A Cross-Cultural Investigation of Students’ Career Planning

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ABSTRACT

Students’ career planning is of great concern for international human resource management. While a lot of research has been done to determine the antecedents of student’s career decisiveness, little is known about the influence of cultural norms and values on career planning. We propose that national culture has an indirect influence on students’ career planning through career adaptability, career optimism and career-related knowledge. Using an eight-country sample of more than 1,800 university students, our findings show that the influence of masculinity, uncertainty avoidance, and long-term orientation on career planning is mediated by career knowledge and career optimism, while the influence of power distance and individualism are partially mediated by these two variables. The theoretical and managerial implications of our study’s findings are discussed.

Keywords: career planning, career adaptability, career optimism, culture, international

Choosing a vocation is one of the most important decisions in life and career planning is the first step of making this particular decision. Since vocational choice and planning one’s career are of great importance to later life outcomes, it has been of great interest to academics. A line of research has been developed in the area of career psychology in an effort to understand the factors that influence career planning and the reasons behind career indecisiveness (Mau, 2001, 2004; Newman, Gray, & Fuqau, 1999). While evidence suggests that culture plays a significant role in the way individuals make career decisions (e.g. Blustein & Ellis, 2000; Fouad & Zao 2000; Lent, Brown, & Hackett, 2000; Leong & Hartung 2000), the influence of culture on students’ career planning has not been explored in the existing literature, although social construction theory would predict such a relationship (Berger & Luckmann, 1966; Malach-Pines & Kaspi-Baruch, 2008).

Career planning is also of interest to human resource professionals. Rotthinghaus, Day, and Borgen (2005) note that, by examining career planning, career counselors may be able to identify factors which influence career decision making and thus, help companies to better direct their recruiting activities. For those without a stable career plan, specific recruiting and employer branding activities might help to guide students in the development of a career plan that benefits both the individual and the organization. As firms become more global and recruit in various countries, it is of crucial importance for such
organizations to understand how culture might impact students’ career planning since this has implications for students’ professional development in their post-university life (Brown, 2004).

The objective of this study is to examine the influence of three career attitudes (career-related adaptability, optimism, and knowledge) on career planning and how national culture impacts both career-related attitudes and career planning. Our study is based on the results of a questionnaire survey performed in eight countries, including Argentina, Bulgaria, China, Finland, Germany, Spain, Ukraine, and the United States, using a sample of business students.

THEORETICAL BACKGROUND

As the first step in the process of career development and vocational decision making, career planning generally requires that individuals are aware of their interests, skills, and values. Gutteridge (1986: 52) defines it “as a deliberate process of (1) becoming aware of self, opportunities, constraints, choices and consequences; (2) identifying career-related goals, and (3) programming work, education and related developmental experiences to provide the direction, timing and sequence of steps to attain a specific career goal.” Information-gathering and raising one’s self-awareness about career options provides a framework for “wisdom development” (Brown, 2004) that leads to a point where individuals are faced with making a decision about their career. An individual’s comfort with this process influences the certainty with which they feel about the decision and is known as career decisiveness (Osipow, Carney, Winer, Yanico, & Koschier 1987). Some researchers have also coined the term “career indecision” by choosing to study those are not able to make career decisions (Guay, Senecal, Gautheir, & Fernet, 2003).

Most studies of career decision making recognize that there are a range of possible factors which could influence an individual’s career planning and decision making process. Some have argued that environmental factors, such as peers, parents’ career interests or control, and career education courses, play a significant role (Brown, 2004; Grier-Reed & Gauza, 2011; Luzzo, James, & Luna, 1996; Peng, 2001; Wong, Wong, & Peng, 2011). Others believe that intrapersonal factors, such as personality,
attitudes, and national culture, are key determinants of career planning behavior (Aryee & Debrah, 1992; Bacanli, 2006; Gould, 1972).

Several researchers have attempted to develop measures for career planning. For example, Gould (1972) developed a career planning scale to explore the influence of locus of control and self-esteem on career planning, finding a positive relationship between self-esteem and career planning. Aryee and Debrah (1992) attained similar results using Gould’s career planning scale. They found a positive relation between career planning and self-esteem, career commitment, and need for achievement. They also showed a negative relationship between external locus of control and career planning. Rottinghaus et al. (2005) introduced the career futures inventory to provide a measure of “positive career planning attitudes”, namely career adaptability, career optimism, and job-related knowledge. Based on Savickas (1997), career adaptability is seen as individual’s readiness to deal with and adjust to changes in the future, the willingness to take increasing work responsibilities, as well as the capability to adjust quickly to unexpected changes in the career plan. It requires that one has the cognitive skills and psychological capacities to apply such adaptability to their career plans and decisions.

