THE RELATIONSHIP BETWEEN CULTURE AND THE USE OF PROFESSIONAL SERVICES: EVIDENCE FROM TWO CROSS-COUNTRY STUDIES

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ABSTRACT

Large sums are spent each year on professional services. However, while differences in the spending between countries can be discerned, we do not know why they occur. Inspired by the organizational buying behavior literature, this paper investigates the influence of culture on the use of professional services. As the use of professional services involves considerable uncertainties – particularly for the buyer – it can be assumed to be influenced by cultural differences regarding the level of Uncertainty Avoidance, Individualism and Masculinity. By drawing on two independent cross-country studies, we show that organizations in high uncertainty avoidance and individualistic cultures use professional services less than organizations in low uncertainty avoidance and collectivist cultures. The findings contribute to
the theorizing on how the cultural context influences organizational buying behavior, and the purchasing of professional services.

**Keywords:** Cultural context, uncertainty avoidance, individualism, professional services, service consumption
1. INTRODUCTION

Although buyers and suppliers are increasingly acting on global markets, research investigating potential cultural differences in organizational buying behavior has been surprisingly sparse. The limited existing research has pointed at variations in a number of aspects of purchasing behavior across national contexts including the content of the purchasing process (e.g., Pemer, Sieweke, Werr, Birkner, & Mohe, 2014), the buyer-supplier relationship (e.g., Cannon, Doney, Mullen, & Petersen, 2010), the make-or-buy decision (e.g., Pagell, Katz, & Sheu, 2005), the involvement of different departments in the purchasing process (e.g. Banting, Beracs, & Gross, 1991; Banting, Ford, Gross, & Holmes, 1985), and the value creation in supply chains (e.g., Davis, Moramone, Quesada, & Gonzalez, 2014).

This study seeks to add to research on how purchasing behavior varies across national contexts, which is a rather neglected area in the purchasing and supply chain literature. Particularly, we investigate the relationship between culture and organizations’ use of suppliers of professional services, namely management consulting (MC) services. In an increasingly complex, changing and challenging business environment, many organizations draw on external knowledge, expertise and advice to strengthen their competitiveness (Bergh & Gibbons, 2011; Mudambi & Tallman, 2010; Reihlen & Werr, 2012). This has led to significant increases in organizations’ spending on consulting services (see FEACO, 2016; Pemer, Sieweke, et al., 2014) and has positioned management consultants as central players in the modern economy (Muller & Zenker, 2001).

The literature on the purchasing of professional services in general, and MC services in particular, has so far focused on different stages of the purchasing process including the selection (e.g., Patterson, 1995; Sonmez & Moorhouse, 2010), contracting (e.g., Homburg & Stebel, 2009;
Sieweke, Birkner, & Mohe, 2012), specification (e.g., Gelderman, Semeijn, & de Bruijn, 2015), and performance evaluation (e.g., La, Patterson, & Styles, 2009; Patterson & Spreng, 1997). Also, research has analyzed the involvement of purchasing departments in the procurement process (e.g., Ellram & Tate, 2015; Luzzini, Longoni, Moretto, Caniato, & Brun, 2014; Werr & Pemer, 2007), the company’s decision to outsource professional services (e.g., Ellram, Tate, & Billington, 2008), and the design and management of the (professional) service supply chain (e.g., Ellram, Tate, & Billington, 2004; Giannakis, 2011). Interestingly, the client organization’s preceding decision whether to use MC services in the first place has been neglected. This gap is surprising given considerable cross-country differences in organizations’ use of consulting services (Keeble & Schwalbach, 1995; Miles, 2005). For instance, the size of the MC sector as a percentage of the gross domestic product (GDP) varies widely across countries from a maximum of about 1.2% for the UK and Germany to a minimum of 0.09% in Poland and Greece (FEACO, 2011).

This lack of research has generated calls for investigating the reasons for cross-country differences in firms’ use of professional services – particularly MC services (e.g., den Hertog, 2000; Faulconbridge & Muzio, 2012; Kipping & Wright, 2012; Sturdy, 2011). Understanding reasons for the cross-country differences is important for suppliers selling consulting services as well as for buyers and policy makers given that these services create several monetary and non-monetary benefits for clients (Aarikka-Stenroos & Jaakkola, 2012). For instance, management consultancies have been found to facilitate the transfer of innovation and knowledge between firms, and initiate and develop innovations in interaction with their clients (e.g., Back, Parboteeah, & Nam, 2014; D’Antone & Bonomi Santos, 2016).
In the current paper, we apply an organizational buying behavior theoretical lens (Sheth, 1973; Webster Jr & Wind, 1972) and view organizations’ buying decision as influenced by the cultural environment which determines the values and norms guiding interorganizational and interpersonal relationships (Webster Jr & Wind, 1972). We will thus explore culture as an explanatory variable of cross-country differences in the use of consulting services. The paper contributes to the purchasing and supply chain literature in two ways: First it contributes to research on the role of culture in organizational buying behavior. Previous studies have shown that culture affects several aspects of organizations’ purchasing and supply chain management (Davis et al., 2014; Pagell et al., 2005; Pemer, Sieweke, et al., 2014). This study adds to this line of research by providing insights into the role culture plays in the preceding decision whether to hire external suppliers of management expertise and advice, which marks the very first step in the purchasing process (Ellram, Tate, & Billington, 2007). Thereby, the study underlines the importance of culture in purchasing and supply chain management. Second, and related to the first contribution, the study contributes to research by establishing a conceptual link between cultural dimensions and the use of management consultants by means of their effects on consulting buyers’ perceived uncertainties and tolerance for uncertainty related to service purchasing. Third, the study adds to the growing literature on (professional) services in the purchasing and supply chain management literature (e.g., Ellram & Tate, 2015; Ellram et al., 2007; Fu, Flood, Bosak, Morris, & O'Regan, 2013; van der Valk & Axelsson, 2015). Research has shown that the purchasing of services is perceived as much more difficult than the purchasing of goods by purchasing professionals (e.g., Smeltzer & Ogden, 2002) and that professional services are among the most challenging types of services to purchase (Ellram et al., 2008; van der Valk & Rozemeijer, 2009). Therefore, calls have been made for paying greater attention to
(professional) services and how service characteristics affect organizational buying (e.g., Ellram et al., 2004, 2007). This study adds to this line of research by arguing that uncertainties involved in dealing with MC services (performance uncertainties, relational uncertainties, psychosocial uncertainties), following from service characteristics, act as a potential barrier to their use by organizations in certain cultural contexts. This provides a basis for further research on the role of uncertainty in understanding cross-country differences in purchasing and supply chain management.

2. LITERATURE REVIEW

2.1 Organizational Buying Behavior

Organizational buying behavior (OBB) as a research stream emerged as a reaction to the emphasis on “rational” factors in economic and purchasing research in the 1960’s and 70’s (Sheth, 1973, 1996; Webster Jr & Wind, 1972). It views organizational buying decisions as the outcome of processes influenced by the individuals involved (the buying center), the nature and composition of the buying center, the organization, and the environment, including the cultural environment (Webster Jr & Wind, 1972). In a review of Nordic purchasing and supply management research, OBB has been identified as the fourth most common theoretical lens (following the IMP school, transaction cost economics and the resource-based view) (Johnsen, Mikkelsen, & Paulraj, 2016).

OBB triggered considerable research on the buying center (the collective of individuals involved in the buying process), its consequences for the buying decision process and its antecedents in terms of the organization’s characteristics and the characteristics of the goods/services to be purchased that lasts until today (see, e.g., Brown, Zablah, Bellenger, &
Johnston, 2011; Makkonen, Olkkonen, & Halinen, 2012; McCabe, 1987; Rajala & Tidström, 2017; Spekman & Stern, 1979). The role of the larger environment in general and the cultural environment more specifically in the buying decision has, however, received considerably less attention (Sheth, 1996), although there are some notable exceptions that have analyzed, among others, how culture affects the source location decision making (e.g., Carter, Maltz, Maltz, Goh, & Yan, 2010) and buyer’s expectations of supplier performance (e.g., Steward, Morgan, Crosby, & Kumar, 2010).

