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Thomas L Bradley and Paul B Eberle

ENTREPRENEURSHIP IN TRANSITION ECONOMIES: IS THERE AN ENTREPRENEURIAL CHARACTERISTIC SIMILARITY TO WESTERN ENTREPRENEURS?

ABSTRACT

This empirical study consists of two parts. The first part of the study examines the cultural characteristics and dimensions of entrepreneurs and factory workers in transition economies during the early transition period to determine if their cultural values were similar to those found in other nations. The second part of the study compares the differences in Hofstede's cultural dimension scores between entrepreneurs and workers in market economies. It might seem extraordinary that after more than 70 years of a centralized non-entrepreneurial society that all of the communist nations that the current authors studied had essentially the same cultural differences among entrepreneurs that were found in capitalist nations with a long history of entrepreneurial activity.

Key Words: entrepreneurs; entrepreneurship; transition economies; former communist countries; cultural characteristics; cultural values

Thomas L Bradley
Research Director, Reforming Economies Research Institute, USA
Professor of International Studies, Keuka College, China & Vietnam

Paul B Eberle
Florida Southern College, USA

Correspondence: Paul B Eberle
Florida Southern College, Lakeland, FL-33801
E-mail: eberlep@hotmail.com

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INTRODUCTION

The presence of entrepreneurs in society is one indication that an environment supporting the formation and continuation of small business efforts is both present and continuing over the transition period. The former Soviet communist nations and republics and the former communist Eastern Europe nations encompassed a vast geographical and a culturally diverse world without massive entrepreneurial business effort. After the collapse of the centralized society in the Soviet Union into a variety of independent nations, countless small businesses emerged. This study compares the cultural values from nine former communist nations with the cultural values from factories across these nations for the purpose of discovering whether the differences are similar to those found in the McGrath, MacMillan, and Scheinberg (1992) study of 8 capitalist nations. The presence of a similar entrepreneurial culture in former communist nations is encouraging to the long-term development of the economies within these societies. By examining the entrepreneurs of these former communist countries and comparing their cultural characteristics to factory workers' cultural characteristics, this study provides insight into the entrepreneur within the former communist world using the framework established by Hofstede's Cultural Dimensional Values Model in combination with the framework provided by McGrath et al. (1992) as to the actual differences between the culture of the country versus the cultural aspects of entrepreneurs.

The literature provides rich evidence that the following indicates a presence of an entrepreneurial culture within a specific country. Therefore the following summary of cultural values for entrepreneurs is the basis for the study.

Individualism:	Entrepreneurs will exhibit an orientation toward individual rather than collectivist tendencies.
Uncertainty Avoidance:	Entrepreneurs will have a tendency to take risks and value their time.
Power Distance:	Entrepreneurs will have a greater tolerance for inequality while having a higher level of power distance than the national value.
Masculinity:	Entrepreneurs will be oriented toward money and possessions while valuing work over pleasure.

The presence of entrepreneurial cultural value orientations identified in this study take on added importance with the passage of time. The authors' research established a foundation to examine today's transition success of fostering entrepreneurial activity. Within each country studied, the current authors' research provides cultural value benchmarks for entrepreneurs and factory workers. In conjunction with the McGrath et al. (1992) study of Western economies, future research can compare results to these benchmarks to evaluate their progress and success in the transition to a market economy. The timeliness to present the findings in this format will allow other researchers to use this benchmark over time in analyzing the continual transition that is ongoing.

Cultural values, and other factors that are not purely economic, are instrumental in understanding the level and perseverance of entrepreneurship (Wennekers and Thurik, 1999; Wennekers, Van Wennekers, Thurik, and Reynolds, 2005; Freytag and Thurik, 2007). The focus of the current authors' research is on cultural values and their influence and effect on the level and perseverance of entrepreneurship in former communist nations. There is an obvious difference in the level of entrepreneurship that exists when comparing one country to another, and this is particularly the case when looking at former communist nations. The differences are due to various reasons, such as cultural factors, legal system, property rights, and established institutions. The differences in level and perseverance of entrepreneurship between countries tends to be stable and last for decades (Laspita, Breugst, Heblich, and Patzelt, 2012; Chlosta, Patzelt, and Dormann, 2012; Dohmen, Falk, Huffman, and Sunde, 2011; Freytag and Thurik, 2007).

Entrepreneurial research of former communist nations of Eastern and Central Europe and former Soviet Republics has increased, but is still incomplete. Prior studies of former communist countries have compared Russian entrepreneurs and Ukrainian entrepreneurs to entrepreneurs in capitalist nations (Hisrich and Grachev, 2001). Several studies have compared entrepreneurship in former communist nations and republics, including studies of Slovakia, the Czech Republic, Poland, Russia, Latvia, Hungary, Bulgaria, as well as others (Bradley, 2003; Kihlgren, 2003). Many studies are descriptive in nature (Parsyak and Zhuravlyova, 2007). Studies by Puffer and McCarthy (2001); Bezgodov (1999); and Aidis et al. (2007) of the former communist nations focused on motivational issues of the entrepreneur. A study by Danik, Kowalik, and Král (2016), looked at cultural characteristics of companies in Poland and the Czech Republic. Studies by Holienka, Jancovicova, and Kovacicova (2016) and Holienka, Pilková, and Munk (2014)

used Global Entrepreneurship Monitor data in their research on entrepreneurship in Slovakia, Poland, the Czech Republic, and Hungary with a focus on individual characteristics. Several authors have conducted a more general, overall approach to examining entrepreneurship. There have been a number of papers researching Slovakia, Hungary, the Czech Republic, and Poland including studies by Dvouletý and Mareš (2016) and Šebestová et al. (2015), both studies used a general macro approach. Results by Aidis, Estrin, and Mickiewicz (2008) indicated former communist nations developed consistently fewer entrepreneurs compared to other countries in the world and their results indicated more entrepreneurship developed in the former communist nations and republics of Eastern Europe and Central Europe than in the former Soviet satellite nations.

There have been many discussions focusing upon small business owners as to their motivation and reason for beginning a company, as well as the characteristics that are present within those who desire to risk their livelihood in such an unforgiving workplace as the entrepreneurial world of post-communist nations. This study examines the underlying cultural values so as to ascertain what cultural values are present and the degree of differences within the society when compared to the entrepreneurial class. The presence of differences that are similar to the study by McGrath et al. (1992) indicate that perhaps entrepreneurial cultural values are present even after decades of communist value influence. The importance of such differences consistent with those of the developed world of capitalism cannot be overstated.

Another purpose of this research is to extend the McGrath et al. (1992) study to former communist nations to discover if the entrepreneurial cultural value differences are evident by virtue of examining the entrepreneur's cultural characteristics. By comparing these characteristics to those of factory workers, the current study is able to provide the framework for understanding these groups within the newly reformed economies of former communist nations. This study substantially increases the knowledge of both groups and what differences are found between them.

The presence of an entrepreneurial class with unique values would be an indicator of the emergence of a future generation of business leaders within the transforming economies of former communist nations. To also provide evidence that these differences between the two groups are consistent with those found in capitalist economies would indicate the belief that an entrepreneurial class could develop given the support of the political, economic and legal systems within the former communist nations. The importance of this finding cannot be over-emphasized.

LITERATURE REVIEW

The existence of entrepreneurs in society is one indication that an environment supporting the formation and continuation of small business efforts is both present and continuing over the transition period. Extensive research has been compiled in which the personal characteristics of an entrepreneur are identified and compared to others in society (Brandt, 1987; McClelland, 1987; Shapero and Sokol, 1982). The previous centrally planned economic model of the communist nations was by nature a non-entrepreneurial model which did not foster new business activity, but instead emphasized large state companies (Kerblay, 1977).

The idea that a nation's culture causes individuals to behave in a way that encourages entrepreneurship that might not be as prevalent in other nations was suggested by Mueller and Thomas (2001). Entrepreneurial research has focused heavily on characteristics, cultural values, and traits of entrepreneurs. These cultural aspects are then compared and contrasted to those of various national characteristics to provide an understanding of the entrepreneur. Entrepreneurs share a predictable and identifiable group of values and entrepreneur values differ from others that are not entrepreneurs (McGrath et al., 1992).

The motivation behind entrepreneurship has also focused upon the external forces influencing an entrepreneur beginning with McClelland's (1961) study, followed by Maehr (1974); Hofstede (1980); Lee (1991); and Shane (1992). The concept of an entrepreneur is one that has the core value of risk taking (Webster, 1977), yet the primary aim of the communist model was to eliminate this very risk, thus negating the entrepreneurial concept (Kerblay, 1977). The elimination of risk, uncertainty, and insecurity combined with the standard of equality for everyone was established in the Soviet Union so as to make the individual a servant of the state (Kerblay, 1977).

The academic literature has historically characterized Russian entrepreneurship from the perspective of the authoritarian nature of the various Russian governments that have existed for over 1000 years. This authoritarian aspect of Russian history has established the foundation from which the cultural values of society have evolved. In Russia, a class system had instilled in the people a view of entrepreneurship that was negative. They perceived entrepreneurs trying to enhance their wealth at the expense of others. Thus, when the communist revolution took place, the promise of equality among workers became the main issue of the revolution (Harcave, 1964). The value system was

designed to control the personal initiative and achievements among the people of Russia. The subservience of the individual combined with the political and economic oppression within the society and the collectivist values predominated the Soviet society (Puffer and Shekshnia, 1996).

The role and activities of entrepreneurs involves a large degree of uncertainty (Sexton and Bowman, 1985), but this is in stark contrast to the tenants of communism that desired a life built upon certainty into what was called, scientific communism (Hosking and Fineman, 1990). The emphasis on equality prevented those who were oriented to entrepreneurism to face a society and economic system that punished individual effort and attempted to prevent individual entrepreneurial activity.

The individual entrepreneur and the impact of culture is extensively studied in the academic literature (Hornaday and Aboud, 1971; McClelland, 1987; Sexton and Bowman, 1986). Because the individual is critical in understanding entrepreneurship (Brockhaus, 1982; Carland, Carland, and Carland, 2002), this element has received more emphasis than any other aspect. Individualism is fundamental to the essence and nature of an entrepreneur (Hisrich and Brush, 1986). The characteristics of the entrepreneur can be studied both within cultures and across cultures by identifying the important characteristics which distinguish the entrepreneur from others within the society.

