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THE EFFECTS OF CULTURAL DIFFERENCES ON CONSUMERS' WILLINGNESS TO SHARE PERSONAL INFORMATION

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ABSTRACT

Consumer information is an increasingly valuable resource in the digitally interconnected modern world. Globally, the number of firms collecting and exploiting consumer information to optimize their marketing efforts is increasing rapidly. We determine how four cultural dimensions—Power Distance, Masculinity, Uncertainty Avoidance, and Long-Term Orientation—affect consumers' willingness to share their personal information with firms (WTS). We empirically test the direct effect of national culture on WTS, as well as its moderating effect on the link between WTS and two of its key drivers, privacy concerns and perceived benefits. Drawing on regulatory focus

theory (RFT), we develop a conceptual framework and test it using multilevel modeling on data from 15,045 consumers across 24 countries. Our empirical findings demonstrate that national culture directly affects WTS and moderates the effects of both privacy concerns and perceived benefits on WTS. These results highlight the need for managers and marketers to consider international cultural differences when collecting consumer information.

INTRODUCTION

Consumer data are becoming increasingly valuable in the digitally interconnected modern world (Schneider et al. 2017). Thus, firms invest substantially in information technology to boost performance and develop a competitive advantage (Bleier, Goldfarb, and Tucker 2020). However, in light of severe global data breaches, such as Cambridge Analytica's unauthorized access to millions of Facebook users' data (Aiello et al. 2020; Martin, Borah, and Palmatier 2017) or a more recent leakage in which data from 533 million Facebook users surfaced on a website for hackers (The Guardian 2021), consumers' concerns about their privacy are mounting. A Pew Research survey revealed that 79% of Americans worry about how firms use their data, 81% perceive a lack of control over their data, and 81% believe that the potential risks of data collection outweigh its benefits (Auxier et al. 2019). These issues are particularly precarious in the face of global interconnectedness, as firms like Google, Microsoft, and Meta monetize consumer data by sharing them with hundreds of affiliated companies (Martin and Palmatier 2020; Smith, Dinev, and Xu 2011).

In this global context, firms must inevitably consider national culture in their data-collection strategies. *Culture* has been conceptualized as the "collective programming of the mind," suggesting that a culture instills its values, attitudes, and beliefs in its members (Hofstede, Hofstede, and Minkov 2010). Despite the remarkable interdisciplinary relevance of national culture and consumer information-sharing behavior for both academia and practice, the literature scarcely looks at their interplay.

On the one hand, the extant literature is fragmented, scattered across a wide range of scholarly disciplines. For instance, scholars in marketing (Lwin, Wirtz, and Williams 2007; Mothersbaugh et al. 2012; Phelps, Nowak, and Ferrell 2000), information systems (Dinev and Hart 2006; Malhotra, Kim, and Agarwal 2004; Smith, Milberg, and Burke 1996), and management (Culnan and Armstrong 1999; Montes, Sand-Zantman, and Valletti 2019) have studied WTS and information privacy. Empirical findings on the influence of national culture on WTS remain marginal. Two exceptions are studies by Milberg, Smith, and Burke (2000) and Bellman et al. (2004).

On the other hand, the literature lacks a conceptual framework through which to consider the effects of national culture on WTS and its key drivers (antecedents), namely, privacy concerns and perceived benefits. Martin and Palmatier (2020, p. 451) call for "more purposeful examinations of cross-cultural differences in privacy concerns, especially in parts of the world that have been less researched." We build on the literature investigating the effects of national culture on consumer decision-making (e.g., Beugelsdijk, Kostova, and Roth 2017; Steenkamp, Ter Hofstede, and Wedel 1999), aiming to address two research questions: 1) How does national culture affect WTS? 2) How does national culture influence the effects of privacy concerns and perceived benefits on WTS? To answer these research questions, we draw on regulatory focus

theory (RFT) to develop a conceptual framework that integrates national culture in an information-sharing setting (Higgins 1997). We develop hypotheses pertaining to the direct effect of national culture on WTS and its moderating influence on the effects of privacy concerns and perceived benefits on WTS. We test our conceptual framework using multilevel modeling (Snijders and Bosker 2012) on data collected from 15,045 consumers across 24 countries.

Our empirical findings illustrate that national culture has a direct effect on WTS. Consumers from countries that rank high on Power Distance are more likely to share personal information with firms. We demonstrate that national culture systematically moderates the relationships of both privacy concerns and perceived benefits with WTS.

We contribute to the literature on international marketing in two important ways. First, we demonstrate how national culture directly influences WTS and moderates the effects of privacy concerns and perceived benefits on WTS across countries. Whereas prior research has predominantly considered the main effects of particular cultural dimensions (e.g., Masculinity) with limited international data (e.g., Bellman et al. 2004), we provide a more comprehensive extension by exploring both main and moderating effects of national culture on a global scale (i.e., 15,045 consumers across 24 countries). By studying the moderating effects of national culture on WTS, we also contribute to an emerging research stream studying second-level influences of national culture (Kirkman et al. 2009). Second, we expand the literature on international marketing by offering insights into WTS, information privacy, and national culture that the international marketing literature has largely neglected.

The issues discussed in this study have valuable implications for practitioners, as managing cultural differences constitutes a key challenge for multinational firms (Beugelsdijk et al. 2018) and firms that rely on data-driven business models (Verhoef and Bijmolt 2019). As the number of

firms developing business models based on consumer data is increasing (Bleier, Goldfarb, and Tucker 2020), we provide managers and marketers with a greater understanding of why consumers from different countries differ in their preferences for and intentions of sharing personal information.

CONCEPTUAL BACKGROUND AND MODEL

Consumers' Privacy Concerns, Perceived Benefits, and WTS

Li (2012) reviews 15 theories that relate to information privacy and privacy-driven behavior. While some theories focus on decision-making in an organizational context, such as principal-agent theory and social contract theory, others serve to explain individuals' motivations to share personal information, such as protection motivation theory. Li (2012) concludes that the privacy calculus theory is a common connection among theories for analyzing consumer information disclosure. Laufer and Wolfe (1977) proposed the *privacy calculus* to predict whether and under what conditions consumers disclose personal information. The privacy calculus argues that consumers conduct a cost-benefit analysis before sharing their personal information to minimize negative outcomes (including risks) and maximize positive outcomes (Beke et al. 2022; Dinev et al. 2016). Beke et al. (2022, p. 24) define the privacy calculus as "a consumer's perception of the valence and probability of performance, time, financial, psychological, social, and security consequences when a firm collects, stores, and uses consumer information related to the products and services they acquire from that firm." Within the bounds of information asymmetry, consumers consider the value (i.e., the benefits) of disclosing personal information to firms and act accordingly (Martin and Palmatier 2020). If the benefits exceed the costs, consumers will likely share their information with the firm (Culnan and Bies 2003).

