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The Influence of National Culture on Business Students' Career Attitudes – An Analysis of Eight Countries**

Despite the fact that career attitudes and their influence on career outcomes is widely researched in the field of occupations and careers, little is known about the influence of cultural norms and values on career attitudes. We propose that national cultural dimensions influence students' career planning, career adaptability, career optimism, and career-related knowledge. We test these relations using an eight country sample with more than 1,800 students. The results show that national culture has significant effect on all four career attitudes and in particular on career planning and career optimism. We discuss theoretical and practical implications and provide future research directions.

Der Einfluss nationaler Kulturen auf die Karriere-Einstellungen von Wirtschaftsstudenten – Eine Analyse aus acht Ländern

Obwohl in der Vergangenheit eine Vielzahl von Studien im Bereich der Berufs- und Karriereforschung den Einfluss von Einstellungen auf unterschiedliche Karriereergebnisse untersucht, ist bisher nur wenig über den Einfluss kultureller Normen und Werte auf diese Einstellungen und deren Determinanten bekannt. Der vorliegende Beitrag untersucht den Einfluss nationaler Kulturdimensionen auf die Planung, die berufliche Anpassungsfähigkeit, den die eigene Karriere betreffenden Optimismus sowie auf das darauf bezogene Wissen von Studierenden. Wir testen diese Beziehungen auf der Grundlage einer Stichprobe mit mehr als 1.800 Studenten in acht Ländern. Die Ergebnisse zeigen, dass die nationale Kultur einen signifikanten Effekt auf alle vier Karriereinstellungen ausübt und insbesondere Planung und Optimismus beeinflusst. Theoretische und praktische Implikationen dieser Ergebnisse werden diskutiert und es wird ein Ausblick auf zukünftige Forschungsfragen gegeben.

Key words: **career planning, career adaptability, career optimism, career knowledge, culture** (JEL: F23, J24, M16)

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Choosing a vocation is one of the most important decisions in life. Career planning is the first fundamental 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 research, which has particularly focused on career indecision (Mau, 2001, 2004). Planning of one's own career starts during education. The early career years are the years as one has just completed or is about to complete the formal education and is about to enter the work life (Hall, 2002). These years are particularly important for firms in order to attract the talent for their organizations and help them to build their future careers within the organization. Firms might try to influence the career identity of individuals by providing a more optimistic picture of the future and offer knowledge about their specific field of operation and its future in order to promote the positive career attitudes of the individuals.

The modern career research shows that career mastery has shifted from organizations towards individuals (Arthur, Hall, & Lawrence, 1989; Baruch, 2004). The examination of the contextual influences on career planning at the micro-level gains importance. The way how individuals view their future careers is pivotal for understanding today's world of work (Rottinghaus, Day, & Borgen, 2005). Given the international character of today's labor market, the influence of national culture on career related aspects has become important to the management of organizations and also the research on careers (Briscoe, Hall, & Mayrhofer, 2012). Individuals in different countries share similarities but also exhibit differences with respect to their understanding of career dimensions (Chudzikowski et al., 2012).

Today, individuals have more choices with respect to their careers. O'Toole and Lawler (2006) note that how well an individual can deal with the variety of choice may depend on various factors, such as an individual's needs and values. Some individuals are overwhelmed by the choices they have. The preferences and needs of individuals are partially determined by the cultural values and norms they are socialized by (Bowles, 1998). Given the large number of choices, career attitudes at the early career years become pivotal to the career success of individuals. The human resource management of internationally active organizations might want to address potential employees with respect to the choices they make with various personnel marketing activities. Nevertheless, given the different needs and values of individuals in the different countries, the required activities in various countries of operations might differ largely. How cultural values influence the career attitudes of individuals is a grossly unexplored field of the career research (Mau, 2001). Despite the comprehensive research on career decision making, the influence of culture or nationality has been widely neglected so far. Following the social construction theory (Berger & Luckmann, 1966), which predicts cultural differences in career planning (Malach-Pines & Kaspi-Baruch, 2008), culture plays a significant role in the way individuals make career decisions (Lent, Brown, & Hackett, 2000). The influence of cultural-contextual factors on individuals' career behaviors and outcomes has been identified in the literature (e.g. Blustein & Ellis, 2000; Fouad & Zao, 2000; Leong & Hartung, 2000). However, the influence of national culture on career planning or the career identity status comprising of the career related optimism, career adaptability, and career-related knowledge (Rottinghaus, Day, & Borgen, 2005) of students has not been explored by the existing

literature. It is well known that career attitudes influence the later career outcomes in organizations such as job satisfaction, promotion, and corporate citizenship behavior (e.g., Ng, Eby, Sorensen, & Feldman, 2005; Kaplan, Bradley, Luchman, & Haynes, 2009; Connolly & Viswesvaran, 2000). However, not much is known about the antecedents of these variables. We examine the influence of national culture on career attitudes of students prior to entering their first job. 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 U.S.A. Our study contributes to the existing literature in two ways: First, we identify cultural dimensions as antecedents of career attitudes. Second, we contribute to the understanding of at which stages of life cultural similarities and differences affect the career related attitudes and behaviors. With our analysis we contribute to two strings of literature – career theory and cross-cultural management. Even though there are various theories on careers, so far the influence of national culture on the different stages of careers has not been discussed in detail. In addition, the cross-cultural management literature lacks in discussion on international differences in careers in general. In particular, the influence of national differences in the development of career attitudes has been so far left unexplored.