OBB, as a sociocognitive approach to sourcing (Shook, Adams, Ketchen Jr, & Craighead, 2009), assumes that organizational buying decisions are made by interacting individuals in buying groups or centers (McCabe, 1987; Spekman & Stern, 1979), who are embedded in and influenced by the organizational context (e.g., interorganizational and interpersonal relationships) and by the national context (e.g., cultural values) (Webster Jr & Wind, 1972). When making buying decisions, organizational actors are viewed as boundedly rational, guided by a complex set of motives relating to both organizational (task) and personal (non-task) interests. Task motives may include purchasing the “right” quality at the “right” price, while non-task motives may include striving for a promotion (Webster Jr & Wind, 1972). Based on Cyert and March’s (1992) behavioral theory of the firm, Webster and Wind (1972) identified the reduction of uncertainty as a key motive in the buying decision process potentially leading to decision avoidance and maintenance of the status quo. OBB research thus provides a conceptual link between culture and the buying decision by establishing uncertainty reduction as a key motive of the organizational buyer (Gao, Sirgy, & Bird, 2005). A decision to use consultants is thus assumed to be made in the context of whether it comes with tolerable levels of uncertainty. Consulting services represent discretionary spending, i.e., there is no legal obligation to hire
management consultancies, but client organizations can voluntarily decide whether or not they use these services. Therefore, we assume that buyers’ uncertainty reduction motives are especially salient in this context. What is perceived as “tolerable” uncertainty is viewed as a consequence of both differences in experienced uncertainty (e.g. the risk of opportunistic behavior) and the tolerance for uncertainty. In the remaining parts of the literature review we will first elaborate on the specific uncertainties involved in the purchasing of consulting services and then develop hypotheses regarding how cultural dimensions are related to the use of MC services through the influence of the cultural dimensions on organizational actors’ perceived and tolerated uncertainty.

2.2 Uncertainties involved in purchasing consulting services

The purchasing and use of services in general and professional services in specific is related to high levels of uncertainty (Glückler & Armbrüster, 2003; Mitchell, Moutinho, & Lewis, 2003; Wynstra, Rooks, & Snijders, 2017). This uncertainty is driven by specific characteristics of services. The service characteristics most often mentioned in previous research are intangibility (the main object of exchange is non-physical), heterogeneity (similar services may differ considerably due to adaptations to the customer), inseparability (value of the services is co-produced by buyer and supplier) and perishability (services are impossible to store) (Wynstra et al., 2017; Zeithaml, Parasuraman, & Berry, 1985). The service characteristics make it difficult for clients to assess service quality and evaluate providers’ qualifications, both ex-ante (e.g. what shall be judged as the service does not yet exist and can vary considerably in different contexts) and ex-post (e.g. if the service is co-produced, who is to blame for a sub-standard service?) (Ellram et al., 2007; Wynstra et al., 2017). In the context of professional services, these
uncertainties are further fueled by high information asymmetry between clients and professionals, since clients lack knowledge about how professionals do their job and what they actually do (Sharma, 1997). In relation to MC services in specific, uncertainties further derive from the discretionary nature of consulting spending making it contestable (Fursten & Werr, 2005) and the organizational context of purchasing where managers’ decisions to hire consultants are made in the intersection between multiple stakeholders with partly different interests, including peer managers, affected employees, purchasing professionals and superiors (O'Mahoney, Heusinkveld, & Wright, 2013). Three types of uncertainties specifically related to the use of MC services are often discussed: performance uncertainty, relationship uncertainty and psychosocial uncertainty (Glückler & Armbrüster, 2003; Mitchell et al., 2003; Pemer & Werr, 2013).

**Performance uncertainty** concerns clients’ difficulties to judge the competence and performance of management consultants and is closely related to management consulting services’ intangibility, heterogeneity and inseparability. Consulting projects are typically expensive and strategically important, which makes the assessment of consultants’ expertise, as well as of their performance, an important task for organizations (Ellram & Billington, 2002; Mitchell, 1994; Smeltzer & Ogden, 2002). However, the assessment of both is a challenge for clients (Ernst & Kieser, 2002; Sturdy, Wylie, & Wright, 2013); the intangibility and heterogeneity, partly founded in a lack of institutional standards for the profession (e.g., the lack of a codified body of knowledge) (Alexius, 2007; Alexius & Pemer, 2013), make it difficult for clients to know what to expect from a consultant, how to identify a qualified consultant, and how to predict the quality and professionalism of a consulting firm (Gallouj, 1997; Glückler & Armbrüster, 2003). The evaluation of consulting performance is also difficult after the end of the project (e.g., Day & Barksdale, 2003; Ellram & Billington, 2002; Nachum, 1999), because of the
service’s inseparability, i.e., that results of MC depend on the collaboration with the client and may evolve over the course of the working relationship. Thus, it may be difficult to define the objectives and metrics against which to evaluate a consulting assignment and to determine how to assign responsibility among managers and consultants for project successes and failures (Glückler & Armbrüster, 2003; Lowendahl, 2005). Further, the outcome of the project may not be known until long after the project’s termination, which makes it even more difficult for the client to know when or what to evaluate (Pemer, 2008).

Relational uncertainty derives from consultants’ propensity to behave opportunistically to the detriment of the client organization (Ellram et al., 2008). Consultants often have access to confidential information to make accurate analyses. However, this creates a risk for opportunistic behavior, as consultants gain valuable knowledge that could prove to be detrimental to the client if disseminated to competitors. Even though client companies can control this uncertainty to some degree by using non-disclosure agreements, they often cannot prevent consultants from working for competitors or from applying the knowledge or experience gained to future projects (Das & Teng, 2001; Kipping, 2002; Sturdy et al., 2013). Additionally, consultants may exploit the service’s intangibility, heterogeneity and inseparability and the client’s knowledge deficits to behave opportunistically by primarily acting in their own instead of their client’s interest (Homburg & Stebel, 2009; Sturdy, 1997). This uncertainty is amplified when clients rely on the input of consultants to define the true nature of the problems and challenges they face or how best to solve them, a condition that is closely related to the service’s heterogeneity and inseparability (Lowendahl, 2005; Schein, 1999). These conditions increase the client’s dependency on the consultants to make correct and non-opportunistic assessments of the situation.
Psychosocial uncertainty, finally, derives from the potential reactions of others (e.g., employees, purchasing professionals) and the self to managers’ use of consulting services (Mitchell et al., 2003; Pemer & Werr, 2013). Managers’ use of consulting services may result in anxiety and skepticism within the managers’ organization. For instance, the involvement of consultants in organizational change projects may lead to critical reactions within the client organization towards consultants, and may inflict self-protective behavior by the client’s peers, subordinates and superiors (Kipping, 2000). Employees may refuse to cooperate with consultants and may even hide information, which, because of the inseparable nature of the consulting service, may jeopardize the success of the consulting project and, as a consequence, managers’ position and career opportunities (Mitchell, 1994). Furthermore, the increasing involvement of purchasing professionals in the hiring of consulting services increases the transparency of managers’ use of management consultants and thus increases their vulnerability as consulting services represent a discretionary spend and thus are at risk of being contested within the organization (Furusten & Werr, 2005; O’Mahoney et al., 2013; Werr & Pemer, 2007). The uncertainties related to the potential reactions of others to managers’ use of consulting services may have negative consequences for managers, because they challenge their self-image of being responsible, competent managers who are in control of the situation (Bäcklund & Werr, 2008). In fact, researchers have argued that the hiring of consultants often involves feelings of emotional stress for managers, because they delegate central aspects of their tasks to consultants (Schein, 1999). Additionally, taking advice from consultants involves the risk of critique against previous actions and decisions, which can also threaten managers’ self-esteem (Maister, 1997).

Following the above outlined OBB framework that situated the buying decision processes in a cultural context and pointed at uncertainty reduction as a key motive guiding organizational
buyers’ behaviors, we will in the following elaborate on and formulate hypotheses regarding the link between cultural dimensions and the use of MC services.

3. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Prior OBB research has argued that the avoidance of uncertainty is a key motive of organizational buyers and that this uncertainty is influenced by cultural norms for interorganizational and interpersonal relationships (Gao et al., 2005; Webster Jr & Wind, 1972). Cross-cultural research has repeatedly shown that the perception of uncertainty and the tolerance for it differs across cultural contexts. “Uncertainty avoidance” is a recurring dimension in frameworks for mapping differences across cultures (see Venaik & Brewer, 2010), arguing that the tolerance for uncertainty differs across cultural contexts. Culture has further been argued to influence the extent to which uncertainties are experienced in business transactions (e.g., Weber & Hsee, 1999). In the following, we will develop hypotheses based on the argument that cultural differences between countries affect organizations’ use of consulting services through culturally induced differences in managers’ tolerance for uncertainty and managers’ perceived uncertainties and risks involved in buying these services. Because previous OBB research on the relationship between culture and buying behavior is scarce, we draw on a broader set of literature, including cross cultural management and international business studies.