Another positive career planning attitude is career optimism. This relates to the attitude of expecting the best possible outcome for the future career and feeling comfortable with completing career planning tasks (Scheier & Carver, 1985). Finally, job-related knowledge measures the individuals’ perceptions concerning their comprehension of job market and employment trends. Generally, students who are well informed with regard to the job market may also be able to make better career-related decisions. As a result, these three factors appear to be an essential basis for successful career planning since they require a mindset of openness, flexibility, and information gathering. By being adaptable, optimistic, and knowledgeable about the job market, one can develop better career plans and experience greater comfort in making decisions about his/her career.

**National Culture and Career Attitudes**

Although efforts have been made to understand career planning and its importance to career decisiveness, the impact of national culture on career planning has been largely overlooked. Hofstede
(2001) defines culture as “the collective programming of the mind that distinguishes one group or category of people from another” (p. 9) or as a collective feature which is common and shared by a group of people and, although not tangible, it is apparent in people’s behavior. In addition, social construction theory ascertains that reality is socially constructed, but that there is not only one reality since various cultural groups have their own unique understanding of the world (Berger & Luckmann, 1966; Tavris, 1992). Therefore, it can be assumed that there are cultural differences in how individuals approach planning, particularly with regard to their career. Each of Hostede’s five dimensions of culture shed light on how individuals might differ in their attitudes towards career planning.

Cultures with high power distance display systems in which skills, wealth, and power should go together. Decisions in societies with high power distance are often made by the individual highest in the respective hierarchy (Hofstede, 2001). This implies that, for example, selection decisions are often made by a single individual and candidates may not be able to influence these decisions. Therefore, the incentive to invest in career knowledge in high power distance cultures might be lower than in low power distance cultures. Similarly, career optimism is not likely to be high in low power distance cultures since decisions about careers appear to be controlled by others. In fact, Fisher and Chambers (2008) show that optimism in general is related to low power distance. Thus, career optimism can be expected to be lower in high power distance than in low power distance cultures. However, the fact that high power distance cultures place a “road block” for individuals, it is likely that those in such situations are more adaptable and are able to work around obstacles in their efforts to plan their careers. According to Lai and Yue (2000), those in high power distance cultures must be able to react on decisions of individuals higher in the hierarchy (Lai & Yue, 2000). Thus, we propose:

Hypothesis 1a: Power distance is positively related to career adaptability.
Hypothesis 1b: Power distance is negatively related to career optimism.
Hypothesis 1c: Power distance is negatively related to career knowledge.

Societies with high uncertainty avoidance are often characterized as being rule-oriented, as well as being those which plan for the future (Hofstede, 1984). As such, career planning is expected to be high in countries with high uncertainty avoidance. By collecting information related to one’s career, it is assumed
that career knowledge would reduce one’s feelings of insecurity and be positively related to uncertainty avoidance. The more information one has about career options, the more it reduces uncertainty and the more optimistic one would likely be. Chang (1996) demonstrated that high uncertainty avoidance is negatively related to optimism. Therefore, it is asserted that individuals from cultures with high uncertainty avoidance would be rather less optimistic about their career. Uncertainty avoidance also has implications for career adaptability. Individuals who dislike uncertain situations would be less likely to change their career plans. Therefore, we predict:

**Hypothesis 2a:** Uncertainty avoidance is negatively related to career adaptability.

**Hypothesis 2b:** Uncertainty avoidance is negatively related to career optimism.

**Hypothesis 2c:** Uncertainty avoidance is positively related to career knowledge.

Individualism measures the degree to which individuals see themselves and make decisions based on “I” rather than “we” (Hofstede, 1991). Studies show that students tend to plan and make career decisions on their own in more individualistically-oriented cultures, whereas planning and decisions are made in a way that conforms to the familial and societal expectations in collective cultures (Mau, 2001). From this, it can be seen that students in collective cultures likely experience more difficulties in career decision making than students from individualistic cultures, facing both family and societal pressures. Similarly, it is likely that student in collective cultures would have less career optimism, given the societal constraints on what might be seen as appropriate in terms of career options. Fisher and Chalmers (2008) found in their study on optimism that lower individualism is related to higher optimism so it is assumed that career optimism is lower in high individualism cultures.