Among the antecedents and consequences of WTS that research has described, the general consensus is that both privacy concerns and perceived benefits considerably influence WTS (Martin and Murphy 2017; Dinev et al. 2013). *Privacy concerns* are concerns over the security of one's personal information (Smith, Milberg, and Burke 1996). The fact that firms are using and exploiting an increasing amount of consumer data at the expense of consumer privacy has raised concerns among policymakers and the public (Holtrop et al. 2017). Previous research suggests that privacy concerns negatively affect WTS (Martin and Murphy 2017). For instance, consumers asked to provide personal information often worry about how firms may use their data (Phelps, Nowak, and Ferrell 2000). Such privacy concerns vary over time, are culture- and context-specific (Martin and Palmatier 2020; Acquisti, Brandimarte, and Loewenstein 2015), and differ nationally (Bellman et al. 2004).

Conversely, consumers sharing their personal information with a firm may receive valuable benefits, such as customized products and services (Kehr et al. 2015; Dinev et al. 2013). *Perceived benefits* motivate and incentivize consumers to share their information (Hui, Teo, and Lee 2007; Chellappa and Sin 2005). For instance, firms can practice price discrimination using consumers' personal information (Montes, Sand-Zantman, and Valletti 2019). Consumers want to know how they can benefit from sharing information in the short run and how it benefits their relationship with the firm in the long run (Martin and Palmatier 2020). They are willing to disclose personal information in exchange for shopping benefits (Phelps, Nowak, and Ferrell 2000), surrender information ownership for monetary compensation (Hui, Teo, and Lee 2007), and exchange personal data for personalization (Xu et al. 2011).

In line with the notion of a calculus, perceived benefits and privacy concerns are independent constructs that consumers assess independently, such that the value of one may

outweigh that of the other—e.g., the benefits outweigh the risks (Chellappa and Sin 2005). For instance, Dinev et al. (2013) find that the perceived benefits of sharing personal information significantly decrease consumers' perceived risk. Strikingly, the notion of the privacy calculus is more present than ever—81% of Americans believe that the potential risks of data collection outweigh its benefits (Auxier et al. 2019). Given its topicality, we adopt the theoretical lens of the privacy calculus, considering privacy concerns and perceived benefits as the main antecedents of WTS.

The Role of National Culture

A country's cultural background may help to explain consumers' data-sharing behaviors, as well as decisions in some regions of the world to regulate firms' data collection. Hofstede, Hofstede, and Minkov (2010) conceptualized *culture* as the "collective programming of the mind" that determines social norms and expectations as well as individual and organizational behavior. How national culture directly influences consumer responses and moderates other drivers of these responses has received considerable attention (Peterson and Barreto 2018; Steenkamp, Ter Hofstede, and Wedel 1999). In line with this literature stream, we propose that national culture directly influences WTS while, at the same time, moderating the effect of privacy concerns and perceived benefits on WTS. We operationalize national culture using Hofstede's value dimensions (Hofstede, Hofstede, and Minkov 2010). Researchers have extensively studied this framework that quantifies a set of cultural dimensions to support comparisons on the national level (Beugelsdijk, Kostova, and Roth 2017; Kirkman, Lowe, and Gibson 2006). Hofstede developed the notion that attitudes, emotions, orientations, and expressions reflect each country's culture, and he

conceptualized them in six dimensions: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-Term Orientation, and Indulgence.[1]

Noting debates about its use as a measure of national culture (e.g., Beugelsdijk, Kostova, and Roth 2017; Javidan et al. 2006), we decided to use the Hofstede framework over other national culture measures—such as the GLOBE framework (House et al. 2013), the Culture Map (Meyer 2016), and the World Values Survey (Inglehart 2018)—for three reasons. First, international marketing research widely accepts Hofstede's framework, which researchers have studied for several decades (Kirkman, Lowe, and Gibson 2006). Second, prior research has found strong correlations between some dimensions of the GLOBE framework and the Hofstede framework (Smith 2006), as well as those in the World Values Survey (WVS) framework and the Hofstede framework (Beugelsdijk and Welzel 2018; Steenkamp and Geyskens 2012). Third, the Hofstede dimensions are well-suited to explaining differences across countries, with a focus on the risks and benefits of providing personal information in the short and the long run. In previous studies on behaviors involving cost-benefit trade-offs, such as the adoption of new products or financial decision-making, Hofstede's dimensions explain national differences theoretically and empirically (Steenkamp, Ter Hofstede, and Wedel 1999; Petersen, Kushwaha, and Kumar 2015).[2]

Regulatory Focus Theory

Originating in psychology, regulatory focus theory (RFT) explores how consumers approach pleasure and avoid pain (Higgins 1997). RFT suggests that consumers make choices in line with

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[1] Each dimension ranges from 0 (low) to 100 (high). The greater the difference in these dimensions between two countries, the greater the cultural diversity between them.

[2] We acknowledge that consumers are affected not only by a country's culture, but also by institutional features, such as the legal infrastructure, political climate, and the structure of the economy (e.g., Cockcroft and Rekker 2016). All of these are not only likely to affect WTS; national culture is also likely to affect them. However, because we cannot assess the degree to which national culture shapes these institutional features, we avoid drawing conclusions about how they affect WTS in our main model. Nevertheless, we account for these factors in our robustness checks.

their regulatory orientation. It distinguishes two types of self-regulation: self-regulation with a prevention focus (e.g., safety, responsibility, and security) and self-regulation with a promotion focus (e.g., accomplishment, growth, and advancement). While consumers have a general predisposition toward one orientation or the other, both exist in every person to some degree.[3] There are two conceptualizations of RFT (Summerville and Roese 2008). The first distinguishes between promotion and prevention in terms of the degree to which the two possible "self-guides" are used for regulation, implying that a promotion focus stresses internal standards while a prevention focus emphasizes external, social standards. The second conceptualization describes how two possible end-states are used in goal regulation. The need for development and growth drives a promotion focus, highlighting a gain as a goal (or a positive end-state); the need for safety drives a prevention focus that aims at avoiding a loss that would represent a negative end-state (Johnson, Chang, and Yang 2010). Consumers with a promotion focus are sensitive to positive outcomes and seek matches for their desired end-states while consumers with a prevention focus are sensitive to negative outcomes and avoid mismatches for their desired end-states (Higgins 1997). Prior research has found that a prevention focus is more widespread in Asian countries, and a promotion focus is more common in Western countries (Kim and Park 2019).