Theoretical background

Career planning, and along that career attitudes, are the fundamental first step in the course of career development, the process of general and vocational decision making. This, however, requires that individuals are aware of their interests, skills, and values. Furthermore, the individuals are assumed to have an idea about the world of labor (Parsons, 1909). While prior literature has identified a variety of career attitudes (e.g., Claes & Ruiz-Quintanilla, 1998), we concentrate on four career attitudes (namely career planning, career adaptability, career optimism, and career-related knowledge) that have been shown to have a strong effect on future career outcomes (e.g., Ng, Eby, Sorensen, & Feldman, 2005; Kaplan, Bradley, Luchman, & Haynes, 2009; Connolly & Viswesvaran, 2000). As career planning is of diverse nature, Gutteridge (1986, p. 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.” Career adaptability can be defined as an individual’s readiness to deal with and adjust to changes in the future (Savickas, 1997). Moreover, career adaptability includes the willingness to adjust to changing work responsibilities, as well as the capability to adjust quickly in case of unexpected alteration of the career plan (Rottinghaus, Day, & Borgen, 2005). It is related to being forward looking, thinking about the future, being ready to make career related decisions (Super & Knasel, 1981). Career optimism relates to the attitude of expecting good outcomes for the future career (Scheier & Carver, 1985). Furthermore, it characterizes individuals who are optimistic and positive concerning the prospects of their career development and who feel comfortable with completing career planning tasks. The career knowledge of job market construct measures 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 (Rottinghaus, Day, & Borgen, 2005).

In the contemporary times, the nature of career planning has changed (Hall, 2002). In contrast to more traditional models of careers, the employment and career relationships have become more individualized (O'Toole & Lawler, 2006). Individuals perform self-assessment and create their own personal career plans, which can be seen as representing their "path with a heart" (Hall, Briscoe, Dickmann, & Mayrhofer, 2012, p. 182). The task of organizations is then to help the individuals to implement their career plan (Hall, Briscoe, Dickmann, & Mayrhofer, 2012). Therefore, careers have become more self-directed. The self-directed career model helps employees to develop more satisfying careers than the traditional models of careers have (O'Toole & Lawler, 2006). Therefore, there is a large demand for organizations to align their practices to support the self-directed career model. Several multinational organizations (among others IBM, GE, and Shell) have developed practices helping employees with their self-directed careers (Hall, Briscoe, Dickmann, & Mayrhofer, 2012). The challenge for the international human resource management is to understand which kinds of practices are required in different types of cultures to foster positive career attitudes and proactive career behaviors.

In the literature, two perspectives are used in comparative career research in order to explain differences across countries: the cultural perspective and the institutional perspective (Chudzikowski et al., 2012). The cultural perspective examines the influence of cultural values on career related aspects, whereas the institutional perspective focuses on three pillars (Scott, 1995) regulative pillar (government policy), normative pillar (the role of family obligations), and the cognitive pillar (perceptions of, e.g., different age groups). In our analysis we will focus on the cultural perspective, as we emphasize on the self-directed career model. Nevertheless, we do recognize that, for example, governmental policies might have an important role in forming the career related attitudes of individuals.

National culture and career attitudes

Hofstede (2001) defines culture as "the collective programming of the mind that distinguishes one group or category of people from another" (Hofstede, 2001, p. 9). Culture is a collective feature, including values and norms, which is common and shared by a group of people and is not tangible, yet, it is apparent in people's behavior. The social construction theory (Berger & Luckmann, 1966) 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 (Tavris, 1992). Based on the social construction theory, it can be assumed that there are cultural differences in norms and values related to career planning. Cultural factors might influence the career choices a person makes (Jackson, 2002). Decision making structures vary across cultures (Thomas, 2008), which explains why culture has been shown to have an influence on the difficulties in career decision making of students (Mau, 2001, 2004). Mau (2001) stresses the importance of being able to recognize the cultural differences in career decision making. The causes for career decision-making difficulties may differ in dif-

ferent cultures, which lead to differing demands for future employees in order to make their career decisions.

Hofstede (2001) introduces five dimensions of culture: power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation, which have been found to reflect the fundamental dimensions of culture (Taras, Kirkman, & Steele, 2010). These dimensions can also be related to career decision making. Compared to other studies concentrating on national cultures (e.g., House et al., 2004; Schwartz, 1994; Inglehart, 1997), the study by Hofstede (2001) directly examines job related variables, such as the desired job and work related goals and values. Cultures with high power distance display systems in which skills, wealth, and power should go together (Hofstede, 1991). 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, recruitment decisions are often made by a single individual, and that one might not be able to influence the recruiting decision by planning the future career as a student. Therefore, the incentive to invest in career knowledge in high power distance cultures might be lower than in low power distance cultures. Individuals in high power distance cultures may not plan their careers to a great degree. Fisher and Chalmers (2008) show that optimism in general is related to low power distance. Thus, also career optimism can be expected to be lower in high power distance than in low power distance cultures. However, power distance can be assumed to be positively related to career adaptability given the fact that one must be able to react on decisions of individuals higher in the hierarchy (Lai & Yue, 2000).

Hypothesis 1a: Power distance is negatively related to career planning

Hypothesis 1b: Power distance is positively related to career adaptability.

Hypothesis 1c: Power distance is negatively related to career optimism.

Hypothesis 1d: Power distance is negatively related to career knowledge.

The uncertainty avoidance dimension measures the degree of tolerance for uncertainty. Therefore, societies with high uncertainty avoidance are often characterized as being rule-oriented as well as being societies which plan for the future (Hofstede, 1984). High uncertainty avoidance cultures invest substantial resources in planning (Hofstede, 1984), and therefore, career planning is expected to be high in countries with high uncertainty avoidance. Career knowledge is assumed to be positively related to uncertainty avoidance, since collecting information related to one's future career might reduce the feeling of insecurity. 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. Also, career adaptability is influenced by uncertainty avoidance. Individuals who dislike uncertain situations are assumed to not be willing to change their career plans.