However, career adaptability is expected to be positively related to individualism since those from less collective cultures are freer to react and to adjust to changes than individuals from collective cultures. Likewise, career knowledge is asserted to be higher in countries with high individualism, given the fact that decisions are made to maximize the individual well-being rather than the collective well-being. Kim and Drolet (2003) show that individuals from individualistic cultures use a variety of choice rules (based on the information they have gathered) for decisions, whereas individuals from more collective cultures do not have such a variety. We, therefore, propose:
Hypothesis 3a: Individualism is positively related to career adaptability.  
Hypothesis 3b: Individualism is negatively related to career optimism.  
Hypothesis 3c: Individualism is positively related to career knowledge.  

Masculine societies value characteristics, such as assertiveness, competitiveness, success, and status, whereas feminine societies appreciate solidarity, modesty, and quality of life (Hofstede, 1991). The status and success orientation of masculine cultures is expected to lead to more thorough career planning and, therefore, to the possession of career knowledge and optimism. Given the importance that the role of work has in masculine societies, it is expected that those in such societies would be more inclined to feel the pressure of career success and seek avenues for career planning. As such, masculinity is expected to be positively related to career adaptability, which is characterized by the readiness to react to changes in career plans and responsibilities, as well as career knowledge and optimism.  

Hypothesis 4a: Masculinity is positively related to career adaptability.  
Hypothesis 4b: Masculinity is positively related to career optimism.  
Hypothesis 4c: Masculinity is positively related to career knowledge.  

Long-term orientation describes the planning horizon of a society. According to Hofstede (2001), long-term orientation is related to personal adaptability so it is assumed that individuals from long-term oriented cultures would also possess career adaptability abilities and be able to adjust more easily to market changes than those with a short-term orientation. With regard to career optimism, societies with a long-term orientation have either full or no confidence, whereas societies with short-term orientation focus more on probabilistic thinking. With a longer time horizon on which to base their assessment of success and opportunity, we would argue that those with a long-term orientation have higher career optimism. Career knowledge, on the other hand, is concerned with job market trends (Rottinghaus et al., 2005), which might be seen as relating to a short-term perspective. Cultures scoring high on short-term orientation base their decisions on numerical (financial) criteria, whereas long-term oriented cultures focus on growth oriented methods (Thomas, 2008). Therefore, career knowledge is expected to be negatively related to long-term orientation. We propose:  

Hypothesis 5a: Long-term orientation is positively related to career adaptability.  
Hypothesis 5b: Long-term orientation is positively related to career optimism.  
Hypothesis 5c: Long-term orientation is negatively related to career knowledge.
Following the ideas of Rottinghaus et al. (2005) that positive career planning attitudes are influenced by the three factors, career adaptability, career optimism, and career knowledge, we propose the following hypotheses:

Hypothesis 6a: Career adaptability is positively related to career planning.
Hypothesis 6b: Career adaptability mediates the relationships between the five cultural dimensions and career planning.

Hypothesis 7a: Career optimism is positively related to career planning.
Hypothesis 7b: Career optimism mediates the relationships between the five cultural dimensions and career planning.

Hypothesis 8a: Career knowledge is positively related to career planning.
Hypothesis 8b: Career knowledge mediates the relationships between the five cultural dimensions and career planning.

METHOD

Sampling and Data Collection

To analyze the factors that influence career planning as well as their mediating role on the relation between the cultural dimensions and career planning, we carried out a questionnaire survey among university students in their last year of study in eight countries during 2008. The countries represent seven cultural clusters identified by Ronen and Shenkar (1985), which based their work on Hofstede’s (1984) cultural dimensions. To ensure that cross-country differences as well as similarities are due to hypothesized relations rather than to other types of factors as well as to ensure sample equivalence, we used a matched sample of university business students (Van de Vijver & Leung, 1997). Of the 1,900 students sampled, 1,845 participated in our study, producing a response rate of 97%. Of the eight countries surveyed, 239 students were from Argentina, 267 from Bulgaria, 206 from China, 265 from Finland, 212 from Germany, 319 from Spain, 129 from Ukraine, and 208 from the United States. The respondents were from one university in each country and citizens of their respective countries. The average age of respondents was 22 years and more than half of the respondents (58%) were females.

