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ORIGINAL EMPIRICAL RESEARCH

Explaining the differing effects of corporate reputation across nations: a multilevel analysis

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Abstract Although multinational corporations increasingly use their reputation as an important differentiation criterion, little is known about the varying effects of corporate reputation in an international context. In this study, the effects of corporate reputation across nations, particularly the moderating role of important institutional country differences, are analyzed. To provide insight into these issues, the authors refer to hierarchical data on 13,665 consumer evaluations of a multinational corporation in 40 countries. The results indicate a strong link between corporate reputation and consumers' loyalty, but this relationship is reinforced or diminished by cultural, economic, or knowledge differences between countries. These moderators represent important factors when managing corporate reputations across nations.

Keywords Corporate reputation · Cross-cultural research · Institutional theory · Multilevel structural equation modeling

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Introduction

Perceived corporate reputation (CR), consumers' overall evaluation of a firm's responsibility, strength, or quality of offers (Berens et al. 2005; Walsh and Beatty 2007), is known to affect firms' performance and consumers' behavior. Multinational corporations (MNCs) increasingly seek to manage their CR across nations because a strong reputation is of paramount importance (e.g., when attracting local customers, establishing businesses with partners, or recruiting employees). For example, after struggling with a crisis of confidence, Procter & Gamble relied on its renewed CR to attract stakeholders and considered its reputation effects across nations by evaluating consumers' loyalty (Lafley 2009). Because an MNC's perceived CR is likely to vary between countries, we study important boundary conditions of the effects of CR on consumers' intentional loyalty toward an MNC. We examine loyalty because it is a well-researched outcome variable that facilitates the evaluation of our observations and remains worthy of further research.

Scholars often study CR by balancing the benefits of a strong reputation for firm performance (e.g., Roberts and Dowling 2002; Tischer and Hildebrandt 2014) and its effects on customer behavior (e.g., trust, satisfaction, loyalty; Caruana and Ewing 2010; Walsh and Beatty 2007). However, scholars have rarely analyzed CR internationally (see Table 1). In addition to the advantages of a strong CR for MNCs' important decisions (e.g., direct investments; Musteen et al. 2013), we consider effects on consumer behavior and their cross-national variations. Bartikowski et al. (2011) were among the first scholars to provide evidence of varying effects of CR on consumers' loyalty by comparing three countries and linking the varying effects to differences in uncertainty avoidance. Jin et al. (2008),

Table 1 Literature review on CR effects

Effects on	Studies with national focus	Studies with international focus
Corporation behavior		
Effects on performance/value	- Hall (1993) - Tischer and Hildebrandt (2014) - Waddock and Graves (1997)	- Roberts and Dowling (2002) - Smith et al. (2010)
Further effects/decisions	- Dollinger et al. (1997) - Herremans et al. (1993) - Rindova et al. (2005) - Petkova et al. (2014)	- Kotha et al. (2001) - Musteen et al. (2013) - Styles et al. (2008)
Consumer behavior		
Direct effects on loyalty	- Bartikowski and Walsh (2011) - Caruana and Ewing (2010) - Sarstedt et al. (2013) - Swoboda et al. (2013) - Walsh et al. (2009b) - Walsh and Beatty (2007)	Culture as moderator - Bartikowski et al. (2011) - Walsh et al. (2009a) Institutional moderators - This study.
Further (indirect) effects/decisions	- Andreassen (1998) - Berens et al. (2005) - Brodie et al. (2009) - Brown and Dacin (1997) - Johnson and Grayson (2005) - Lai et al. (2009) - Veloutsou and Moutinho (2009)	Culture as moderator - Falkenreck and Wagner (2010) - Jin et al. (2008) - Walsh and Bartikowski (2013)

among others, have shown that CR influences consumers' loyalty indirectly; nevertheless, these authors have linked the varying effects to cultural differences between countries.

Thus, research on CR across nations is rare and suffers from some limitations. Focusing solely on culture as a moderator when comparing few countries and failing to control for further differences is a misguided approach because countries differ in multiple dimensions that may be more important than culture (e.g., Shenkar 2001). For example, uncertainty avoidance affects CR across nations, but it is difficult to provide evidence of this particular effect by comparing only two or three countries. Countries may differ in their demographic or economic situations, which may influence consumer decisions as well. Thus, a broader, theoretically based conceptualization of moderators is compelling. We aim to move the literature forward theoretically by providing a more nuanced account of institutional moderators to analyze whether an MNC's reputation predicts consumers' loyalty across nations and particularly whether and how institutional country differences moderate the relationship between CR and consumers' loyalty toward an MNC. Important decisions regarding the market selection or operation modes of MNCs are related to national business, innovation, and governance systems, which are likely to influence MNCs' reputation effects as well. These institutional systems theorized in the international business research form the overarching framework for this study (Berry et al. 2010) because the institutional theory perspective offers a strong theoretical foundation for the study of MNCs (Kostova et al. 2009).

We offer important contributions to the extant literature by extending knowledge on MNC reputation effects across nations, which is important because international reputation management is advantageous for MNCs. In particular, we contextualize the reputation–loyalty relationship by investigating a set of institutional dimensions that are known to affect important MNC decisions (referring to calls; see Berry et al. 2010; Griffith 2010). Analyzing the role of institutions contributes to marketing-centered reputation research, in which institutional country differences are not yet systematically observed. Working in heterogeneous contexts, it should be clear to MNCs whether country differences reinforce or diminish their CR effects to maximize the returns on investments in reputation management. In particular, it should be clear which institutions affect the CR effects most, when MNCs determine CR budgets in countries served or when deciding to rely on MNCs' strong CR or to make an acquisition in a new country (like the H.J. Heinz Company; Johnson 2011). Additionally, we contribute to the literature by applying multilevel structural equation modelling (SEM), an approach that is seldom used in the literature (where multi-group and hierarchical regressions dominate) and that disentangles the explained variance into individual- and country-level effects of latent variables by testing differences in intercepts and slopes simultaneously (referring to calls, e.g., by Walsh et al. 2014).

The remainder of the study is structured as follows. Drawing from theory and literature, we derive hypotheses and test them based on 13,665 consumer evaluations of an MNC in 40 countries. After presenting the results, we discuss the implications and avenues for further research.

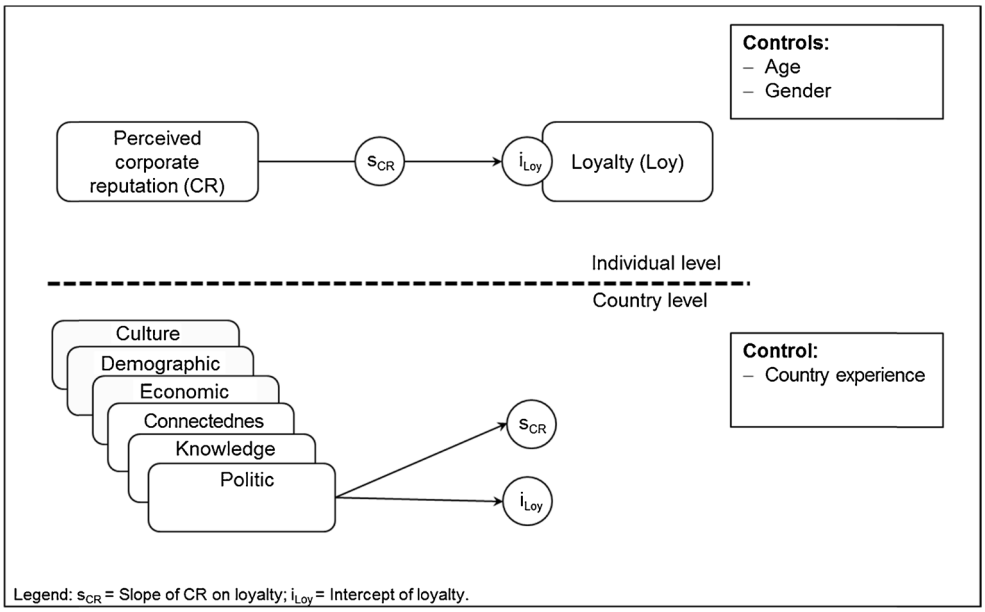

Fig. 1 Conceptual framework

Theoretical foundation and conceptual framework

To address our research aims, we build on the theoretical considerations of two research streams: studies on consumers' CR perceptions, especially those that theoretically explain the reputation link to consumer behavior, and studies on differences between international markets.