In characterizing different cultural contexts, we base our reasoning on Hofstede’s (1980) work. Although his work has been criticized, e.g., for conflating national culture with nation-states (Baskerville, 2003) or organizational culture (McSweeney, 2002), for the data’s age (Smith, 2002) and for methodological weaknesses (Fang, 2003), it has exerted a strong influence in the international business literature (e.g., Kirkman, Lowe, & Gibson, 2006; Taras, Kirkman, &
Steel, 2010) but also in the purchasing and supply management literature (e.g., Batenburg, 2007; Chang, Ellinger, Kim, & Franke, 2016). Moreover, while the GLOBE project has published more recent data on culture at the country level,\(^1\) using categories with similar labels as some of Hofstede’s original dimensions (e.g., uncertainty avoidance, individualism/collectivism) (House, Hanges, Javidan, Dorfman, & Gupta, 2004), Hofstede’s cultural dimensions are closer to the argument that clients might refrain from using consulting services because of the uncertainties related to the service (Pemer & Werr, 2013). For instance, whereas uncertainty avoidance in GLOBE measures rule orientation, Hofstede’s uncertainty avoidance dimension measures the level of stress that individuals experience in uncertain situations (Venaik & Brewer, 2010), which is more in line with the OBB inspired framing of the relationship between culture and purchasing behavior in this study. Additionally, a recent study (Beugelsdijk, Maseland, & Hoorn, 2015) indicated that although culture at the country level changes over time, this change is rather absolute than relative; this indicates that the relative position of the countries on a certain culture dimension is very stable, which suggests that Hofstede’s data can still be used in cross-country research (Beugelsdijk et al., 2015). While acknowledging the limitations of Hofstede’s work (e.g., Baskerville, 2003; Brewer & Venaik, 2014), we therefore use his cultural dimensions in our argumentation and empirical analyses. We focus on three dimensions that are especially relevant for understanding how uncertainties related to the use of MC services differ between different cultural contexts: Uncertainty Avoidance (UA), Individualism, and Masculinity (Steensma, Marino, Weaver, & Dickson, 2000). Hofstede also identified a fourth dimension, Power Distance,\(^1\)

\(^1\) The GLOBE project, which stands for Global Leadership and Organizational Behavior Effectiveness, is a research project that analyzes culture and leadership in more than 60 countries. The project seeks to develop “empirically-based theory to describe, understand, and predict the impact of specific cultural variables on leadership and organizational processes and the effectiveness of these processes” (House, Javidan, Hanges, & Dorfman, 2002, p. 4). GLOBE researchers started collecting data to measure national culture at the end of the 1990s and have since then established an influential research program in the field of international management.
which refers to the extent to which members in a society expect power to be distributed equally in organizations and institutions. We decided to exclude this dimension from our analysis for two main reasons: First, the Power Distance dimension focuses on hierarchical relationships and especially the relationship between manager and subordinates and the acceptability and nature of the inequality in this relationship; it is less informative regarding the kind of interorganizational, non-hierarchical relationships and the perception of uncertainty, which are in the focus of this study. Second, research indicates that the Power Distance dimension correlates strongly with the Individualism-Collectivism dimension, which raises problems of multicollinearity (Smith, 2006) and limits the conclusions that can be drawn from the data.² Because the Individualism dimension has theoretical links to managers’ perceived uncertainties (Chen, Peng, & Saparito, 2002), we decided to include Individualism in the analysis and to exclude Power Distance.

Finally, Hofstede later identified a fifth dimension, “long term orientation,” based on findings particularly from China (Hofstede, 1993). However, because this dimension is not part of Hofstede’s original survey to measure national culture, which was conducted in cooperation with the IBM company in the 1970s, data are available for only a few countries. Therefore, this dimension was also excluded from our study.

² Please note that we ran all models described below with and without Power Distance. We found a negative relationship between Power Distance and the use of consulting services for study 1, but no such relationship for study 2. More importantly, our findings did not change when we include Power Distance as control variable (except for the relationship between UA and the extent of using consulting services, which is non-significant when we include power distance). However, our analysis shows that the high correlation between power distance and individualism-collectivism in study 1 (r = -.83) and with uncertainty avoidance in study 2 (r = .74) cause problems of multicollinearity. For instance, we can see that the coefficient for individualism increases by ca. 36% (from -.55 to -.75) in study 1 when power distance is included in the analysis; similarly, the coefficient for Masculinity increases by about 60% (from .15 to .24). These are clear signs for the presence of multicollinearity, which affects the conclusions we can draw from the study. Because the conceptual link between Power Distance and the use of consulting services is rather weak, we decided to exclude the dimension from our analysis.
3.1 Uncertainty avoidance and the use of MC

Uncertainty Avoidance refers to the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity about the future (Hofstede, 1999). In cultures in which tolerance for uncertainty is low (i.e., high UA cultures), people experience significant levels of stress when being confronted with uncertain situations (Venaik & Brewer, 2010), whereas people from cultures with higher tolerance for uncertainty (low UA) experience uncertainty as less threatening (Richards & Yang, 2007).

Overall, we suggest that uncertainty avoidance is negatively related to organizations’ use of MC services. Particularly, managers will perceive the uncertainties involved in buying consulting services (performance, relational and psychosocial uncertainty) as stressful and threatening, which will reduce the use of consulting services. First, we argue that the level of UA is associated with the perceived performance uncertainty related to the use of consulting services. For example, Hofstede (1980) found that managers in high UA cultures are less willing to make individual and risky decisions than managers in low UA cultures. Also, research found that uncertainty avoidance is negatively related to corporate takeovers, which is explained by a higher perceived risk regarding the added value of takeovers (Frijns, Gilbert, Lehnert, & Tourani-Rad, 2013). The findings suggest that buyers in high UA cultures experience higher levels of stress and greater risk in uncertain situations. Therefore, they will show a reluctance to engage in uncertain endeavors, such as buying consulting services.

Second, we argue that the level of UA is associated with perceived relational uncertainties related to the use of consulting services. For instance, Qu and Yang (2015) found that uncertainty avoidance is negatively related to organizations’ use of supply chain collaborations, which is explained by a higher perceived risk of opportunistic behavior by the partner. The conclusion is
supported by Minkov and Hofstede (2014b), who found that UA is negatively correlated with trust (see also Doney, Cannon, & Mullen, 1998). Based on the findings, we argue that buyers in high UA cultures are less likely to trust consultants and more likely to assume that consultants behave opportunistically. Therefore, they will experience higher levels of uncertainty and threat when deciding upon using consulting services, which increases the likeliness of refraining from assigning consultants.

Third, we argue that the level of UA is associated with perceived *psychosocial uncertainty* as change in high UA cultures is perceived as more threatening and may thus generate more negative reactions towards managers hiring consultants. This is supported by Hofstede (1980), who found that people in high UA cultures tend to show more emotional resistance to change. Furthermore, high UA has been shown to be associated with a larger fear of failure (McClintock & McNeel, 1966), which increases the emotional pressures on a manager embarking on an uncertain change journey together with consultants over which (s)he has limited control.

Because cultural norms regarding uncertainty avoidance affect the tolerance for performance, relational and psychosocial uncertainties and the level of perceived relational and psychosocial uncertainties when buying and using consulting services, we argue that organizations in high UA cultures will use less consulting services because they have less tolerance for uncertainty and perceive higher levels of uncertainty than organizations in low uncertainty avoidance cultures. We thus formulate the following hypothesis:

**Hypothesis 1.** The level of uncertainty avoidance is negatively related to organizations’ use of MC services.
3.2 Individualism and the use of MC

The cultural dimension of individualism/collectivism refers to the propensity of particular cultures to adhere to and embody more “individualistic” or “collectivistic” values. In individualistic cultures, individuals tend to be loosely embedded in social groups and have lower identification with such groups (Chen et al., 2002); they are forced to take greater responsibility for their own well-being, but conversely, they have fewer obligations to others. The independent actor is cherished (Hofstede, 1999). In collectivistic cultures, individuals tend to be deeply embedded in groups and have stronger identification with those groups; they feel responsible for the welfare of their groups and the groups function as sources of support and care for group members. Dependence on others is seen as unproblematic (Hofstede, 1999).