Wirtz and Lwin (2009) use RFT to develop a framework that links justice, trust, and concern to promotion-focused and prevention-focused consumer responses. They show how consumers' perceptions of justice affect subsequent prevention- and promotion-focused behaviors. While privacy concerns predicted preventive behaviors (e.g., defensive and deflective behavior), trust predicted promotional behaviors (e.g., relational behavior and re-patronage intentions). Som and Lee (2012) predict the joint effect of choice assortment and regulatory focus on choice

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[3] There is an approximately equal split between consumers with a prevention focus and consumers with a promotion focus (Som and Lee 2012).

behavior (i.e., choice decision and choice confidence). Trudel, Murray, and Cotte (2012) illustrate the effect of regulatory focus (prevention orientation and promotion orientation) on consumer satisfaction, highlighting that prevention-oriented consumers are more satisfied with negative outcomes and less satisfied with positive outcomes, due to their conservative bias. Mosteller and Poddar (2017) examine the privacy paradox as it pertains to consumers' social media engagement and privacy-protection behaviors, using RFT to develop hypotheses on how the perception of secondary control and privacy violation affects social media engagement and privacy-protection behaviors.

We do not explicitly test RFT and only use it as the theory on which to develop our hypotheses. Following Petersen, Kushwaha, and Kumar (2015), we assume that culture is ingrained in consumers' subconscious during their formative years and, in turn, considerably influences their regulatory orientation. This suggests that a consumer's likelihood of acting on a specific focus (promotion or prevention) largely depends on where they rank (high or low) on a specific dimension of national culture. In line with RFT, we argue that positive consumer responses relate to a promotion focus, while negative consumer responses relate to a prevention focus (Wirtz and Lwin 2009). In this study, we argue that a prevention focus entails avoiding a negative outcome, which we limit to a loss of privacy, and not a loss of potential benefits (e.g., fear of missing out on discounts). Conversely, we view a promotion focus centering around the potential gains from sharing information. Thus, we argue that consumers with a promotion focus will more likely share personal information with firms, whereas consumers with a prevention focus will less likely do so.

HYPOTHESES

Main and Moderating Effects of National Culture

We develop hypotheses on the main and moderating effects of national culture, privacy concerns, and perceived benefits on WTS, to test our conceptual framework (see Figure 1).

Figure 1. Conceptual Framework
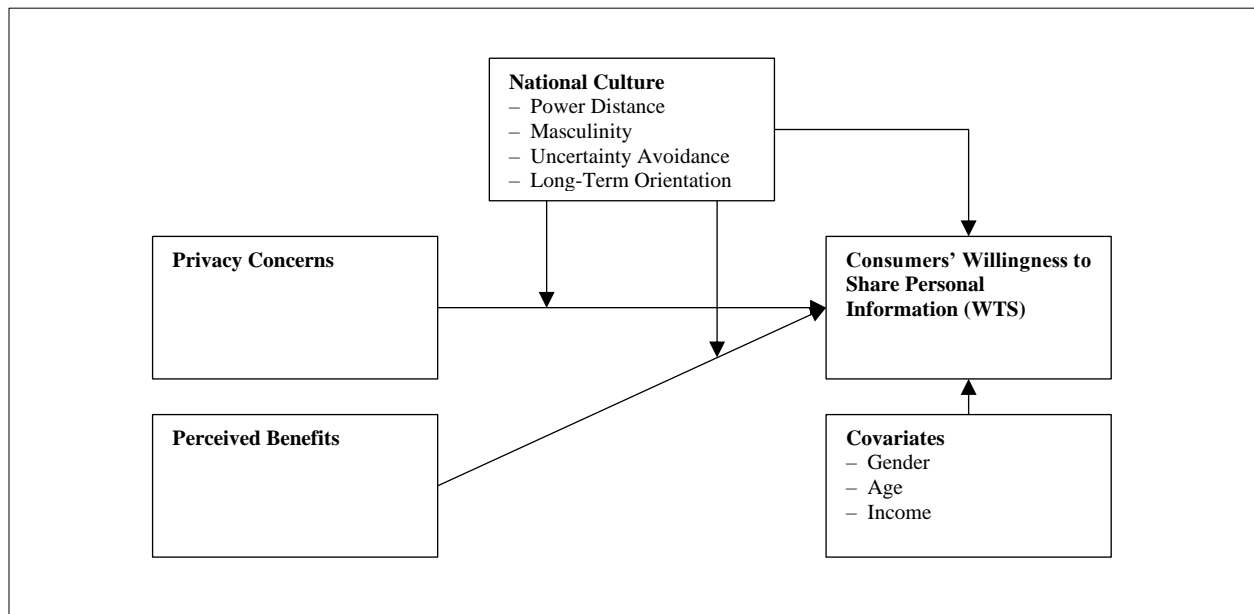
Power Distance. Power Distance describes how societies handle power inequalities (Hofstede, Hofstede, and Minkov 2010). In countries that rank high on Power Distance (e.g., Malaysia, Mexico, and China), consumers accept hierarchies and unequal distribution of power. More specifically, they follow strict rules that power-holders impose, respect authorities, and appreciate clearly defined roles (Farh, Hackett, and Liang 2007; Schepers and van der Borgh 2020). In contrast, countries that rank low on Power Distance (e.g., Austria, Sweden, and Switzerland) strive to diminish power inequalities. Consumers in these cultures are more egalitarian and may aim to alleviate power inequalities by withholding information. Conversely, Hofstede, Hofstede, and

Minkov (2010) posit that information flows can be constrained by hierarchy in countries that rank high on Power Distance. For instance, Husted and Michailova (2002) found that Russian organizations hoard information instead of sharing it among employees, partly due to Russia's traditionally high degree of respect for power and hierarchy. Ardichvili et al. (2006) also observed such behavior, finding that people share less knowledge and choose to hoard information due to perceived hierarchies. The existing literature largely agrees that consumers from high-Power Distance cultures are inclined to distrust more powerful groups (Bellman et al. 2004; Milberg, Smith, and Burke 2000). Hence, we expect these consumers will less likely share personal information with firms.

       Hypothesis 1a. Higher (lower) Power Distance scores decrease (increase) WTS.

       Our interest extends to how Power Distance influences the effects of privacy concerns and perceived benefits on WTS. Milberg et al. (1995) and Milberg, Smith, and Burke (2000) have shown that Power Distance scores are positively associated with concerns over information privacy, which is in line with lower levels of trust in powerful groups. However, Bellman et al. (2004) and Lowry, Cao, and Everard (2011) find opposite effects. Because consumers in high-Power Distance countries have a more pronounced need for security and, in turn, value their privacy over the potential benefits of sharing personal information, we expect consumers in those countries to have a prevention focus rather than a promotion focus. For instance, China, India, and Malaysia—all highly ranked on Power Distance—were found to rank among the five countries that protect consumer data the least (Bischoff 2020). Thus, we hypothesize that the negative

relationship between privacy concerns and WTS is stronger in countries with higher Power Distance scores.

Research has shown that perceived benefits positively affect consumers' intentions to disclose personal information (Kehr et al. 2015). Although firms may offer better, more personalized benefits to appeal to consumers' promotion focus, we expect consumers' prevention focus to be dominant in high-Power Distance countries, assuming that perceived benefits are inferior to consumers' need for security. Thus, we hypothesize that the positive relationship between perceived benefits and WTS is weaker in countries that rank high on Power Distance.