The questionnaire was initially developed in English and conducted in the respective official language of all eight countries. Following the recommendations of Harzing (2005) and the procedure suggested by Brislin (1986), the English questionnaire was translated and back-translated into English to
ensure linguistic, as well as conceptual equivalence. Three respective country natives translated the original English questionnaire into six languages (Chinese, Bulgarian, Finnish, German, Russian, and Spanish). The translations were conducted using one individual for the translation, another individual for the translation back into English, and again another individual in order to solve differences in the translations of the two translators. Two countries (Argentina and Spain) used the Spanish versions but were adjusted for Latin American and Spanish language differences.

Prior to conducting the survey, the questionnaire was tested by a focus group in Germany for its content and then pilot-tested in Germany to validate its model and methodology. To ensure the equivalence and consistency across samples in terms of survey formats and the data collection procedure in all eight countries, surveys were administered in a classroom setting. The data was collected simultaneously for the majority of countries and concluded before the financial crisis to prevent any risk of bias (Steinmetz et al., 2011).

**Measures**

The measure for career planning was based on the work of Marcia (1966), using four-statements, one-choice items representing a 2 x 2 typology (e.g., “I have not made a career choice at this time” and “I do not feel particularly concerned or worried about it”). The career futures inventory by Rottinghaus et al. (2005) was used to measure students’ career adaptability (2 items, “I can adapt to change in the world of work.” and “I will adjust easily to shifting demands at work.”), career optimism (2 items, “I get excited when I think about my career.” and “Thinking about my career frustrates me.” – reverse coded), and career knowledge (2 items, “I am good at understanding job market trends.” and “I do not understand job market trends.” – reverse coded). For all three variables, the items were scored on a five-point scale, ranging from 1 ("strongly agree") to 5 ("strongly disagree"). Coefficient alpha reliabilities for career adaptability, career knowledge, and career optimism were .60, .80 and .64, respectively.

Following the recommendation of Taras, Kirkman, and Steel (2010), we used primary data to measure the cultural dimensions and used the Values Survey Module 2008 (VSM 08), suggested by
Hofstede et al. (2008). This measure included individualism (4 items, e.g., “In choosing an ideal job, how important would it be to you to have security of employment”), long-term orientation (4 items, e.g., “Persistent efforts are the surest way to results”), masculinity (4 items, e.g., “In choosing an ideal job, how important would it be to you to have pleasant people to work with”), power distance (4 items, e.g., “In choosing an ideal job, how important would it be to you to be consulted by your boss in decisions involving your work.”), and uncertainty avoidance (4 items, e.g., “A company's or organization's rules should not be broken - not even when the employee thinks breaking the rule would be in the organization's best interest.”). All items were measured on five-point Likert scales with question-specific anchor points. We calculated the respective indexes following the procedure suggested by Hofstede et al. (2008). As can be seen in Table 1, the values calculated on the basis of our data differ significantly in some cases from the values calculated in Hofstede’s original study. This may be due to a number of reasons, including the potential change of cultural values over time (Taras, Kirkman, & Steel, 2010).

We controlled for two common demographic variables (age and gender) that have been found to be related to career planning and the effect of cultural dimensions in previous research (e.g., Chung, 2002; Taras, Kirkman, & Steel, 2010). Age was measured in years. Gender was measured as a dichotomous variable coded (1 for female and 0 for male). Moreover, the questionnaire included questions about citizenship, citizenship at birth, major, and level of degree program (bachelor/master) to control for sample homogeneity.

ANALYSIS AND RESULTS

Measurement Model, Measurement Invariance, and Common Method Bias

In a first step, the data sets were examined country by country using confirmatory factor analysis (CFA) to identify any country-specific components. We used AMOS 16 and the maximum likelihood estimation procedure. According to Cheung and Rensvold (2002), among others, the chi-square ($\chi^2$)
statistic is not an adequate test of model fit given large sample sizes (>250), such as the women sample in this study. As shown in Table 2, the values of the CFI were above the .9 threshold and the RMSEAs were below the .8 threshold for each of the eight countries for the revised measurement model, indicating an acceptable fit. Table 3 presents means and standard deviations for all variables (tables of correlation coefficients and construct reliabilities by country are available from the corresponding author upon request). Table 4 presents means, standard deviations, and correlation coefficients for the pooled sample.