To explain the effects of CR on loyalty, the conceptual model in Fig. 1 draws on signaling and schema theory because these theories constitute the existing arguments about CR effects. Scholars understand CR as a company signal and suggest that customers perceive CR as an information cue to form attitudes about a firm (e.g., Spence 1973; Walsh et al. 2009b). The importance of signals arises from information asymmetry, the premise that transacting parties possess different amounts of information (e.g., Kirmani and Rao 2000). Particularly under conditions of high uncertainty, customers search for more information before making a decision to minimize or avoid losses (Erdem et al. 2002). Thus, MNCs use signals to deliver information to consumers. These signals affect consumer attitudes, which, in turn, cause a consonant decision (e.g., to be loyal; Bartikowski et al. 2011). However, consumers, especially loyal consumers, possess information about an MNC that is learned and stored in memory as a network of dependent associations (e.g., Barsalou 1983). Scholars therefore also understand CR as a corporate node in customers' memory that is linked to various associations and other nodes, such as those of competitors. The strength and number of links between nodes can be explained by the degree of activation (e.g., information retrieval, Anderson 1983; Malle and Horowitz 1995). The behavioral importance of these associations arises as consumers' access information in memory about an MNC in a decision situation, not necessarily through external activation. Following this reasoning, scholars highlight the effects of CR on consumers' loyalty (e.g., Swoboda et al. 2013). Thus, two mechanisms theoretically explain the CR–loyalty relationship: perceived signals of and attitudes toward an MNC and associations learned in different contexts and stored in memory.

Institutional theory provides a broad conceptualization of possible moderators for reputation research across nations whereby country differences are conceptualized in sociology, international business, or innovation research (e.g., Dow and Karunaratna 2006; Shenkar 2001). Institutions represent "symbolic frameworks that provide guidelines for behavior, and lend stability, regularity, and meaning to social life" (Orr and Scott 2008, p. 565). We ground our choice of dimensions in institutional theories of cross-national differences theorized in the field of international business (e.g., Pajunen 2008).

According to Berry et al. (2010), three theoretical perspectives on cross-national institutions are particularly relevant to MNCs.[1] The first perspective addresses country differences in terms of the characteristics of their *business systems* (Whitley 1992). Specifically, countries' economic, financial, and administrative practices are different and originate in cultural and demographic institutions, for example. Second, *national innovation systems* represent configurations of institutions that support the formation of technology and innovation (e.g., Nelson and Rosenberg 1993; Whitley 1992). Differences between countries appear in their ability to generate

[1] Although this theorizing emphasizes a smaller set of institutional dimensions than the theory of business systems, the underlying logic is also one of institutional variations that produce larger differences between countries (Berry et al. 2010, p. 1463).

knowledge and in the extent to which they can apply and enhance this knowledge through connection to other countries. Finally, *governance*, the "set of incentives, safeguards, and dispute-resolution processes used to order the activities of various corporate stakeholders" (Kester 1996, p. 109), is addressed. Governance originates in administrative and political institutions that make certain stakeholders powerful and force MNCs to establish relationships with them in a given country.

Berry et al. (2010) provide a conceptualization of multiple institutional dimensions and indicators in each dimension. Six dimensions of these country differences are subsequently analyzed: cultural, demographic, economic (business systems), global connectedness, knowledge (innovation systems), and political (governance systems).[2] Interactions within society and between individual consumers are influenced by these dimensions because both are part of a country's institutional framework (e.g., Steenkamp and Geyskens 2006). Thus, we argue that institutions are important moderators for the relationship between CR and loyalty across nations because they affect the way in which CR signals are perceived and gain relevance for loyal behavior toward an MNC and the way in which consumers' reputation associations stored in memory are learned and used in decision situations.

Next, we develop our hypotheses. The CR–loyalty link is addressed first, followed by institutional moderators using theoretical arguments and empirical evidence.

Corporate reputation effects

As highlighted, both signaling and schema theory suggest a positive relationship between CR and consumers' loyalty across nations. A strong reputation is an important signal that encourages the benefits of an MNC, such as a customer-oriented, reliable, qualitatively strong, and responsible corporation (Walsh and Beatty 2007). This signal influences consumers' attitudes and loyal behavior toward an MNC (i.e., the intention and readiness to buy products/offers and the establishment of a good relationship with a firm). This definition describes intentional loyalty (Oliver 1999), which is a core predictor of consumer spending (Morgeson et al. 2011). A strong CR is also stored in consumers' memory as an association that is learned over time and retrieved in decision situations and that affects customer loyalty (Swoboda et al. 2013). Empirically, many studies support the relationship between CR and loyalty in a national context (e.g., Caruana and Ewing 2010; Sarstedt et al. 2013; Walsh et al. 2009b) and, less frequently, in an international context (e.g., Bartikowski et al. 2011; Walsh et al. 2009a). We propose the following hypothesis:

H1: The CR of an MNC has a positive effect on consumer loyalty across nations.

Country differences as moderators

In this section, we examine whether and how institutional indicators that represent country differences of the six theoretical dimensions moderate the relationship between CR and consumers' loyalty toward an MNC. Reasonable rationales for possible moderating effects of at least three indicators in each institutional dimension on the theorized CR–loyalty mechanisms are provided.

Cultural dimension Researchers have intensively discussed differences in cultural values and norms across nations. We rely on the work of Schwartz (1994, 1999) because of its strong theoretical and methodological foundation (e.g., Baack and Singh 2007; Steenkamp 2001) rather than on the more frequently used but criticized conceptualizations (e.g., of Hofstede; Ailon 2008). Schwartz (1994, p. 88) defines values as "desirable goals, varying in importance, that serve as guiding principles in people's lives." The author combines cultural value types into three bipolar dimensions that we subsequently analyze[3]: embeddedness vs. autonomy (intellectual/affective), hierarchy vs. egalitarianism, and mastery vs. harmony (e.g., Rubera et al. 2011; Shao et al. 2010).

Embeddedness vs. autonomy represents society's relationship with the group and the individual (Schwartz 1999). Individuals who are embedded in the collective rely on traditions and the status quo, whereas having independent ideas and the right to pursue one's own intellectual beliefs and directions (intellectual) or one's individual feelings and emotions (affective) are important in societies that score high on autonomy (Schwartz 1994). Behavior in highly autonomous societies is based on individual preferences, which are more important than the preferences of the collective (e.g., Schwartz 1999; Steenkamp 2001). Individuals in such societies primarily make decisions based on their individual understanding of

[2] Because distances from a focal country are not the focus of this study, geographic distance and administrative distance were not observed (Berry et al. 2010, p. 1465). The financial dimension (e.g., stock market capitalization) was not observed because theoretical arguments for consumer behavior are not obvious.

[3] Schwartz (1994, 1999) distinguishes seven value types: embeddedness, intellectual autonomy, affective autonomy, hierarchy, egalitarianism, mastery, and harmony. Societies that score high on one value type in a dimension (e.g., high mastery) are known to have lower value scores on the opposite value type in the same dimension (e.g., low harmony) and vice versa.

situations (Schwartz 1999) and are known to be less loyal and to seek variety (Doney et al. 1998; Erdem et al. 2006). CR signals might therefore have a weaker effect on loyal behavior. In contrast, the collective guides consumer behavior in highly embedded cultures (Schwartz 1999) and is said to strengthen the effects of signals such as the reputation of MNCs (Erdem et al. 2006). Thus, we assume that the effect of reputation on consumers' loyalty will be strengthened in highly embedded societies and—following Schwartz's bipolar logic—in low (intellectual and affective) autonomy societies.

Hierarchy vs. egalitarianism refers to the organization of responsible behavior and cooperative activity in a society. Hierarchical societies accept authority and an unequal distribution of social power, whereas egalitarian societies focus on social justice and equality among people (Schwartz 1994). Scholars have shown that brand or reputation signals are important in highly hierarchical societies (e.g., Falkenreck and Wagner 2010). Individuals in such societies are more sensitive to information that refers to and is received from authorities or hierarchies, and MNCs are seen as trustworthy authorities if their reputation predicts responsibility and quality, for example (Walsh and Beatty 2007). Therefore, reputation signals gain relevance for loyal behavior toward an MNC. In contrast, trustworthy authorities and reputation signals should be less relevant in decision-making situations in highly egalitarian societies.

Mastery vs. harmony characterizes the relationship between humans and their natural and social world. Mastery represents societies' preference to change and exploit the natural and social environment to force personal or group interests, whereas harmony represents societies' acceptance of the world as it is and their desire to fit into and protect the environment (Schwartz 1999). In high mastery societies, reputation signals of a responsible, reliable, and employee-oriented MNC might be less important because the cultural values support individuals' assertive action and risk taking (e.g., Schwartz 1999). Consumers in such societies may tend to use reputation signals less to guide their loyal behavior because these signals are contrary to their nature of exploitation and risk taking. In contrast, consumers in highly harmonious societies may perceive and use reputation signals in decision situations because they provide reference for MNCs' behavior (e.g., for their responsibility). We therefore believe that according to signaling theory, it is more likely that the CR–loyalty link will be reinforced in highly harmonious societies.