Non-entrepreneur studies have been conducted using Hofstede's cultural dimensional survey in many countries throughout the world. The connection between culture and the characteristics of entrepreneurs from those of non-entrepreneurs is well studied, but with different national degrees of activity (Birley, 1987; Shapero, 1985). Hofstede was the first to create a cultural model for national identity using IBM workers from factories all over the world (Hofstede, 1980) that established a method to create a national comparison using specific variables the he called, "Cultural Dimensions". By using factory workers, administration employees, managers and other job specific samples, it allowed for the expansion of this research into other nations but did not include any communist nations. By establishing a basis for future study, the authors' research project was able to utilize a factory sample as being similar to the cultural values of the nation much as was done by Hofstede, as well as many other replications and cultural studies using Hofstede's survey. This cultural basis on a national scale has proven valid by a host of studies replicating the national identities established by Hofstede with only minor differences. A factory contains a variety of workers that given a large enough sample would reflect a national cultural. While other researchers have used various sample

categories to try to establish a national cultural value model, Hofstede suggest a homogenous sample across cultures is sufficient to produce a valid model. (Hofstede, 1991, 1994). Thus the sample this project utilized is valid as to sample size, being homogeneous in nature (electro-mechanical factories) and similar in demographics.

Several studies have identified certain entrepreneurial characteristics and compared them to others who are not considered entrepreneurs (Shapero and Sokol, 1982; Brockhaus, 1982; Brandt, 1987; McClelland, 1987). Differences in cultural values were found by Begley and Boyd (1987) in their study of American entrepreneurs compared to non-entrepreneurs, and Thomas and Mueller (2000) identified significant cultural value relationships and entrepreneur personality types that were related to entrepreneurs but not present in non-entrepreneurs.

The underlying cultural values and cultural dimensions can be used to identify and contrast entrepreneurs and non-entrepreneurs (McGrath et al., 1992). The study by McGrath et al. (1992) looked at the behaviors and activities of entrepreneurs and characterized certain cultural characteristics they exhibited or were likely to exhibit. The McGrath et al. (1992) study was across eight countries utilizing over 2400 responses.

McGrath et al. (1992) utilized Hofstede's cultural characteristic model to study the different cultural values that are unique to entrepreneurs. The McGrath et al. (1992) study found that entrepreneurs are more individualist, have less uncertainty avoidance, are more masculine and display a larger Power distance. McGrath et al.'s (1992) conclusions certainly showed that there are differences in those who engage in entrepreneurial activities as to their cultural values in capitalist countries. From this perspective, the characteristics of the entrepreneur can be studied both within cultures and across cultures by identifying the degree of differences in these characteristics that distinguish the entrepreneur from others within the society.

Several studies in the literature have established persistent, consistent, and persevering cultural values and traits over generations (Hofstede, 2001; North, 2005; Triandis, 1994; Voigtländer and Voth, 2012; Beugelsdijk et al., 2018). Once cultural values are a part of society, the institutionalization of these values further reinforces their existence as behavioral actions, thus creating the presence of national cultural values that are unique (Hofstede, 1980). Fundamental natural factors lead to the development of institutions that support society's cultural traits and values. Family structures, schools, legal systems, economic systems, and political systems develop that support and reinforce

the cultural values of society. Therefore, a society's cultural values lead to stability and consistency over time and embrace a long-time development that does not change quickly (Hofstede, 2001; North, 2005; Triandis, 1994). The ability of cultural values to exist over time with little change is what Hofstede (1980) called the consequences of that culture. Hofstede indicated that society's cultural values change little over time because of the crystallized nature within the institutions of society. The stability and constancy of cultural values impacts the level and perseverance of entrepreneurship that takes place in society.

A cross-generational model is used by Bisin and Verdier (2001) to analyze how culture and cultural values are passed on from parents to their children. The overlapping generation's model developed by Bisin and Verdier (2001) explains the stability of culture and cultural traits, and how they persist and are passed on from one generation to the next from a theoretical point of view. Other research has also shown that when one or both parents are entrepreneurs, then their children are significantly more likely to grow up to be entrepreneurs than those whose parents are not entrepreneurs. (Lindquist, Sol, and Van Praag, 2015; Hoffmann, Junge, and Malchow-Møller, 2015). Clearly, culture is passed on from one generation to the next, as many studies indicate, additionally cultural values are persistent and are stable for generations, being inherited from one generation to the next (Tabellini, 2008; Bénabou and Tirole, 2006; Bisin and Verdier, 2001).

One example of the consistency and perseverance of cultural values is found in migrant communities. Migrants to the US still hold cultural values and behavioral characteristics of their ancestors' country even after two generations living in the United States. Migrants to any country are immersed in that country. Migrants are continuously surrounded by different cultural values. Migrants are constantly exposed to, and inundated with, cultural values that are different than their own. However, they continually hold onto to their own cultural values. Studies by Giuliano (2007), Fernandez and Fogli (2009), and Algan and Cahuc (2010) indicate that cultural values brought to the new country last for generations and that their descendants also maintain these values, even when they are inundated and surrounded by the new and different culture.

Divergence theory also supports the idea that cultural values are stable over time. Divergence theory evolved from earlier empirical studies that indicated a divergence of cultures across countries (Abegglen, 1958; Bond, 1987; Hofstede, 1991; Kelley and Worthley, 1981; Laurent, 1983). Divergence theory argues that culture is such a strong

influence upon institutional values that dynamic changes in characteristics and values do not change much over time.

Using the database from the Global Entrepreneurship and Development Index, Szerb and Trumbull (2016) completed a study that included Russia, Latvia, Lithuania, Slovakia, Slovenia, Poland, Hungary, Estonia, Serbia, Croatia, Macedonia, Montenegro, and Romania. According to Szerb and Trumbull (2016) little difference exist regarding the attitude, opinion, or feeling about entrepreneurs in those countries transforming from a communist system to a market system compare to those countries that were not considered transition countries. Eleven transition countries studied by Van der Zwan, Verheul, and Thurik (2011) used the database from the Flash Eurobarometer Survey on Entrepreneurship. The results of the study by Van der Zwan et al. (2011) indicated an entrepreneurial spirit similar to non-transition countries.

METHODOLOGY

The authors' study comprised entrepreneurs and factory workers, from similar regions in each country studied. The current study utilized the VSM94 survey instrument developed by Hofstede (1994). The original Hofstede's (1980) survey used workers from various factories around the world that made IBM products. The most similar type of factory in the studied countries was the electro-mechanical product factory. When possible this type of factory was the source of the sample groups used so as to replicate the IBM study as close as possible in each region studied. The cities sampled are as follows: Russia: Yoshkar-Ola; Ukraine: Kharkov, Dnipropetrovsk; Latvia: Riga; Lithuania: Vilnius, Kaunas; the Czech Republic: Prague; Poland: Katowice; Romania: Bucharest; Armenia: Yerevan; Bulgaria: Sofia.

Each sample taken was completed within the same region within a 30 day period but over a period from 1994-2003. The study was conducted on site during lunch hours and after work at factory sites while the entrepreneurial sample was taken daily in all the market areas, shops, and businesses in the same city as the factory site. In the factories, the sample was from 20-55% of the available respondents. The entrepreneurial sample had an approximate 25% response rate. This rate did not vary to any degree across countries. The questionnaire was not discussed with the respondent except to indicate it was confidential and anonymous and that it was a project for a local university (to avoid any difficulties with local criminal groups and with the perception that it was a project that was using foreign influences which would have made it impossible to conduct safely).

Various researchers who have conducted similar research using Hofstede's instrument in foreign hostile or unwelcoming environments have utilized small sample sizes that were conveniently done due to the difficulty of the research effort. The sample sizes for this study is large compared to other studies. See Table 1 for the sample sizes for each country for the study done by the authors of this paper.

The decision to conduct research in such a geographic diverse region that extends halfway around the world from where the authors live in Florida, was, to say the least, daunting. Because the researchers refused to participate in criminal bribery, some limitations in access were encountered. However, the researchers were able to make ample contacts that resulted in nine nations being studied. The inherent dangers involved in these countries during the period that the research took place were very real. Thus, it was necessary for the research for this paper to be completed over a nine-year period from 1994-2003 in the former communist nations involving 5358 respondents from nine nations listed in Table 1.

During the research, one of the authors traveled to these regions and using local translators, sought out key people through a host of contacts. This required living in the regions to be surveyed to establish the personal relationships that all of these countries necessitated. Only by establishing a myriad of contacts could the authors locate and survey the needed factories and vendors. Often contacts from one region would result in the needed contact in another region and another country. This is the reason the study took place over such a long period of time. The ability to sample a homogeneous group from factories similar in their production was thus gained over time in the countries surveyed. This provided for voluntary participation and sample sizes large enough to provide valid and meaningful study.

The cultural value orientation for entrepreneurs should be significantly different than the values held by a measured segment of the population as represented by a typical factory within the same geographic location. Factory workers traditionally have represented a segment of society that is consistent with society as a whole, especially in the former communist nations. The cultural dimensions of IND, PD, UA, MAS, and LTO are representative of these factors.

The traditional factory worker group in the former communist nations was organized centrally so as to create a very similar worker mix throughout all these nations. One could visit a factory in Siberia and find a very similar factory thousands of miles away in Ukraine. Because the factory was not organized as in the West, it was established as a

small community within itself. The factory was responsible for not only the production of a product, but also the education, social, medical, housing, transportation and welfare of the workers. Thus, the factory reflected the community at large, often including 20,000 to 40,000 workers. It is from this group that the study found the factory workers to survey that would best reflect the traditional workers and thus the culture of the region. Factory workers in these regions were from all segments of society and provided the most accurate representation of the national identity due to the organizational method used by the Central Planning Commission during the communist days. The group is the most homogeneous across national boundaries for all the communist nations.

The manufacturing environment was the focus for the community in which it was located. Hofstede (1991) suggested that by comparing homogeneous groups across national boundaries, the cultural dimensional scores can be used to compare and contrast the underlying values. Although it is impossible to survey every factory in every region, the host of studies that have replicated Hofstede have been from a variety of sample groups, yet have provided evidence that the survey can reflect a national value with a large enough sample. A group that best represents a homogeneous sample that is similar across nations also had to be found. The traditional (and non-entrepreneurial) worker group was best represented by factory workers because (a) they took little or no risk in their labor, (b) factories that were similar in production (thus with similar workers needed) could be found across nations, (c) the organizational model for all communist nations used the factory as a small city or a microcosm, (d) workers had security of employment as long as the factory was functioning, (e) they were the largest measurable group available and (f) they were most similar to the original Hofstede sample group.

In choosing the factory, the key was not to contact large numbers of factories, but rather to focus upon a similar factory in each region. This was consistent with Hofstede's homogeneous study group methodology. Once the factory was located and surveyed, the vendor-entrepreneurs were surveyed in the same region. In the case of the vendor-entrepreneurs, it was necessary to be as discreet as possible because the criminal elements were always present. Despite the presence of criminal elements, discreet solicitation successfully obtained voluntary surveys that were small business owners to create a homogeneous sample group that could be defined as entrepreneurs.

