

# **EXPLORING THE RELATIONSHIP BETWEEN CULTURAL DIMENSIONS AND ENTREPRENEURIAL ACTIVITY IN 30 COUNTRIES: AN UNDERGRADUATE RESEARCH COLLABORATION**

*Ronda Roberts Callister, Huntsman School of Business, Utah State University, 3555 Old Main Hill, Logan, Utah 84322, 435-797-1905, Ronda.Callister@usu.edu*

*Darcy Stewart, Huntsman School of Business, Utah State University, 3555 Old Main Hill, Logan, Utah 84322, 208-340-5153, darcy.stewart@aggiemail.usu.edu*

## **ABSTRACT**

The purpose of this paper is to encourage other faculty to try a collaborative approach to undergraduate research by providing an example that involved a modest commitment of the faculty member's time and resulted in significant benefits. Here we describe a research project that resulted from a faculty student undergraduate research project where the faculty member was able to build on and shape the students ideas and knowledge. This collaboration resulted in a finished paper that neither one would have developed on their own. The student has received a number of accolades. This research has influenced her career choice.

**Keywords:** Entrepreneurship, Culture, Undergraduate, Research

## **INTRODUCTION**

With the goal of inspiring other faculty develop undergraduate research at their universities, Darcy Stewart, undergraduate student majoring in Entrepreneurship and Ronda Callister, Management Professor share their experiences in developing an undergraduate research study that explores the relationship between cultural dimensions and entrepreneurial activity in 30 countries.

### **Darcy Stewart: Getting started on an undergraduate research project/How the project evolved:**

The Honors Program at Utah State University encourages students to become involved in independent undergraduate research. Before entering the program, I never saw myself as someone interested in research. This changed as I began delving into independent research projects—I discovered how much I love the opportunity to find answers to questions, and research has become an integral part of my undergraduate education. I realized this last fall as I completed an honors project by doing an extra paper within a regular management class with a professor which allowed me to develop a question or idea to study outside of class. Our project corresponded to concepts we had discussed in class and gave us the opportunity to delve further into details of specific interest. I studied microfinance movement expanded by Dr. Muhammad Yunus and the Grameen Banking system of India. As a business student in entrepreneurship, I was fascinated by the idea of microfinance, obstacles to entrepreneurs, and the nature of small scale enterprises and opportunity identification and exploitation.

A few months after learning about microfinance and entrepreneurship in developing countries, I entered Dr. Ronda Callister's International Management course. As we began discussing country culture, I

began to be curious as to the implications to business creation in various cultures. I had several issues on my mind at this time. As mentioned, I had just spent several months learning about microfinance infusing capital in developing countries and stimulating small scale entrepreneurial ventures. Additionally, I was preparing for a study abroad trip down to Peru to work with a small business loan extension program through Utah State and partner corporation DanPer. With our recent focus on cultural characteristics in Dr. Callister's International Management class, I began to wonder if there were connections between the likelihood of success for microfinance and other business development programs in countries with certain cultural characteristics.

Because I was travelling to Peru, I wanted to research the available microfinance data and the cultural composition of the country. At the beginning of our project, my research goals and questions were very vague. Throughout our research process, we were able to clearly define what my research interests really were—the relationship between cultural characteristics and entrepreneurship. I was unfamiliar with how many resources and comparative data were available, and Dr. Callister guided me to published sources of data collection on business startups in countries around the world [1]. After clarifying and reevaluating my real research interests and becoming familiar with available data and resources, we redefined and narrowed my project.

### **Ronda Callister: How the project evolved**

Darcy approached me with vague idea about wanting to study more about entrepreneurship, culture and microfinance. We agreed to meet every two weeks to discuss the project. Following each meeting Darcy had assignments to work on and report back at our next meeting. By completing this project prior to the end of the semester and delivering a paper on her chosen topic she would receive honors credit for my International Management class. As we met I began to suggest data that I knew was available. For example, there was data now available from [3] that included Hofstede's original 52 countries plus over twenty additional countries including each of the countries grouped into three regions. These included rank order and scores for each of four or five cultural dimensions. In addition, the GLOBE study (House et al, 2004) includes 52 countries and nine different dimensions of culture with scores for each country on each dimension. I asked Darcy if she wanted to use this data to examine her interest in entrepreneurship and culture. We also had available the Global Entrepreneurship Monitor Data (GEM) [1] on entrepreneurial activity in many countries. Darcy expressed interest in trying to determine if cultural dimensions predicted entrepreneurial activity in these countries.

At this point I asked her to do a literature review – searching on several research databases such as Google Scholar for studies that included culture and entrepreneurship. She found several studies and after she read and determined which ones were relevant, we discussed how we could go beyond the work that had already been done. We developed a research question and I asked Darcy to begin to develop hypotheses based on this research question. During the course of the semester Darcy was able to write a modest literature review, develop hypotheses and run correlations and one way ANOVAs on archival data that fit her research questions. To continue to develop this study will require significantly more development and more sophisticated analyses. But the basic elements of a research study were in place and are presented here.