Summarizing the arguments leads us to develop the following hypothesis:

H2: National cultural differences moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) high embeddedness (low intellectual/affective autonomy), (b) high hierarchy (low egalitarianism), and (c) high harmony (low mastery).

Demographic dimension Demography is an important institutional factor because fundamental characteristics such as the size or age structure of the population have implications for the country's attractiveness and the expansion decisions of MNCs (Whitley 1992). Drawing upon Berry et al. (2010), we focus on differences in the age structure of the population, in life expectancy rates, and in household size.

Scholars have shown that older (vs. younger) consumers are more loyal and have a smaller set of relevant brands in memory (e.g., Lambert-Pandraud and Laurent 2010; Srinivasan and Ratchford 1991). Across nations, we speculate that consumers in older (vs. younger) societies may also rely on long-term learned associations that are anchored in memory and are important in decision situations. Because older consumers have a lower affiliation for new information (Burke and Light 1981) and tend to rely on known MNC associations in their loyal behavior, it is reasonable to assume the reinforcing effects of MNCs' strong reputations. In contrast, individuals in younger societies are open to new signals but rely less on a particular MNC's reputation in a decision situation. With a similar logic, in societies with high (vs. low) life expectancy, consumer behavior is influenced by their longevity (i.e., longer purchase and thus possibly longer information retrieval experiences, Gourinchas and Parker 2002, as well as smaller choice-sets in memory) and by learned associations with an MNC. Finally, societies with larger (vs. smaller) average household sizes are characterized by many household members, which implies higher household consumption and potentially smaller budgets (De Mooij 2011, p. 93; Kalyanam and Putler 1997). Consumers in those societies are likely to focus more on price information and less on broader reputation information, such as the socially responsible behavior of MNCs or their product range quality. We thus propose the following hypothesis:

H3: National demographic differences moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) a high share of an older population, (b) high life expectancy, and (c) smaller households.

Economic dimension Drawing upon business literature on economic differences, we focus on three indicators: income level, average consumption rate, and intensity of trade with the rest of the world. The indicators are correlated with

consumer purchasing power and preferences and the openness of the economy to external influences and competition (e.g., Berry et al. 2010).

The income levels and consumption expenditures of a society are related to the affordability of reputable brands. In countries with less disposable income or low consumption expenditures, most individuals primarily satisfy their basic needs (Hsieh et al. 2004). Therefore, most consumers in those societies may rely less on CR signals, such as the quality of offers or the responsible behavior of an MNC, in their decision-making process and may rely primarily on price information. In contrast, in countries with higher income and consumption rates, consumers can rely on those reputation signals in decision situations because they do not have to primarily satisfy their basic needs (e.g., Kalyanam and Putler 1997). In countries with high (vs. low) international trade (i.e., export and import rates), there is more international competition; therefore, consumers can choose between the offers of more MNCs. Because loyalty formation is based on a comparative evaluation (Olsen 2002), the effect of CR on loyalty is reduced. From the perspective of schema theory, it can be argued that learning and retrieving CR associations becomes more difficult in such contexts (e.g., Cohen 1982; Pieters and Bijmolt 1997). In summary, we propose the following:

H4: National economic differences moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) high income, (b) high consumption expenditures, and (c) low international trade.

Global connectedness dimension Global connectedness reflects the ability of MNCs and individuals to interact with their surroundings, obtain information, and diffuse their own activities (Oxley and Yeung 2001). The number of Internet users and mobile phones as well as international tourism in a society reflect this dimension (Berry et al. 2010; Sheth 2011).

A reasonable rationale for the possible moderating role of globally connected (vs. less connected) societies in the CR–loyalty link may be found in the easy access of individuals in those societies to information about an MNC. Societies that are globally more connected facilitate citizens' active use of the Internet and mobile phones and thus access to relevant information. Because it has been shown that Internet and mobile phone users tend to increase active information searches (e.g., Ratchford et al. 2003), we assume that for more globally connected societies, there is a stronger relevance of CR signals in decision situations and therefore reinforced CR effects. Additionally, interactions between consumers reinforce the retrieval of CR associations and strengthen the CR–loyalty link (Cohen 1982). A similar rationale could be drawn for societies with higher (vs. lower) involvement in international tourism activities. A stronger relevance of CR signals in individuals' decision making is likely because of the more frequent perception of MNCs' signals in home countries and when traveling abroad (e.g., Bengtsson et al. 2010). We therefore propose the following:

H5: Differences in national global connectedness moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) high Internet usage, (b) a high number of mobile phones, and (c) high tourism activities.

Knowledge dimension Countries differ in terms of their capacity to create knowledge and to innovate, with implications for their role in the global economy (e.g., Nelson and Rosenberg 1993). Following studies on national innovation systems, we analyze knowledge differences by focusing on the literacy rate, tertiary school enrollment, and number of scientific articles (Berry et al. 2010; Morgeson et al. 2011).

Scholars argue that consumers' brand perceptions and associations are dependent on their educational background (across nations, e.g., Morgeson et al. 2011and within a country, e.g., Viswanathan et al. 2005). Individuals in societies with high (vs. low) literacy rates or in societies with a high (vs. low) tertiary school enrollment know how to inform themselves and to conduct effective information searches (e.g., Morgeson et al. 2011), and they are more capable of finding disposable information than are illiterate individuals. We assume therefore that in such societies consumers are more frequently confronted with relevant signals and with (easier) retrieval of relevant CR associations. In contrast, for societies with a lower literacy rate reputation signals may be relevant to form attitudes toward an MNC as well, but an active search for relevant information in decision situations requires considerable cognitive energy (Viswanathan et al. 2005). Consequently, weaker learning and retrieval processes of CR occur, which we assume will diminish the CR–loyalty relationship. Finally, a high number of scientific articles in a society may force associations of individuals with reputable MNCs due to reinforced interactions with them through spillover effects, such as cooperation of scientists with MNCs (e.g., Jaffe et al. 1992). In summary, we propose the following:

H6: National knowledge differences moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) a high literacy rate, (b) high tertiary school enrollment, and (c) a high number of scientific articles.

Political dimension Political institutions refer to policy-making uncertainty, the political system (i.e., democratic or

autocratic regimes), and corruption (e.g., Berry et al. 2010). These indicators represent how a society and its consumers are influenced and constrained by the political surroundings.

Scholars have shown that a weak rule of law in a country enhances consumers' requirement for security cues (Steenkamp and Geyskens 2006). In societies with stable and democratic political environments, consumers have confidence in their government and rely on its protection (Dean 2007). On the contrary, weak political structures, such as uncertain and autocratic environments, in countries are often accompanied by non-functional consumer redress mechanisms (i.e., insitutional voids; e.g., Khanna and Palepu 1997). Under such conditions, it is argued that the absence of formal mechanisms to ensure the correct behavior of MNCs makes reputation signals an important instrument to generate trust in and loyal behavior toward a company (Puffer et al. 2010). Especially in countries with high (vs. low) corruption, a strong reputation is likely to serve the function of confidence building because CR signals are used to judge MNCs' transparency to create confidence in and attitudes toward MNCs (e.g., Park and Blenkinsopp 2011). Thus, strong reputation signals become more relevant in a corrupt environment because consumers rely on these signals for their loyal behavior. This rationale leads us to propose the following hypothesis:

H7: National political differences moderate the relationship between CR and loyalty; that is, the relationship is stronger in countries with (a) high political uncertainty, (b) low democratic character, and (c) high corruption.

Empirical study

Sample

To develop the sample, we cooperated with an MNC in the environmentally sensitive chemical and pharmaceutical industry, in which CR is particularly important. The MNC has foreign subsidiaries in more than 150 countries that offer (non-)prescription drugs, crop products, or services endorsing the corporate brand and a standardized, centrally coordinated CR whose effects are controlled in approximately 30 countries by surveying up to 1,000 consumers per country each year. The selection of the countries is based on their importance to the MNC and on (weak) knowledge about the perceived CR in a country. Of the 44 countries controlled in the years 2011 and 2012 (31 in 2011 and an additional 13 in 2012), four were excluded from this study because of missing data on institutional moderators (Costa Rica, UAE) or small samples ($N < 154$, Egypt, Jordan). We ensured that no special events or activities were conducted by the MNC in the countries. The remaining 40 countries constitute an appropriate number for multilevel modeling (MLM; Paterson and Goldstein 1991).

After several pre-tests, panel data were collected by a commercial marketing research agency. The agency offers panels in 200 countries and territories worldwide. Comparable to the panel surveys documented in the literature, the agency's average participation rate is 55 %, and respondents are compensated with cash rewards. Two screening criteria were used to select the respondents in each country. First, a quota sampling according to gender and age distribution was used based on the information provided by national registration offices. The sampling was restricted to the urban population between 18 and 65 (55) years in most developed (emerging) countries. Second, respondents had to meet one of the following criteria: above-average income or a high level of education or profession. Thus, the sample included brand-affine respondents and is not representative of all countries, as an ex post comparison of the quotas due to age and sex with official data shows. At the beginning of the survey, the respondents indicated their unprompted and prompted awareness of up to six MNCs in the industry followed by a question about their knowledge of the MNCs (based on a 5-point Likert scale from 1=I don't know the company to 5=I know the company very well; Keller 1993). Respondents who knew the MNC under investigation at least in general (=2) participated in the survey.