During the early stages of economic transition from communism to capitalism, entrepreneurial activities were most evident in an increasing number of retail vendors. The

vendors usually operated from retail sites including small storefronts, street kiosks, and outside markets. In all of the studied countries, the transition created a very similar pattern in the creation of such retail locations. The largest compilation of vendors was in the local outdoor markets. These markets sold products ranging from simple foodstuffs to sophisticated electronic devices. These marketplaces often contained nearly a thousand shops. Across a major city, there would be approximately 12-15 such marketplaces.

The total lack of indoor retail space made these locations the new shopping centers. These vendors constituted the largest identifiable group of entrepreneurial people within these transitioning economies. These individuals were entrepreneurs because they; (a) take their own risk, (b) have no security of result at all, (c) are their own boss, (d) either profit or lose by their own initiative, (e) regard their business as more important than family, and (f) decided on their own initiative to begin what in these nations was a very different form of work. An entrepreneur's future was not known, the level of profits were uncertain, individual effort was necessary, there was little group support, the time it would take to succeed or fail was short, and the environment in which the effort was operating was totally in flux. Yet, despite the uncertainty that forming a new individual business entailed, hundreds of thousands of people did just that within a short time frame in every reforming country. It is from this group that the authors chose to conduct the survey, as it was the best representation of an entrepreneur.

Table 1. Sample size from each country studied by the authors

Country	Entrepreneur Sample	Factory sample
Russia	697	551
Ukraine	376	408
Latvia	256`	271
Lithuania	149	339
Czech	225	299
Poland	152	319

Romania	153	257
Armenia	236	240
Bulgaria	249	181
Total	**2493**	**2865**

Following the method used by Hofstede's VSM94 survey instrument each of the Hofstede (1994) cultural value survey questions used were classified into one of the following cultural dimensions; Individualism, Power Distance, Uncertainty Avoidance, Masculinity, and Long-Term Orientation (the same method as used by Hofstede was applied in this study). Hofstede's survey questions are associated with each cultural characteristic and were combined and labeled as IND (Individualism), PD (Power Distance), UA (Uncertainty Avoidance), MAS (Masculinity), and LTO (Long-Term Orientation).

The results were categorized for either entrepreneur or factory worker by national identity. The data was analyzed to determine the z-statistic associated with each individual characteristic. The objective was to determine if there was a difference in cultural values of entrepreneurs compared to factory workers. The conclusions of this study were compared to the conclusions of the McGrath et al. (1992) analysis to see if these differences were similar to that observed in other countries.

The authors used two predictor variable for each country (a) vendor-entrepreneur and (b) factory worker. Hofstede (1980, 1994) has stated that homogeneous samples as low as fifty would be sufficient for a reliable and valid indicator of the cultural dimensional values. A sample size many times this amount, as evidenced in this study, provided an excellent representation of both groups studied. The factory chosen for each sample was similar in nature across countries so as to produce a homogeneous group. These factories were similar in total size, with worker populations that were working for a long time within the site. In the sample, the subjects were either entrepreneur or non-entrepreneur. The samples are representative of the populations. The samples are independent. The samples were all drawn from similar factories and environments. The variances of the two populations are assumed to be equal due to the research design and the homogenous nature of the samples.

The VSM 94 survey instrument was translated in each country by a local university English language instructor. This translation was given to a different English language instructor for a back translation and compared to the original instrument for accuracy. This was repeated a total of three times to achieve an authentic translation. In

Russia, Ukraine, and Latvia, the language used was Russian. In the other countries, the local language was utilized.

Hofstede's formula for determining the cultural dimensional values by country was utilized by computing the values for the factory workers and for the entrepreneurs for each country (Hofstede, 1994). Hofstede stated that his method, "can serve to explain and understand observed similarities and differences between matched phenomena in different countries" (Hofstede, 1991). The differences between countries are, according to Hofstede, attributed to the national culture in those countries. The interesting part about Hofstede's theory is that it focuses on the specifics of the cultural dimensions of a culture, allowing the research to compare two groups, whether they are completely different or partly similar. The cultural dimensions identified by Hofstede are meant to depict tendencies, not precise cultural values (Hofstede, 2001).

Each respondent has his or her own reference points in answering the survey questions, and their responses might be influenced by their value judgments based on their recent experiences. In the transition economies, most people probably realized that their old system did not work and thus responded to the questions more in favor of individualism and less in favor of uncertainty avoidance than their actual behavior might reveal. However, individuals within society may change rather quickly, but not society itself. Society tends to maintain its traditional values and culture (Hofstede, 2001; Beugelsdijk et al., 2018). The level of individualism indicated by some of the respondents was likely already there, though those with this characteristic never acted upon it or revealed it (to do so would have put them at a great social disadvantage). Clearly, culture and cultural values are extremely important factors influencing a person's opinions, beliefs, attitudes, viewpoints, and motivations (Hayton, George, and Zahra, 2002). Surely, individual psychological and personality factors are significantly determined by culture, and this would lead to more entrepreneurs in those societies that exhibit these characteristics (Davidsson and Wiklund, 1997).

The ability for the demographics to be a primary influence upon the results is certainly a major consideration. However, there is no pattern across countries, indicating that demographics are an explanation for the differences between vendor-entrepreneurs and factory workers. In contrast, the two groups studied using the hypothesized variables indicate differences within the countries and also differences across countries. Thus, the differences in the samples were not driven by an overall effect of the demographic variables. The differences were driven by the value systems rather than the demographic

variables. Hofstede was able to create an accurate instrument related to the cultural dimensions that also included demographical questions to allow for sex, age, education, and job position variables. This established a method whereby an accurate reading of the differences as related to nationality could be quantified. The plethora of follow-up research not only validated the Hofstede research but also expanded it so as to compare groups within a national culture.

Respondent data contained questions that determined each respondent's educational level, age, gender, job category, and time on the job. The survey resulted in a similar number of males and females for each category to reflect the overall population of the country for factory workers. Vendor entrepreneurs reflected the convenience sample that was taken without regard to gender, age, educational level, or previous job held. The local vendor-entrepreneurial population is not defined by the gender of the entrepreneur, but rather by the nature of the work and its risk-taking and work initiative. Hofstede (1984) advised researchers to use years of education as an index to adjust for occupational effects (Bosland, 1985). The current study followed the formula recommended by Hofstede (1984) to calculate the cultural dimensions and to control for occupational effects. The sample demographics (age, gender, education, and percentage in high managerial ranks) are shown in the appendix in tables 5-8.

For each cultural dimension, the mean scores of entrepreneurs and the mean scores of factory workers were compared and analyzed. Comparison of means in this way is a widely used method in cross cultural analysis and the means from this method are assumed to reflect a nation's cultural values (Davidov, Schmidt, and Billiet, 2012). When comparing means, traditional methods (z-test and t-test) have been widely used (Davidov et al., 2012). In the current study, a z-test was conducted for each country to test for a statistical difference between the means between entrepreneurs and factory workers.

Culture can be thought of as continuous. There are a continuum of values and levels of culture that exist, with no limited gap between values (Trompenaars, 1993). Just as time is often measured as an interval, culture also can be measured in the same way, with different dimensions indicating different levels (Yeganeh, Su, and Sauers, 2009). Culture is "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 2001).

Inferential statistics and the parametric approach assumes the studied values are normally distributed. However, the most important point regarding the assumption of normality is that the distribution of sample means (across independent samples) is normal.

Given that all samples were large, the assumption that the distribution of means across samples is normal, and so the z-test value can be used. The z-test is used to determine if two sets of data are significantly different from each other by looking at their means. According to the Central Limit Theorem (CLT), the distribution of sample means approaches a normal distribution as the sample size increases (assuming random and independent samples). The CLT applies for any population irrespective of the distribution from which the sample was taken. The current study used a large number of sample observations and can therefore apply the Central Limit Theorem and use the standardized z-scores (Fernandez et al., 1997). The authors of the current study used a convenience sampling technique. The conditions under which the research was conducted made it impossible to conduct a random sample. Given the large sample used in this study, and based on the Central Limit Theorem, the results are valid and can be generalized.

The cultural value orientation for entrepreneurs should be significantly different than the values held by a measured segment of the population as represented by a typical factory within the same geographic location. The Hofstede value scores in the McGrath et al. (1992) study found entrepreneurs had higher Individualism scores, lower Uncertainty Avoidance scores, higher Masculinity scores, displayed a larger Power Distance value, and had a larger Long-Term Orientation value. The conclusion by McGrath et al. (1992) certainly showed that there are differences in those who engage in entrepreneurial activities as to their cultural values in capitalist countries.

Statistical tests for significance were done for each country. Additionally, for purposes of aggregate cross-inference, the use of Hofstede's cultural value dimensional scores using the VSM 94 were computed for entrepreneurial and factory worker samples. If the null hypothesis between the groups mean value was rejected, then Hofstede's cultural dimensional value scores were utilized to provide the basis for additional examination of the basic hypothesis wherein entrepreneurs would have significantly different cultural values than factory workers in a particular direction. The direction of these differences indicate additional support for the general hypothesis.

HYPOTHESIS

The general hypothesis of the study was that entrepreneurs in the nine countries studied are different in their cultural values than factory workers (i.e., non-entrepreneurs). This hypothesis was founded in theory advanced toward the belief that there is a divergence in

cultural values associated with national identity and entrepreneurship (McGrath, 1996). Factory workers traditionally have represented a segment of society that is consistent with society as a whole, especially in the former communist nations. Five variables were used to study the cultural value orientation as the criterion variables are the five variables of the Hofstede survey; IND, PD, UA, MAS, and LTO.

The specific research hypothesis tested by the authors are based on Hofstede's five cultural values and McGrath et al.'s (1992) entrepreneurial model. Hofstede is one of the most commonly cited authors in the social sciences and his cultural values are widely accepted for cultural research (Hambrick and Brandon, 1988; Kirkman, Lowe, and Gibson, 2017; Merkin, Taras, and Steel, 2014). The extensive number replications using Hofstede's method is beyond compare and is still relevant in studies regarding culture and cultural values (Holden, 2004; Eringa et al., 2015). Additionally, the previous work of McGrath et al. (1992) in their eight-nation study is highly regarded.