To investigate the influence of the cultural dimensions, the influence of the career futures inventory variables, and the mediation hypotheses, we used the pooled sample. As there are no previous cross-country studies and theory which we could use as a sufficient basis to hypothesize complete or partial mediation, we followed the suggestions by James, Mulaik, and Brett (2006) and tested complete mediation. We used the structural equation modeling (SEM) approach suggested by James and Brett (1984) to test the complete mediation model. The model fit indexes, which are presented in Table 5, suggest a relatively poor fit for our hypothesized complete mediated model ($\chi^2 = 561.95; df = 32; CFI = .93; RMSEA = .10$). While the CFI is above .90, the RMSEA is above .08. In spite of the poor fit, we followed the suggestions by Anderson and Gerbing (1988) and examined alternative models that we believed were less likely to fit the data but were plausible on theoretical arguments. First, the non-significant paths were deleted from the model. Second, we added direct relationships between career knowledge and career adaptability, between career knowledge and career optimism, and between career adaptability and career optimism. Estimation of the revised complete mediated model ($\chi^2 = 360.53; df = 34; CFI = .96; RMSEA = .072$) resulted in a significantly better fit ($\Delta\chi^2 = 201.42; df = 3; p < .001$).
To further test the mediation hypotheses for career knowledge, career adaptability, and career optimism, we compared the hypothesized completely mediated model and the revised completely mediated model with three respective partially mediated models, as recommended by Kelloway (1998). In the partially mediated model, we specified direct paths from each cultural dimension variable to career planning and included all other specifications in the hypothesized model and all other specifications in the revised model. As presented in Table 5, the theorized partially mediated model had a poor fit with the data ($\chi^2 = 390.05; df = 27; CFI = .95; RMSEA = .085$). The model-data fit is not as strong for the hypothesized complete mediation model as for the hypothesized partially mediated model. The change in the value of chi-square between the completely mediated model and the partially mediated model was significant ($\Delta\chi^2 = 171.9; df = 5; p < .001$). The added direct paths from power distance ($\beta = -.28, p < .001$) and individualism ($\beta = -.19, p < .001$) to career planning were significant. The added direct paths from uncertainty avoidance, masculinity, and long-term orientation were not significant. The revised partially mediated model had a satisfactory fit with the data ($\chi^2 = 183.03; df = 29; CFI = .98; RMSEA = .05$). The model-data fit is not as strong for the revised completely mediated model as for the revised partially mediated model. The change in the value of chi-square between the completely mediated model and the partially mediated model was significant ($\Delta\chi^2 = 177.5; df = 5; p < .001$).

The structural coefficients of the revised partially mediated model indicate that power distance has a negative effect on career optimism and career knowledge, supporting Hypotheses 1b and 1c. Uncertainty avoidance relates negatively to career adaptability and positively to career optimism. This result supports Hypothesis 2a. Individualism has a negative effect on career adaptability, career optimism, and career knowledge, thus supporting Hypothesis 3b. Masculinity relates positively to career adaptability and career knowledge. These results support Hypotheses 4a and 4c. Long-term orientation has a negative effect on career optimism and career knowledge, thus supporting Hypothesis 5c. Overall, 8 of our 15 hypotheses related to the direct effect of the cultural dimensions on career adaptability, career optimism, and career knowledge were not supported. Both career optimism and career knowledge have a positive relationship with career planning. Thus, Hypothesis 7a and Hypothesis 8a are supported. The added paths in the
revised model between career knowledge and career adaptability, between career knowledge and career optimism, as well as between career adaptability and career optimism were positive and significant. Moreover, the added direct paths in the partial mediation model from the five cultural dimensions to career planning were negative and significant for the power distance – career planning and the individualism – career planning relationship. These results indicate that career adaptability and career optimism partially mediate the relationship between the cultural dimensions and career planning. This implies that power distance and individualism affect career planning not only indirectly through their effects on career optimism and career knowledge but also through direct effects on career planning.

In addition to the direct effects of the cultural dimensions on the three career planning antecedents, we also tested potential moderating effects of the cultural dimensions on the relationships between career planning and its determinants. We analyzed the pooled data using hierarchical multiple regression, following Aiken and West’s (1991) commonly used recommendations for testing interactions. The results show that the significant direct effects of career optimism and career knowledge on career planning were not moderated by the cultural dimensions. This result suggests that, while cultural dimensions have direct and indirect effects on career planning, cultural dimensions do not moderate the relationship between career planning and its antecedents.