### **RESEARCH DESCRIPTION – THE INFLUENCE OF CULTURE ON ENTREPRENEURIAL ACTIVITY**

Countries throughout the world experience different rates of entrepreneurial activity. This activity is associated with economic development and growth. What are some factors that may be influenced with

entrepreneurial activity and can stimulate or inhibit it? This raises the question of whether some cultural characteristics facilitate higher levels of entrepreneurial activity.

Hofstede argues that each person carries within him or herself patterns of thinking; feeling; and potential acting which were learned throughout their lifetime [4]. These patterns of thinking, feeling, and acting stem from one's learned culture and culture includes patterns of thinking and acting. This study explores how entrepreneurship may be influenced by one's culture. If we can identify the cultural characteristics that are associated with successful entrepreneurship, we may be able to identify which cultures would experience greater success with microfinance or other supportive measures that encourage entrepreneurial activity.

This study explores the culture as a potential influence on entrepreneurial startup activity within countries around the world. Entrepreneurship is seen as a way to stimulate economic growth through new business and job creation and market activity. Government policy leaders and business leaders worldwide are looking to entrepreneurship as a way to increase economic development [8]. "Understanding cultural influences on the development of entrepreneurial potential is crucial to the internationalization of entrepreneurship theory and the development and implementation of policy initiatives to encourage entrepreneurship in various areas of the globe," [8, p. 297].

A study on the relationship between individualism and power distance to per capita national rates of innovation showed that individualism and power distance were positively associated with per capita national innovation rates, suggesting that the more individualism, the higher rate of innovation, and the higher power distance, the higher rate of innovation [6].

Shane [7] conducted a study to compare the effect of cultural dimensions on per capita rates of innovation. He compared per capita national rates of innovation with individualism, power distance, and uncertainty avoidance. Results showed a positive association between individualism and national rates of innovation, suggesting the higher individualism, the higher rates of innovation. Results also showed a negative association between power distance and uncertainty avoidance and national rates of innovation, suggesting the higher power distance, the lower rates of national innovation, the higher uncertainty avoidance, the lower rates of innovation.

## HYPOTHESIS DEVELOPMENT

Power distance is defined as "the degree to which members of an organization or society expect and agree that power should be stratified and concentrated at higher levels of an organization or government" [5, p. 537]. Hofstede measured power distance along a similar definition. In high power distance countries, the people are less likely to deviate or challenge authority. Figures of authority are seen as the experts, more talented, knowledgeable, intelligent, skilled, and correct. Thus, we expect that those who perceive themselves with lower power in high power distance cultures may be less willing to take the initiative in starting new ventures. We hypothesized:

*Hypothesis 1:* Countries with low power distance are more entrepreneurial than countries with high power distance cultures.

Uncertainty avoidance is defined) as "the extent to which members of the organization or society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices" [5, p. 602]. Countries that have a higher uncertainty avoidance scores are less likely to take risks and deviate from usual, routine, typical, or standard behaviors. They are more likely to stick with the familiar. Entrepreneurship involves a lot of risk taking and there are many uncertainties involved. This suggests:

*Hypothesis 2:* Countries with high uncertainty avoidance are less entrepreneurial than countries with low uncertainty avoidance.

Performance orientation is defined as "the extent to which a community encourages and rewards innovation, high standards and performance improvement" [5, p. 239]. High performance orientation

suggests the entrepreneur perceives there is an incentive for business start up. In general, this suggests higher performance orientation cultures would be more entrepreneurial. This suggests:

*Hypothesis 3:* Countries with high performance orientation are more entrepreneurial than countries with low performance orientation.

Collectivism is defined as the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families [5] [3]. These studies divide collectivism into two subgroups: in-group and institutional. In-group collectivism relates to cohesiveness of organizations or families (see definition). Institutional collectivism refers to the degree to which organizational and societal practices encourage and reward collective distribution of resources and collective action [5]. This type of collective cohesiveness is supported or enforced by institutions.

A collectivist culture is more likely to work together, work to benefit the group, stick with the group, feel a concern and a connectedness to a group. Individualist cultures are the opposite—individuals work to accomplish things themselves, to benefit and depend on themselves. Many successful village banking and microfinance programs are in collectivist culture clusters such as Southern Asia and Latin America. The group pressure to repay the loans, make money and succeed, associated with village banking is born of collectivism and motivates the members to be entrepreneurial. Motivation for many village bankers is also based on collectivist ideals, looking out for the benefit of the family. Given these considerations, collectivism may be related to entrepreneurial activity.

*Hypothesis 4:* Collectivism may be related to entrepreneurial activity

Future orientation is defined “as the degree to which individuals in organizations or societies engage in future-oriented behaviors such as planning, investing in the future, and delaying individual or collective gratification” [1, p. 282]. A desire to invest in the future could be an important characteristic of successful entrepreneurs. Entrepreneurs may fail if they are interested in immediate gratification and do not use resources to further grow and expand. Entrepreneurship may emerge from a desire to have a better immediate/current situation, or to have a better future.