We expect that the level of individualism influences organizations’ use of consulting services in two ways. First, the individualism-collectivism dimension may influence the 
relational uncertainties involved in the use of MC. Doney et al. (1998) argued that the cultural dimension of Individualism is related to a higher self-orientation, more competitive modes of interaction, looser interpersonal ties and a lower degree of loyalty to other people, whereas collectivism is related to a stronger group orientation, cooperative modes of interaction, strong interpersonal ties and higher levels of loyalty. This indicates a higher risk of opportunistic behavior by business partners in individualistic cultures, and thus higher perceived relational uncertainties. Previous studies provide evidence for this claim by Doney et al. (1998). For instance, Sakalakil and colleagues (2007) showed that the level of Individualism is positively related to economic opportunism. Similarly, Ryu and colleagues (2012) found that firms from collectivistic cultures were less likely to behave opportunistically than firms from individualistic cultures. These findings indicate that organizations in individualistic cultures are subject to
greater relational uncertainties when using consulting services than organizations in collectivist cultures, thus increasing buyers’ perceived uncertainties.

Second, the individualism-collectivism dimension may influence the *psychosocial uncertainties* involved in the use of MC. Individualism reflects strong norms of the independent actor, and reliance on others is interpreted as a sign of weakness (Chui & Kwok, 2008; Hofstede, 1980). Making oneself dependent on consultants is thus a potential threat both to the managers’ self-esteem and how they are viewed by their colleagues (Maister, 1997; Schein, 1999) indicating higher psychosocial uncertainties associated with the use of MC in cultures high on individualism. These arguments for higher relational and psychosocial uncertainties in individualistic cultures make us put forward the following hypothesis:

**Hypothesis 2.** The level of individualism is negatively related to organizations’ use of MC services.

### 3.3 Masculinity and the use of MC services

Hofstede’s Masculinity/Femininity dimension describes cultures’ adherence to more “masculine” or “feminine” values (Hofstede, 1999). Cultures that score high on the Masculinity dimension tend to value performance-orientation, competitiveness, independence and assertiveness, and view collaboration as a zero-sum game. Cultures that score low on the Masculinity dimension, and thus are said to be more feminine, are more participative, consensus-seeking, relation-oriented, nonassertive and collaborative, focusing on collaboration as a win-win situation (Hofstede, 1980).

We argue that the level of masculinity is associated with perceived relational and psychosocial uncertainties. First, masculinity is related to perceived *relational uncertainties*, because it affects the perceived risk of opportunistic behavior. For instance, Doney and
colleagues (1998) argued that because of the appreciation of competitiveness in masculine societies, there is a higher risk that cooperation partners will behave opportunistically and try to take advantage of their business partners (see also Schepers, 2006). Similarly, Johnson and Droge (2004) argued that the risk of opportunistic behavior in principal-agent relations is lower in feminine societies than in masculine societies; because of the higher value of harmony in feminine societies, agents’ goals are more likely to be aligned to principals’ goals, which reduces the risk of opportunistic behavior (see also Brock, Shenkar, Shoham, & Siscovick, 2008). Because the risk of opportunistic behavior is greater in masculine than in feminine societies, we argue that the perceived relational uncertainties when hiring consultants are higher in masculine than in feminine societies.

Second, we propose that masculinity is associated with perceived psychosocial uncertainties. According to Hofstede (1980), the independent and self-reliant decision maker is a strong ideal in masculine cultures (see also Harzing & Hofstede, 1996). The hiring of outside experts, such as management consultants, may however threaten this ideal (Schein, 1999), which increases uncertainties in relation to both self-esteem and how managers hiring consultants will be judged by their peers. Against the background of these arguments for higher perceived relational and psychosocial uncertainties in masculine countries we formulate the following hypothesis:

**Hypothesis 3.** The level of masculinity is negatively related to organizations’ use of MC services.

4. RESEARCH DESIGN

To study culture’s influence on organizations’ use of MC services, we have conducted two independent studies. In these, we follow Hofstede’s work and use the term national culture to
capture the organizations’ cultural contexts. Thus, while we acknowledge that cultures might not be confined to national borders only, and that countries might have several cultures, we use countries as a proxy to study the cultural context. This approach is supported by recent research that has shown that although countries are culturally heterogeneous, the cultural heterogeneity within a country is much smaller than the cultural heterogeneity between countries (Minkov & Hofstede, 2012, 2014a), which suggests that national culture is a meaningful concept.

4.1 Study 1

4.1.1 Data

We use publicly-available secondary data on firms’ use of consulting services from the Management, Organisation and Innovation Survey of the European Bank for Reconstruction and Development (EBRD) and the World Bank. The EBRD-World Bank Management, Organisation and Innovation Survey was conducted between October 2008 and November 2009 in twelve countries (Belarus, Bulgaria, Germany, India, Kazakhstan, Lithuania, Poland, Romania, Russia, Serbia, Ukraine and Uzbekistan). Trained interviewers from market research companies surveyed senior managers in firms to ensure the reliability of the data. The firms were randomly selected and are representative of a country’s manufacturing sector (for more information, see European Bank for Reconstruction and Development, 2008). We excluded two countries (Kazakhstan and Uzbekistan), because we lack data regarding Hofstede’s cultural dimensions for these countries. Our final sample consisted of 1,319 firms from ten countries (average number of firm observations per country: 131.9).

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3 The data can be downloaded for free from the website of the EBRD (http://www.ebrd.com/what-we-do/economic-research-and-data/data/moi.html).
4.1.2 Variables

Dependent variables: Based on the theoretical framework, which suggests that buyers are influenced by uncertainty avoidance motives that may lead them to avoid decisions and maintain the status quo (i.e. not hire rather than hire consultants) as perceived uncertainty increases and tolerance for uncertainty decreases, the use of consulting services was operationalized as a binary variable of use vs. non-use of consultants. We thus used firms’ self-reported use of consulting services (“Has this establishment ever hired an external consultant to help improve an area of its management?”) as dependent variable. The variable was coded 1 if the firm has ever used consulting services and 0 if it had not. Of the 1,319 firms in our sample, 523 have used consulting services (39.7%).

Uncertainty in relation to the use of consultants is not only produced in the commissioning and supplier selection phase, but also during delivery. Thus, uncertainty avoidance motives may also lead to a more limited use of consultants among the firms having made the decision to use consultants in cultural contexts where perceived uncertainty is higher and tolerance for uncertainty lower. To explore this possibility, we created a second dependent variable by using two questions from the MOI survey that contain information regarding (1) the average number of external consultants hired by a firm and (2) the average man-days each consultant worked. This information can be used to measure the extent to which firms use consulting services, which complements the focus of the first dependent variable (i.e., whether or not firms use consulting services at all). We followed the approach outlined by Back et al. (2014) to combine two questions from the survey to create an aggregate measure of the extent of consultant use: First, we ran a factor analysis that indicates that the two variables form a single factor (Eigenvalue =
1.40; proportion of explained variance = .70). Second, we formed the variable using the following formula: extent of consulting use = average number of external consultants hired x average days worked by consultants.\(^4\) We had usable data from 1,236 companies.

**Independent Variables.** We used Hofstede’s (2001) culture scores to measure the level of Individualism (minimum: 25; maximum: 67), Uncertainty Avoidance (minimum: 40; maximum: 95) and Masculinity (minimum: 19; maximum: 71) within a country. The culture scores were collected from Hofstede’s webpage (www.geert-hofstede.com/national-culture.html). Because Hofstede included few countries from the former Soviet Union, we searched for additional data. We found studies that raise Hofstede’s indices in Lithuania (Huettinger, 2008) and Belarus (Kustin, 2006) and included the scores in our analysis.\(^5\)

**Control variables.** We included several control variables. First, we control for firm size (natural logarithm of the number of employees), because larger firms may have a higher need for consulting services (Sieweke et al., 2012). Second, consultants might be hired to compensate for a lack of managerial ability (Werr & Pemer, 2007). Therefore, we control for firms’ quality of management, which was measured on a five-point Likert scale (1 = worst practice; 5 = best practice) using respondents’ estimation (“Excluding yourself, how well managed do you think the rest of the establishment is overall?”). Third, we included top management’s industry experience (number of years top managers have worked in the firm’s industry), because previous research has indicated that it might affect clients’ use of consultants (Fincham, Clark, Handley, &

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\(^4\) Please note that instead of multiplying the variables, Back et al. (2014) build the sum of the variables. Given that the extent to which a firm uses consultants can be rather measured by multiplying the number of work days by the number of consultants, we deviated from Back et al. (2014). However, our results do not differ when using the other approach.