Hypothesis 2a: Uncertainty avoidance is positively related to career planning.

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

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

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

Individualism (opposed to collectivism) measures the degree to which individuals see themselves and make decisions based on “I” rather than “we” (Hofstede, 1991). Mau (2001) shows that students tend to make their career decision on their own in more individualistically oriented cultures, whereas in collectivistic cultures decisions are made in a way that is conform with the familial and societal expectations. Students in the latter type of cultures might experience more difficulties in career decision making than students from individualistic cultures. Therefore, individualism can be seen positively affecting career planning. Fisher and Chalmers (2008) have found in their study on optimism that lower individualism is related to higher optimism. Therefore, career optimism is assumed to be lower in high individualism cultures. Career adaptability, however, is expected to be positively related to individualism. Individuals from less collective cultures are more free to react and to adjust to changes than individuals from collective cultures where the decision making process involves various individuals. 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.

Hypothesis 3a: Individualism is positively related to career planning.

Hypothesis 3b: Individualism is positively related to career adaptability.

Hypothesis 3c: Individualism is negatively related to career optimism.

Hypothesis 3d: Individualism is positively related to career knowledge.

Masculinity (opposed to femininity) describes the extent to which a culture has its social roles clearly distributed among its members. 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. Resulting from that, individuals from masculine cultures possess career knowledge and optimism. In addition, 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. Masculine cultures are distinguished by work centrality as well as the relatively low importance of employment and position security (Hofstede, 2001).

Hypothesis 4a: Masculinity is positively related to career planning.

Hypothesis 4b: Masculinity is positively related to career adaptability.

Hypothesis 4c: Masculinity is positively related to career optimism.

Hypothesis 4d: Masculinity is positively related to career knowledge.

Long-term orientation describes the planning horizon of a society. Long-term orientation is related to having either full or no confidence, whereas societies with short-term

orientation focus more on probabilistic thinking. Societies with short-term orientation value short-term results and are rather perseverant toward slow results (Hofstede, 2001). Therefore, career planning is expected to take less often place in short-term orientated cultures than in long-term oriented cultures. Long-Term orientation is related to high career optimism. According to Hofstede (2001), long-term orientation is related to personal adaptability. That is, it is assumed that individuals from more long-term oriented cultures would also possess career adaptability abilities. Career knowledge on the other hand, is concerned with job market trends (Rottinghaus, Day, & Borgen, 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.

Hypothesis 5a: Long term orientation is positively related to career planning.

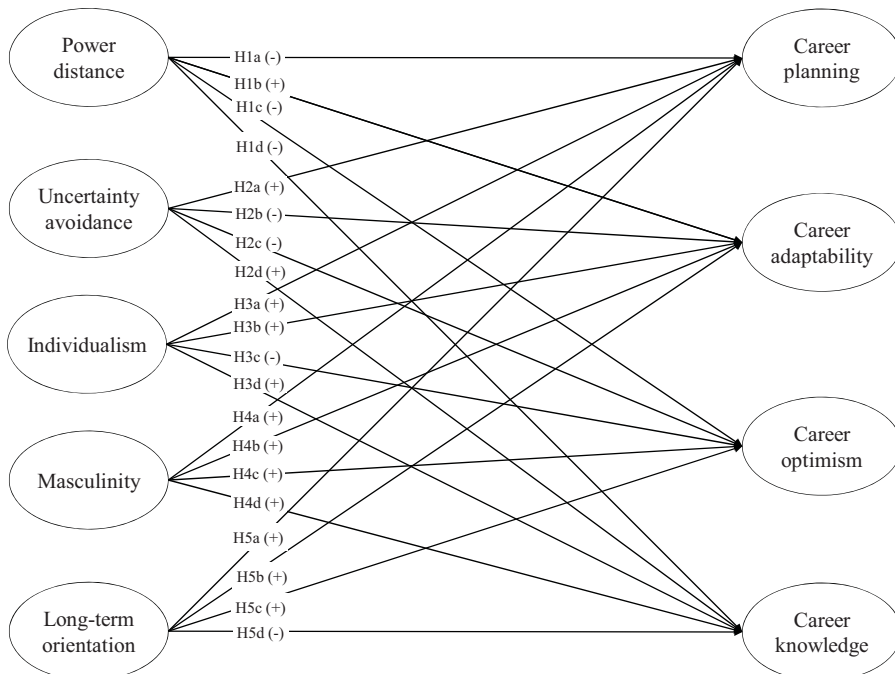
Hypothesis 5b: Long-term orientation is positively related to career adaptability.

Hypothesis 5c: Long-term orientation is positively related to career optimism.

Hypothesis 5d: Long-term orientation is negatively related to career knowledge.

To examine the hypothesized relations presented in the theoretical model (Figure 1), we will perform our analysis using a student sample from eight countries.

Figure 1: Theoretical model



Method

Sampling and data collection

Our sampling strategy required careful consideration of factors such as sample population selection and national cultural dimensions. To ensure that the countries selected were appropriate to investigate the research question, we drew on the guidance offered by work cultural clusters (countries with similar cultural norms and values) to select countries for sampling (Ronen & Shenkar, 1985; Bakacsi, Sándor, András, & Viktor, 2002). Our selection includes Argentina, Bulgaria, China, Finland, Germany, Spain, Ukraine, and the U.S. The eight countries elicit both similarities and differences across cultural dimensions. The countries represent seven cultural clusters identified by Ronen and Shenkar (1985) and Bakacsi, Sándor, András, and Viktor (2002), which based their work on Hofstede's (1984) cultural dimensions – Latin American (Argentina), Eastern European (Bulgaria, Ukraine), Far Eastern (China), Nordic (Finland), Germanic (Germany), Latin European (Spain), and Anglo (U.S.). By testing countries that elicit similarities and differences, we can examine the influence of national cultural dimensions on career attitudes to explore if variance exists between countries.