**DISCUSSION**

Our findings contribute to the career planning literature in three ways. First, this study enhances understanding of how career adaptability, career knowledge, and career optimism play an important role for career planning. While career knowledge and career optimism directly influence career planning, career adaptability indirectly influences career planning through individuals’ career-related optimism. Moreover, career knowledge increases career optimism and, in this way, also indirectly influences career planning. Thus, this study answers recent calls for research to examine the developmental paths of career optimism and the importance of optimism in determining an individual’s career-related activities (Creed,
Patton, & Bartram, 2002). Second, the results of our study show that cultural dimensions influence the planning of a career and its antecedents and, thereby, offer support for social construction theory.

Moreover, the results provide support for our mediation hypotheses. Career knowledge and career optimism partially mediate the relationships between the cultural dimensions and career planning. Our study extends career planning research by suggesting how cultural norms and values influence career planning. We specified three mediators through which cultural dimensions influence career planning. Our results suggest that the influence of the cultural dimensions depends on whether they enhance or inhibit career-related knowledge, optimism, and adaptability. Power distance, individualism, and long-term orientation negatively influence career planning by hindering the formation of career knowledge, while masculinity positively influences career planning by fostering the formation of career knowledge. Power distance, individualism, and long-term orientation undermine the career planning process by inhibiting career-related optimism, while uncertainty avoidance increases career optimism and, consequently, career planning. Masculinity increases career planning through the relation between career adaptability and career optimism, while uncertainty avoidance reduces career planning through the same relationship.

Although previous research has suggested that cultural dimensions as a moderator between career planning and its determinants (Constantine & Flores, 2006; Mau, 2001; Leong & Hartung, 2000), our results show that the influence of career adaptability and career optimism on career planning is not moderated by cultural values. An important implication of this result is the need for empirical studies to identify specific mediators in the relationship between cultural dimensions and career planning. Such studies are critical to develop a more complete understanding of how country-specific cultural norms and values influence individual career preparation.

**Implications**

Our study offers two insights pertaining to practices directed at enhancing career counseling and organizations’ talent management. First, our results serve as a help for international human resource departments to understand how cultural values, career-related adaptability, knowledge, and optimism shape students’ career planning. Our study highlights the need to understand the labor markets and
develop sensitivity to country-specific needs, including cultural differences. Our empirical results are consistent with theoretical arguments (McDonnell, Hickey, & Gunnigle, 2011), as they suggest that human resource managers need to become more familiar with cultural influences to develop an effective country-specific talent management systems which fosters a more accurate identification and involvement of potential employees. One approach by which organizations can enhance students’ career planning across countries is establishing talent management systems to explicitly target the improvement of students’ career knowledge and career optimism to influence potential employees very early in the career planning process and, in this way, increase the ability of organizations to attract more potential employees. However, more empirical research is needed to examine whether or not the same career-related information increases career knowledge and career optimism across countries in a similar way.

Limitations and Further Research

Despite several strengths, our study has some notable limitations offering fruitful avenues for future research. First, even though we tried to select countries that were culturally different, the generalizability of our results is limited to the eight countries in our sample. Future research should include a higher number of countries to examine the role of cultural traits, e.g., in a multi-level research design. Second, we sampled only a limited number of individuals within a specific socio-economic class. Offering generalizable results requires a more comprehensive sample and one matched closely to the socio-economic characteristics of the countries examined. Third, our findings should be interpreted in light of the fact that all of the measures in our study were developed primarily in a North American context. Although we were careful to use the recommended translation/back-translation procedure as well as multi-group confirmatory factor analysis to increase and test for measurement invariance, the constructs may have not captured country-specific factors given the relatively high number of deleted items in the development of our baseline measurement model. Future research may help address this limitation by including measures that were specifically designed and tested to be utilized in cross-country studies, considering cross-country similarities and differences.
Finally, our study is limited to a matched sample (business and economics majors) of university students. Due to similarities in age and educational background or time spent in foreign countries, there may be similarities in students’ attitudes, beliefs, as well as cultural norms and values. These types of similarities could potentially mask cultural differences that would have otherwise been observed if more heterogeneous samples had been used. Furthermore, students of a single university were surveyed in each country. It would have been ideal if we could have used data from several universities in each sample country. We would encourage future research to improve the study design further and to avoid this potential problem by combining data from different universities, as well as to expand the choice of countries. Despite these limitations, the present study takes a step forward and sheds some light on the complexity of business students’ career planning. At the same time, it highlights the need for more multi-country studies and comparisons in the field of students’ career planning.
REFERENCES


### TABLE 1
Cultural Values and Hofstede Scores

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</table>

Notes: * indicates the primary data cultural dimension scores. Individualism (IND), long-term orientation (LTO), masculinity (MAS), power distance (PD), uncertainty avoidance (UA), Hofstede’s original cultural dimension scores (H).