Just as was done previously in the McGrath et al.'s (1992) study, using the Hofstede model combined with previous research by McGrath et al. (1992), the current authors' study expands their research to nations never before researched at a moment in time before the multitude of changes, that were to happen, had not yet occurred. The series of hypothesis was used to try to understand all of the characteristics to provide a fuller view of the necessary differences between factory workers (i.e., national values and entrepreneurs). Entrepreneurship and cultural values is a fairly recent area of study. Expanding entrepreneurship and cultural values research into transition economies and former communist countries is a valuable input into academic understanding. Hofstede's study provided the individual characteristics while McGrath et al. (1992) provided the framework of entrepreneurship cultural values from which to create the following hypothesis.

(1) Security of employment: H1E < H1F
H1: Entrepreneurs display a lesser need for security of employment than factory workers.

(2) Value work over family: H2E > H2F
H2: Entrepreneurs value work over their family to a greater degree than factory workers.

(3) Individualism: H3E > H3F
H3: Entrepreneurs display greater Individualism than factory workers.

(4) Power Distance: H4E > H4F
H4: Entrepreneurs display greater Power Distance than factory workers.

(5) Uncertainty Avoidance: H5E < H5F
H5: Entrepreneurs display lower Uncertainty Avoidance than factory workers.

(6) Masculinity: H6E > H6F
H6: Entrepreneurs display greater Masculinity than factory workers.

(7) Long-Term Orientation: H7E > H7F
H7: Entrepreneurs display greater Long-Term Orientation than factory workers.

Hypothesis 1: Security of employment: H1E < H1F

$H0_1$: Entrepreneurs will not display a lesser need for security of employment than factory workers.
H1: Entrepreneurs will display a lesser need for security of employment than factory workers.

McClelland (1961) claimed that "practically all theorists agree that entrepreneurship involves, by definition, taking risks of some kind" (McClelland, 1961). Independent thinking, risk taking, and hard work are important traits of entrepreneurs. Cultures that reward and encourage these traits create a positive and supporting environment for entrepreneurship. Cultures that emphasize conformity discourage entrepreneurial behavior (Herbig and Miller, 1992; Herbig, 1994; Hofstede, 1980). Since entrepreneurs take their own risk, have no security of result at all, and either profit or lose by their own initiative it is hypothesized that entrepreneurs will display a lesser need for security of employment than factory workers. Question 4 from Hofstede's VSM94 survey specifically refers to security of employment, with a higher score indicating that the responder does not find security of employment very important. Table 4 contains the results of the z-test for the differences of the scores from the sample groups for all the countries in the study.

Hypothesis 2: Value work over family: H2E > H2F

$H0_2$: Entrepreneurs will not value work over their family to a greater degree than factory workers.
H2: Entrepreneurs will value work over their family to a greater degree than factory workers.

Cultures that encourage hard-work, reward merit, promote self-sufficiency, and value diligence tend to take more chances in life, bear more risk, and identify creative alternatives, all of which foster entrepreneurship (Davidsson and Wiklund, 1997). A strong work ethic and a desire for self-sufficiency would result in long hours implying a strong importance (value) of work over family. Question 1 from Hofstede's VSM94

survey specifically refers to how respondents value work over family. A higher score from question 1 indicates that the responder values work more over family. The mean values and z-test are shown in Table 4.

Hypothesis 3: H3E > H3F: Individualism/Collectivism

$H0_3$: Entrepreneurs do not display greater Individualism than factory workers.

H3: Entrepreneurs display greater Individualism than factory workers.

There are many empirical studies using the Hofstede individualism index that reveals individualism is more beneficial for innovation compared to collectivism. Among others, Gorodnichenko and Roland (2017) and Acemoglu, Akcigit, and Celik (2014) conducted comprehensive cross-country empirical analyses and found that individualism encourages innovation and entrepreneurship more than collectivism both quantitatively and qualitatively.

The history of the Soviet and Eastern European people shows constant domination by authoritarian leaders who have used a community-oriented model; this places great emphasis upon the degree to which those engaged in entrepreneurial activities are individualist rather than collectivist. It was expected that the vendor-entrepreneur would be significantly more oriented to being an individualist. The main trait that was desired in the establishment of communism was a collective spirit in peoples' attitude and for the established institutions to reflect the peoples' collective spirit. Without such a collective attitude among the people, the communist revolution would have been difficult to sustain for so long. After such a long period of dictatorial rule that officially prohibited open business efforts outside state controlled companies, it could be expected that individual effort would have been stifled and eventually even eliminated.

The need to be self-motivated is a cornerstone of entrepreneurial theory (Knight, 1964; Lippitt, 1987; Kao, 1991; Hébert and Link, 1988; Kuratko and Hodgetts, 1998). The relatively low level of Individualism generally found in former communist nations outside the entrepreneurial class is consistent with a lack of new business effort and success in some of the studied nations. Over 70% of the respondents replied utmost or very important when answering questions related to the security of employment. This suggests the basis for the low Individualism score.

Hypothesis 4: H4E > H4F: Power Distance

$H0_4$: Entrepreneurs do not display greater Power Distance than factory workers.
H4: Entrepreneurs display greater Power Distance than factory workers.

The academic literature indicates that under communism the countries should have a high Power Distance value consistent with an autocratic society. Puffer and Sheskina (1996) concluded that Russia should have a high Power Distance. All previous research agreed with this conclusion (Hisrich and Grachev, 1993). The lower Power Distance that McGrath, MacMillan, and Venkataraman (1995) concluded was present in entrepreneurs when compared to their national culture, did not indicate the level of the national cultural Power Distance, only the direction of the difference.

The interaction of workers and superiors establishes the degree that Power Distance is present in a society. Entrepreneurs tend to believe that they have a much higher Power Distance than the population due to the intolerance for inequality (McGrath et al., 1992). The former USSR and Eastern European nations all have had a history of top-down organizational management systems with a very strong worker union presence. The presence of an entrepreneurial spirit should indicate that the entrepreneurial group studied (vendors) would have a much higher power distance than the factory workers. When there is high power distance, those working in an organization (without high status) find it difficult to advance and gain status, they are effectively stuck in their status. In this case, engaging in entrepreneur activity is one way to overcome their low status. If a person becomes an entrepreneur, then they gain independence, they are their own boss, and they must become self-reliant. There is no better way to become independent and have self-determination than to become an entrepreneur. Shane (1992) and Dwyer, Mesak, and Hsu (2005) find a direct relationship between entrepreneur development and Power Distance; a higher Power Distance means more entrepreneurship. Therefore, the current authors tested the hypothesis to see if entrepreneurs display greater Power Distance than factory workers. It is significant that the authors found a much lower Power Distance among all groups studied than was previously suggested would exist.

In the communist factory environment, once decisions were made, the directions were followed without question. However, the process of decision making may have provided the lower than expected Power Distance score. Theoretically, the factory was an institution in which the workers had an input into the decision making process. The factory provided workers a social network. Therefore, the factory manager's role was related to, and associated with, their workers rather than to any political ideology or

political structure and therefore established a low power distance difference between the workers and those who directly managed them.

Hypothesis 5: H5E < H5F: Uncertainty Avoidance

$H0_5$: Entrepreneurs do not display lower Uncertainty Avoidance than factory workers.

H5: Entrepreneurs display lower Uncertainty Avoidance than factory workers.

One of the critical elements of defining an entrepreneur is the degree that they fear uncertainty. Entrepreneurs tend to have less fear of uncertainty than do other members of society. This is especially critical in developing countries where the economy is unstable and risk, uncertainty, and unpredictability are all high. Entering a new venture has a high degree of uncertainty. The new entrepreneur is expected to exhibit a smaller degree of Uncertainty Avoidance in the countries studied. As stated by Hofstede (1980), "a low UA means by definition a greater willingness to take risks". Taking risk means the outcome and results will vary. To handle the uncertainty entrepreneurs must have a low level of Uncertainty Avoidance. In those cultures that have high Uncertainty Avoidance, people seek security, stability, and consistency and avoid high risk situations thus inhibiting entrepreneurship (Hofstede, Jonker, and Verwaart, 2008). In such societies, individuals prefer stability in their life, like insurances or job security. Thus, the authors test the hypothesis to determine whether entrepreneurs display lower Uncertainty Avoidance than factory workers.

Hypothesis 6: H6E > H6F: Masculinity/Femininity

$H0_6$: Entrepreneurs do not display greater Masculinity than factory workers.

H6: Entrepreneurs display greater Masculinity than factory workers.

High Masculinity cultures put more emphasis on material things, money, wealth accumulation, and as Hofstede (1980) said this orientation, "works to live." Societies that have high Masculinity characteristics tend to be assertive, aggressive, seek prestige, material success, and feel the need for a high level of achievement (Hofstede, 1980; Hofstede, 1991; Hofstede, Hofstede, and Minkov, 2010; McGrath et al., 1992). The ability of entrepreneurs to begin and sustain the effort needed to become successful contains an inherent ability to be aggressive in their pursuit for success. The ability to put forth the effort in business formation above family needs is legendary among successful entrepreneurs. Often the entrepreneur is alone without a support system other than self-

direction. Each of these traits can be found in a highly masculine culture. The capacity to become assertive, proactive, self-oriented for success, and risk taking are all characteristics of an entrepreneurial class. Ardichvili and Gasparishvili (2003) found that societies with higher Masculinity had more entrepreneurial activity and behaviors. Cultures with lower masculinity traits imply less importance is placed on high achievement, the accumulation of wealth, and engaging in entrepreneurial activity (Hofstede, 1980; Hofstede, 1991; Hofstede et al., 2010; De Mooij and Hofstede, 2010). Since competitiveness, assertiveness, and the need for achievement all encourage entrepreneurship and are found in societies with high Masculinity the authors hypothesize that entrepreneurs display greater Masculinity than factory workers.

Hypothesis 7: H7E > H7F: Long-Term Orientation

$H0_7$: Entrepreneurs do not display greater Long-Term Orientation than factory workers.

H7: Entrepreneurs display greater Long-Term Orientation than factory workers.

Hofstede (1991) said that the "values at the LTO pole are very Confucian and support entrepreneurial activity. Persistence and tenacity when pursuing a goal are components of the entrepreneurial effort." Hofstede (2001) further stated, "Long-term orientation stands for the fostering of virtues oriented towards future rewards, in particular perseverance and thrift." (Hofstede, 2001). The ability to persevere over time is a component of the entrepreneur. The long history of continual efforts to modernize the former USSR and Eastern European nations would indicate that the overall population has been oriented to a long-term time perspective. However, entrepreneurs must persevere to be successful, and it is expected that the vendor-entrepreneur will be more oriented toward the long term than is the general population. Long-term orientation is focused on the future, delayed gratification, and achieving long term goals. The Long-term Orientation cultural value emphasizes thrift, perseverance and future benefits and putting less emphasis on leisure time (Hofstede et al., 2010). Therefore, the authors of this study hypothesize that entrepreneurs display greater Long-Term Orientation than factory workers.