To test our hypotheses 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 (Vijver & Leung, 1997). A total of 1,845 students from eight countries participated in the questionnaire: 239 from Argentina, 267 from Bulgaria, 206 from China, 265 from Finland, 212 from Germany, 319 from Spain, 129 from Ukraine, and 208 from the U.S.A. The respondents are from one university in each country and citizens of their respective countries. The average age of respondents is 22 years. More than half of the respondents (58%) are females.

We followed the recommendations by Vijver and Leung (1997) to ensure a robust approach. This included the effort to ensure the comparability of samples, questionnaire translation, timing, and process of data collection. In an effort to establish cross-country homogeneity of samples to reduce the number of other influences than culture, we utilized samples from the same population (university level business students) in all eight countries. Student samples help to isolate the effects of cultural dimensions on career attitudes by holding some demographic variables such as socio-economic status and age constant. The questionnaire was initially developed in English and conducted in the respective official language of all eight countries. Following the recommendations in the literature (Harzing, 2005), the English questionnaire was translated and back-translated into English to ensure linguistic as well as conceptual equivalence (Brislin, 1986; Hui & Triandis, 1985). 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. Then it was pilot-tested in Germany to validate its model and methodology. To ensure methodological equivalence and consistency across the investigated countries (Leung, 2008), the same procedures were applied in terms of survey formats and the data collection procedure in all eight countries. The data was collected simultaneously for the majority of countries. The data collection process ended before the financial crisis in all eight countries, preventing the results from being biased (Steinmetz et al., 2011).

Measures

Career planning, was based on the work of Marcia (1966). It was measured 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”). Using the career futures inventory by Rottinghaus, Day, and Borgen (2005), students’ career adaptability (3 items, e.g. “I can adapt to change in the world of work.”), career optimism (3 items, e.g. “I get excited when I think about my career.”), and career knowledge (2 items, e.g. “I am good at understanding job market trends.”) were taken as further dependent variables. 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 were .67 for career adaptability, .80 for career knowledge, and .78 for career optimism for the pooled sample. The respective item reliabilities for all eight countries are presented in Table 1. Of the 24 reliability estimates 16 estimates are above .7 and eight estimates are between .6 and .7, suggesting that the measurement scales are reliable (Nunnally, 1970).

Table 1: Construct Reliabilities

Variables	Argentina	Bulgaria	China	Finland	Germany	Spain	Ukraine	USA	Pooled
Career adaptability	.67	.62	.70	.70	.70	.64	.68	.65	.67
Career knowledge	.66	.74	.78	.91	.84	.74	.87	.84	.80
Career optimism	.81	.65	.80	.88	.64	.82	.82	.79	.78

Following the recommendation of Taras, Kirkman, and Steel (2010) we used primary data to measure the cultural dimensions. We used the Values Survey Module 2008 (VSM 08), suggested by Hofstede et al. (2008) including 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.”), 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.”), individualism (4 items, e.g., “In choosing an ideal job, how important would it be to you to have security of employment”), masculinity (4 items, e.g., “In choosing an ideal job, how important would it be to you to have pleasant people to work with”), and long-term orientation (4 items, e.g., “Persistent efforts are the surest way to results”). 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 2, the values calculated on the basis of our data differ 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).

Table 2: Primary cultural values and secondary Hofstede scores

Country	IND*	IND-H	LTO*	LTO-H	MAS*	MAS-H	PD*	PD-H	UA*	UA-H
Argentina	100	46	106	20	102	56	86	49	30	86
Bulgaria	95	30	87	69	138	40	124	70	41	85
China	99	20	105	118	93	66	119	80	30	30
Finland	119	63	86	38	92	26	91	33	20	59
Germany	112	67	122	31	93	66	83	35	30	65
Spain	93	51	118	48	87	42	89	57	29	86
Ukraine	116	39	62	81	118	36	118	93	53	95
U.S.A.	90	91	90	29	93	62	108	40	5	46

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).

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 as 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

Following the recommendations by Byrne (2010), comparative research including various group samples requires testing the measurement model at the group level first before establishing measurement equivalence across these groups. This procedure is of particular importance in cross-country studies, which may be influenced by the translation of the research instrument and the impact of national differences on the understanding of the constructs (Harzing, 2005). In our case, the various countries included in our sample represent the different groups for which we test for measurement invariance. In a first step, we examined the samples country by country using confirmatory factor analysis (CFA) in order to test the validity and reliability of the measurement model and to identify any country-specific components of the measurement model. We used AMOS 20 and the maximum likelihood estimation procedure. According to Cheung and Rensvold (2002), among others, the chi-square (χ^2) statistic is not an adequate test of model fit given large sample sizes ($n > 250$). Therefore, the results of the χ^2 test were not considered critical for evaluating the model fit such that we complement the χ^2 statistic with other, more appropriate measures of fit (Byrne, 2010). As suggested by Browne and Cudeck (1993), we used several fit indexes in combination to provide a complete assessment of model adequacy. More specifi-