Hypothesis 1b. The negative relationship between privacy concerns and WTS is stronger in countries that rank high on Power Distance.

Hypothesis 1c. The positive relationship between perceived benefits and WTS is weaker in countries that rank high on Power Distance.

Masculinity. Masculinity (in contrast to Femininity) describes the competitiveness and toughness of a culture (Hofstede, Hofstede, and Minkov 2010). Societies that rank higher on Masculinity (e.g., Japan, Austria, and Switzerland) value rewards, wealth, assertiveness, and heroism. Consumers in these countries strive for success, which may include the benefits they can obtain through sharing their personal information (Milberg, Smith, and Burke 2000). Societies that rank lower on Masculinity (e.g., Sweden, the Netherlands, and South Korea)—referred to as Feminine—emphasize cooperation, solidarity, modesty, quality of life, and caring for others (Hofstede, Hofstede, and Minkov 2010). Feminine societies are largely tender and consensus-

oriented. In Masculine societies, the request for personal information likely appears as a means to an end and constitutes a potential gain, such as obtaining access to personalized products and services (Steenkamp, Ter Hofstede, and Wedel 1999). Because consumers in Masculine countries strive for rewards, achievements, and success (Milberg, Smith, and Burke 2000), we expect them to be more likely to share their personal information with firms in exchange for such gains.

Hypothesis 2a. Higher (lower) Masculinity scores increase (decrease) WTS.

As rewards influence consumers in high-Masculinity countries more (e.g., appreciating the benefits of sharing personal information), potential risks may affect those consumers less, such that they typically emerge as more promotion-focused and less prevention-focused (Petersen, Kushwaha, and Kumar 2015). In line with Petersen, Kushwaha, and Kumar's (2015) reasoning, we argue that privacy concerns should concern Masculine societies less, as consumers have less concern about the potential downsides of providing their personal information; instead, they are attracted by the potential gains they could obtain.

Given that consumers in more Masculine countries are more promotion-focused, we expect that they value more highly the benefits of sharing information. In line with this, Bellman et al. (2004) argue that consumers in high-Masculinity cultures may more likely disclose their personal information when they receive economic benefits as compensation. We thus hypothesize that the positive relationship between perceived benefits and WTS is stronger in high-Masculinity countries.

In more Feminine countries, we predict opposite effects. A prevention focus should dominate, inducing a stronger effect of privacy concerns and, thus, mitigating benefits' effect on

WTS. This reasoning aligns with the findings of Lowry, Cao, and Everard (2011) that privacy concerns low-Masculinity consumers, motivating them to refrain from sharing personal information.

Hypothesis 2b. The negative relationship between privacy concerns and WTS is weaker in countries that rank high on Masculinity.

Hypothesis 2c. The positive relationship between perceived benefits and WTS is stronger in countries that rank high on Masculinity.

Uncertainty Avoidance. Uncertainty Avoidance details the extent to which societies feel threatened by uncertainty and ambiguity (Hofstede, Hofstede, and Minkov 2010). In societies that rank high on Uncertainty Avoidance (e.g., Belgium, Poland, and Japan), consumers try to control their environment and the future, maintain rigid behaviors and beliefs, and reject unorthodox behaviors and ideas (Hofstede, Hofstede, and Minkov 2010). Consumers from high-Uncertainty Avoidance countries appear to be more risk-averse and pessimistic; they feel anxious when dealing with uncertainty (Lowry, Cao, and Everard 2011). Uncertainty is an inevitable part of the online realm. Prior literature has shown that consumers in high-Uncertainty Avoidance countries are wary of making decisions and hesitant about sharing personal information. Thus, people there consider disclosing personal information risky because its outcomes are uncertain (Beke, Eggers, and Verhoef 2018). Another study illustrated that in a setting with high uncertainty and unpredictable consequences, users of social networking sites were less likely to share personal information, to avoid undesirable backlash, such as potential misuse of their data (Cao and Everard 2008). Finally,

Acquisti, Brandimarte, and Loewenstein (2015) show that uncertainty negatively affects WTS. We thus predict a negative effect between Uncertainty Avoidance and WTS.

Hypothesis 3a. Higher (lower) Uncertainty Avoidance scores decrease (increase) WTS.

As consumers in high-Uncertainty Avoidance countries aim to avoid risks and rely on state regulations to protect their privacy (Milberg, Smith, and Burke 2000), they will likely be more prevention-focused (Petersen, Kushwaha, and Kumar 2015). Given their prevention focus, consumers in high-Uncertainty Avoidance countries aim to protect their privacy (Milberg, Smith, and Burke 2000). Privacy concerns have been shown to persist over time in high-Uncertainty Avoidance cultures (Bellman et al. 2004). Krasnova, Veltri, and Günther (2012) found that Uncertainty Avoidance amplifies the negative effect of privacy concerns on information disclosure. Consumers in countries that rank high on Uncertainty Avoidance are more prevention-focused (Petersen, Kushwaha, and Kumar 2015). Accordingly, we hypothesize that the negative relationship between privacy concerns and WTS is stronger in countries that rank high on Uncertainty Avoidance. Conversely, we assume that the benefits of sharing personal information are less appealing and less relevant. Accordingly, we hypothesize that the positive relationship between perceived benefits and WTS is weaker in countries that rank high on Uncertainty Avoidance.

Hypothesis 3b. The negative relationship between privacy concerns and WTS is stronger in countries that rank high on Uncertainty Avoidance.

Hypothesis 3c. The positive relationship between perceived benefits and WTS is weaker in countries that rank high on Uncertainty Avoidance.

Long-Term Orientation. Long-Term Orientation describes how societies maintain links with the past while addressing the future (Hofstede, Hofstede, and Minkov 2010). In countries that rank high on Long-Term Orientation (e.g., South Korea, Japan, and China), people are forward-looking and accept delayed gratification (Boninger, Gleicher, and Strathman 1994). They tend to be pragmatic, thrifty, and persistent. Long-term-oriented cultures aim to establish long-term relationships, whereas short-term-oriented cultures have a sense of urgency and aim for quick results (Barkema and Vermeulen 1997). In countries that rank low on Long-Term Orientation (e.g., Australia, Mexico, and the United States), people mistrust societal change and stick to traditions and norms. They live in the "now" and seek advantages whenever possible (van Everdingen and Waarts 2003). In consumer research and psychology, some authors have linked Long-Term Orientation to the theoretical construct "consideration of future consequences" (CFC) (Joireman, Strathman, and Balliet 2006). These authors posit that consumers with high CFC are less impulsive than more "present-oriented" consumers and do not discount future monetary gains. Consumers with high CFC tend to make less-risky choices (Boninger, Gleicher, and Strathman 1994), indicating that they are more prevention-focused. Hence, we assume that consumers who rank high on Long-Term Orientation tend to be more prevention-focused and aim to avoid disclosing their personal information to firms (Petersen, Kushwaha, and Kumar 2015).