RESULTS

While no nation will exhibit a perfect entrepreneurial cultural value model, different cultures can be influenced by one characteristic more than another. A nation's political,

social, and economic framework, in combination with the cultural values and cultural institutional factors, will impact the changes each nation undergoes. How this economic, political and social evolution will proceed will be influenced by many factors that will directly affect the ability of each nation to build an entrepreneurial class. Viewing the cultural characteristics individually can provide insight regarding the potential risks and strengths of for each cultural trait. Tables 2, 3, and 4 contain the summary results for the analysis of the cultural traits and hypothesis from the standpoint of each country.

GENERAL RESEARCH HYPOTHESIS

The general research hypothesis was that entrepreneurs would display a characteristic assortment of beliefs. The authors' extensive study encompassed nine countries using seven characteristics for a total of 63 potential characteristic values. Entrepreneurs scored significantly higher for all countries studied for Individualism, Power Distance, Uncertainty Avoidance, Masculinity, and Long-Term Orientation. Although the need for less security of employment overall did not support the hypothesis, there was significant support from three of the nine countries. There was little support for valuing work over family, with only two countries supporting this hypothesis. Individualism had total support from all countries, most with very strong support. Power Distance overall did support the hypothesis; however, there was support from only five of the nine countries. Uncertainty Avoidance provided strong support for the general hypothesis from all countries. Masculinity had strong support for all countries except Bulgaria, with the overall z-test indicating support for the general hypothesis. Long-Term Orientation had support for the general hypothesis from all of the nine countries.

Overall, of 63 potential differences, 45 scores indicated differences that supported the general hypothesis, and 18 scores did not support the general hypothesis. Thus, findings show 71% support for the general hypothesis. When examining only the Hofstede values of the potential 45 scores, 40 supported the hypothesis and five did not. This provided an 89% level of support for the five hypotheses, certainly a robust level of support when using the Hofstede scales and the general hypothesis using z-scores.

The authors' research had mixed support for the work of McGrath et al. (1992). The authors' research indicated entrepreneurs have a higher value for Individualism and Masculinity than the McGrath et al.'s (1992) study, while having a lower value for

Uncertainty Avoidance and Power Distance with a longer Long-Term Orientation than the McGrath et al.'s (1992) study.

The hypothesis test failed to support Power Distance for Russia. The Hofstede comparisons did not support Uncertainty Avoidance for Russia. Ukraine failed to support Power Distance in the hypothesis test. Russia and Ukrainian entrepreneurs were similar in their Masculinity scores, their Power Distance scores but varied dramatically in all other scores indicating a very different culture for each nation. The results confirmed Russian differences that were similar to those found by McGrath et al. (1992) in other countries between entrepreneurs and national identities. However, Ukrainian entrepreneurs did not follow the same pattern and only partially supported McGrath et al.'s (1992) findings.

The most significant differences found were in the Masculinity score and the Power Distance score for Russia and Ukraine. Characteristics for the entrepreneur in Russia and Ukraine were significantly in the direction predicted by the hypothesis on both of these cultural dimensions. Russia was statistically significant in the direction predicted by the hypothesis for Individualism as well. The results signify some lack of entrepreneurial characteristics, indicating insufficient desire to be entrepreneurial.

Table 2, 3, and 4 indicate the summary of the results for the study by the authors. Table 2 summarizes the results for the cultural values of factory workers and entrepreneurs in former communist nations. Table 3 summarizes the hypothesis and the Hofstede comparisons and Table 4 summarizes the hypothesis test results with the z-test statistics shown. Overall, the results found strong support for the differences between the studied groups on the cultural dimensional values of Individualism, Masculinity and Power Distance, but with mixed results for the other dimensions.

Table 2. Cultural Value Scores: Results from the Study Done by the Authors.

	Entrepreneur scores					Factory worker scores				
	IND	**PD**	**UA**	**MAS**	**LTO**	**IND**	**PD**	**UA**	**MAS**	**LTO**
Russia	52	33	91	22	54	31	40	102	6	36
Ukraine	38	26	60	23	55	27	48	93	0	50
Latvia	44	46	76	45	44	23	25	99	26	16
Lithuania	44	23	62	59	37	8	30	94	8	23
Czech	70	70	44	75	54	41	47	64	50	34
Poland	54	16	23	47	44	23	1	55	27	22
Romania	65	25	59	47	51	49	33	73	24	28
Armenia	59	32	52	64	38	18	13	90	34	18
Bulgaria	64	27	85	62	64	49	13	101	46	49
Mean	**54**	**33**	**61**	**49**	**49**	**30**	**28**	**86**	**25**	**31**

Table 3. Hypothesis Summary and Hofstede Score Comparisons.

	Hypothesis test summary							Hofstede scale comparisons				
Country	**H1**	**H 2**	**H3 IND**	**H4 PD**	**H5 UA**	**H6 MAS**	**H7 LTO**	**IND**	**PD**	**UA**	**MAS**	**LTO**
Russia	yes	no	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Ukraine	no	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Latvia	no	no	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Lithuania	yes	no	yes	no	yes	yes	yes	yes	yes	yes	yes	no
Czech	no	no	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Poland	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Romania	no	no	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Armenia	no	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Bulgaria	yes	no	yes	yes	yes	no	yes	yes	yes	yes	yes	no
Overall	**no**	**no**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**yes**	**no**

Table 4. Individual Country Hypothesis Analysis Summary

	H1 z Value	H1	H2 z Value	H2	H3 z Value	H3	H4 z Valu	H4	H5 z Valu	H5	H6 z Value	H6	H7 z Value	H7
Russia	2.56	yes	-1.14	no	2.56	yes	-1.85	no	-2.30	yes	2.60	yes	6.32	yes
Ukraine	-1.59	no	4.36	yes	3.25	yes	-2.29	no	-4.02	yes	3.64	yes	1.67	yes
Latvia	-1.39	no	-4.87	no	3.56	yes	3.87	yes	-4.87	yes	3.29	yes	6.54	yes
Lithuania	2.95	yes	-2.39	no	5.49	yes	1.29	no	-4.24	yes	4.36	yes	5.75	yes
Czech	1.49	no	-0.40	no	4.59	yes	3.58	yes	-2.03	yes	2.28	yes	2.31	yes
Poland	-7.29	no	-11.0	no	5.27	yes	3.27	yes	-2.08	yes	2.37	yes	2.59	yes
Romania	-1.73	no	-2.20	no	2.74	yes	-1.94	no	-2.42	yes	2.34	yes	3.46	yes
Armenia	-0.94	no	1.87	yes	4.99	yes	8.93	yes	-3.31	yes	2.05	yes	2.25	yes
Bulgaria	9.39	yes	-2.57	no	3.41	yes	2.20	yes	-2.96	yes	1.50	no	2.23	yes
Overall	**0.68**	**no**	**-0.68**	**no**	**3.97**	**yes**	**1.90**	**yes**	**-3.03**	**yes**	**2.71**	**yes**	**3.68**	**yes**

Hypothesis 1

The country by country analysis indicates that only three nations (Russia, Lithuania, and Bulgaria) have significantly higher mean values for entrepreneurs (thus a lower need for security) than for factory workers, thus rejecting the null hypothesis and supporting Hypothesis 1. Ukraine, Latvia, Poland, Romania, and Armenia have higher mean values for the factory workers (thus have less need for security of employment) and fail to reject the null hypothesis, thus Hypothesis 1 is not supported.

The Czech Republic has a higher mean value for entrepreneurs, but the difference is not significant, thus the null hypothesis is not rejected and Hypothesis 1 is not supported. Overall, although entrepreneurs had a higher mean value than factory workers, the difference was not significant, thus the null hypothesis is not rejected and Hypothesis 1 is not supported. The mixed support for security of employment is in contrast to the literature. The long period of communist rule with an all-encompassing social security blanket may have institutionalized a very low need for security of employment. This explains the mixed results from societies that are evolving from a situation of total security to one that is much more uncertain. This mixed result indicates that security of employment, while having differences between the two groups, is not strongly support across all nations, as indicated by the z-test value for all nations combined.

Hypothesis 2

These findings indicate that the null hypothesis is not rejected, and thus there is no support for Hypothesis 2. With the exception of Ukraine and Armenia, the entrepreneurs did not regard time for their personal or family life to be less valuable than time for work, whereas factory workers indicated a need for time for personal or family life to be more important. Hypothesis 2 is not supported. Only Ukraine and Armenia found support for the alternative Hypothesis 2.

Hypothesis 3

The results of the independent tests that establish the z-score for the difference between the group means for the cultural dimension of Individualism are contained in Table 4. The results reject the null hypothesis at the 95% significance level in all countries and thus supports Hypothesis 3 that entrepreneurs are more individualistic than factory workers. In this study, the authors find a strong entrepreneurial spirit and an overall middle-to-high Individualism value for most countries. This provides rich evidence that even when a dominant culture is forced upon the population, it is difficult to change the basic underlying culture. Even after such a long and sustained effort to make all the communist nations into a collective orientation, an individualist orientation continued.

An additional surprising result is the high level of Individualism observed in the Czech Republic, Romania, and Bulgaria. These values are even above average for developed nations. One common thread running through these three nations is a history and a long tradition of trade and business. The Czech Republic, Romania, and Bulgaria are also among the more reformed minded of all the former communist economies. The Individualist trait must have contributed to the high degree of reform as well. The current authors' research confirmed that factory workers were low, to lower middle, in their Individualism score, but that the entrepreneur was significantly higher than the factory worker on this value. The entrepreneur was in the middle category for all nations, indicating an orientation toward individual effort that confirmed dramatically the authors' hypothesis.

Hypothesis 4

The results of the independent z-test for the Cultural Dimension of Power Distance are contained in Table 4. The country by country results are mixed, five countries reject the null hypothesis and four countries fail to reject the null hypothesis. The findings do not

indicate a higher degree of Power Distance for entrepreneurs in Russia, Ukraine, Lithuania, and Romania, thus do not reject $H0_4$ at the 95% significance level for these countries. The finding indicates that in Latvia, the Czech Republic, Poland, Armenia, and Bulgaria $H0_4$ is rejected in favor of H4 indicating a higher Power Distance for entrepreneurs than factory workers.