cally, we used the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). Models resulting in CFI values of .9 or higher are considered acceptable (Bagozzi & Yi, 1988). For the RMSEA index, values below .08 are considered indicative of good fit (Browne & Cudeck, 1993). In the various countries, different factor loadings were statistically insignificant and showed factor loadings and squared multiple correlations below the .7 and .4 threshold, respectively. Following the procedure suggested by Byrne (2010), we used the results of individual country CFA to identify those items in the different countries establishing a baseline model for the multi-group confirmatory factor analysis (MGCFAs). We deleted several items from the career optimism as well as the career adaptability construct and one item for career knowledge (the detailed results are available from the corresponding author upon request). Consequently the number of items for the three independent variables provided in the method section is lower than the number of items originally proposed by Rottinghaus, Day, and Borgen (2005). The deletion of items for the three measures was based on (1) the analysis of item intercorrelations, (2) the analysis of item-total correlations, and (3) the CFA. The three independent variables were modeled as reflective measures so that items could be removed without affecting their theoretical domain. For further analysis we used a factor structure that was identical for all eight countries and only used those items that showed high factor loadings and high squared multiple correlations for all eight countries (Byrne, 2010). As shown in Table 3 the values of the CFI were above the .9 threshold and the RMSEAs were below the .08 threshold for each of the eight countries for the revised measurement model. Overall, the CFA results of the revised measurement model indicate an acceptable fit. The results of the CFA are presented in Table 3.

Table 3: Results of confirmatory factor analysis and test of measurement invariance

	<i>n</i>	χ^2	<i>df</i>	<i>p</i>	CFI	RMSEA	RMSEA Low 90%	RMSEA High 90%	Δ CFI
CFA Results									
Argentina	239	14.13	17	.658	1.000	.000	.000	.048	-
Bulgaria	267	25.81	17	.078	.979	.044	.000	.077	-
China	206	40.06	17	.001	.954	.081	.049	.114	-
Finland	265	19.85	17	.282	.994	.025	.000	.064	-
Germany	212	25.91	17	.076	.976	.050	.000	.086	-
Spain	319	35.62	17	.005	.973	.059	.031	.086	-
Ukraine	129	20.59	17	.245	.988	.041	.000	.094	-
U.S.A.	208	19.33	17	.310	.996	.026	.000	.070	-
Pooled sample	1845	81.91	17	.000	.981	.049	.036	.056	
MGCFAs Results									
Configural model (M1)	1845	425.86	136	.000	.923	.034	.030	.038	-
Metric model (M2 full)	1845	539.26	171	.000	.902	.034	.031	.038	M1/M2: .021
Metric model (M2 partial)	1845	484.58	157	.000	.925	.034	.030	.037	M1/M2: .002
Scalar model (M3 full)	1845	942.49	227	.000	.811	.041	.039	.044	M2/M3: .091
Scalar model (M3 partial)	1845	602.07	199	.000	.893	.033	.030	.036	M2/M3: .032

Note: CFA = Confirmatory factor analysis, MGCFAs = Multi-group confirmatory factor analysis, *df* = Degrees of freedom, CFI = Comparative fit index, RMSEA = Root mean square error of approximation. 'Partial' denotes partial measurement invariance and 'full' denotes full measurement invariance models.

Following the recommendations in the literature prior to hypotheses testing, we tested the assumptions of cross-cultural measurement invariance which are a necessary prerequisite for meaningful cross-cultural comparisons of relationships (Behrend et al., 2008; Nimon & Reio, 2011; Schmitt & Kuljanin, 2008). To meaningfully compare relationships across groups, the measurement of constructs need to show at least partial metric invariance (e.g. Steenkamp & Baumgartner, 1998). The term “partial” refers to at least two observed indicators of a latent construct showing invariance. In examining measurement invariance we constrain factor loadings and variances of the latent constructs to be equal across groups and compare this constrained model with the unconstrained one. More specifically, we tested three types of measurement invariance: (1) configural invariance, (2) metric, and (3) scalar invariance (Steenkamp & Baumgartner, 1998). The pooled data set and the maximum likelihood estimation procedure was used to assess the invariance of the measurement model across countries. Cheung and Rensvold (2002) suggest that the χ^2 difference test ($\Delta \chi^2$) is not a good indicator of measurement invariance when the sample size is as large as in the present study. Therefore, the results of the χ^2 difference test were not considered critical in comparing the models. Following Cheung and Rensvold (2002) we used the difference in CFI between models to statistically compare the measurement models. Specifically, the CFI difference was used to assess whether the change in model fit due to relaxing between-groups equality constraints of certain parameters was statistically significant. The difference in CFI between (successive) equivalence models may not be higher than .01 (Cheung & Rensvold, 2002). In the first model, all factor loadings were constrained to be equal in both groups (configural invariance). The results for the configural model show a satisfactory fit ($\chi^2 = 425.86$; $df = 136$; CFI = .92; RMSEA = .03). In the metric model, the factor loadings were allowed to vary between groups (metric invariance). As presented in Table 3, the results of the estimation of the second model indicate that the constructs were measured adequately through their indicators across countries for the partial measurement invariance model ($\chi^2 = 484.58$; $df = 157$; CFI = .93; RMSEA = .03). The differences between the configural model and the partial measurement invariance model was not significant ($\Delta CFI = .002$) and, therefore, the factor structure can be considered invariant across the eight countries (Byrne, 2010; Cheung & Rensvold, 2002). The third model tested scalar invariance. The results show an inadequate fit of the partial as well as the full measurement invariance model. The comparison between the respective metric models and the scalar models shows that the data did not fit the requirement for scalar invariance and, consequently, the data did not meet the requirement for meaningful comparison of the means across countries (Steenkamp & Baumgartner, 1998). The conditions for cross-cultural equivalence are almost never fully met in empirical data (e.g., Vijver & Leung, 2001). Hence, similar deviations are quite typical for cross-cultural research and were also found in other studies which examined different cultures (e.g., Hu, Pellegrini, & Scandura, 2011). The results of the MGCFA are presented in Table 3.