Hypothesis 4a. Higher (lower) Long-Term Orientation scores decrease (increase) WTS.

Aligning RFT (Higgins 1997) and CFC (Joireman, Strathman, and Balliet 2006), we assume that consumers in long-term-oriented countries are more prevention-focused, whereas consumers in short-term-oriented countries are more promotion-focused (Petersen, Kushwaha, and Kumar 2015). Accordingly, we hypothesize that the negative relationship between privacy concerns and WTS is stronger in countries that rank high on Long-Term Orientation.

Short-term-oriented consumers value immediate gains (Acquisti 2004), such as rewards, discounts, and access to digital services (Beke, Eggers, and Verhoef 2018). Such consumers ignore the potentially negative long-term consequences of sharing their personal information. Thus, we expect that the positive relationship between perceived benefits and WTS is weaker in countries that rank high on Long-Term Orientation.

Hypothesis 4b. The negative relationship between privacy concerns and WTS is stronger in countries that rank high on Long-Term Orientation.

Hypothesis 4c. The positive relationship between perceived benefits and WTS is weaker in countries that rank high on Long-Term Orientation.

METHODOLOGY

Data Collection

We tested our hypotheses using a large-scale global survey, from which we collected data from 15,838 consumers across 24 countries (Australia, Austria, Belgium, Brazil, Canada, China, the Czech Republic, France, Germany, India, Japan, Malaysia, Mexico, the Netherlands, Poland, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom,

and the United States). We aimed to capture a broad range of countries to highlight cultural differences.[4] The selected countries cover a substantial proportion of the global population and gross domestic product (GDP), accounting for 54.95% (United Nations Department of Economics and Social Affairs 2020) and 77.68% (World Bank 2021), respectively.[5] We developed a preliminary questionnaire in English, which we discussed with faculty and pre-tested with them and a student sample. The pre-test's main purpose was to ensure the questionnaire's functionality. After making necessary adjustments, we finalized the questionnaire and had it translated into all relevant languages—Chinese, Czech, Dutch, French, German, Japanese, Korean, Malay, Polish, Portuguese, Spanish, Swedish, and Turkish—by a professional translation agency.

We conducted the data collection in close collaboration with ValueQuest, an international market research company, and Dynata, a first-party data platform with access to consumer panels. Respondents were chosen based on our objective to obtain well-balanced samples in each country, in terms of gender, age, and income, to broadly map a country's average population. Along these lines, respondents were chosen randomly. ValueQuest reached out to consumers via email and distributed online questionnaires. Dynata offered financial incentives for participation. The amount of monetary compensation was not disclosed. Participants were required to answer all included questions to finish the questionnaire, preventing missing values. If respondents could not immediately complete the questionnaire (i.e., in one sitting), they could suspend it and finish it later. The questionnaire was designed so that participants could finish it in less than 20 minutes,

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[4] Our data set covers countries from all continents and includes less-researched regions, such as emerging markets (e.g., Brazil, China, India, Malaysia, Mexico, South Africa, and Turkey).

[5] Our data set includes each continent's leading country in terms of GDP: Australia, Brazil, China, Germany, South Africa, and the US (World Bank 2021). Note that South Africa was ranked second in terms of GDP in Africa behind Nigeria; however, data from consumers in Nigeria were not accessible.

to ensure participants' focus. The sequence of questions remained the same across all countries and languages.

Participants were randomly assigned to one of four industries—consumer electronics, insurance, mobility, or retail. We ensured that the number of participants in each subsample was similar. Consumers were then asked to name one firm from this industry and relate their subsequent answers to that firm.

We obtained a well-balanced sample of females (49.96%) and males (50.04%) with a mean age of 42.75 years (standard deviation: 13.80).[6] We excluded questionnaires from 639 respondents (4%) who did not take enough time to meaningfully answer the questions.[7] Additionally, we excluded 131 respondents (1%) who displayed a uniform response style (i.e., no variation in responses across items) regardless of whether we had reversed the question items (Baumgartner and Steenkamp 2001) as well as 23 respondents (< 1%) who were above 80 years old.[8] The final data set consists of 15,045 consumers. Table 1 depicts sample characteristics.

Table 1. Sample Characteristics

	Sample Characteristics	
	Absolute Value	Percentage
Gender		
Female	7,516	49.96%
Male	7,529	50.04%
Age		
Mean	42.75	
Standard Deviation	13.80	
Minimum	18	
Maximum	80	
Income		
Less than $16,000	1,279	8.50%
$16,001 – $31,000	2,616	17.39%
$31,001 – $48,000	3,410	22.67%
$48,001 – $72,000	3,387	22.51%
More than $72,000	3,426	22.77%
Prefer not to say	927	6.16%

Notes. Sample size = 15,045. Income was measured in each country's national currency and subsequently converted to US-Dollars.

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[6] Gender balance was also determined at the national level.

[7] These respondents took less than one-third of the median time to complete the survey.

[8] We removed respondents over 80 years old because their answers were rather unreliable and inconsistent.

Measures

Individual-Level Constructs (Level 1). To measure our dependent variable, WTS (α = 0.923, CR = 0.931, AVE = 0.447),[9] we adapted 17 items from Gupta, Iyer, and Weisskirch (2009), pertaining to sharing general information (e.g., name, email address, date of birth) and highly sensitive information (e.g., credit card details, location data, social media profiles) online. Taken together, these items offer a nuanced understanding of the distinct types of information that consumers are willing—or unwilling—to share with firms. The WTS construct measures consumers' willingness to share personal information online in general. As such, it does not specifically associate WTS with a particular firm. As a Level 1 predictor, privacy concerns (α = 0.849, CR = 0.872, AVE = 0.635) were measured using four items based on the work of Malhotra, Kim, and Agarwal (2004). The perceived benefits scale (α = 0.874, CR = 0.872, AVE = 0.799) relies on three items adapted from Dinev et al. (2013). Privacy concerns and perceived benefits were measured in relation to sharing personal information with the specific firm consumers had named at the beginning of the survey.

   Country-Level Constructs (Level 2). We operationalized national culture using Hofstede's cultural-value dimensions: Power Distance, Masculinity, Uncertainty Avoidance, and Long-Term Orientation (Hofstede, Hofstede, and Minkov 2010).[10] We collected data on each country's four cultural dimensions from the Hofstede website (Hofstede Insights 2020), displayed in Web

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[9] α = Cronbach's Alpha, CR = Composite Reliability, AVE = Average Variance Extracted.
[10] We excluded Individualism and Indulgence from our analyses due to their high correlations with Power Distance and Long-Term Orientation, respectively. Arguably, Individualism is the most prominent of Hofstede's dimensions; however, Steenkamp and Geyskens (2012) argue that including both Power Distance and Individualism in the same model would lead to unstable parameter estimates. Because a considerable number of studies have focused on the Individualism dimension (e.g., Kirkman et al., 2006; Steenkamp & Geyskens, 2012), we investigate Power Distance instead. Additionally, we explore Long-Term Orientation instead of Indulgence because we are interested in the long-term effects of privacy concerns and perceived benefits.