This procedure led to 30,996 respondents. Because the number of respondents varied from 280 to 1,023 in each country, we randomly reduced the samples in the largest countries to ensure a balanced design of the data across nations (e.g., Lohr 2010; using the average number of 355 respondents in the five smallest countries as an orientation). This procedure led to 14,061 respondents in 40 countries. A comparison of the initial sample and the reduced sample showed no chi-squared differences in the percentage distribution concerning age, gender, education, and income. After the outliers were detected according to the Mahalanobis distance, 13,665 respondents remained (see Table 2). Prior to the structural analyses, we tested for univariate and multivariate normality using Mardia's coefficient (Vlachopoulos 2008). All values indicated that the data were normally distributed.

Measurements

Regarding the measurements at the individual level, we considered general aspects (such as the hierarchy of effects in all panels). We relied on scales from previous studies (using five-point Likert-type scales from 1=strongly disagree to 5=strongly agree), and we tested the measurements for reliability and validity. Perceived CR was measured according to Walsh et al. (2009a; Walsh and Beatty 2007), with 15 items capturing five dimensions (see Table 3). The three items of loyalty measurement were adapted from Oliver (1999, 2015; Walsh and

Table 2 Sample distribution (in percent)

	Gender		Age groups (years)				
Country	Male	Female	18 to 25	26 to 35	36 to 45	46 to 55	56 to 65
Argentina (*N*=346)	48.0	52.0	23.4	28.9	24.9	22.8	0.0
Australia (*N*=352)	50.0	50.0	11.9	18.2	19.6	23.9	26.4
Belgium (*N*=349)	50.4	49.6	14.6	19.8	22.3	24.4	18.9
Brazil (*N*=345)	51.0	49.0	37.4	24.9	24.3	13.3	0.0
Canada (*N*=345)	50.4	49.6	18.6	20.9	20.0	17.7	22.9
China (*N*=354)	47.5	52.5	22.3	39.5	22.3	15.8	0.0
Colombia (*N*=341)	46.0	54.0	22.3	25.8	31.7	20.2	0.0
Denmark (*N*=338)	54.7	45.3	11.8	16.3	24.3	21.3	26.3
Estonia (*N*=300)	52.7	47.3	15.3	24.7	23.3	21.3	15.3
Finland (*N*=347)	48.7	51.3	13.5	15.3	22.8	23.9	24.5
France (*N*=332)	53.9	46.1	15.4	18.4	23.5	18.1	24.7
Germany (*N*=340)	48.8	51.2	17.1	15.9	26.8	22.9	17.4
Guatemala (*N*=340)	69.7	30.3	41.5	24.1	18.5	15.9	0.0
India (*N*=340)	47.6	52.4	22.6	26.8	23.2	27.4	0.0
Indonesia (*N*=352)	50.0	50.0	26.7	23.6	23.0	26.7	0.0
Italy (*N*=334)	50.9	49.1	14.7	21.3	22.2	22.2	19.8
Japan (*N*=354)	52.0	48.0	8.5	19.5	21.8	25.7	24.6
South Korea (*N*=354)	48.3	51.7	10.7	19.2	30.5	39.5	0.0
Latvia (*N*=335)	48.4	51.6	11.0	26.9	27.2	25.4	9.6
Lithuania (*N*=343)	50.7	49.3	13.1	19.0	23.6	27.4	16.9
Malaysia (*N*=352)	54.3	45.7	24.7	21.9	23.6	29.8	0.0
Mexico (*N*=343)	47.8	52.2	33.5	30.9	22.2	13.4	0.0
Netherlands (*N*=346)	49.1	50.9	12.1	17.9	30.1	19.9	19.9
New Zealand (N=351)	51.9	48.1	12.5	15.7	27.1	23.9	20.8
Norway (*N*=346)	53.2	46.8	14.2	13.3	24.0	21.1	27.5
Philippines (*N*=348)	46.8	53.2	29.3	27.0	19.0	24.7	0.0
Poland (*N*=344)	49.4	50.6	19.8	21.5	17.7	21.5	19.5
Russia (*N*=340)	52.1	47.9	24.7	25.9	25.9	23.5	0.0
Saudi Arabia (*N*=259)	76.8	23.2	32.4	22.8	25.9	18.9	0.0
Singapore (*N*=353)	51.0	49.0	10.8	19.8	28.6	40.8	0.0
South Africa (*N*=345)	51.3	48.7	25.8	23.2	19.4	31.6	0.0
Spain (*N*=345)	48.1	51.9	12.5	27.8	24.3	19.1	16.2
Sweden (*N*=350)	53.4	46.6	12.9	14.3	20.0	23.1	29.7
Switzerland (*N*=344)	49.4	50.6	13.7	21.5	24.7	21.8	18.3
Thailand (*N*=354)	53.1	46.9	15.5	24.9	29.9	29.7	0.0
Turkey (*N*=322)	51.6	48.4	18.3	33.9	27.3	20.5	0.0
United Kingdom (*N*=345)	48.4	51.6	11.6	21.7	24.3	20.9	21.4
USA (*N*=346)	52.9	47.1	19.7	19.7	22.0	23.7	15.0
Venezuela (*N*=341)	48.1	51.9	22.6	31.7	28.2	17.6	0.0
Vietnam (*N*=350)	52.9	47.1	26.0	28.6	26.3	19.1	0.0
Total (*N*=13,665)	51.4	48.6	19.0	22.8	24.2	23.1	10.9

Beatty 2007). The scales were pre-tested by two consumer focus groups with marginal semantic adaptations. The scales were quantitatively tested in the home country of the MNC (*N*=288) and in fifteen diverse countries (average *N*=213 per country). These pre-tests yielded satisfactory values for reliability and validity. To ensure semantic equivalence, the

Table 3 Measurements on individual and country level

Construct/dimension		Item/variable	Source
Individual level			
Corporate Reputation (CR)	Customer orientation (CO)	CO1: [MNC] has employees who are concerned about customer needs.	Walsh and Beatty (2007); Walsh et al. (2009a)
		CO2: [MNC] has employees who are polite towards their customers.	
		CO3: [MNC] is concerned about its customers.	
	Good employer (GE)	GE1: [MNC] appears to be a good employer.	
		GE2: [MNC] seems to have an excellent leadership style.	
		GE3: [MNC] seems to treat its employees well.	
	Product range quality (PRQ)	PRQ1: [MNC] is a strong, reliable company.	
		PRQ2: [MNC] offers high-quality products.	
		PRQ3: [MNC] develops innovative products.	
	Social and environmental responsibility (SER)	SER1: [MNC] would reduce its profits to ensure a clean environment.	
		SER2: [MNC] seems to make an effort to create new jobs.	
		SER3: [MNC] seems to be environmentally responsible.	
	Reliable and financial strong company (RFC)	RFC1: [MNC] looks like it has strong prospects for future growth.	
		RFC2: [MNC] seems to recognize and take advantages of market opportunities.	
		RFC3: [MNC] tends to outperform competitor.	
Loyalty		LOY1: I am a loyal customer of [MNC].	Oliver (1999; 2015); Walsh and Beatty (2007)
		LOY2: I have developed a good relationship with [MNC].	
		LOY3: I am certain that I will buy products/offers of [MNC].	
Country level (adapted from Berry et al. 2010)			
Cultural		Questions on values, e.g.,	
	Embeddedness	respect for tradition, being moderate, and preserving public image.	Schwartz 1994; 1999
	Autonomy (intellectual)	creativity, broad-minded, and curiosity.	
	Autonomy (affective)	pleasure, exciting life, and enjoying life.	
	Hierarchy	authority, social power, and humble.	
	Egalitarianism	equality, honesty, and responsibility.	
	Mastery	being daring, ambitiousness, and independence.	
	Harmony	protecting the environment, unity with nature and world of beauty.	
Demographic	Population above 65	Population ages 65 and above (% of total).	WDI
	Life expectancy	Life expectancy at birth, total (years).	
	Household size	Average household size.	World Bank
Economic	Income	GDP per capita (2000 US$).	WDI
	Household consumption	Household final consumption expenditure (% of GDP).	
	International trade	Imports and Exports of goods and services (% GDP).	
Global connectedness	Internet user	Internet user per 1,000 people.	WDI
	Mobile phones	Number of mobile phones per capita.	CIA Factbook

Table 3 (continued)

Construct/dimension		Item/variable	Source
	International tourism	International tourism, receipts and expenditures (% of GDP).	WDI
Knowledge	Literacy rate	Literacy rate of total adults (%).	CIA Factbook
	Tertiary school enrollment	School enrollment, tertiary (% of gross).	WDI
	Scientific articles	Number of scientific articles per 1 million populations.	
Political (reverse coded)	Policy-making uncertainty	Political stability (considering independent institutional actors with veto power).	POLCONV
	Democratic character	Democracy score.	Freedom House
	Corruption	Corruption perceptions index.	Transparency International

translation-back-translation method was applied by commercial translation agencies that specialized in market research. These agencies were briefed according to the requirements of appropriate semantic equivalence processes (Hult et al. 2008).