When there is a high level of Power Distance, then there is a tendency for people to resist change. Leaders, and those in authority, are given high respect and those with lower status depend on their leaders and the result is likely less initiative (Hofstede, 1991). Geletkanycz (1997) says that, "power distance is associated with maintaining the status quo and established barriers to novelty and change". Hayton et al. (2002) and Mitchell et al. (2000) argue that entrepreneur development and Power Distance are inversely related.

The Power Distance findings revealed two areas of special interest. First, although Power Distance had mixed support for the alternative hypothesis, overall it was supported. Second, actual scores for each country were much lower than expected from the literature. Latvia, the Czech Republic, Poland, Armenia, and Bulgaria all supported the alternative hypothesis that entrepreneurs would have a higher Power Distance than factory workers. This support was generally strong. However, Russia, Ukraine, Lithuania, and Romania supported the null hypothesis. The mixed result indicates national differences between the two groups that can be generalized across countries to support the alternative hypothesis; however. The authors conclude that despite an overall significance for the result, the data show weak support for Hypothesis 4 due to only five countries supporting and four countries not supporting Hypothesis 4.

The level of Power Distance for the factory workers was very much consistent with that in the United States, while the level among entrepreneurs was lower, just as the McGrath et al. (1995) research results indicated it would be. The socialist model for most nations has a low Power Distance value, for example, the Power Distance for Switzerland 34, Sweden 31, Finland 33, Denmark, and Norway 31, are all considered low (Hofstede et al., 2010). Entrepreneurs and factory workers are both consistent with this result. The authoritarian system that existed in the communist world certainly implied that a high Power Distance should exist at all levels. However, the theoretical tenants of communism were based upon worker participation, social structures orientated to the factory, and collective agreement on decisions which would argue for a lower Power Distance.

Hypothesis 5

The results of the independent z-test for the Cultural Dimension of Uncertainty Avoidance are contained in Table 4. The findings reject the null hypothesis at the 95% significance level in all countries, and thus support Hypothesis 5 that entrepreneurs will have a lower Uncertainty Avoidance than factory workers. In comparison to other socialist nations, most of the countries studied scored higher Uncertainty Avoidance for both groups than the socialist nations scored. For example, the Uncertainty Avoidance values for Finland = 59, Switzerland = 58, Netherlands = 53, Norway = 50, Sweden = 29, and Denmark = 23 (Hofstede, 1980; Hofstede et al., 2010) and most counties in the authors' study were higher than these values. This study found a very high Uncertainty Avoidance orientation among all the nations studied, placing them in the upper tier among all nations. Because the basic value of communist ideology was to make all lives very certain, people in former communist countries display fear of uncertainty.

It is interesting to theorize about why the communist ideology appealed to the masses given they had such a high Uncertainty Avoidance. Did people desire a society that provided them with a life free of the uncertainty they feared? The very high values for this trait confirm this possibility. Since, the communist dictatorship governed through fear, this likely resulted in a high level of Uncertainty Avoidance. Most of the previous literature predicated the presence of a high Uncertainty Avoidance value in the former communist nations (Bradley, 1999, 2003). Those societies that have high Uncertainty Avoidance prefer distinctive, explicitly, and unmistakable norms, rules, and procedures and those that do not follow the rules face painful consequences (Erez and Nouri, 2010) which may limit the development of entrepreneurship (Jansen, Van den Bosch, and Volberda, 2006).

Entrepreneurs need to act quickly to take advantage of new markets, new opportunities, and new products and they need to do this in an environment of uncertainty (Lee and Peterson, 2000; Brinckmann, Grichnik, and Kapsa, 2010). Those societies that exhibit high Uncertainty Avoidance will be better able to take advantage of these opportunities. For example, if there is significant uncertainty in the market then an entrepreneur may find potential economic profit opportunities that others miss (Shackle, 1953). A lower Uncertainty Avoidance level promotes, cultivates, and encourages a culture of entrepreneurship (Lee and Peterson, 2000). The authors found that Ukraine had a far higher Uncertainty Avoidance value than Russia. The results indicate confirmation of the

Russian hypothesis expected by the theory proposed by McGrath et al. (1992), but the results did not confirm the presence in the Ukrainian samples.

In the authors' study, the level of Uncertainty Avoidance is among the highest in the world while the value places it in the middle of those nations surveyed using Hofstede scores. The socialist nation's scores are generally in the middle for this value (for example, Finland 59, Switzerland 58, Netherlands 53, and Norway 50) while Sweden (29) and Denmark (23) score very low (Hofstede et al., 2010). Russian history and the communist ideology would place a desire for the nation to have total certainty in the society to avoid any conflicts. The high level of UA in Russia is consistent with this ideology, but the lower Ukrainian score is an enigma.

Hypothesis 6

The results of the independent z-test for the cultural dimension of Masculinity/Femininity are contained in Table 4. The findings indicate that the null hypothesis is rejected across 8 countries with the exception of Bulgaria; thus, Hypothesis 6 is supported, indicating that entrepreneurs have a greater Masculinity score than factory workers. The results indicate that the entrepreneurs were significantly more masculine than factory workers. The extremely low score for factory workers on this value places them in a highly feminine culture that values family, society, and the agreement among people, all values that are also similar to tenants of socialism. For the entrepreneurial group to rise substantially from this feminine culture provides the most significant evidence of this study confirming that a difference exists between entrepreneurs and factory workers across the measured cultures. The values of assertiveness, money orientation, work orientation and accountability for personal effort is contained in this dimension.

This result is interesting given the fact that Russia, Ukraine, Lithuania, and Romania all had very low values for factory workers, indicating that these cultures are very feminine in nature. The characteristics associated with this value are family, cohesive work groups, and an orientation toward the society rather than the individual. With entrepreneurial scores far above these values, this difference between the two groups provides impetus for an aggressive, work-oriented entrepreneurial class. The entrepreneurs value work, money, assertiveness, and accountability toward personal effort. The ability to take personal responsibility for one's success or failure is at the cornerstone of entrepreneurial theory as well as market-oriented societies (Knight, 1964; Lippitt, 1987; Kao, 1991; Hébert and Link, 1988; Kuratko and Hodgetts, 1998). The act of forming a

new business is a bold step and indicates a desire to become independent as well as the drive to pursue both personal goals and goals for the business.

The Masculinity factor is critical in the evolution of an entrepreneurial class. Evidence of a high Masculinity value among most nations studied and a large difference between the entrepreneurs and factory workers is a very positive finding. Combined with the Individualism finding, it is decisive that the overall hypotheses regarding real differences between the two groups studied have implications for the economic development within these nations. Although the overall level of Masculinity is not at the levels of Western economies, it is substantially above other socialist nations (Hofstede, 1980; Hofstede et al., 2010).

Hypothesis 7

The results of the independent z-test for the Long-Term Orientation are contained in Table 4. The findings indicate that the null hypothesis is rejected for all nine countries, and thus Hypothesis 7 is supported. This cultural dimension provided the most closely matched answers by each nation. The groups were almost identical in their replies. The overall cultural value was toward a long-term orientation that was expected by the literature (Bradley, 1999).

The overall scores, when viewed as a whole, provide among the highest Long-Term Orientation values yet recorded in the world. Apparently, the constant future-oriented propaganda during the communist era became engrained in the populace, or it is more likely that this quality was institutionalized in more ancient history. Clearly, there was a long held repressed resentment of the communist ideology, people wanted a better future and they took a long-run view, hopeful someday it would arrive. Regardless, this value bodes well for an entrepreneurial class to evolve over time. With the other positive traits that indicate an entrepreneurial orientation, the exceptionally Long-Term Orientation of these nations establishes a very conducive character for the economic growth among the entrepreneurial class.

DISCUSSION OF COUNTRY RESULTS

Russia

In Russia, support for Hypotheses 1, 3, 5, 6, and 7 concerning a need for less security of employment, Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation indicates that there are significant differences between the entrepreneurial group studied and factory workers. There is no support for Hypothesis 2 (valuing work over family) and Hypothesis 4 (Power Distance). Hofstede's scores indicate support for all the hypothesis. It is evident that Russia has the underlying characteristics that are necessary to be a successful entrepreneur and that are needed for a market economy. The presence of entrepreneurial characteristics is critically important for Russia as they transform their economy from the centrally planned to one of markets. The results confirmed Russian differences between entrepreneurs and national identities similar to those found by McGrath et al. (1992) in other countries.

That Russia supported a need for less security of employment when most other nations did not is most interesting. Russia always has had a national identity as the dominant player among the communist nations, giving the people a sense that they would recover and find jobs, opportunities, and hope. This is especially true for the entrepreneur who thinks tomorrow will be better than today. Paradoxically, the paternalism by managers in Russian factories gave workers a feeling of security in their jobs, therefore workers did not feel a need for more security even as the Soviet Union broke up and economic conditions deteriorated (Brown, 1996; Clarke, 1995; Iankova, 2008).

The degree that Russian entrepreneurs were higher in Individualism compared to factory workers was substantial (52-31). The Individualism value places the Russian entrepreneur above the average for developed countries. Seventy years of communist rule did not eliminate the entrepreneurial spirit in Russia. Adding to the Individualism inclination, the Russian entrepreneur also is oriented to a long-term vision as evidenced by a value of 54 for the LTO trait. The Russian LTO value indicates that the entrepreneur will persevere over time, something critical to success for any entrepreneurial venture.

The Masculinity value of 22 for entrepreneurs, when compared to only six for factory workers, provides further insight into a true unique character for the entrepreneurs studied. This, combined with the previous insight into the high Individualism and Long-Term Orientation score, creates a positive basis for a true entrepreneurial character. Masculinity traits are needed for an entrepreneur to be successful, especially in a reforming

economy with little if any support for the new businessperson. The additional support in the survey was found for Uncertainty Avoidance. The communist system was based upon creating a state that had as a basic right the value of certainty. The very high values for both groups, 102 for factory workers and 91 for entrepreneurs, indicate the society is quite risk averse; Russian people desire a society that is low in uncertainty.

When examining a combination of all five characteristics, Russia has shown a strong inclination toward being entrepreneurial. When looking for historical reasons, one point must be made in the context of entrepreneurs. In the past communist world, the shadow economy (the blat economy or economy of favors) was a significant percentage of GDP. The shadow economy was reported at around 19% in the early 1990s and by 1997 it was reported at around 54% (Eilat and Zinnes, 2000). By definition, a shadow market is entrepreneurial in nature, particularly given the added risk of doing an unlawful business. The presence in Russia of a market that was functioning yet hidden, when combined with these entrepreneurial-oriented results, presents a positive view toward a long-term transition to a market form of economy with many small independent businesses. The unofficial markets known as blats (or svyaz) had been in existence since before the communist revolution (Lovell, Rogachevskii, and Ledeneva, 2001). Blat refers to the unofficial shadow markets that existed where goods and services were exchanged through connections, social networks, reciprocity and relationships, similar to guanxi in China, furthermore, having these social networks was more important than using currency or having money due to shortages of goods in the economy (Arnstberg and Boren, 2003; Lovell et al., 2001; Smith et al., 2012). Rehn and Taalas (2004b) boldly claim that the former Soviet Union, "might be seen as the most entrepreneurial society ever. In fact, one can, with a specific notion of entrepreneurship in mind, claim that the system basically forced all citizens to become micro-entrepreneurs, to enact entrepreneurship in even the most mundane facets of everyday life." Essentially, in the former Soviet Union, everyone had to be a micro-entrepreneur just to survive and live (Rehn and Taalas, 2004b).

