch." (EXPERT 3, CONTEST E, FOREIGN SUBMISSION, TIGHTNESS SCORE 6.9) "If it hasn't won a prize it is because the French market is not used to this kind of designs. I don't know if it would have been successful… maybe it could have worked, but maybe it could have disturbed the audience in France too." (EXPERT 2, CONTEST E, FOREIGN SUBMISSION, NO TIGHTNESS SCORE)
Execution	Lack of elaboration	"The creator should have gone further in the designs and fully transmit his ideas on the bottle designs." (EXPERT 2, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "It looks like the creator just took some images of kiwis and did not really develop the design of the product itself. So maybe it didn't help the client to visualize the real idea, the real concept behind it." (EXPERT 2, CONTEST A, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "Maybe it could have won if the creator could have offered more views of the product, in 3D, helping the client better visualize better his idea." (EXPERT 2, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
	Poor quality of execution	"The execution is very bad; the story is a bit lame and a bit disgusting as well." (EXPERT 2, CONTEST B, FOREIGN SUBMISSION, TIGHTNESS SCORE 5.1) "Quality of the presentation is not exceptional and the creator did not present how the designs look in the inside of the car. So maybe the client did not manage to fully visualize the creator's idea." (EXPERT 2, CONTEST C, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3) "The story is hard to understand. We have to watch it 5 times to get it." (EXPERT 1, CONTEST B, FOREIGN SUBMISSION, NO TIGHTNESS

Reasons	Sub-categories	Sample quotes
		SCORE)
Implementation	Complexity of implementation	"Industrial feasibility for the square form of the bottle. I guess that's why it did not win a prize." (EXPERT 3, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
		"It is a very interesting idea to put the crater in the bottle. That's not new, but that's exceptionally complex to do. So then you have to price it higher, otherwise the overall margin of the product will not be met. […] When you think about the development of the idea, forget it. It is really a nightmare."(EXPERT 3, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
		"When you look at this from an industrial perspective, then you park it directly. You park it from a cost perspective, you park it from a supply chain perspective, you park it from a labeling perspective, because it would be very difficult to have the label stick" (EXPERT 3, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 11.8)
	High cost of implementation	"The creator mentions several operations in several countries all around the world so maybe [the client] considered it was a bit too expensive and complicated to organize in terms of budget, security, and convenience." (EXPERT 2, CONTEST D, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)
		"I do believe it is an amazing bottle, it is an amazing design. Although I do think that it will be hard to produce for them. There are a lot of constraints." (EXPERT 1, CONTEST E, FOREIGN SUBMISSION, NO TIGHTNESS SCORE)
	Legal risks of the implementation	"I think the reference to Louis Vuitton is too obvious and too touchy I terms of copyrighting and things like this. And [the brand] did not want to take that risk." (EXPERT 1, CONTEST C, FOREIGN SUBMISSION, TIGHTNESS SCORE

Reasons	Sub-categories	Sample quotes
		5.4) "[The] association with champagne is highly dangerous and difficult from a legal perspective. […] Alcohol and cars don´t go together!" (EXPERT 3, CONTEST C, FOREIGN SUBMISSION, TIGHTNESS SCORE 6.9)
Competition	High level of competition in the contest	"Maybe the competition was hard in this contest. We indeed received many creations, so the brand found another creation which may have met better their expectations." (EXPERT 2, CONTEST C, FOREIGN SUBMISSION, NO TIGHTNESS SCORE) "To me it could have been a winner, maybe competition was tough for this contest thus the client favored others creations." (EXPERT 2, CONTEST E, LOCAL SUBMISSION, TIGHTNESS SCORE 6.3)