The measurements of the country-level variables were mostly based on Berry et al. (2010, see Table 3). Data were collected according to the year of the survey; if data were not available for the year of the survey, the most recently available data were used. Measurements of the cultural values were based on Schwartz (1994; Licht et al. 2007). Four missing countries' data for this dimension were replaced by the nearest available neighboring country (following Steenkamp and Geyskens 2006; Walsh et al. 2014).[4] Data on demographic and economic variables in each country were obtained from the World Development Indicator database (WDI) and the World Bank. Global connectedness and knowledge data were based on the WDI and the CIA Factbook. Data on political variables were based on POLCONV, Freedom House, and Transparency International and were reverse coded.

We included covariates in the study. At the individual level, gender (0=male, 1=female) and age were controlled because both are known to influence consumer behavior. At the country level, country experience was controlled (i.e., years of operation in a country) because it is known to influence MNC performance in a country.

After ensuring reliability and validity, item parceling according to Bandalos (2002) was applied for the five CR dimensions to reduce model complexity and to ensure model identification (i.e., a higher number of countries than parameters, e.g., Kline 2011, see Table 4). This and subsequent tests are reported in a web appendix, which is available upon request. The scales for the overall measurement model were tested for reliability and validity, including the new five-item corporate reputation scale. All values and the goodness of the confirmatory model were satisfactory. The test for discriminant validity was satisfactory, and we correlated the country variables (see Table 5; correlations under .80 are acceptable, Zhou et al. 2009).

We addressed common-method variance (CMV) a priori by using an appropriate questionnaire design (e.g., question order in the panels) and *a posteriori* by calculating a single-factor test using confirmatory factor analysis (Podsakoff et al. 2003). The model with all items loading on a single factor (CFI .752; TLI .653; RMSEA .323; SRMR .085; $\chi^2(20)$= 28,601.985) showed significantly worse fit values than our model did ($\Delta\chi^2(1)$=12,206.149, p<.001). We also applied the marker variable technique (Lindell and Whitney 2001) using the latent variable approach of Williams et al. (2010). We used the job variable as marker variable because it is theoretically unrelated to our constructs. The tests indicated no significant changes in coefficients and correlations. Thus, we concluded that CMV was not a major issue in this study.

We tested for measurement invariance. Due to the large sample size, the differences in comparative fit indices were used to ensure measurement equivalence (Chen 2007; Steenkamp and Baumgartner 1998). The results indicated a good fit for all models and supported full scalar invariance for all constructs in all countries.

We addressed the likelihood of possible unobserved heterogeneity on the individual level by relying on the literature. Specifically, we tested for endogeneity to reduce the possibility of omitted variables (e.g., Antonakis et al. 2014), performed a rival model and a split half test to support model robustness (e.g., Heller et al. 2009), and estimated finite mixture multilevel SEM (Jedidi et al. 1997; for details see web appendix). First, five instrumental variables (IV, i.e., adapted offers, well organized, brand quality, MNC's environmental causes, and brand strength) were implemented, one for each CR dimension because CR is conceptualized as a second-order construct and because those instrumental variables are theoretically related to each CR dimension. We checked for the IVs' strength by applying F-tests (Stock and Watson 2011) and then calculated an efficient model in addition to a consistent model (Antonakis et al. 2010). The results of a Hausman

[4] A robustness check was conducted by estimating the models without the replaced countries. The results remained substantively the same.

Table 4 Reliability and validity of measurement

		Item	MV/Std.	FL	KMO	ItTC	α	CR	λ	AVE
Corporate reputation (CR)	Customer orientation (CO)	CO1	3.44/.867	.932	.750	.841	.907	.908	.891	.847
		CO2	3.44/.849	.916		.809			.865	
		CO3	3.46/.872	.908		.795			.872	
	Good employer (GE)	GE1	3.54/.879	.935	.758	.851	.920	.921	.899	.861
		GE2	3.52/.888	.917		.815			.879	
		GE3	3.48/.849	.934		.848			.896	
	Product range quality (PRQ)	PRQ1	3.79/.922	.926	.753	.830	.913	.914	.888	.842
		PRQ2	3.77/.919	.934		.848			.897	
		PRQ3	3.66/.906	.909		.799			.865	
	Social and environmental responsibility (SER)	SER1	3.11/.995	.900	.743	.772	.882	.882	.811	.793
		SER2	3.32/.875	.888		.751			.843	
		SER3	3.34/.945	.914		.798			.882	
	Reliable and financial strong company (RFC)	RFC1	3.67/.902	.923	.757	.823	.910	.916	.902	.845
		RFC2	3.65/.900	.925		.823			.877	
		RFC3	3.55/.896	.914		.802			.877	
Corporate reputation (CR, parcels)		CO	3.47/.806	.906	.896	.848	.939	.939	.880	.861
		GE	3.51/.810	.924		.874			.908	
		PRQ	3.74/.846	.910		.854			.891	
		SER	3.26/.845	.846		.766			.801	
		RFC	3.62/.828	.897		.833			.870	
Loyalty (Loy)		Loy1	3.00/1.158	.956	.732	.898	.950	.952	.938	.849
		Loy2	3.16/1.141	.933		.853			.877	
		Loy3	3.03/1.101	.974		.938			.982	

Confirmatory model fit of single CR dimensions: CFI .980 TLI .975; RMSEA .055; SRMR .029; χ^2 (120)=5140.473

Confirmatory model fit of parceled CR dimensions: CFI .977 TLI .966; RMSEA .102; SRMR .034; χ^2 (19)=2713.804

MV/Std. = Mean value and standard deviation, FL = Factor loadings (exploratory factor analysis), KMO = Kaiser-Meyer-Olkin criterion (≥ .5), ItTC= Item-to-total correlation (≥ .5), α=Cronbach's alpha (≥ .7), CR = Composite reliability (≥ .6), λ=Standardized factor loadings (confirmatory factor analysis) (≥ .5), AVE = Average variance extracted (≥ .5)

(1978) test indicated that CR is exogenous (z-value: 1.000). Second, a rival model was calculated to ensure a reasonable main effect; specifically, we tested whether consumers' loyalty determined perceived reputation. This model showed significantly poorer fit values ($p<.001$) than the proposed model did and therefore supports our proposed model. Furthermore, in the randomly split samples, the CR effects remained stable in all models ($b=.981$ to 1.007, $p<.001$; t-test: $p>.05$). Third, finite mixture multilevel SEMs was estimated following the procedure to test for unobserved consumer heterogeneity by Becker et al. (2013). This method assigns the observations to a number of groups by means of fuzzy clustering, thereby permitting the simultaneous estimation of group-specific parameters in our model (Jedidi et al. 1997). Otherwise, estimations on an aggregate sample may lead to serious biases when there are significant differences in model parameters across unobserved segments of consumers (Wedel and Kamakura 2000). The results in all procedure steps did not indicate particular challenges that may bias our proposed relationship ($\Delta\chi^2$ (1)= 3.696, $p>.050$). In summary, we believe that the likelihood of unobserved heterogeneity is reduced in this study.

Finally, because the data have a hierarchical structure (consumers are nested within countries), we tested for the requirements of multilevel modelling (Wagner et al. 2006). If no variance in the criterion variable (i.e., loyalty) exists on the country level, then MLM is not appropriate because there is only individual variance to explain. To test for the breakdown of variance, we estimated a null model that contained no predictor variables. We found that 18.8 % [.220/(.220+.951)] of the differences in loyalty could be attributed to country differences. Thus, MLM of these data was appropriate. Ignoring the nested structure of the data would lead to misspecification and a biased estimation of standard errors (Hox 2010).