\(^5\) We ran all analyses excluding these countries. The findings were similar, which indicates that they are not affected by the use of different data sources for the cultural dimensions.
Sturdy, 2008). Fourth, we control for firms’ number of competitors; firms with a high number of competitors might feel greater competitive pressure, which in turn might increase the likelihood of their seeking advice from consultants. The number of competitors was based on respondents’ self-assessment using four categories (none, one, two to five, and more than five); we set “none” as the reference category and included three dummy variables for the remaining three categories. Fifth, because firms in different sectors may differ regarding their need for consulting services, we control for a firm’s sector. The MOI survey distinguished eleven sectors: Food, textiles, garments, chemicals, plastics & rubber, non-metallic mineral products, basic metals, fabricate metal products, machinery and equipment, electronics, and other manufacturing. We set “other manufacturing” as reference category and included ten dummy variables for the remaining categories. Finally, we included a country’s gross national income (GNI) per capita to control for differences in countries’ economic structure.

4.1.3 Statistical analysis

The first dependent variable was binary coded (use of consulting services: yes/no), which indicates the use of logistic regression. However, the firms in our sample were nested in higher-level groups (i.e., countries), which potentially violates logistic regression’s assumption of independence between the observations (Guo & Zhao, 2000). We calculated the intra-class correlation (ICC), i.e., the proportion of the variation in the dependent variable that is explained on the higher level (i.e., country-level), to test whether the nesting of firms explains a significant amount of the variance. The ICC indicated that 11% of the variance in the dependent variable is explained at the country level. Therefore, we apply multilevel logistic regression (MLR). We used the melogit command in Stata 14 with robust standard errors clustered by country.
Following recommendations in the literature (Enders & Tofighi, 2007), we centered all firm-level variables within their country cluster.

The second dependent variable was a continuous variable (extent to which a firm uses consulting services). The ICC indicated that 1.2% of the variance in the dependent variable is explained at the country level. Therefore, we apply multilevel regression using the mixed command in Stata 14 with robust standard errors clustered by country. We also centered all firm-level variables within their country cluster.

4.1.4 Findings

Table 1 shows the descriptive statistics, variance inflation factors (VIFs) and correlations for all variables. Previous research has identified problems of multicollinearity when using Hofstede’s cultural dimensions (Smith, 2006). In this study, the correlations were relatively high ($r_{\text{max}} = 0.64$); however, VIFs indicate no problems with multicollinearity.

Table 2 shows the results of the statistical analyses. Model 1a (use of consulting services as dependent variable) and Model 1b (extent of using consulting services as dependent variable) include the control variables. In Model 2a and 2b, the independent variables are added. For Model 1a and 2a, we report the odds ratio to facilitate interpretation. The odds ratio indicates the likeliness that an event (e.g., the use of consulting services) occurs in comparison to the likeliness that it does not occur (Bland & Altman, 2000). For instance, an odds ratio greater than 1 (lower than 1) suggests that the probability of an event is greater (is lower) when the value of a variable is greater. In the first step, we report the findings with the use of consulting services as dependent variable (see Table 2, Model 2a): Regarding the relationship between a country’s level of UA and the use of MC services, the odds ratio ($0.98; p = 0.048$) indicates that the likeliness of using
consulting services is lower if a country’s level of UA is high. Thus, hypothesis 1 is supported. Regarding the relationship between a country’s level of Individualism and the use of MC services, the odds ratio (0.98; \( p = 0.153 \)) indicates no significant relationship. Therefore, hypothesis 2 is not supported. Finally, with regard to the relationship between a country’s level of Masculinity and the use of consulting services, the odds ratio (1.01; \( p = 0.369 \)) is not significant. Therefore, hypothesis 3 is not supported.

In the second step, we report the findings with the extent of use of consulting services as dependent variable (see Table 2, Model 2b): Regarding the relationship between a country’s level of UA and the extent of using consulting services, we find a negative and significant coefficient (\( b = -0.03; \ p < 0.001 \)), which supports hypothesis 1. Regarding the relationship between a country’s level of Individualism and the extent of using consulting services, the coefficient is negative and significant (\( b = -0.02; \ p = 0.033 \)). Therefore, hypothesis 2 is supported. Finally, with regard to the relationship between a country’s level of Masculinity and the extent of using consulting services, we find a positive but non-significant coefficient (\( b = 0.00; \ p = 0.796 \)). Therefore, hypothesis 3 is not supported.

Overall, the results show that UA is negatively related both to whether or not firms use consulting services and to the extent of using consulting services. Furthermore, we find that Individualism is related to the extent of using consulting services but not to the decision to use or not to use consultants. Finally, Masculinity is neither related to whether or not firms use consulting services nor to the extent of using consulting services.
Table 1  
Study 1: Descriptive Statistics, VIFs, and Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>VIF</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1 Variables (Firm Level)</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
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</tr>
<tr>
<td>1. Use of consulting services (1 = yes)</td>
<td>0.40</td>
<td>0.49</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2. Extent of using consulting services</td>
<td>20.43</td>
<td>71.63</td>
<td>0.38</td>
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</tr>
<tr>
<td>3. Firm size&lt;sup&gt;b&lt;/sup&gt;</td>
<td>5.10</td>
<td>0.95</td>
<td>1.01</td>
<td>0.18</td>
<td>0.16</td>
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</tr>
<tr>
<td>4. Quality of management</td>
<td>3.84</td>
<td>0.79</td>
<td>1.01</td>
<td>-0.02</td>
<td>0.00</td>
<td>-0.04</td>
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<tr>
<td>5. Industry experience</td>
<td>18.16</td>
<td>11.29</td>
<td>1.01</td>
<td>0.06</td>
<td>0.03</td>
<td>0.02</td>
<td>0.06</td>
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</tr>
<tr>
<td>6. Number of Competitors (1)</td>
<td>0.03</td>
<td>0.17</td>
<td>1.80</td>
<td>0.02</td>
<td>-0.01</td>
<td>-0.00</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.00</td>
<td>-0.12</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7. Number of Competitors (2-5)</td>
<td>0.35</td>
<td>0.48</td>
<td>7.47</td>
<td>0.07</td>
<td>0.02</td>
<td>0.07</td>
<td>-0.04</td>
<td>0.00</td>
<td>-0.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Number of Competitors (&gt; 5)</td>
<td>0.59</td>
<td>0.49</td>
<td>7.68</td>
<td>-0.06</td>
<td>-0.01</td>
<td>-0.08</td>
<td>0.04</td>
<td>0.03</td>
<td>-0.21</td>
<td>-0.88</td>
<td></td>
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<tr>
<td><strong>Level 2 Variables (Country Level)</strong>&lt;sup&gt;c&lt;/sup&gt;</td>
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</tr>
<tr>
<td>9. GNI per capita</td>
<td>12,064</td>
<td>13,520</td>
<td>1.92</td>
<td>0.27</td>
<td>0.12</td>
<td>0.08</td>
<td>-0.07</td>
<td>0.15</td>
<td>-0.02</td>
<td>0.05</td>
<td>-0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Uncertainty avoidance</td>
<td>76.95</td>
<td>19.29</td>
<td>1.69</td>
<td>-0.15</td>
<td>-0.02</td>
<td>-0.02</td>
<td>0.02</td>
<td>-0.27</td>
<td>-0.05</td>
<td>-0.09</td>
<td>0.09</td>
<td>-0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Individualism</td>
<td>44.97</td>
<td>15.20</td>
<td>2.89</td>
<td>0.18</td>
<td>0.04</td>
<td>0.24</td>
<td>-0.12</td>
<td>0.16</td>
<td>0.01</td>
<td>0.05</td>
<td>-0.06</td>
<td>0.63</td>
<td>-0.55</td>
<td></td>
</tr>
<tr>
<td>12. Masculinity</td>
<td>46.81</td>
<td>15.20</td>
<td>1.80</td>
<td>0.19</td>
<td>0.06</td>
<td>0.23</td>
<td>-0.06</td>
<td>0.23</td>
<td>0.02</td>
<td>0.06</td>
<td>-0.07</td>
<td>0.47</td>
<td>-0.45</td>
<td>0.64</td>
</tr>
</tbody>
</table>

*Note: All correlations larger than r = .06 are statistically significant (p ≤ .05)*

<sup>a</sup>n = 1,319 firms (for use of consulting services as dependent variable); n = 1,236 (for extent of using consulting services as dependent variable)

<sup>b</sup>Logarithm.