### TABLE 2
Results of Confirmatory Factor Analysis and Test of Measurement Invariance

<table>
<thead>
<tr>
<th>Country</th>
<th>n</th>
<th>χ²</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA Low 90%</th>
<th>RMSEA High 90%</th>
<th>ΔCFI (M1-M2/M2-M3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>239</td>
<td>5.47</td>
<td>6</td>
<td>1.000</td>
<td>.000</td>
<td>.000</td>
<td>.080</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>267</td>
<td>7.56</td>
<td>6</td>
<td>.992</td>
<td>.031</td>
<td>.000</td>
<td>.090</td>
</tr>
<tr>
<td>China</td>
<td>206</td>
<td>26.39</td>
<td>6</td>
<td>.933</td>
<td>.056</td>
<td>.046</td>
<td>.081</td>
</tr>
<tr>
<td>Finland</td>
<td>265</td>
<td>11.05</td>
<td>6</td>
<td>.984</td>
<td>.056</td>
<td>.000</td>
<td>.090</td>
</tr>
<tr>
<td>Germany</td>
<td>212</td>
<td>4.69</td>
<td>6</td>
<td>1.000</td>
<td>.000</td>
<td>.000</td>
<td>.078</td>
</tr>
<tr>
<td>Spain</td>
<td>319</td>
<td>17.67</td>
<td>6</td>
<td>.965</td>
<td>.078</td>
<td>.037</td>
<td>.098</td>
</tr>
<tr>
<td>Ukraine</td>
<td>129</td>
<td>9.91</td>
<td>6</td>
<td>.978</td>
<td>.071</td>
<td>.000</td>
<td>.094</td>
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<tr>
<td>U.S.A.</td>
<td>208</td>
<td>7.35</td>
<td>6</td>
<td>.995</td>
<td>.033</td>
<td>.000</td>
<td>.099</td>
</tr>
</tbody>
</table>

**CFA Results**

**MGCFA Results**

Configural model (M1) 1845 107.93 48 .971 .026 .020 .033 -
Metric model (M2) 1845 136.71 69 .968 .023 .017 .029 .003
Scalar model (M3) 1845 597.62 111 .768 .049 .043 .053 .200

Note: CFA = Confirmatory factor analysis, MGCFA = Multi-group confirmatory factor analysis, df = Degrees of freedom, CFI = Comparative fit index, RMSEA = Root mean square error of approximation
### TABLE 3
Descriptive Statistics by Country

<table>
<thead>
<tr>
<th>Variables</th>
<th>Argentina M</th>
<th>Argentina SD</th>
<th>Bulgaria M</th>
<th>Bulgaria SD</th>
<th>China M</th>
<th>China SD</th>
<th>Finland M</th>
<th>Finland SD</th>
<th>Germany M</th>
<th>Germany SD</th>
<th>Spain M</th>
<th>Spain SD</th>
<th>Ukraine M</th>
<th>Ukraine SD</th>
<th>U.S.A. M</th>
<th>U.S.A. SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career planning</td>
<td>3.55</td>
<td>.67</td>
<td>2.56</td>
<td>1.10</td>
<td>2.37</td>
<td>.72</td>
<td>1.22</td>
<td>1.05</td>
<td>2.66</td>
<td>1.05</td>
<td>3.03</td>
<td>.98</td>
<td>2.44</td>
<td>.68</td>
<td>3.20</td>
<td>.97</td>
</tr>
<tr>
<td>Career adaptability</td>
<td>4.03</td>
<td>.60</td>
<td>4.00</td>
<td>.56</td>
<td>3.78</td>
<td>.56</td>
<td>3.80</td>
<td>.57</td>
<td>3.97</td>
<td>.55</td>
<td>3.89</td>
<td>.48</td>
<td>3.69</td>
<td>.57</td>
<td>4.06</td>
<td>.49</td>
</tr>
<tr>
<td>Career knowledge</td>
<td>3.59</td>
<td>.68</td>
<td>3.64</td>
<td>.78</td>
<td>3.06</td>
<td>.73</td>
<td>3.33</td>
<td>.83</td>
<td>3.40</td>
<td>.61</td>
<td>3.43</td>
<td>.67</td>
<td>3.24</td>
<td>.79</td>
<td>3.55</td>
<td>.72</td>
</tr>
<tr>
<td>Career optimism</td>
<td>4.30</td>
<td>.72</td>
<td>4.12</td>
<td>.67</td>
<td>3.68</td>
<td>.73</td>
<td>3.60</td>
<td>.84</td>
<td>3.80</td>
<td>.79</td>
<td>3.87</td>
<td>.74</td>
<td>4.01</td>
<td>.74</td>
<td>3.91</td>
<td>.71</td>
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<tr>
<td>Gender (% female)</td>
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<td>.66</td>
<td>.54</td>
<td>.48</td>
<td>.54</td>
<td>.62</td>
<td>.62</td>
<td>.82</td>
<td>.40</td>
<td>.40</td>
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<tr>
<td>N</td>
<td>239</td>
<td>267</td>
<td>206</td>
<td>265</td>
<td>212</td>
<td>319</td>
<td>129</td>
<td>208</td>
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</table>