Method

Multilevel SEM was used to test the hypotheses. Although multi-group analysis is the most frequently used method when scholars compare countries (the results for the moderators are included in the web appendix), this method does not account for the nested data structure and provides no indication of the

Table 5 Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
CR (1)	1																									
Loyalty (2)	.54***	1																								
Gender (3)	.01ns	.02ns	1																							
Age (4)	−.03***	−.11***	.03*	1																						
Country experience (5)	–	–	–	–	1																					
Embeddedness(6)	–	–	–	–	−.42**	1																				
Autonomy (intellectual) (7)	–	–	–	–	.43**	−.80**	1.																			
Autonomy (affective) (8)	–	–	–	–	.32*	-.79**	68***	1																		
Hierarchy (9)	–	–	–	–	−.33*	.49**	−.26ns	−.56***	1																	
Egalitarianism (10)	–	–	–	–	.30ns	−.76**	.50**	.75***	−.67***	1																
Mastery (11)	–	–	–	–	.03ns	.07ns	−.04ns	−.25ns	.56***	−.28ns	1															
Harmony (12)	–	–	–	–	.28ns	−.50**	.14ns	.62***	−.65***	.51***	−.54***	1														
Population above 65 (13)	–	–	–	–	.43**	−.77**	.66***	.74***	−.54***	.45**	.53***	−.26ns	1													
Life expectancy (14)	–	–	–	–	.15ns	−.65**	.51**	.67***	−.42**	.55***	.28ns	−.11ns	.67***	1												
Household size (15)	–	–	–	–	−.39*	.78**	−.76***	−.66***	.42**	−.40**	−.35*	.15ns	−.79***	−.57***	1											
Income (16)	–	–	–	–	.29ns	−.70**	.66***	.66**	−.56***	.64***	.28ns	−.13ns	.65***	.71***	−.64***	1										
Household consumption (17)	–	–	–	–	−.01ns	.01ns	−.07ns	−.08ns	.20ns	−.16ns	−.25ns	.30ns	−.04ns	.10ns	−.02ns	−.07ns	1									
International trade (18)	–	–	–	–	−.40**	.16ns	−.09ns	−.21ns	.02ns	−.15ns	−.04ns	−.25ns	.06ns	.18ns	−.04ns	−.01ns	.03ns	1								
Internet user (19)	–	–	–	–	.22ns	−.69**	.67***	.61***	−.55***	.47**	.21ns	−.19ns	.78**	.73***	−.77***	.79***	.12ns	.22ns	1							
Mobile phones (20)	–	–	–	–	−.04ns	.17ns	−.14ns	−.08ns	−.24ns	−.04ns	.07ns	−.50***	.10ns	−.05ns	.00ns	−.04ns	−.09ns	.31*	.10ns	1						
International tourism (21)	–	–	–	–	.25ns	.05ns	−.08ns	−.13ns	.44**	−.21ns	−.17ns	.67***	−.16ns	−.22ns	.14ns	−.18ns	−.09ns	−.23ns	−.32*	−.38*	1					
Literacy rate (22)	–	–	–	–	.38*	−.76***	.82***	.68***	−.43**	.54***	.21ns	−.04ns	.64***	.62***	−.67***	.76***	−.13ns	−.12ns	.75***	−.14ns	−.13ns	1				
Tertiary school enrollment (23)	–	–	–	–	−.25ns	.07ns	−.03ns	−.36ns	.15ns	−.06ns	−.32*	.20ns	−.14ns	−.12ns	.03ns	.00ns	.42**	.22ns	.10ns	−.03ns	−.13ns	−.11ns	1			
Scientific articles (24)	–	–	–	–	.39*	−.16ns	.21ns	.05ns	.07ns	.01ns	−.24ns	.35*	.21ns	.17ns	−.22*	.22ns	−.06ns	−.27ns	.17ns	−.26ns	.40*	.33*	−.09ns	1		
Policy-making uncertainty (25)	–	–	–	–	.22ns	−.49**	.47**	.50**	−.44**	.35*	.32*	−.24ns	.61***	.50***	−.63***	.50***	.09ns	.16ns	.58***	−.03ns	−.28ns	.51***	.07ns	.10ns	1	
Democratic character (26)	–	–	–	–	−.38*	.67***	−.61***	−.58***	.58***	−.56***	−.40**	.25ns	−.68***	−.44**	.69***	−.57***	−.10ns	.11ns	−.64***	.19ns	.29ns	−.60***	−.09ns	−.12ns	−.68***	1
Corruption (27)	–	–	–	–	.19ns	−.68***	.72***	.59***	−.43**	.50**	.20ns	−.12ns	.68***	.71***	−.67***	.76***	−.04ns	.24ns	.77***	−.00ns	−.21ns	.75***	.12ns	.16ns	.56***	−.65***

* $p<.05$

** $p<.01$

*** $p<.001$

ns not significant

strength of the moderation. MLM overcomes these shortcomings. In MLM, the influence of predictor variables on the individual level and on the country level is considered simultaneously, and interactions between the variables on both levels are calculated (cross-level interactions). Furthermore, multilevel SEM (vs. hierarchical regressions) provides the possibility to specify latent variables, which are more common in marketing than manifest variables. Finally, MLM disentangles the information contained in the data about the population in the observed variance between countries and within countries. This approach avoids estimated standard errors that are too low, significance tests that are too liberal, and estimated confidence intervals that are too tight (Snijders and Bosker 2012). All models were estimated using the Mplus software.

To test the hypotheses, we calculated *random intercept and slopes models* with cross-level interactions. The independent level-one variable was grand-mean centered (Hox 2010). The level-one equation for these models is as follows:

$$Loy_{ij} = \beta_{0j} + \beta_{1j}(CR_{ij}) + \beta_{controls} FControls_{ij} + r_{ij}, \quad (1)$$

where i denotes individuals, j indicates countries, Loy_{ij} denotes individual i's loyalty, CR_{ij} reflects individual i's perception of the MNC, and $FControls_{ij}$ include control variables on the individual level. β_{0j} is the intercept, and β_{1j} is the regression slope; these are allowed to vary across countries. Finally, r_{ij} represents the individual-level error term. The country-level model (level two) captures the differences between countries and predicts random slopes (β_{1j}) and intercepts (β_{0j}) on level one using the different country-level variables. The level-two models are specified as follows:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(CLV_j) + u_{0j}, \quad (2)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(CLV_j) + u_{1j}, \quad (3)$$

where CLV_j represents the different country-level variables (e.g., harmony), and u_{qj} (q=0, 1) are errors that are normally distributed over respondents. The full model includes equations one to three and was used for hypothesis testing:

$$Loy_{ij} = \gamma_{00} + \gamma_{01}(CLV_j) + \gamma_{10}(CR_{ij}) + \gamma_{11}(CLV_j)(CR_{ij}) + \gamma_{controls}\, FControls_{ij} + error. \quad (4)$$

The procedure to test the hypotheses in MLM occurred in a stepwise manner (Hox 2010). We initially calculated an individual baseline solution that contained only individual-level control variables and involved the full individual solution (i.e., by adding CR as the predictor). In a third step, the control variable of country experience was added, and in a final step, a moderator at the country level was added. For each country variable, a separate multilevel model was computed and used for hypothesis testing (see single indicator models in Table 6). Additionally, MLM results for each institutional dimension show their explained variance (calculated by including all indicators per dimension, despite of model identification challenges; see overall dimension in Table 6). These procedures resulted in 28 estimated *random intercept and slope models*. Finally, we calculated the effect sizes following Marsh et al. (2009), which underline our reasoning.[5]

Results

Table 6 summarizes the MLM results; detailed results are included in the web appendix (unstandardized coefficients are shown because standardized coefficients are problematic in MLM due to the division of variance; Raudenbush and Bryk 2002).

Main effects All models show a positive and highly significant relationship between CR and customer loyalty (in all models b=.842 to 1.156, p<.001). Thus, H1 is supported. MNC reputation is a strong predictor of customers' loyalty across nations.

Cultural dimension H2 states that the effect of CR on loyalty is amplified in countries with (a) high embeddedness (low autonomy), (b) high hierarchy (low egalitarianism) and (c) high harmony (low mastery). The data support the effects for high embeddedness (b=.106; p<.05) and low intellectual autonomy (b=−.076; p<.05) but not for affective autonomy (b=−.009; p>.05, H2a). The latter might be explained by the fact that the theorized CR–loyalty link is based on cognitive mechanisms; therefore, affective differences between societies may not directly influence them (Schwartz 1999). Concerning H2b, the effect of high hierarchy is supported (b=.002; p<.05), whereas the effect of low egalitarianism is not significant but supports our expectations by trend (b=−.011; p>.05). A reason for the non-significant result might be related to the conceptualization of CR that contains elements of responsibility, which is an important source of guidance in egalitarian societies (Schwartz 1994) and thus may compensate for the proposed relationships. The effects hypothesized in H2c are supported (harmony b=.072; p<.001; mastery b=−.081; p<.01). In total, this dimension explains 43.3 % of country-level variance.

Demographic dimension H3 states that the effect of CR on loyalty is reinforced in countries with (a) a high share of an

[5] Effect sizes (ES) were computed as ES=(2*b*$SD_{predictor}$)/$SD_{outcome}$, where b is the unstandardized regression coefficient, $SD_{predictor}$ is the predictors' standard deviation and $SD_{outcome}$ is the standard deviation of the outcome variable (Marsh et al. 2009). This effect size is comparable to Cohen's d (Cohen 2013).