Following the recommendation in the literature (Chang, van Witteloostuijn, & Eden, 2010; Reio, 2010) we utilized procedural remedies as well as empirical testing to minimize common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We minimized common rater effects by protecting respondents anonymity and as-

sured that no right or wrong answers exist. In the pre-test we tested two different versions the questionnaire with respect to the order of the questions and found no significant differences in the respondents' answers. In the main study the respondents were not aware of the study's main purpose and the conceptual model. We utilized three ex post approaches to assess common method bias. First, we examined the correlation matrices for each country and the pooled sample for suggestions of multicollinearity. We found no highly correlated variables, suggesting that common method bias is minimal. Next, we used Harman's one factor test and found a very poor fit for the single-factor models for each country sample and the pooled sample, suggesting an absence of common method bias. Third, we applied a common method factor. We performed additional CFA for each individual country and the pooled sample, incorporating a common method factor that loads on each item (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). All item loadings on the common method factor were insignificant for the eight country samples. While both test have their limitations, they do not indicate that our data have common method variance issues. Table 4 presents means and standard deviations for all variables (tables of correlation coefficients by country are available from the corresponding author upon request). Table 5 presents means, standard deviations, and correlation coefficients for the pooled sample.

Table 4: Descriptive statistics by country

Variables	Argentina		Bulgaria		China		Finland		Germany		Spain		Ukraine		U.S.A.	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Career planning	3.55	.67	2.56	1.10	2.37	.72	2.27	1.20	2.66	1.05	3.03	.98	2.44	.68	3.20	.97
Career adaptability	4.06	.51	4.07	.49	3.75	.54	3.85	.49	4.02	.52	3.91	.43	3.76	.49	4.07	.43
Career knowledge	3.59	.68	3.64	.78	3.06	.73	3.33	.83	3.40	.61	3.43	.67	3.24	.79	3.55	.72
Career optimism	4.21	.72	4.10	.65	3.73	.69	3.63	.82	3.43	.57	3.79	.76	4.01	.73	3.97	.67
Age	21.69	3.35	21.25	3.07	24.71	5.28	21.91	2.52	23.04	1.81	20.97	2.45	19.63	2.08	23.58	6.11
Gender (% female)	.49		.66		.54		.48		.54		.62		.82		.40	
N	239		267		206		265		212		319		129		208	

Table 5: Descriptive statistics and correlation coefficients (pooled sample)

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1. Career planning	2.82	1.03										
2. Career adaptability	3.95	0.50	.16									
3. Career knowledge	3.40	0.77	.25	.31								
4. Career optimism	3.87	0.74	.31	.23	.29							
5. Individualism	102.12	10.26	-.20	-.09	-.13	-.15						
6. Long-term orientation	99.20	17.02	.13	.03	-.05	-.16	-.29					
7. Masculinity	101.17	16.86	-.11	.08	.12	.19	-.12	-.55				
8. Power distance	100.79	15.52	-.20	-.04	.01	.12	-.29	-.60	.68			
9. Uncertainty avoidance	28.70	11.64	-.15	-.06	-.03	.06	.17	-.20	.63	.35		
10. Age	22.10	3.88	.09	.11	.05	-.06	-.04	.10	-.14	.03	-.21	
11. Gender (% female)	57.02		-.03	.05	-.01	.13	-.02	-.31	.52	.38	.44	-.17

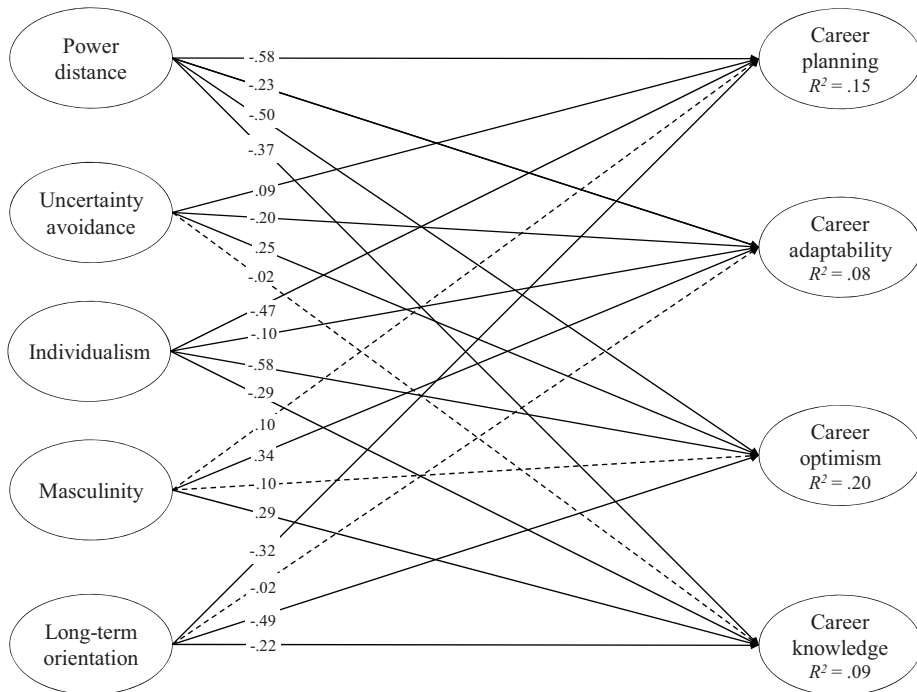
Note: N = 1845. All correlations above |.04| are significant at the .05 level.