<sup>c</sup>k = 10 countries
Table 2
Study 1: Results from the Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1a</th>
<th>Model 2a</th>
<th>Model 1b</th>
<th>Model 2b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of consulting services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent of using consulting services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control variables – Level 1 (Firm-Level)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1.73*** (.13)</td>
<td>1.73*** (.13)</td>
<td>14.11*** (3.68)</td>
<td>14.16*** (3.71)</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>0.96 (.08)</td>
<td>0.95 (.08)</td>
<td>.53 (3.51)</td>
<td>.45 (3.52)</td>
</tr>
<tr>
<td>Industry Experience</td>
<td>0.99 (.01)</td>
<td>0.99 (.01)</td>
<td>.02 (.16)</td>
<td>.02 (.16)</td>
</tr>
<tr>
<td>Number of Competitors (1)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.84* (1.49)</td>
<td>2.80* (1.34)</td>
<td>8.37 (11.06)</td>
<td>8.23 (11.34)</td>
</tr>
<tr>
<td>Number of Competitors (2-5)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.26* (.88)</td>
<td>2.24* (.82)</td>
<td>11.64 (9.62)</td>
<td>10.90 (10.14)</td>
</tr>
<tr>
<td>Number of Competitors (&gt; 5)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.80 (.69)</td>
<td>1.82 (.66)</td>
<td>10.66 (8.57)</td>
<td>10.44 (8.76)</td>
</tr>
<tr>
<td>Sector dummies included&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Control variables – Level 2 (Country-Level)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNI per capita</td>
<td>1.00** (.00)</td>
<td>1.00*** (.00)</td>
<td>.00*** (.00)</td>
<td>.00*** (.00)</td>
</tr>
<tr>
<td><strong>Independent variables – Level 2 (Country-)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualism</td>
<td>0.98* (.01)</td>
<td></td>
<td>-.15* (.07)</td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>0.98+ (.01)</td>
<td>-.55*** (.16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>1.01 (.01)</td>
<td></td>
<td>.15 (.10)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1,319</td>
<td>1,319</td>
<td>1,236</td>
<td>1,236</td>
</tr>
<tr>
<td>k</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

*Note: Model 1a and 2a show odds ratios with cluster robust standard errors in parentheses; Model 1b and 2b show unstandardized regression coefficients with cluster robust standard errors in parentheses. 
+p ≤ .10; *p ≤ .05 **p ≤ .01 ***p ≤ .001; two-tailed tests.
<sup>a</sup> logarithmized  
<sup>b</sup> Reference category = no competitors  
<sup>c</sup> Reference category = other manufacturing

While the firm-level data and the large number of firms represent an advantage of study 1, the study is limited by the low number of countries, its focus on manufacturing companies, and its cross-sectional design. These limitations raise questions regarding the robustness of the findings and the extent to which the findings are generalizable. To overcome the limitations, we conducted a second study (study 2) in which we use data on the consulting industry in 24 European countries over time (1999-2011) to provide further evidence for the results of study 1.
4.2 Study 2

4.2.1 Data

For study 2, we collected publicly-available data on the turnover of the consulting industry in 24 European countries from 1999-2011 from the annual report of the FEACO—the European Federation of Management Consulting Associations—which published data about the national consulting markets from its national member associations. The data are available for free and can be used for research purposes (see http://www.feaco.org/site-page/feaco-annual-survey-european-mc-market). We used the above time period, because FEACO published industry turnover data only in the reports for these years. Due to data availability, some observations are missing. Our total sample comprises 224 observations (average observations per country: 9.3).

4.2.2 Variables

Dependent variable: We measured the extent of using consulting services on the country-level by using the turnover of the consulting industry relative to the GDP. For instance, in 2007 the GDP of Germany was about 2,309 billion Euros and the turnover of the consulting industry was about 21.7 billion Euros; thus, the turnover of the consulting industry relative to the GDP was about 0.94%. Using a relative measure has the advantage that it is unaffected by cross-country differences in the size of the economy. Data were collected from the FEACO annual reports (FEACO, 2011).

Independent variables. We focus on three of Hofstede’s cultural dimensions: Individualism (minimum: 27; maximum: 89), Uncertainty Avoidance (minimum: 23; maximum: 112) and Masculinity (minimum: 5; maximum: 88). The culture scores were collected from Hofstede’s webpage (www.geert-hofstede.com/national-culture.html).
Control variables. First, to rule out the possibility that a country’s economic structure influences the use of consulting services, we included the services sector ratio of the GDP as a control variable. Second, Armbrüster and Glückler (2007) revealed an association between the use of MC services and economic growth. Thus, we control for the annual GDP growth. Third, because FEACO (2011) data indicate that the public sector is a heavy user of consulting services, we included a variable that captures the ratio of government expenditures as a percentage of the GDP. Fourth, we control for a country’s research & development (R&D) expenditures as percentage of the GDP, because innovative firms might be heavier users of consulting services (Miozzo, Desyllas, Lee, & Miles, 2016). Data on these four variables were collected from the World Bank (worldbank.org) and lagged one year. Fifth, to capture differences in the countries’ economic development, we included a dummy variable for OECD membership (1 = yes). Finally, we included year dummies to control for year fixed-effects.

4.2.3 Statistical Analysis

The data resemble a panel structure with multiple observations for each country. To make a decision regarding the appropriate data analysis technique, we applied the Hausman test to analyze whether a fixed-effects regression or a random-effects regression should be used. The Hausman test showed that the estimated coefficients of the fixed-effects and the random-effects model differ significantly ($\chi^2 (13) = 52.45; p < .001$), which suggests that a fixed-effects regression is more appropriate. However, because Hofstede’s cultural dimensions do not vary over time within our sample, a fixed-effects regression cannot be used to test the hypothesized relationships. To overcome the problem, we used the so-called hybrid approach, which has recently been advocated in the field of strategic management (Certo, Withers, & Semadeni,
The hybrid approach combines the advantages of fixed-effects models and random-effects models by allowing researchers to simultaneously analyze relationships at the between-country level (e.g., whether consulting services are more frequently used in countries with higher annual GDP growth) and at the within-country level (e.g., whether the use of consulting services increases when the GDP growth increases). To analyze relationships at the between-country level and the within-country level, we decomposed the independent and control variables into their between-country and within-country components by centering variables within country. This means that we first calculated the country-specific mean for each variable (e.g., the average annual GDP growth for Germany was 1.25 percent); this variable is included in the regression to analyze relationships at the between-country level. We then subtracted the country mean from each observation (e.g., the GDP growth in Germany in 1999 was 1.97, so that the value of the variable in 1999 is 1.97-1.25 = 0.72); this mean-centered variable was included in the regression to analyze relationships at the within-country level. Following recommendations in the literature (Certo et al., 2016), we used the `xtreg, re vce(robust)` command in Stata 14 to analyze the data.

4.2.4 Findings

Table 3 reports the descriptive statistics, VIFs, and correlations of all the variables of interest. We found high correlations between Hofstede’s cultural dimensions ($r_{\text{max}} = -0.62$). However, VIFs indicated no serious problems with multicollinearity ($\text{VIF}_{\text{max}} = 3.70$).

The results of the regression analysis are reported in Table 4. Model 1 includes only the control variables ($r^2 = 0.38$). Model 2 introduces Hofstede’s cultural dimensions; the change in $r^2$ indicates that the cultural dimensions explain a considerable amount of variance in the use of consulting services between countries ($r^2 = 0.57; \Delta r^2 = 0.19$).
Regarding the relationship between a country’s level of UA and the use of MC services, the results (Table 4, Model 2) showed a negative and significant (\( b = -0.01; \ p = 0.004 \)) coefficient, which supports hypothesis 1.