Table 6 Results (summarized)

	Random intercept and slope													
	Single indicators							Overall dimension						
	CR→Loy		Intercept		Slope[1]		Expl. var.[2]	*CR→Loy*		Intercept		Slope		Expl. var.[3]
	β	*p*	*β*	*p*	*β*	*p*		*β*	*p*	*β*	*p*	*β*	*p*	
Cultural dimension														
Embeddedness	.994	***	.437	***	.106	*	28.3	.977	***	.172	ns	.056	*	43.3
	(1.457)		(.324)		(.079)			(1.432)		(.127)		(.042)		
Autonomy (intellectual)	.969	***	−.330	***	−.076	*	23.3			−.030	ns	−.057	ns	
	(1.421)		(−.265)		(−.061)					(−.024)		(−.046)		
Autonomy (affective)	.933	***	−.315	***	−.009	ns	28.3			−.256	**	−.021	ns	
	(1.368)		(−.275)		(−.008)					(−.224)		(−.018)		
Hierarchy	.998	***	.207	***	.002	*	15.0			.250	*	.084	**	
	(1.463)		(.205)		(.001)					(.248)		(.080)		
Egalitarianism	.974	***	−.020	ns	−.011	ns	1.7			−.067	ns	−.050	ns	
	(1.428)		(−.012)		(−.006)					(−.041)		(−.031)		
Mastery	.974	***	.073	*	−.081	**	1.7			.304	ns	−.008	**	
	(1.428)		(.023)		(−.025)					(.095)		(−.002)		
Harmony	.910	***	.048	ns	.072	***	33.3			.116	ns	.036	**	
	(1.334)		(.031)		(.046)					(.074)		(.023)		
Demographic dimension														
Population above 65	.985	***	−.001	*	.001	***	23.3	.950	***	−.018	ns	.011	ns	26.7
	(1.443)		(−.012)		(.012)			(1.383)		(−.209)		(.012)		
Life expectancy	.845	***	.003	ns	.002	ns	0.1			.002	ns	.004	ns	
	(1.238)		(.035)		(.023)					(.023)		(.047)		
Household size	1.045	***	.136	***	−.014	ns	18.3			−.001	ns	−.065	ns	
	(1.531)		(.235)		(−.024)					(−.002)		(−.112)		
Economic dimension														
Income	.909	***	−.013	***	.010	ns	50.0	.988	***	−.005	*	.003	ns	41.7
	(1.332)		(−.032)		(.025)			(1.448)		(−.012)		(.007)		
Household consumption	.842	***	.005	*	.003	*	5.0			.006	ns	.002	ns	
	(1.234)		(.109)		(.064)					(.128)		(.043)		
International trade	1.082	***	.002	ns	−.001	*	1.7			.001	ns	−.002	*	
	(1.585)		(.260)		(−.130)					(.130)		(−.261)		
Global connectedness dimension														
Internet user	1.030	***	−.006	***	−.001	ns	33.3	1.128	***	−.007	ns	.000	ns	33.3
	(1.509)		(−.306)		(−.051)			(1.654)		(−.357)		(.000)		
Mobile phones	1.156	***	−.104	ns	−.125	*	3.3			−.139	*	−.114	ns	
	(1.694)		(−.060)		(−.072)					(−.080)		(−.066)		
International tourism	.985	***	.012	*	.008	*	6.7			−.007	ns	.011	*	
	(1.443)		(.120)		(.080)					(−.070)		(.110)		
Knowledge dimension														
Literacy rate	.988	***	.003	*	.026	***	1.7	.989	***	.022	**	.015	***	3.3
	(1.448)		(.048)		(.422)			(1.450)		(.357)		(.243)		
Tertiary school enrollment	.990	***	.004	*	.010	*	3.3			.008	ns	.009	ns	
	(1.451)		(.176)		(.439)					(.351)		(.395)		
Scientific articles	.982	***	.290	ns	.020	**	1.0			.200	ns	.015	*	
	(1.439)		(.021)		(.001)					(.013)		(.001)		

Table 6 (continued)

	Random intercept and slope												
	Single indicators							Overall dimension					
	CR→Loy		Intercept		Slope[1]		Expl. var.[2]	*CR→Loy*		Intercept		Slope		Expl. var.[3]
	β	*p*	*β*	*p*	*β*	*p*		*β*	*p*	*β*	*p*	*β*	*p*	
Politic dimension (reverse coded)														
Policy making uncertainty	1.008	***	−.251	*	−.008	ns	5.0	1.021		−.097	ns	−.009	ns	41.7
	(1.447)		(−.225)		(−.003)			(1.496)		(−.045)		(−.004)		
Democratic character	1.015	***	.054	***	−.005	ns	11.7			.005	ns	−.008	ns	
	(1.487)		(.188)		(−.017)					(.017)		(−.028)		
Corruption	1.005	***	−.152	***	−.053	*	38.3			−.028	***	.001	ns	
	(1.472)		(−.789)		(−.275)					(−.145)		(.005)		

Effect sizes are shown in brackets. [1] Used for hypothesis tests. Indicates the explained variance on the country level (in %) due to added [2] country variables. [3] country dimension

* $p<.05$

** $p<.01$

*** $p<.001$

ns not significant

older population, (b) high life expectancy, and (c) smaller households. The results support H3a only. An MNC's reputation pays off more in countries with a large population over age 65 ($b=.001$; $p<.001$). Household size ($b=-.014$; $p>.05$) and life expectancy ($b=.002$; $p>.05$) do not significantly moderate the CR effects, although the relationships support our expectations by trend. A reasonable explanation might be that perceptions of CR signals are not dependent on the average household sizes per se in a country but on the actual income and the composition of each household (e.g., De Mooij 2011). Similarly, it is not the expected average life span of a society but rather individuals' position and experience in the lifecycle that may affect the CR–loyalty link (e.g., Gourinchas and Parker 2002). Altogether, this dimension explains 26.7 % of country-level variance.

Economic dimension The reputation–loyalty relationship is reinforced in countries with high consumption expenditures ($b=.003$; $p<.05$, H4b) and is diminished in countries with high international trade ($b=-.001$; $p<.05$, H4c). Income levels have an insignificant effect but, as hypothesized, in a positive direction ($b=.010$; $p>.05$, H4a). This result needs further investigation because prior studies underline its importance for consumer behavior and perceptions (e.g., Hsieh et al. 2004). One explanation might be found in our measurement: GDP per capita does not reflect the income of the individual consumer, especially in countries with an unequal distribution of incomes. To provide evidence of this unexpected result, we tested average household income as a moderator. However, we found an insignificant effect here as well. Thus, further research may test variables that take into account the actual income of a household or the distribution of income in a society (e.g., the Gini index). A total of 41.7 % of country-level variance is explained by this dimension.

Global connectedness dimension The CR–loyalty link is not moderated by the Internet usage in a country ($b=-.001$; $p>.05$, H5a) but rather by the number of mobile phones, which is negative and contradicts H5b ($b=-.125$; $p<.05$). The effect of tourism activities supports H5c ($b=.008$; $p<.01$). The results of H5a and H5b are of particular interest because increasing usage of mobile phones and (by trend) of the Internet diminish the reputation effects. Thus, the CR effects are not determined solely by the general accessibility of information in globally connected countries (Cohen 1982) or by the increased information search when making decisions (e.g., Ratchford et al. 2003). Rather, the interactive (vs. passive) nature of media seems to be important because interactive information processing is more conscious and decreases consumers' information asymmetries (Sheth 2011), making information other than reputation relevant in decision situations. Thus, MNCs must consider the relevance of interactive media. A total of 33.3 % of country-level variance is explained by this dimension.

Knowledge dimension H6 states that the effect of CR on loyalty is reinforced by the knowledge dimension. We found support for H6a, literacy rate (b=.026; p<.001), H6b, tertiary school enrollment (b=.010; p<.05), and H6c, number of scientific articles (b=.020; p<.01). MNCs should pay attention to knowledge differences across nations. These results are also notable because previous research shows that adaption to illiterate consumers can enhance loyalty (Viswanathan et al. 2005).[6] This dimension explains 3.3 % of country-level variance.

Political dimension The data provide no support for H7a and H7b because the moderators of policy-making uncertainty (b=−.008; p>.05) and democratic character (b=−.005; p>.05) are insignificant. However, the data support the effect of (reverse-coded) corruption (H7c, b=−.053; p<.05). CR gains particular importance for consumer decisions in countries with a high corruption rate. The non-significant results for policy-making uncertainty and democratic character may be because these indicators are not directly linked to non-functional redress mechanisms in a country, which seem to affect the CR–loyalty relationship. Even though both indicators may affect MNCs' decisions (Berry et al. 2010), they are not transferred to consumer behavior and particularly to the CR–loyalty link. Nevertheless, extant studies indicate the importance of political institutions for consumer behavior (e.g., governance effectiveness on perceived value, Steenkamp and Geyskens 2006). The need to further analyze governance systems, such as political institutions, is underlined by the significant effects of all political variables on loyalty in this study (see the additional intercept-only models in the web appendix). This dimension explains 41.7 % of country-level variance.