*Hypothesis 5:* Future orientation will be related to entrepreneurial activity.

## **Measures and Analyses**

The measures of entrepreneurial activity are divided by three types of activity: nascent, new business owners, and early stage entrepreneurs. Nascent is defined as entrepreneurs “who have taken some action towards creating a new business in the past year” [1, p. 6]. These entrepreneurs have not paid wages or salaries for more than three months. New business owners are individuals who are active as owner-managers of a new business and who have paid wages or salaries for three to 42 months. GEM uses a measure which includes nascent entrepreneurial activity and new business owners called early stage entrepreneurial activity.

This study uses country scores for the following dimensions from the [3] study: individualism, power distance, uncertainty avoidance and long/short term orientation. This study also uses country scores for the following GLOBE [5] cultural dimensions: in-group collectivism, power distance, uncertainty avoidance, performance orientation and future orientation.

Data from the Global Entrepreneurial Monitor (GEM) [1] was used to measure entrepreneurial activity within 42 countries around the world. Data taken from GEM’s research on entrepreneurial activity “indicates the dynamic entrepreneurial propensity of a country,” and illustrates the population percentage that is “willing and able to undertake an entrepreneurial venture” [1, p. 6].

## **Analyses & Results**

To determine the relationships, this study used correlations and one-way ANOVAs to determine whether cultural dimensions predict entrepreneurial activity. Culture was treated as the independent variable because it is learned at very young age, while entrepreneurial activity which occurs much later was treated as the dependent variable.

Hofstede's power distance predicts new owner entrepreneurial activity ( $F_{(32, 11)}=8.391, p=.0000$ ) partially supporting hypothesis 1 [3]. Hofstede's uncertainty avoidance is significantly related to nascent entrepreneurial activity ( $F_{(30, 12)}=6.202, p=.001$ ), new owner entrepreneurial activity ( $F_{(30, 12)}=4.560, p=.004$ ), and early state entrepreneurial activity at the .002 level ( $F_{(30, 12)}=5.116, p=.002$ ) supporting hypothesis 2. Individualism is significantly related to nascent entrepreneurial activity ( $F_{(28, 15)}=3.864, p=.004$ ), new owner entrepreneurial activity ( $F_{(28, 15)}=3.26, p=.01$ ) and early stage entrepreneurial activity ( $F_{(28, 15)}=2.991, p=.015$ ) supporting hypothesis 4. Hypotheses 3 and 5 for performance and future orientation were not supported. Both of these measures were from the GLOBE study [5]. There may have been measurement issues with this instrument or there may have been other variables not included in this study which explained a larger percentage of the variance – such as the relative income levels of the population in each country.

## DISCUSSION

This study showed that some aspects of culture explain entrepreneurial activity – specifically power distance, uncertainty avoidance and individualism. Additional research that includes more variables such as average income in each country would be very useful in explaining how income levels or education levels might interact with cultural dimensions. For example when income or education levels are extremely low this may reduce entrepreneurial activity to such a low point that not relationship exists with culture. Another aspect of countries that may interact with the relationship between cultures and entrepreneurial activity is government regulations and bureaucracy. The World Bank provides data on the ease of doing business in 181 countries [9]. This data could be used to determine if there are interactions between country cultures and entrepreneurial activity such that the relationship is enhanced when regulation is low and reduced when regulation is high.

### **Darcy Stewart: The Future: How it will go forward**

Completing this project was a great experience for me. Throughout the whole process, I found that I kept developing more questions, and identifying new avenues to take my research. By the time we concluded our project, I had several additional research questions related to this topic. These project findings and the connection between culture and entrepreneurship are fascinating, and I would like to strengthen this research through continued testing. I plan to work with Dr. Callister to further pursue research questions and strengthen this project. After deeper analysis, I plan to ask an entrepreneurship professor to become part of this project to guide us in additional data analysis and find a suitable conference to submit this study. If the findings provide enough support for the hypotheses, I will also seek advice on possible publication in an entrepreneurship journal.

On a more general level, this project has helped me develop research plans for my future. As I became involved with the whole process of this research project, I realized how much I love to question, find answers, connect data, synthesize, write, and present. As a senior, I've begun looking at avenues to pursue following graduation. Completing this project has stimulated interest in pursuing a Ph.D. and career in continued research.

### **Ronda Callister: Future**

It has been a great experience working with Darcy watching her ideas and understanding develop over time. There are multiple outlets for undergraduate research and Darcy is submitting her work to these. In the state of Utah there are Research Day at Capitol Hill and Utah Conference for Undergraduate Research. On the national level there is National Conference for Undergraduate Research and Posters on the Hill at the capitol in Washington D.C. I look forward to helping her apply for Ph.D. programs.

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