### TABLE 4
Descriptive Statistics and Correlation Coefficients (Pooled Sample)

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Career planning</td>
<td>2.82</td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Career adaptability</td>
<td>3.92</td>
<td>0.56</td>
<td>.14</td>
<td>(.60)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3. Career knowledge</td>
<td>3.40</td>
<td>0.77</td>
<td>.25</td>
<td>.28</td>
<td>(.80)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Career optimism</td>
<td>3.88</td>
<td>0.77</td>
<td>.31</td>
<td>.18</td>
<td>.27</td>
<td>(.64)</td>
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<td></td>
</tr>
<tr>
<td>5. Individualism</td>
<td>102.12</td>
<td>10.26</td>
<td>-.20</td>
<td>-.11</td>
<td>-.13</td>
<td>-.16</td>
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<td></td>
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</tr>
<tr>
<td>6. Long-term orientation</td>
<td>99.20</td>
<td>17.02</td>
<td>.13</td>
<td>.05</td>
<td>-.05</td>
<td>-.13</td>
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<td>7. Masculinity</td>
<td>101.17</td>
<td>16.86</td>
<td>-.11</td>
<td>.03</td>
<td>.12</td>
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<td>.12</td>
<td>-.55</td>
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<tr>
<td>8. Power distance</td>
<td>100.79</td>
<td>15.52</td>
<td>-.20</td>
<td>-.04</td>
<td>.01</td>
<td>-.29</td>
<td>-.60</td>
<td>.68</td>
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<tr>
<td>9. Uncertainty avoidance</td>
<td>28.70</td>
<td>11.64</td>
<td>-.15</td>
<td>-.08</td>
<td>-.03</td>
<td>.09</td>
<td>.17</td>
<td>-.63</td>
<td>.35</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10. Age</td>
<td>22.10</td>
<td>3.88</td>
<td>-.03</td>
<td>.02</td>
<td>-.01</td>
<td>.13</td>
<td>-.31</td>
<td>.52</td>
<td>.38</td>
<td>.44</td>
<td>-.17</td>
<td></td>
</tr>
<tr>
<td>11. Gender (% female)</td>
<td>57.02</td>
<td>2.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note: N = 1845. All correlations above |.02| are significant at the .05 level. Alpha coefficients are on the diagonal.

### TABLE 5
Model Fit Indexes

<table>
<thead>
<tr>
<th>Model Fit</th>
<th>Partially Mediated Model (Hypothesized)</th>
<th>Partially Mediated Model (Revised)</th>
<th>Fully Mediated Model (Hypothesized)</th>
<th>Fully Mediated Model (Revised)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>390.05***</td>
<td>183.03***</td>
<td>561.95***</td>
<td>360.53***</td>
</tr>
<tr>
<td>$df$</td>
<td>27</td>
<td>29</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>CFI</td>
<td>.95</td>
<td>.98</td>
<td>.93</td>
<td>.96</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.085</td>
<td>.054</td>
<td>.095</td>
<td>.072</td>
</tr>
<tr>
<td>RMSEA Low 90%</td>
<td>.078</td>
<td>.046</td>
<td>.088</td>
<td>.066</td>
</tr>
<tr>
<td>RMSEA High 90%</td>
<td>.093</td>
<td>.061</td>
<td>.102</td>
<td>.079</td>
</tr>
</tbody>
</table>

Note: N = 1845.