Discussion and conclusions

To determine whether MNC reputation predicts consumers' loyalty across nations and particularly whether and how country differences moderate this relationship, we examine an under-researched but important topic for MNCs such as Procter & Gamble or H.J. Heinz Company, which rely on their reputation to attract consumers across nations or when entering a new country market and that consider their reputation effects across nations. Although our study is based on evaluations of only one MNC across 40 countries, which also has benefits such as controlling for industry factors, or origin issues, we carefully provide major theoretical conclusions and suggestions for managers.

Theoretical conclusions

For an MNC, a strong reputation is an important signal in international markets and anchors the associations of the MNC in the memories of local consumers. Based on our results, we conclude that CR pays off by directly influencing consumers' intention and readiness to purchase MNCs' offers (supporting studies by, e.g., Bartikowski et al. 2011; Walsh et al. 2009a). We believe that the results for institutional moderators (responding to calls for hierarchical studies, e.g., Griffith 2010) are particularly notable, and we discuss three conclusions in greater detail.

First, not only culture but also additional country differences moderate the relationship between reputation and customers' loyalty. Fourteen of the 22 indicators tested affect the slopes of the CR–loyalty link across nations (whereas 16 determine the intercept of loyalty; see also the additional intercept-only models in the web appendix). Marketing scholars and MNCs need to consider further differences between countries when they conduct research across nations because, unsurprisingly, countries differ in multiple ways, not only culturally (e.g., Shenkar 2001), and because MNCs need to identify the most important moderators. For the analyzed MNC, the relevance of *business systems* was indicated, such as the reinforcing role of high embeddedness, high harmony, and the population age as well as the diminishing roles of high mastery and the high international trade volume of an economy. Differences in *national innovation systems* are relevant as well. That is, indicators representing global connectedness (e.g., tourism activities, the number of mobile phones) as well as the ability to generate knowledge (e.g., literacy rate, tertiary school enrollment) affect CR effects. Finally, for *governance systems*, corruption, in particular, has reinforcing effects. Although we do not discuss every moderator in detail, we conclude that for future reputation research as well as for MNCs, it might be useful to particularly consider harmony, embeddedness, population age, and corruption because these institutional factors explain most of the variance in MLM. MNCs' investments in reputation activities might be particularly advantageous in countries that score high on these variables. Research and MNCs must also consider diminishing moderators, such as high international trade volumes. Thus, MNCs encounter tradeoffs with respect to specific institutional pressures they may observe, and future research could focus on the importance and interdependencies between those moderators (e.g., Håkanson and Ambos 2010). Additionally, the most variance explained by each dimension provides an important guideline for future studies, such as the cultural dimension (43.3 %), economic and political dimensions (41.7 % each), the global connectedness dimension (33.3 %), and the

[6] The number of patents in a country as a known indicator of the ability of a country to create knowledge was not analyzed because of weak theoretical reasoning for its effects on the CR–loyalty link. However, testing of the moderator patents per 1 million population (provided by the WIPO IP Statistics Data Center) show non-significant results (b=.076; p>.05).

demographic dimension (26.7 %). Future research may also extend our signaling or schema theoretical reasoning for hypothesis development by combining the different mechanisms explained by both theories, which constitute existing arguments about CR effects.

Second, we believe that the proposed institutional framework of cross-national differences (theorized in the international business research, e.g., Pajunen 2008; Whitley 1992) contributes significantly to marketing-centered reputation research, in which institutions have not yet been systematically observed. Few studies use the three institutional pillars of Scott (2014) and often measure one item in each pillar (e.g., Walsh et al. 2014) only, which is a misguiding approach because one item hardly represents the facets of one institutional dimension and because further institutions developed in international business research were shown to be relevant in this study. To understand CR effects, a broader conceptualization of country differences is needed because institutions are known to determine MNCs' important decisions on market selections or operational modes across nations, which contribute to well-known management tasks. Focusing on consumer behavior may also be of increasing importance for international business research because customers affect firms' success (e.g., Morgeson et al. 2011). We deliberately consider the institutional dimensions proposed by Berry et al. (2010) that are linked to available, time-variant measures of indicators, although additional indicators exist. Thus, further research may rely on the promising dimensions or indicators observed in this study or focus on other ones (e.g., Chacar et al. 2010; Orr and Scott 2008). Researchers may even consider institutional distances because an MNC's reputation is primarily a CEO task (e.g., Lafley 2009) and thus is strongly managed from the home country. Consumers may have difficulty processing information from MNCs with different institutional backgrounds.

Third, in extant research multilevel SEM is rarely used to analyze differences across countries. Therefore, with this study we also contribute methodologically to the literature. Additional multi-group models that dominate in the literature (see web appendix) indicate clear and significant group differences for insignificant moderators in MLM (e.g., income, Internet use, life expectancy). Therefore, we call for generalization with caution when using multi-group models or comparing few countries only, and for more robust, latent variables based multilevel SEM studies (because hierarchical regressions also have limitations).

Managerial implications

For managers, it is important to know that institutional factors that affect important MNC decisions, such as entry strategy, also affect reputation effects across nations. The analyzed MNC has learned how its reputation is perceived across nations and has identified starting points for its international reputation management. The determination of higher CR budgets and the definition of related targets for subsidiaries in countries with major diminishing factors, such as a higher distribution of mobile phones/Internet, or adjustments of CR budgets in those countries where reinforcing factors such as corruption are present are two examples of conclusions that managers could draw from this study. We conclude that managers must identify institutional factors to understand their potential effects and to strategically manage the external institutional environment. Because in this study factors that diminish reputation effects as well as factors that reinforce those effects were identified, managers encounter tradeoffs with respect to their overall knowledge and responses to specific institutional pressures in host countries. To manage the interdependencies among reputation, target group behavioral outcomes, and environmental factors, managers must broaden their understanding of the interactions among these factors as well as their understanding of appropriate methods. Managers should be aware that a multi-group comparison of a few countries leads to a distorted picture because the results, as indicated in this study, lead to overly liberal significance test, for example (Snijders and Bosker 2012). Thus, additional knowledge on MLM is useful.

Limitations and further research

To better understand the cross-national effects of MNCs' reputations, additional research is needed because the present study is not without limitations. We wish to highlight three issues of this nature.

First, although we gave special attention to data collection, analyzing one MNC in less than one-quarter of the countries of the world and focusing on brand-affine consumers limit the scope of this study. Broadening the database would mitigate these limitations and allow further conclusions to be drawn. For example, analyzing the same MNCs across 40 nations would allow for the evaluation of the relative CR performance or of the effects within different corporate branding strategies (e.g., Berens et al. 2005). Alternatively, different leading MNCs in each country in an industry might be analyzed, although not without further methodological challenges (requiring a third level, as consumers are nested within a MNC, or model identification challenges, e.g., Hox 2010; Kline 2011). We analyzed major countries in the world, but we cannot exclude changes in the results when other countries are observed. Finally, analyzing one institutional moderator at a time due to model identification reasoning limits the scope of the study, although analyzing interactions between moderators or overall dimensions would be interesting (Stephan et al. 2015).

Second, alternatives exist for the applied measurements. Compared to the reputation quotient and the AMAC index,

our scale more strongly emphasizes the affective (vs. cognitive) components of CR but has similar convergent validity and explanatory power (Sarstedt et al. 2013). Alternative measurements of consumers' loyalty may extend the conclusions that may be drawn from such a study (e.g., Oliver 1999). In addition to the mentioned limitations of the institutional framework, we should note that no common agreement on valid indicators has been reached. We mostly rely on the measures proposed by Berry et al. (2010) and Schwartz (1994), but further cultural measures provide a promising field of research (e.g., sociological ones by Inglehart 1997).

Third, future research may extend the proposed conceptual model. Analyzing further antecedents of loyalty is interesting but also methodologically challenging, as are mediation models because MNCs' reputations determine loyalty directly and indirectly by strengthening product images and offered value or even reciprocal models (e.g., Berens et al. 2005; Swoboda et al. 2013). Future studies may also address further contextual boundaries because, for example, behavioral factors and the socio-economic context may influence how consumers perceive MNCs (e.g., for a recent overview, see Sharma 2011; Sheth 2011). Firm-specific factors are likely to reinforce or diminish reputation effects as well. We have controlled for country experience, but the analysis of MNCs' commitment, performance, and the roles of foreign entities has not yet been addressed in the reputation literature.

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