Regarding the relationship between a country’s level of Individualism and the use of MC services, the results (Table 4, Model 2) showed a negative and significant coefficient (\( b = -0.01; \ p = 0.002 \)), which supports hypothesis 2.

Finally, with regard to the relationship between a country’s level of Masculinity and the use of MC services, the coefficient for Masculinity (Table 4, Model 2) is positive but not significant (\( b = 0.003; \ p = 0.098 \)). Thus, hypothesis 3 is not supported.

To sum up, the findings of our analysis of data from 24 countries collected from 1999 until 2011 showed that the cultural dimensions Uncertainty Avoidance and Individualism, as hypothesized, are negatively related to the extent to which consulting services are used; we found no association between Masculinity and the use of consulting services. Because the design of study 2 overcame several limitations of study 1, the findings further raise the confidence in our results.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>VIF 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>7</th>
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<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>1. Use of Consulting Services</td>
<td>.45</td>
<td>.30</td>
<td>-</td>
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<tr>
<td>2. GDP Growth (w)</td>
<td>.03</td>
<td>2.83</td>
<td>3.37</td>
<td>-.12</td>
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<tr>
<td>3. GDP Growth (b)</td>
<td>2.14</td>
<td>1.08</td>
<td>1.85</td>
<td>-.07</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. Government Expenditures (w)</td>
<td>-.08</td>
<td>2.72</td>
<td>1.62</td>
<td>-.00</td>
<td>-.39</td>
<td>-0.00</td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>5. Government Expenditures (b)</td>
<td>3.64</td>
<td>5.33</td>
<td>1.78</td>
<td>-.14</td>
<td>.03</td>
<td>-.37</td>
<td>-.02</td>
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<tr>
<td>6. Service Sector Ratio (w)</td>
<td>-.00</td>
<td>1.80</td>
<td>3.20</td>
<td>.28</td>
<td>-.49</td>
<td>.07</td>
<td>.41</td>
<td>.07</td>
<td></td>
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<td></td>
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<tr>
<td>7. Service Sector Ratio (b)</td>
<td>67.85</td>
<td>5.95</td>
<td>2.02</td>
<td>.24</td>
<td>.02</td>
<td>-.52</td>
<td>-.03</td>
<td>.48</td>
<td>-.04</td>
<td></td>
<td></td>
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<tr>
<td>8. R&amp;D expenditures (w)</td>
<td>.00</td>
<td>.18</td>
<td>1.86</td>
<td>.30</td>
<td>-.40</td>
<td>.02</td>
<td>.21</td>
<td>-.04</td>
<td>.61</td>
<td>-.01</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>9. R&amp;D expenditures (b)</td>
<td>1.62</td>
<td>.83</td>
<td>2.23</td>
<td>.48</td>
<td>-.05</td>
<td>-.27</td>
<td>.00</td>
<td>.01</td>
<td>.03</td>
<td>.31</td>
<td>.00</td>
<td></td>
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<tr>
<td>10. Dummy OECD</td>
<td>.89</td>
<td>.32</td>
<td>1.92</td>
<td>.23</td>
<td>-.01</td>
<td>-0.27</td>
<td>.00</td>
<td>.01</td>
<td>.31</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11. Uncertainty avoidance</td>
<td>72.99</td>
<td>22.48</td>
<td>3.74</td>
<td>-.48</td>
<td>.06</td>
<td>.34</td>
<td>-.03</td>
<td>.13</td>
<td>-.04</td>
<td>-.15</td>
<td>-.00</td>
<td>-.63</td>
<td>-.21</td>
<td></td>
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<tr>
<td>12. Individualism</td>
<td>59.39</td>
<td>19.63</td>
<td>3.57</td>
<td>.22</td>
<td>-.04</td>
<td>-.33</td>
<td>.02</td>
<td>.28</td>
<td>.01</td>
<td>.44</td>
<td>-.01</td>
<td>.45</td>
<td>.51</td>
<td>-.62</td>
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<tr>
<td>13. Masculinity</td>
<td>46.67</td>
<td>23.58</td>
<td>1.63</td>
<td>-.08</td>
<td>.03</td>
<td>-.09</td>
<td>.00</td>
<td>.22</td>
<td>-.01</td>
<td>.13</td>
<td>.00</td>
<td>-.25</td>
<td>.09</td>
<td>.22</td>
</tr>
</tbody>
</table>

**Note:** All correlations larger than \( r = .13 \) are statistically significant \((p \leq .05)\); two-tailed tests.

\((w) = \text{within-country variable}; (b) = \text{between-country variable}\)

\( ^a \text{n} = 224 \)
Table 4
Study 2: Results from the Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth (w)</td>
<td>-.00 (.01)</td>
<td>-.00 (.01)</td>
</tr>
<tr>
<td>GDP Growth (b)</td>
<td>.02 (.03)</td>
<td>.08 (.04)</td>
</tr>
<tr>
<td>Government Expenditures (w)</td>
<td>-.01 (.01)</td>
<td>-.01 (.01)</td>
</tr>
<tr>
<td>Government Expenditures (b)</td>
<td>.00 (.01)</td>
<td>-.00 (.01)</td>
</tr>
<tr>
<td>Service Sector Ratio (w)</td>
<td>.00 (.02)</td>
<td>.01 (.02)</td>
</tr>
<tr>
<td>Service Sector Ratio (b)</td>
<td>.01 (.01)</td>
<td>.02* (.01)</td>
</tr>
<tr>
<td>R&amp;D expenditures (w)</td>
<td>.37* (.18)</td>
<td>.35 (.19)</td>
</tr>
<tr>
<td>R&amp;D expenditures (b)</td>
<td>.15** (.05)</td>
<td>.08 (.06)</td>
</tr>
<tr>
<td>Dummy OECD</td>
<td>.05 (.14)</td>
<td>.14 (.12)</td>
</tr>
<tr>
<td>Year Dummies Included</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty avoidance (b)</td>
<td>-.01** (.00)</td>
<td></td>
</tr>
<tr>
<td>Individualism (b)</td>
<td>-.01** (.00)</td>
<td></td>
</tr>
<tr>
<td>Masculinity (b)</td>
<td>.00 (.00)</td>
<td></td>
</tr>
</tbody>
</table>

R²: .38 .57

Note: Dependent variable: Use of consulting services (turnover of the MC industry as ratio of the GDP)
Unstandardized coefficients are shown with robust standard errors in parentheses.
(w) = within-country variable; (b) = between-country variable.
*p ≤ .05 **p ≤ .01 *** p ≤ .001; two-tailed tests.
n = 224

5. DISCUSSION

The aim of this paper was to investigate the relationship between culture and the use of professional services, particularly MC services. The findings of two studies using independent samples offer support for the hypothesis that higher levels of UA are negatively related to the use of MC services even after controlling for firm characteristics (study 1) and countries’ economic development (study 2). Also, both study 2 and the investigation into the extent of consultant use in study 1 support the hypothesis that Individualism is negatively related to the use of consulting services, whereas none of the analyses indicates a relationship between Masculinity and the use of consulting services. The findings suggest that the main mechanisms explaining variations in
the use of MC services in different cultural contexts are variations in the tolerance for uncertainty and differences in perceived relational uncertainties (the risk for opportunistic behavior in individualist cultures) as well as perceived psychosocial uncertainties (the risk of being perceived as dependent and thus weak and incompetent in individualist cultures).

5.1 Theoretical Contributions

These findings contribute to the purchasing and supply management literature in three ways: First they contribute to research on the role of culture in organizational buying behavior. The findings of this study build on and extend prior research (Davis et al., 2014; Pagell et al., 2005; Pemer, Sieweke, et al., 2014) by showing that culture, particularly the dimensions of UA and Individualism, plays a crucial role in the very first step of organizations’ purchasing process: the decision whether to use external consulting services. The finding underlines the crucial role of culture in the organizational buying process: As previous studies have shown (Davis et al., 2014; Pagell et al., 2005; Pemer, Sieweke, et al., 2014), organizations that are located in a specific cultural context differ in the way they organize the buying process. The current study extends this line of research by indicating that organizations located in a specific cultural context might also differ in whether and to what extent they use professional services. Therefore, almost all steps of the buying process—starting from the need definition focused in this paper up to the evaluation—are affected by culture, which makes culture an important contextual factor that helps better understand cross-country differences in organizations’ purchasing and supply chain behavior.