Testing the Structural Model and Hypotheses

Having confirmed that the measurement model had adequate fit across all country samples and that the measures are comparable across countries, we tested our proposed structural model. We used structural equation modeling with AMOS 20 with maximum likelihood estimation to test our hypotheses. Results of the structural analysis of the proposed model provides an acceptable fit to the data ($\chi^2 = 186.06$; $df = 30$; CFI = .981, RMSEA = .053 [Arbuckle, 1997; Bollen, 1989; Browne & Cudeck, 1993]). Hypothesis 1 predicts that power distance has a negative effect on career planning (H1a), career optimism (1c), as well as on career knowledge (H1d) and a positive effect on career adaptability (H1b). The structural coefficients indicated that power distance had a negative effect on career planning, career optimism, and career knowledge, supporting Hypotheses 1a, 1c and 1d. Power distance had a negative effect on career adaptability. Therefore, Hypothesis 1b is not supported. Hypothesis 2 predicts that uncertainty avoidance has a positive effect on career planning (H2a) as well as on career knowledge (H2d) and a negative effect on career adaptability (H2b) as well as career optimism (H2c). Uncertainty avoidance related positively to career planning and negatively to career adaptability. These results support Hypotheses 2a and 2b. Contrary to Hypotheses 2c and 2d, uncertainty avoidance had a significant positive effect of career optimism and a nonsignificant negative effect on career knowledge. Hypothesis 3 predicts that individualism has a positive effect on career planning (H3a), career adaptability (H3b), and career knowledge (H3d) as well as a negative effect on career optimism (H3c). Support was found for Hypothesis 3c. Contrary to our hypotheses all other relationships were negative. Hypothesis 4 predicts that masculinity has a positive effect on career planning (H4a), career adaptability (H4b), career optimism (H4c), and career knowledge (H4d). In support was of Hypotheses 4b and 4d, the path coefficients between masculinity and career adaptability as well as between masculinity and career knowledge were positive and significant. The path coefficients between masculinity and career planning (H4a) as well as between masculinity and career optimism were positive and approached significance ($p < .10$). Hypothesis 5 predicts that long-term orientation has a positive effect on career planning (H5a), career adaptability (H5b), and career optimism (H5c) as well as a negative effect on career knowledge (H5d). In support of Hypothesis 5d, the path coefficients between long-term orientation and career knowledge was negative and significant. Contrary to our hypotheses, long-term orientation had a negative effect on career planning, career adaptability, and career optimism. Figure 2 summarizes our results.

Discussion

In this study, we examined the influence of cultural dimensions on students' career planning, career adaptability, career optimism, and career knowledge and in this way tested whether cultural differences could account for differences in the relative importance of career attitudes found in past research. In the following, we elaborate the theoretical implications of our findings for career research as well as for research on cross-cultural management, offer managerial implications, and discuss the limitations of this study.

Figure 2: Structural equation modeling results

Note: $N = 1,845$; $\chi^2 = 186.06$; $df = 30$; CFI = 981; RMSEA = .053. Standardized structural coefficients are provided for each path in the model. Nonsignificant paths are dashed. Both control variables had paths to career planning, career adaptability, career optimism, and career knowledge. Age had a significant positive effect on career planning, career adaptability, and career knowledge. Gender (coded 1, "female", and 0, "male") had a significant positive effect on career planning and a significant negative effect on career knowledge.

* $p < .05$

** $p < .01$

*** $p < .001$

Theoretical implications

Our findings contribute to the career theory literature by enhancing the understanding of the antecedents of positive career attitudes of individuals in a phase of their lives between the completion of their education and job search. Although cross-cultural management research and career research has largely focused on the relationship between career attitudes and career outcomes, the relationships between career attitudes and their antecedents have received less attention. Thus, this study answers calls for research to examine in particular the influence of cultural norms and values on the development of positive career attitudes before individuals start their careers (Claes & Ruiz-Quintanilla, 1998).

Our results show that power distance, individualism, and long-term orientation have a negative influence on career planning, while uncertainty avoidance and masculinity have a positive effect. In line with our hypothesized relationships, power dis-

tance negatively affects career planning. In more hierarchical cultures, others are involved in career planning, especially those with higher hierarchical positions in institutions, organizations, or within families. Contrary to our expectation individualism had a negative influence on career planning. In general, more individualistic countries have a better developed social support system and provide more guidance in the job search and career planning process. Therefore, individuals might be less proactive in planning their own careers and rely more on supporting factors. In contrast to the proposed positive influence of long-term orientation on career planning, we found a negative relationship. This could be caused by the fact that individuals coming from short-term oriented countries are focused on short-term success, and therefore, are more involved in career planning activities related to their immediate future. As predicted, uncertainty avoidance had a positive influence on career planning. Individuals coming from high uncertainty avoidance cultures try to reduce uncertainty, and therefore, plan for the start in their future careers. The proposed positive effect of masculinity on career planning was supported. Cultures with higher degree of masculinity are focused on career success, which requires early career planning. Meta-analytic evidence suggests that proactive behaviors, such as career planning activities, are positively related to a higher salary, more probable promotion, and higher career satisfaction in later work life (Ng, Eby, Sorensen, & Feldman, 2005). Therefore, identifying the influence of national culture on early career planning provides better understanding of the future career success. Our findings suggest that the career attitudes are to some extent predetermined by national culture and consequently influence career outcomes.

Career adaptability was, contrary to our hypothesized relationship, negatively influenced by power distance. In cultures with high power distance, the flexibility of individuals might be restricted by the more powerful individuals in society. As predicted, uncertainty avoidance had a negative effect on career adaptability, suggesting that individuals with high levels of uncertainty avoidance are less open to adjust to career related changes. Individualism, contrary to our expectation, had a negative influence on career adaptability. The focus on individual preferences might cause the reluctance to adjust to changes which are contrary to one's own needs and preferences. As proposed, masculinity had a positive influence on career adaptability. Individuals from masculine cultures are willing to accept changes. While career adaptability in later career stages has a positive influence on turnover intentions and behavior (Ito & Brothridge, 2005), in earlier career stages it might be beneficial for the individual as well as potential employers as organizations can utilize the adaptability of the applicants in appointing them to various positions and even to different international locations.