Ukraine

Hypothesis 1 (need for less security of employment) and Hypothesis 4 (Power Distance) were not supported at the 95% level of significance. Support for all specific cultural dimension hypotheses except Power Distance in Ukraine indicates differences among the entrepreneurial group studied and factory workers. Ukraine was one of only two countries to support Hypothesis 2. The support was very strong for valuing work over their family

for the entrepreneur versus the factory worker. Reasons why Ukraine supported Hypothesis 2 require further explanation. The survey included many Russians as well as Ukrainians (ethnic Russians populate almost half of Ukraine and Russian military forces occupy and control Southern Crimea and this part of the Ukraine has a Russian population that is larger than average). Thus, although Russia did not support this hypothesis, the Russians living in Ukraine did support it significantly. The economy of Ukraine was not as robust as that of Russia, and the transformation to a market economy created high unemployment. The economy forced many people into entrepreneurial efforts, while everyone, including those working, had to find additional sources of income to survive.

In examining individual traits of Ukrainian entrepreneurs, several points are worthy of discussion. The level of Individualism in Ukraine was moderate (38), the level of Power Distance was lower for entrepreneurs than for factory workers (26-48), and the level of Masculinity also was low (23-0). Although the two groups studied differ in Individualism and Masculinity traits, the combination of these two traits relative to entrepreneurialism is critical to a successful ongoing entrepreneurial society. The low level of Masculinity traits means that the people, including entrepreneurs, are not assertive and aggressive in their nature, and have a low desire for achievement.

A new entrepreneur class that has a moderate Independence value, a low Masculinity, and a high Uncertainty Avoidance probably will not endure over time, and may even seek out a more secure occupation in time. The moderate value of Long-Term Orientation provides further evidence for this insight. The Ukrainian entrepreneur has traits that substantially support the overall hypothesis of this study, but upon further examination, has other characteristics that indicate a low inclination toward being a long-term entrepreneur. History supports this conclusion as well. In a historical context, the Ukrainian economy has floundered and usually has been assimilated or conquered by stronger nations nearby.

Latvia

Latvia is a country with a small, but significant, industrial base and a very large urban society. Hypothesis 1 (need for less security of employment) and Hypothesis 2 (valuing work over family) were not supported. Support for all other hypotheses concerning Latvia indicates differences among the entrepreneurial group studied and factory workers on every cultural dimension using the z-score. Using Hofstede value scores there was support

for Individualism, Uncertainty Avoidance, Masculinity and Long-Term Orientation, but factory workers were higher on Power Distance. Latvia is a society of high collective spirit, while being risk averse and oriented to the short term rather than long term. Historically, a class of entrepreneurs has not been prevalent at any time in Latvia. However, the authors' research indicates an entrepreneurial class exists distinct from typical workers. Although Individualism is moderate in Latvia (44), Masculinity is much more pronounced (45), and when combined with a very Long-Term Orientation (44), this provides evidence of Latvia's entrepreneurial predisposition.

Lithuania

In Lithuania, support for Hypotheses 1, 3, 5, 6, and 7 concerning a need for less security of employment, Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation indicates that there are significant differences between the entrepreneurial group studied and factory workers. Hypothesis 2 (valuing work over family) and Hypothesis 4 (Power Distance) were not supported. Examination of the actual values for Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation reveals that Lithuania has an entrepreneurial orientation. The Individualism score (44) and Uncertainty Avoidance score (62), were in the middle for developed nations, whereas the Masculinity score (59) and the Long-Term Orientation score (37) were in the upper range for developed nations. This combination is often seen as a valuable asset toward an entrepreneurial society. The differences between the two groups were large on all three traits.

The Czech Republic

The Czech Republic data supported hypotheses 3, 4, 5, 6, and 7. There were significant differences between the entrepreneurial group studied and factory workers on all of the cultural dimension using the z-score and using Hofstede's scores for Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation.

The Czech Republic is the former communist country closest to Europe. It is the most cosmopolitan of all former communist nations. The economy has always had an entrepreneurial class and the country tried repeatedly to become democratic and market orientated during the Soviet era. It is not surprising that the Czech Republic results indicated a very entrepreneurial society with large differences between both groups as well

as strong entrepreneurial values. In examining the actual values contained in each trait for both groups, several items are interesting to discuss.

Individualism is pronounced among the entrepreneurs (70) but still high for former communist nations among factory workers (41), indicating that the country has an orientation toward individual effort. Individual initiative is strong, and when combined with a high Masculinity score (75 for entrepreneurs and 50 for factory workers), and Long-Term Orientation of 54 for entrepreneurs, there is a definite orientation to the characteristics for an entrepreneurial effort. Factory workers have high scores on these traits as well (Independence, 41; Masculinity, 50; and Long-Term Orientation, 34). Observing these values in factory workers strengthens the potential for economic development within Czech society.

The moderate level of Uncertainty Avoidance (entrepreneurs, 44; factory workers, 64), especially when compared to former communist nations, provides evidence that the Czech Republic has a strong and deep rooted entrepreneurial presence. The Czech Republic is a country that already has adapted very well to becoming a market economy, with thousands of small business efforts succeeding. The Czech Republic is the most Western-oriented of all the former communist nations, but still has the memory of a brutal past associated with the Prague purges that created havoc within the society. This proximity to the West could provide incredible opportunity for development if the society was institutionalized to foster such development.

Poland

In Poland, the findings supported Hypotheses 3, 4, 5, 6, and 7 concerning Individualism, Power Distance, Uncertainty Avoidance, Masculinity, and Long-Term Orientation, indicating there are significant differences between entrepreneurs and factory workers. The data did not support Hypothesis 1 (need for less security of employment) and Hypothesis 2 (valuing work over family).

Poland is a country with many historical connections to business and trade. The presence of an active market economy during communist times enabled the rapid transformation to a market economy and hence a strong entrepreneurial society. The results for Poland provide several noteworthy findings. The election of a trade union president to the first post-communist presidency is not surprising in the context of the extremely low results for Power Distance, among the lowest in the world (16 for entrepreneurs and one for factory workers). Obviously, the Polish people regard workers

and management as being equal, which is further exemplified by the strong trade union movement.

In the context of the overall hypotheses, Poland has a strong Masculinity value (47 for entrepreneurs and 27 for factory workers), a moderate to high inclination for being Individualist (54 for entrepreneurs and 23 for factory workers), a high Long-Term Orientation (44 for entrepreneurs and 22 for factory workers), and a very moderate Uncertainty Avoidance value (23 for entrepreneurs and 55 for factory workers), especially for a former communist nation. These values are very supportive of entrepreneurial effort and characteristics. These results portend that Poland has a bright future as long as the political forces allow for these entrepreneurial characteristics to develop.

Romania

Data for Romania supported Hypotheses 3, 5, 6, and 7 concerning Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation, indicating there were significant differences between entrepreneurs and factory workers, but with mixed results. There was no support for Hypothesis 1 (need for less security of employment), Hypothesis 2 (valuing work over family), and Hypothesis 4 (Power Distance).

The high entrepreneur Individualism score of 65 places Romania toward the upper sector for all nations. A middle Masculinity score (47) and Long-Term Orientation score (51) indicate the country has three important elements for entrepreneurship. Entrepreneurs have a very good combination of individual desire for achievement and the patience for long-term rewards, yet have an aggressive work-oriented attitude that enhances any entrepreneurial effort. Additionally, Romania has a moderate Uncertainty Avoidance value of 59 for entrepreneurs and a much higher value for factory workers (73), which is typical of an entrepreneurial society. Unlike many of the former communist nations that had very high UA scores, Romanian entrepreneurs are much more able to take risks and have the patience to deal with new events and transformations.

Romanian society appears to have an important orientation toward the family, including the extended family. However, factory workers actually valued work over family to a greater extent than did entrepreneurs. This is a surprising finding, yet under examination of the cultural characteristics, a case can be made that those who are entering entrepreneurial activities do so because they wish to have the time and ability to interact with their extended family rather than work.

Power Distance was not supported, with low values for both groups (entrepreneurs, 25, and factory workers, 33). Most communist nations were thought to have a high Power Distance due to the top-down structure that existed. However, this study has found consistently lower than expected values. Romania was consistent with this result, even though it did not support the general hypothesis. Reasons for this lack of support can be attributed to the poverty and extreme income inequality gap that existed in Romania and therefore distorted the results. Those inside the state industrial organizations are subject to a greater authority structure than are those outside the system. This could be one explanation for the difference found between the two groups. Also, this result was found in other countries as well. Power Distance was the least supported trait among the five. This translates into a viewpoint of equality between workers and managers.

Armenia

The support for Hypotheses 2, 3, 4, 5, 6, and 7 concerning Armenia indicates that there are significant differences between the entrepreneurial group studied and factory workers. The data did not support Hypothesis 1 (need for security of employment). Using Hofstede's scores, there was support for Individualism, Uncertainty Avoidance, Masculinity, and Long-Term Orientation.

Armenia is in a different region than the other countries studied, located in the southern reaches of the former Soviet Union. It provides insight into a very different cultural arena than the other nations of the former communist world. The results were very positive for an entrepreneurial spirit being present in Armenia, although the actual values for individual traits were very different from the other nations studied. Armenia, more than any other studied nation, has a history of business and trade activity going back over thousands of years. During the communist reign, a high level of trade and business took place outside the centrally planned economic structure in Armenia. Armenian entrepreneurs are present in markets all over the former USSR.

Armenia has a very high Individualism value for entrepreneurs (59) that when combined with a very high Masculinity value (64) and somewhat moderate Long-Term Orientation value (38) is certainly supportive of an entrepreneurial attitude. This bodes well for the ability to foster and develop an entrepreneurial class should the political, economic, and legal forces provide impetus for its development. One interesting factor that was discovered is that Armenia has the shortest Long-Term Orientation for entrepreneurs. This would indicate that the political and economic forces reforming the

economy must do so in a timely fashion or the short-term orientation for both groups and hence society at large could result in impatience and dissatisfaction with a reforming economy.