Second, and related to the first contribution, the study contributes to research by establishing a conceptual link between cultural dimensions and the use of management consultants by means of their effects on consulting buyers’ perceived uncertainties and tolerance for uncertainty related to service purchasing. While the uncertainty avoidance dimension was
argued to influence consulting use mainly through affecting the tolerance for performance as well as relational and psychosocial uncertainty, Individualism and Masculinity were argued to affect the perceived levels of relational and psychosocial uncertainties. Unfortunately, the empirical set-up of the current study does not allow us to verify these conceptual relationships. However, the consistent relationship between UA and consultant use across the two studies may be interpreted as an indication that variations in tolerance for uncertainty (UA dimension) are a stronger mechanism than variations in perceived uncertainty deriving from e.g. varying propensities to act opportunistically in interorganizational relationships (Individualism and Masculinity dimensions). The latter relationships only gained mixed or no empirical support.

Third, the study provides new insights into research on the purchasing of (professional) services (see, e.g., Ellram & Tate, 2015; Ellram et al., 2007; Fu et al., 2013). Our findings provide tentative evidence that uncertainties involved in dealing with MC services, which result from factors such as service characteristics, act as a barrier to their use by companies in cultures with low tolerance for uncertainty (high levels of UA). Partial evidence is also provided that individualistic cultures increase perceived relational and psychosocial uncertainties and thus are associated with lower uses of consulting services. Perceived relational uncertainties are increased by higher risks of opportunistic behavior in business relationships in individualistic cultures and perceived psychosocial risks by strong norms of the independent and self-reliant manager, which are threatened by the use of external consultants in such cultures.

These findings are notable, because researchers have previously suggested—despite the lack of systematic evidence—that organizations often buy professional services, particularly MC services, to reduce uncertainties related to their business activities (Clark & Salaman, 1996; Furusten, 2009). For instance, consultants have been argued to reduce clients’ uncertainty both by
providing access to new knowledge and advice that might benefit organizational performance and innovativeness (Abrahamson & Eisenman, 2001; Amara, D'Este, Landry, & Doloreux, 2016; Furusten, 2009), but also through providing legitimacy to managers and organizations (Canato & Giangreco, 2011; Clark & Salaman, 1996). From this perspective, conceptual arguments could be made that UA, through a stronger belief in experts and their knowledge in high UA contexts (Hofstede, 2001) would be associated with higher use of consultants. Similarly, the argument could be made that Individualism, through its focus on competition and achievement (Cannon et al., 2010; Hofstede, 2001), would be associated with more consultant use to reduce managers’ uncertainty regarding state of the art knowledge and ideas. Our empirical findings, however do not support such relationships. Thus, it seems that uncertainty is a double-edged sword when it comes to the use of consulting services: On the one hand, uncertainty, particularly in the business environment, benefits the use of consulting services, because consultants may reduce client uncertainty. On the other hand, uncertainty is a burden, because consulting services themselves are associated with significant uncertainties for clients. Our study indicates that the uncertainties related to the use of consulting services currently seem to outweigh the reduction of uncertainties consultants can offer their clients. An interesting question that results from our findings is if the increasing involvement of the supply management function in the purchasing of (professional) services (e.g., Ellram & Tate, 2015; Pemer, Werr, & Bianchi, 2014; Tate, Ellram, Bals, Hartmann, & van der Valk, 2010) changes the relationship? That is, we expect that professional buyers, due to their expertise and experience, may perceive less uncertainties and risks in the purchasing of professional services than non-professional buyers (e.g., managers from other departments). Currently, research has provided little insights into the question, although we know that purchasing professionals perceive the purchasing of services as being more complex than the
purchasing of goods (Ellram et al., 2007). Therefore, future research is needed to explore whether the formalization of the purchasing of professional services could affect the relationship investigated in this study.

5.2 Managerial and policy implications

Our study has several implications for practice. First, for multinational firms, our results indicate that the local cultural context influences subsidiaries’ willingness to engage with MC service providers. Taking this into account might both help understand differences in foreign subsidiaries’ willingness to use external MC services and intervene in order to increase – or decrease – this. For example, corporate managers might consider different measures to reduce local managers’ perceived uncertainties in high UA cultures to facilitate their use of MC services. Examples of such measures might be the establishment of policies for the use of MC services or the establishment of preferred supplier agreements that both legitimate and support the use of MC services.

Second, for multinational or internationalizing MC firms, the current study highlights important cultural differences in firms’ sourcing behavior that may inform their internationalization strategies and sales approaches. Our findings indicate that establishing a sustainable consulting business in high UA cultures may be more challenging than doing so in low UA cultures. Clients’ perceived uncertainties are key factors to address when doing business in these more challenging environments. This implies a need for different sales approaches in different cultural contexts in order to respond to clients’ differing tolerance for uncertainty. In high UA cultures, suppliers of MC services may be well advised to pay special attention to reducing the clients’ uncertainties through e.g. building experience based trust and networked reputation (Armbrüster, 2006).
Third, for policy makers in nations and regions wishing to expand the MC services sector, understanding the influence of culture is valuable as it helps identify drivers and barriers to the use of these services. This enables policy makers in government agencies and professional associations to design strategies for reducing the perceived uncertainty related to the use of MC services. This can, for example, be done by developing certifications aiming at reducing the perceived performance and relational risks often associated with MC services. The findings of this study indicate that the potential effects of such interventions are larger in cultures characterized by high levels of UA than in cultures with lower levels of UA. The results from the current study thus call for cultural sensitivity, both in practice and research, highlighting the need to adapt the policies and strategies to the cultural context.

5.3 Strengths, limitations and directions for future research

This paper has several strengths. First, in contrast to many cross-country studies in purchasing and supply chain management (see Qu & Yang, 2015), this paper investigates the relationship between culture and the use of professional services based on a relatively large cross-country sample \((n \geq 10)\). This sample size increases the power to detect statistical effects. Second, we test the hypotheses using two independent data sets. Also, while each data set has certain limitations (e.g., the cross-sectional data used in study 1), the strengths of each data set (e.g., the longitudinal data used in study 2) compensate for the respective limitations. Together, the two studies provide robust evidence for the found relationships.

Despite the strengths, the paper also has some limitations. First, the methodological design of the current study does not allow us to directly assess clients’ perceived uncertainty. The link between the three culture dimensions, the three uncertainties salient in the purchasing of consulting
services and the use of MC services established in the current paper is a conceptual one. Therefore, we recommend further research that directly measures clients’ perceived uncertainty in the three identified dimensions (performance uncertainty, relationship uncertainty, psychosocial uncertainty) and relates this to the use of MC services in different cultural contexts. For instance, researchers may conduct a cross-country survey of managers who are responsible for the purchasing of consulting services. Based on our conceptual framework, we would expect that the perceived uncertainty (performance uncertainty, relationship uncertainty, psychosocial uncertainty) of the surveyed managers mediate the relationship between national culture and the decision whether to use consulting services.

Second, the countries included in our analysis limit the generalizability of our findings. In study 1, we had to restrict our analysis to firms from ten countries, seven of which are from Eastern Europe. Although study 2, which includes data from 24 Eastern and Western European countries, supports the findings from study 1, we have no evidence that the findings are generalizable to other regions including North America and Asia. Therefore, we recommend future research that uses data from countries all over the world to test our hypotheses.

Third, our empirical material focuses on MC services. Consulting represents neo-professional services, which differ from classic professional services such as law and accounting in their lack of a professionalized workforce (von Nordenflycht, 2010). It could be argued that the lack of professional standards and institutions for neo-professional services increases perceived performance and relational uncertainties for clients (Glückler & Armbrüster, 2003). Further research is needed that focuses on other professional services, especially classical professions including law and accounting, to confirm the findings.
Finally, our study does not distinguish between different types and uses of consulting services or variations in purchasing practices. As has been pointed out in previous research (e.g., Bolander, Werr, & van der Valk, 2017; van der Valk & Wynstra, 2014; Wynstra, Axelsson, & Van der Valk, 2006) professional services may play rather different roles for the users commissioning them, being more or less central to the organization’s operations and involving different purchasing practices. The purchasing of different kinds of services (e.g., IT consulting, strategy consulting) in this regard may involve different uncertainties and be more or less sensitive to perceived uncertainties. Further research on the relationship between culture and the use of management consulting services should thus distinguish between different kinds of management consulting services as well as control for different kinds of purchasing approaches.
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