Career optimism was, as hypothesized, negatively influenced by power distance. Given the fact that in cultures characterized by high power distance, individuals' career related aspects are influenced more strongly by exogenous factors, optimism is reduced as one's attitudes and actions have a comparatively low influence on results. Contrary to our results, uncertainty avoidance had a positive influence on career optimism. Optimism might function as a coping mechanism in high uncertainty avoidance cultures to reduce potential negative aspects which arise from the increasing uncertainty related to career related aspects. Individualism had a negative influence on career optimism as predicted in our model. In contrast to our expectation, long-term

orientation had a negative effect on career optimism. Meta-analytic findings show that optimism has a positive effect on task performance and organizational citizenship behavior (Kaplan, Bradley, Luchman, & Haynes, 2009). It is positively related to job satisfaction (Connolly & Viswesvaran, 2000). Thus, our 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, & Bartrum, 2002).

Career-related knowledge was negatively influenced by power distance as predicted in our model. In high power distance cultures career related decisions are not solely based on one's own preferences, and therefore, investment in gathering career-related information is lower than in low power distance cultures. In contrast to our model, individualism had a negative influence on career-related knowledge. The focus on oneself and the resulting evaluation of one's abilities might lower the incentives to invest in additional career-related knowledge. As proposed in our hypothesized model, masculinity had a positive effect on career-related knowledge. Career focused individuals are likely to gather supporting information in order to enhance their chances in the labor market. Long-term orientation had a negative influence on career related-knowledge as predicted by our model. Individual's focused on short-term results are likelier to inform themselves on job-market trends to position themselves more favorable in the labor market.

In summary, our results show that career attitudes are influenced by cultural dimensions. In particular career planning and career optimism are determined by culture to a comparably large degree. Therefore, career theory should recognize the influence of national culture already in the early stages of careers. We show that not only organizational culture and structures within an organization affect career attitudes, career-related decisions, and career-related behaviors, but these factors are to some degree predetermined by the national culture. Given the relative stability of national cultures (Williamson, 2000), it is not simple for organizations to directly address this influence and instead need to adjust their human resource strategies to the respective national frameworks.

Managerial implications

Our results will help internationally active organizations to design their recruiting activities in a culture-compatible way as well as provide career counselors information on how the career counseling process might need to be adjusted for individuals from diverse cultural backgrounds. Our results serve as a help for international human resource departments to understand how cultural values shape students' career planning as well as career-related adaptability, knowledge, and optimism. In certain cultures, the human resource management departments need to be more aggressive in providing information about career opportunities in the organization than in others, since culture influences students' proactivity in acquiring career-related knowledge and planning for their careers. In addition, in case of potential changes in economic conditions and thereby in the labor market, as during the recent economic crisis, individuals from different cultures are willing to adapt to these changes in different ways. Therefore, the human resource management of an internationally active organization needs to be

prepared for coping with the different levels of career adaptability of the applicants in different cultures. Our study highlights the need to understand the labor markets and develop sensitivity to country-specific needs, including cultural differences. The findings 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.

Our findings aid in the understanding of current attitudes toward the transition from education to career and enhance the effectiveness of career counseling by addressing the country-specific differences and similarities in individuals' career behaviors and attitudes in an international work environment. Especially educational institutions can take the role of career counselors for their students, particularly focusing on the career decision making process of individuals, helping them to understand the labor market situation as well as address the sources of career decision-making difficulties which might also result from the lack of career related adaptability, optimism, or the knowledge on the job-market trends. Our results suggest that the level of institutional support to some degree depends on cultural dimensions. While some cultural settings foster individuals' investment in career-related knowledge and career planning activities, others inhibit one's proactive attitudes and behaviors. As a result, educational institutions in some cultures have to provide more support to their students in the early career stage than in other cultures.

Limitations and further research

Our study has some notable limitations offering fruitful avenues for future research. First, an important limitation is the comparably low number of countries and, therefore, the limited generalizability of our conclusions. Even though the selected countries present different cultural clusters and the samples 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 dimensions. Second, we sampled only a limited number of individuals within a specific socio-economic class. Study participants were students from universities in the different countries. Also given the aim of the study, i.e. to test the influence of cultural dimensions on students' career attitudes, all participants were students. This may, however, impose limits on the generalizability of the research findings to other groups. Future research may examine the relationships between cultural dimensions, career attitudes, and subsequent behavior with other samples than students and across other cultures. Third, there is the challenge of cross-national measurement equivalence. While we took several steps to address equivalence (translation/back-translation procedure, multi-group confirmatory factor analysis), the constructs may have not captured all country-specific factors given the relatively high number of deleted items in the development of our baseline measurement mode. Furthermore, as a result of establishing a baseline model, career knowledge was measured with only two indicators. While the literature suggests to utilize three indicators for each variable (e.g., Baumgartner & Homburg, 1996), the literature also shows that two indicators per

variable is a case that occurs very often in practice (Gerbing & Anderson, 1985) and that models that include variables with only two indicators can be identified in structural equation modeling (Bollen, 1989). Fourth, our study is limited to a matched sample (business and economics major) 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 avoid this potential problem by combining data from different universities as well as to expand the choice of countries. Finally, we measured Hofstede's (2001) national culture dimension at the societal level rather than measuring individuals' cultural norms and values at the individual level (e.g., Yoo, Donthu, & Lenartowicz, 2011). Despite these limitations the present study takes a step forward and sheds some light on the complexity of business students' career attitudes. At the same time, it highlights the need for more multi-country studies and comparisons of career attitudes.

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