Appendix A. National cultural differences tend to be largely persistent, as relative country scores remain quite stable over time (Beugelsdijk and Welzel 2018).

    Covariates. Aiello et al. (2020) have proposed that both gender and age influence WTS. Thus, we include gender, age, and income to control for sociodemographic factors. Respondents indicated their absolute income in their national currency, which we converted into US-Dollars (USD). This measure of USD-converted income provides a better model fit for our data than purchasing power parity (World Bank 2019). We present the descriptive statistics and correlations in Table 2. Web Appendix B contains detailed information about the constructs and measures.[11]

Table 2. Descriptive Statistics and Correlations

	Correlation Matrix						
	1	2	3	4	5	6	7
1 WTS	1.000						
2 Privacy Concerns	−0.017*	1.000					
3 Perceived Benefits	0.471**	0.067**	1.000				
4 Power Distance	0.119**	0.154**	0.113**	1.000			
5 Masculinity	−0.010	0.006	0.027**	−0.032**	1.000		
6 Uncertainty Avoidance	−0.083**	−0.042**	−0.042**	0.050**	0.210**	1.000	
7 Long-Term Orientation	−0.107**	−0.115**	−0.050**	−0.005	0.016*	0.132**	1.000
Mean	3.000	4.121	3.297	55.200	54.960	61.330	56.350
Standard Deviation	0.902	0.797	0.943	20.328	18.224	23.728	21.777

Notes: * = Correlation is significant at the 0.05 level (2-tailed). ** = Correlation is significant at the 0.01 level (2-tailed). Variables, means, and standard deviations appear in their original values. WTS, Privacy Concerns, and Perceived Benefits were measured using 5-point Likert scales (1 = minimum, 5 = maximum). Power Distance, Masculinity, Uncertainty Avoidance, and Long-Term Orientation were measured on a scale ranging from 0 to 100 (0 = minimum, 100 = maximum).

Data Equivalence and Common Method Variance

Data equivalence refers to "the extent to which the elements of a research design have the same meaning and can be applied in the same way in different cultural contexts" (Hult et al. 2008, p. 1027). Having measured variables in different countries, we had to ensure that they carried the same meaning across countries and cultures. Thus, we established construct, measurement, and data-collection equivalence (see Web Appendix C). In addition, we also addressed *common*

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[11] The measures reported were not all measures collected. Countries reported included all countries in the survey.

method variance (CMV), or "variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff et al. 2003, p. 879). CMV can cause false internal consistency and systematic measurement errors that can deflate or inflate observed relationships between the constructs and affect type I and type II errors (Podsakoff et al. 2003). We tested for CMV because predictor and outcome variables are derived from the same respondents. Following a set of stringent procedures, we concluded that the model is free of CMV (see Web Appendixes C and D).

Model Specification

In the data, consumers (at Level 1) were nested within countries (at Level 2). This nesting, or clustering, constitutes the main characteristic of hierarchical linear or multilevel modeling (Snijders and Bosker 2012). Ordinary least squares (OLS) regressions do not suit multilevel data, as they assume that the units of analysis are independent. Thus, applying OLS would lead to biased estimates and spuriously small standard errors. Instead, multilevel modeling was developed explicitly to deal with multilevel data (Snijders and Bosker 2012). Multilevel modeling helps to disentangle the data, simultaneously estimating the relationships of variables at two or more levels. Our multilevel model is as follows:

Individual Level (Level 1)

(1) Consumers' Willingness to Share Personal Information$_{ij}$ = β_{0j} + β_{1j}Privacy Concerns$_{ij}$ + β_{2j}Perceived Benefits$_{ij}$ + β_{3j}Gender$_{ij}$ + β_{4j}Age$_{ij}$ + β_{5j}Income$_{ij}$ + ε_{ij}

Country Level (Level 2)

(2) $\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Power Distance}_j + \gamma_{02}\text{Masculinity}_j + \gamma_{03}\text{Uncertainty Avoidance}_j + \gamma_{04}\text{Long-Term Orientation}_j + u_{0j}$

(3) $\beta_{1j} = \gamma_{10} + \gamma_{11}\text{Power Distance}_j + \gamma_{12}\text{Masculinity}_j + \gamma_{13}\text{Uncertainty Avoidance}_j + \gamma_{14}\text{Long-Term Orientation}_j + u_1$

(4) $\beta_{2j} = \gamma_{20} + \gamma_{21}\text{Power Distance}_j + \gamma_{22}\text{Masculinity}_j + \gamma_{23}\text{Uncertainty Avoidance}_j + \gamma_{24}\text{Long-Term Orientation}_j + u_{2j}$

where i and j denote individuals and countries, respectively. The random intercept (β_{0j}) captures how WTS differs across countries in terms of cultural differences: Power Distance (γ_{01}), Masculinity (γ_{02}), Uncertainty Avoidance (γ_{03}), and Long-Term Orientation (γ_{04}). Furthermore, we account for systematic differences in the effects of privacy concerns (β_{1j}) and perceived benefits (β_{2j}) on WTS by explaining any heterogeneity in β_{1j} and β_{2j}, according to the variation in cultural differences among countries (γ_1 and γ_2), up to the residual variation (u). The individual-level error term ε_{ij} is assumed to be normally distributed with zero mean and variance (σ^2). The random effects u_{qj} are assumed to be multivariate normally distributed across countries with expected values of 0, $\text{var}(u_{qj}) = \tau_{qq}$, and $\text{cov}(u_{qj}, u_{q'j}) = \tau_{qq'}$. We group-mean centered the Level 1 variables and grand-mean centered the Level 2 predictors before running the regressions to foster the interpretability of the estimated coefficients.

FINDINGS

The results for the multilevel model appear in Table 3. We estimated two models: 1) a model with only main effects of national culture and 2) a full model with main and moderating effects of national culture. The results of the models are very similar, and we discuss them below.