Bulgaria

The findings in Bulgaria supported Hypotheses 1, 3, 4, 5, and 7 concerning a need for less security of employment, Individualism, Power Distance, Uncertainty Avoidance, and Long-Term Orientation, indicating there were significant differences between entrepreneurs and factory workers. The data did not support Hypothesis 2 (valuing work over family) and Hypothesis 6 (Masculinity). Hofstede's scores indicated a higher value for Individualism, Power Distance, Uncertainty Avoidance, and Masculinity with the factory workers having a higher score for Long-Term Orientation.

Bulgaria had a large industrial base that specialized in weapons production. Because of the large industrial base, Bulgaria had the highest standard of living of all the nations of the former communist world. The collapse of the trade arrangements with Russia in particular and the total collapse of the armament production affected Bulgaria's standard of living more than any other nation. The country went from a high standard of living to one of the lowest.

Examination of the large differences found between the Bulgarian entrepreneurs and factory workers studied reveals a very entrepreneurial society. Individualism in both groups was high for communist nations (64 for entrepreneurs and 49 for factory workers). Factory workers in Bulgaria had a similar Individualism score to most entrepreneurs from other countries. This provides evidence that Bulgarians have a very high orientation toward individual effort, an important aspect of being an entrepreneur.

Bulgaria has a very low Power Distance (entrepreneurs, 27 and factory workers, 13). Bulgaria has a very high Uncertainty Avoidance for both groups (entrepreneurs, 85; factory workers, 101). Other than Russia (entrepreneurs, 91; factory workers, 102), it is the highest of all nations studied. This would indicate that Bulgarians like a society that is secure and known. The turmoil evident from the dramatic changes in Bulgaria taking it from the highest standard of living to among the lower certainly had some impact upon the people. Also, combining this high UA value with the support for Hypothesis 1 indicates a high fear for job security.

Bulgaria has a very high Masculinity score for both groups and a pronounced difference between them (entrepreneurs, 62; factory workers, 46). These scores are similar

to other countries studied but very different from Russia and Ukraine. Much of the difference in how the region responded to the authoritative rule of Russia may be attributed to this trait. A society that desires a high socialist nature is consistent with a low Masculine orientation. However, the Eastern European nations were much more oriented to a higher Masculine nature and thus desired a society that fosters an individual environment. In this type of environment, people would desire work and success, be aggressive, and desire much less influence of the state in their lives. This is in stark contrast to how the communist world was governed and structured. It is not surprising that Bulgaria also supported Hypothesis 2, valuing work over their family.

Long-Term Orientation can provide the patience and sense of tradition that is needed in an economy that is in transition. Bulgaria has a very high Long-Term Orientation value for both groups but with significant differences between them (entrepreneurs, 64; factory workers, 49). This trait is most interesting when combined with the high Individualism score and high Masculinity score. As long as the people see progress toward a new economy and society, they can overcome their fear of uncertainty.

DISCUSSION AND CONCLUSION

This study supports the McGrath et al. (1992) conclusions that entrepreneurs are unique and that, regardless of the national culture, they have unique characteristics using the Hofstede VSM94 survey as the comparison measurement tool. Several surprising results include the incredibly high Uncertainty Avoidance and the higher than expected Individualism. In addition, there was almost universal agreement with research on entrepreneurs vs factory workers as compared to the McGrath et al. (1992) study. It is significant that the present authors found a much lower Power Distance among all groups studied than was expected from the literature.

Even in the former Soviet Union entrepreneurs existed. However, the government discouraged entrepreneurship and considered it a criminal offense. The shortage of normal everyday food, clothing, and materials provided opportunities for entrepreneurs to profit (Rehn and Taalas, 2004a; Aidis, 2006). In the former Soviet Union, the underground (or second) economy supplemented the official planned economic system providing support to the people that was lacking from the official system (Welter and Smallbone, 2011). This second economy included private entrepreneurs that even existed within government run factories and organizations (Dallago, 1990). During the

transition period, the phenomenon of predatory entrepreneurship accelerated creating many unscrupulous businesses (Spicer, McDermott, and Kogut, 2000; Scase, 2003; Feige, 1997). This included the use of factory workers to sell surplus products from which they received their salary. A unique method that was used to sell products in the context of an undeveloped distribution and sales system. Predatory entrepreneurship included the organization of illegal crime syndicates. Often former communist officials and large companies seized the major assets, factories, and resources and engaged in predatory entrepreneurship, creating corrupt organizations and oligarchs (Spicer et al., 2000; Scase, 2003; Feige, 1997).

Even after years of central planning, communist controlled economy, and non-entrepreneurial society, the nations studied by the authors exhibited the same cultural differences among entrepreneurs found in Western market oriented nations with a strong entrepreneurial history. Given the results found in this study, the authors surmise that the social-cultural values and other cultural factors have more to do with the similarities and differences between entrepreneurs and factory workers than with the political system or purely philosophical contrast between capitalism versus communism.

It is worth noting that the entrepreneurs studied follow the typical pattern of entrepreneurs throughout the world far more than would have been expected. The lack of entrepreneurial activity during the communist era did not result in the elimination of typical entrepreneurial characteristics, cultural traits, or cultural values. The cultural and social-cultural traits are the major factors that determine whether or not entrepreneurs will exist.

A second major conclusion of the study is that many of the countries researched are far more entrepreneurial than either Russia or Ukraine. Many of the countries studied maintained their unique cultural characteristics despite prolonged Soviet domination and exposure to relentless communist ideology and propaganda. If additional support for this result is found in all the former Soviet Republics, it would provide rich evidence for the intransigence of culture over time, regardless of the influences of outside ideologies, a major finding. This was not an intentional goal of the research, but nevertheless, must be included due to the major implications of such a finding.

The communist society preached a collectivist ideology, yet the level of Individualist orientation is found to be high, especially among entrepreneurs. This finding is contrary to most conclusions drawn from the literature. The strongly Masculine

orientation by the entrepreneurs, when the underlying culture was highly feminine, is also in contrast to the conjecture from the literature.

Additionally, the same conclusion can be drawn from the much lower Power Distance of both groups studied. The literature purports a very high Power Distance would be found in Russia and the republics. The low level of Power Distance among entrepreneurs found in this study suggests a class of people that were truly oriented to the theory of equality in the workplace, a basic principle of communism. Either this was institutionalized before communism took hold or it demonstrates a successful transition to equality among the work force that was a basic tenet of communism.

This finding provides a very interesting area of discussion. In the first case, that a low Power Distance was present before the communists took control, it is likely that communism became accepted because of, not in spite of this trait. The appeal of an ideology that preached the power of the proletariat would find an agreeable audience. If the communist ideology was successful in transforming the society into one that believed in the equality of the masses to the ruling class, this is equally interesting to explore. Certainly the 70 or more years of social indoctrination had some influence upon parts of the population. The presence of entrepreneurial traits after so long a time without an entrepreneurial class would indicate that communist indoctrination was only partially successful at best.

Another aspect that was found by the authors' research was a much lower Uncertainty Avoidance among entrepreneurs than among the factory workers. This was so universal as to raise the prospect that in countries that are undergoing a transition from a controlled economy to one that is modestly free market, a new paradigm is present or being formed. Perhaps the change from a secure job and society into an unknown world of free markets means those who choose entrepreneurial activities are those with the most tolerance for uncertainty, an obvious conclusion. The more secure and cautious element will stay in the workplace, while the least cautious will choose to become an entrepreneur. The control of individual destiny gained from owning a business is not as paramount as understanding the theory and practice of the new entrepreneurial venture. Conversely, in a developed country, forming a business indicates confidence in the outcome. In an economy that has no rules and no history and is using the learning-by-doing method of development, the new entrepreneur will face more uncertainty than the factory worker. It is an interesting and unexpected element in this paper that requires more study in different countries.

ADDITIONAL STUDY AND LIMITATIONS OF STUDY

Because the study was done during the early transition period, there is a rich opportunity to conduct a new study to compare changes over time, which would be perhaps the best example worldwide to test the theory that cultural values do not change easily over time. Perhaps no greater upheaval inside the multitude of nations that were communist would be seen in world history so as to view over time changes that may be happening. This study provides the only view of these nations during the transition time that can be used as a benchmark for future studies.

Additional studies could examine the level of success or failure to establish a market economy during the transition period in comparison to the level of entrepreneurism present in the population as exemplified by this study. This would either fortify the entrepreneurial cultural concept or perhaps weaken some aspects of the values that entrepreneurs have as to culture.

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APPENDIX

Table 5. Gender of Respondents

Country	Sample Entrepreneur	Entrepreneurs % men	Sample factory	Factory % men
Russia	697	47.3	551	50.7
Ukraine	376	50.9	408	51.7
Latvia	256	51.8	271	54.9
Lithuania	149	45.8	339	46.5
Czech	225	65.3	299	70.6
Poland	152	65.6	319	53.7
Romania	153	67.1	257	68.3
Armenia	236	30.1	240	36.6
Bulgaria	249	58.6	181	55.8
Mean		53.6		54.3

Table 6. Education Level of Respondents

Country	Sample Entrepreneur	Sample Entrepreneur % < 12 years	Sample factory	Factory % < 12 years
Russia	697	45	551	61
Ukraine	376	53	408	72
Latvia	256	64	271	70
Lithuania	149	64	339	51
Czech	225	43	299	53
Poland	152	62	319	57
Romania	153	52	257	49
Armenia	236	80	240	75
Bulgaria	249	83	181	78
Mean		60.7		62.9

Table 7. Age Level of Respondents

Country	Sample Entrepreneur	Entrepreneurs % <45	Sample Factory	Factory % < 45
Russia	697	67	551	56
Ukraine	376	57	408	43
Latvia	256	71	271	69
Lithuania	149	50	339	74
Czech	225	71	299	56
Poland	152	64	319	59
Romania	153	64	257	76
Armenia	236	45	240	40
Bulgaria	249	68	181	71
Mean		61.9		60.4

Table 8. Job Level of Respondents

(< level 6 indicates not a manager of people)

Country	Sample Entrepreneur	Entrepreneurs % < level 6	Sample Factory	Factory % < level 6
Russia	697	61	551	54
Ukraine	376	60	408`	61
Latvia	256	65	271	60
Lithuania	149	46	339	45
Czech	225	42	299	54
Poland	152	55	319	61
Romania	153	58	257	42
Armenia	236	95	240	94
Bulgaria	249	61	181	56
Mean		60.3		58.6