Table 3. Empirical Findings

Predictor	Hypothesized Effect	Model 1: Main Effects			Model 2: Full Model		
		Unstandardized Coefficient	t-value	p-value	Unstandardized Coefficient	t-value	p-value
Intercept		2.761	55.359	< 0.001*	2.762	55.359	< 0.001*
Level 1 Predictors							
Privacy Concerns	−	−0.090	−11.031	< 0.001*	−0.092	−11.097	< 0.001*
Perceived Benefits	+	0.417	60.552	< 0.001*	0.417	59.885	< 0.001*
Level 2 Predictors							
Power Distance	−	0.510	2.415	0.026*	0.512	2.421	0.026*
Masculinity	+	0.053	0.225	0.825	0.054	0.226	0.823
Uncertainty Avoidance	−	−0.275	−1.485	0.154	−0.276	−1.488	0.153
Long-Term Orientation	−	−0.401	−2.011	0.059*	−0.401	−2.011	0.059*
Moderation Effects of National Culture							
Power Distance x Privacy Concerns	−				0.124	3.053	0.002*
Power Distance x Perceived Benefits	−				0.085	2.475	0.013*
Masculinity x Privacy Concerns	−				0.021	0.454	0.650
Masculinity x Perceived Benefits	+				0.008	0.188	0.851
Uncertainty Avoidance x Privacy Concerns	−				−0.004	−0.108	0.914
Uncertainty Avoidance x Perceived Benefits	−				−0.104	−3.358	0.001*
Long-Term Orientation x Privacy Concerns	−				−0.087	−2.268	0.023*
Long-Term Orientation x Perceived Benefits	−				−0.024	−0.721	0.471
Covariates							
Gender		0.016	1.228	0.219	0.015	1.179	0.238
Age		< 0.001	0.034	0.973	< 0.001	0.252	0.801
Income							
("Prefer not to say," reference category)							
Less than $16,000		0.160	4.742	< 0.001*	0.159	4.718	< 0.001*
$16,001 – $31,000		0.195	6.536	< 0.001*	0.196	6.577	< 0.001*
$31,001 – $48,000		0.246	8.507	< 0.001*	0.246	8.491	< 0.001*
$48,001 – $72,000		0.269	9.215	< 0.001*	0.266	9.116	< 0.001*
More than $72,000		0.280	9.536	< 0.001*	0.278	9.456	< 0.001*

Notes: p-values are for two-tailed tests. We report two-tailed tests to be more conservative (Cho and Abe 2013). In multilevel models, variance is spread across different levels. Therefore, we report unstandardized—rather than standardized—coefficients. * = significant at the 0.05 level. We display "Prefer not to say" as a reference category for income.

Main Effects Model

We first tested the direct relationships between Level 1 and Level 2 predictors and WTS. As expected, we found a significant negative relationship between privacy concerns and WTS (b = –0.090, t = –11.031, p < 0.001) and a significant positive relationship between perceived benefits and WTS (b = 0.417, t = 60.552, p < 0.001). These findings are in line with those of prior studies (Krafft, Arden, and Verhoef 2017).

We found a significant main effect of Power Distance (b = 0.510, t = 2.415, p = 0.026) on WTS, supporting H1a. More specifically, consumers from high-Power Distance countries are more willing to share their personal information. The positive effect of Power Distance on WTS is intriguing. Appealing to consumers' prevention focus in countries that rank high on Power Distance (Kim and Park 2019), we expected these consumers to be reserved in sharing their private information, preferring to ensure privacy. Hence, this finding appears counterintuitive, as we found China, India, and Malaysia—all of which rank high on Power Distance—ranking among the five countries that least protect consumer data (Bischoff 2020). One potential explanation is that in these countries, information-sharing is mandatory in some cases; for example, the government could compel firms and consumers to share their information. Under such conditions (i.e., if consumers have no other choice), culture may have no influence. Moreover, we found that Long-Term Orientation negatively affects WTS, as we expected. However, H4a was rejected (b = –0.401, t = –2.011, p = 0.059). Consumers' prevention focus is more pronounced, deterring them from sharing their personal information due to uncertainty in the long run. We did not find support for the notion that high-Masculinity societies share more personal information (b = 0.053, t = 0.225, p = 0.825). Similarly, the effect of Uncertainty Avoidance on WTS is insignificant (b = –0.275, t = –1.485, p = 0.154). Accordingly, we cannot support either H2a or H3a.

Full Model

Next, we explored the moderating effects of national culture. Increasing Power Distance reduces the negative effect of privacy concerns (b = 0.124, t = 3.053, p = 0.002), while it increases the positive effect of perceived benefits (b = 0.085, t = 2.475, p = 0.013). These results contradict our hypotheses. We do not find support for H1b and H1c. However, these findings suggest that Power Distance is an essential moderator, but not as hypothesized. Figure 2 illustrates the effects of Power Distance on consumers with high vs. low privacy concerns. The figure compares China (high Power Distance) and Sweden (low Power Distance).

Figure 2. Effects of Power Distance on Consumers with High vs. Low Privacy Concerns
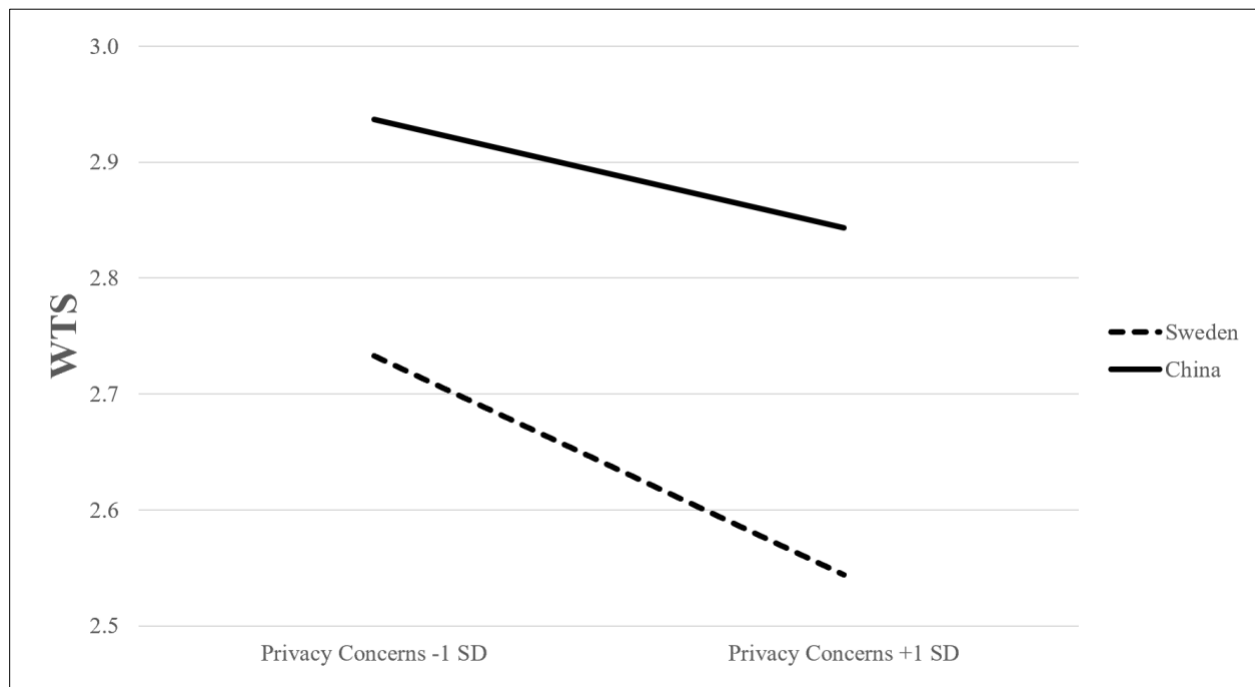
The interactions between Masculinity and privacy concerns (b = 0.021, t = 0.454, p = 0.650) and between Masculinity and perceived benefits (b = 0.008, t = 0.188, p = 0.851) are insignificant, rejecting H2b and H2c. Thus, Masculinity does not significantly affect WTS directly or as a moderator. The statistical significance of the interaction coefficient suggests that consumers from high-Uncertainty Avoidance countries are not sensitive to privacy concerns (b = –0.004, t = –0.108, p = 0.914). Thus, H3b is rejected. However, we find support for H3c, as the effect of perceived benefits is lower in countries that rank high on Uncertainty Avoidance (b = –0.104, t = –3.358, p = 0.001). Alongside increasing levels of uncertainty, consumers perceive benefits obtained through data exchanges with firms to be less valuable. Next, we proposed that consumers from long-term-oriented countries are more prevention-focused and, in turn, more sensitive to privacy. The findings show that the negative effect of privacy concerns increases alongside higher levels of Long-Term Orientation (b = –0.087, t = –2.268, p = 0.023), leading to a decrease in WTS, supporting H4b. Last, the interaction term for Long-Term Orientation and perceived benefits is statistically insignificant (b = –0.024, t = –0.721, p = 0.471), and H4c is not supported. Table 4 summarizes our hypotheses and empirical results.

Our model controlled for gender, age, and income. First, prior studies have highlighted gender differences in the realm of information-sharing (Culnan 1995). However, our findings illustrate that gender (b = 0.015, t = 1.179, p = 0.238) does not significantly affect WTS. We found that females were less willing than males to share their personal information with firms, confirming prior findings (Bellman et al. 2004). Second, the literature largely agrees that young consumers have less concern about privacy than older consumers (Bellman et al. 2004; Culnan 1995; Martin 2012). However, our empirical findings show that age is not a significant predictor of WTS (b = < 0.001, t = 0.252, p = 0.801).

Table 4. Summary of Hypothesis Testing

Hypothesis	Hypothesized Path	Cultural Moderator	Hypothesized Effect	Results of Hypothesis Test
Power Distance directly affects WTS and moderates the effects of Privacy Concerns and Perceived Benefits on WTS				
H1a	Power Distance → WTS		Negative	Significant effect, but in opposite direction
H1b	Power Distance x Privacy Concerns → WTS	Power Distance	Negative	Significant effect, but in opposite direction
H1c	Power Distance x Perceived Benefits → WTS	Power Distance	Negative	Significant effect, but in opposite direction
Masculinity directly affects WTS and moderates the effects of Privacy Concerns and Perceived Benefits on WTS				
H2a	Masculinity → WTS		Positive	Not supported
H2b	Masculinity x Privacy Concerns → WTS	Masculinity	Negative	Not supported
H2c	Masculinity x Perceived Benefits → WTS	Masculinity	Positive	Not supported
Uncertainty Avoidance directly affects WTS and moderates the effects of Privacy Concerns and Perceived Benefits on WTS				
H3a	Uncertainty Avoidance → WTS		Negative	Not supported
H3b	Uncertainty Avoidance x Privacy Concerns → WTS	Uncertainty Avoidance	Negative	Not supported
H3c	Uncertainty Avoidance x Perceived Benefits → WTS	Uncertainty Avoidance	Negative	Supported
Long-Term Orientation directly affects WTS and moderates the effects of Privacy Concerns and Perceived Benefits on WTS				
H4a	Long-Term Orientation → WTS		Negative	Not supported
H4b	Long-Term Orientation x Privacy Concerns → WTS	Long-Term Orientation	Negative	Supported
H4c	Long-Term Orientation x Perceived Benefits → WTS	Long-Term Orientation	Negative	Not supported

Third, prior research has argued that consumers with lower incomes are less concerned about their privacy (Culnan 1995). We found a positive relationship between income and WTS, suggesting that consumers with higher incomes are more likely to share their information ($p <$ 0.001 for all income brackets).[12] The effect size for the high-income bracket ($> \$72,000$) is 0.278; for the low-income bracket ($< \$16,000$), it is 0.159.

Robustness Checks

We did several robustness checks. First, we included a variable to operationalize consumers' relationship with the firm (CRF). We built this construct by merging four individual constructs that were part of our survey—satisfaction (Verhoef 2003), trust (Malhotra, Kim, and Agarwal 2004), (positive) word of mouth (WOM) (Zeithaml, Berry, and Parasuraman 1996), and loyalty (Cronin, Brady, and Hult 2000). Further, we considered economic, governance, and political influences that may affect consumers' decision-making when sharing personal information online. We ran an estimation that controls for GDP (World Bank 2021), a country's state of democracy (The Economist Intelligence Unit 2021), perceived corruption (Transparency International 2021), and rule of law (World Justice Project 2021). GDP is "the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products" (World Bank 2021). A country's state of democracy reflects "electoral process and pluralism, the functioning of government, political participation, political culture, and civil liberties" (The Economist Intelligence Unit 2021, p. 3). The corruption perceptions index scores 180 countries and territories by their perceived levels of public-sector corruption (Transparency International 2021, p. 4). The rule of law index measures a country's rule of law based on the experiences and perceptions of the general public,

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[12] We display income in brackets and code it relative to a base category of respondents who were unwilling to share their income ("Prefer not to say").

in-country legal practitioners, and experts worldwide (World Justice Project 2021, p. 5). Among others, these variables represent each country's regulatory environment that may shape consumers' WTS. We controlled for these factors in our empirical model and display results in Web Appendix E. CRF (b = 0.130, t = 12.231, p < 0.001) and GDP have a positive effect on WTS (b = 0.002, t = 2.263, p = 0.039). No other variables significantly affect WTS. The correlation matrix for the robustness check appears in Web Appendix F.

Second, we tested three well-established frameworks that measure international cultural differences: (1) the GLOBE framework (House et al. 2013), (2) the Culture Map (Meyer 2016), and (3) the World Values Survey (Inglehart 2018). We estimated both main and moderating effects of these cultural dimensions on WTS and compared them to a Hofstede benchmark model (see Web Appendix G), concluding that the Hofstede model provides better results than the other frameworks (i.e., the Hofstede model has superior AIC test results and does not suffer from collinearity issues). Thus, we are confident that Hofstede's model of national culture is an appropriate framework through which to explain the direct and moderating effects of national culture on WTS.

DISCUSSION

We investigated the main effects of national culture on WTS (research question 1) and the ways in which national culture moderates the effects of privacy concerns and perceived benefits on WTS (research question 2). Understanding national cultural differences can be highly beneficial to understanding WTS. We tested our conceptual framework using multilevel modeling (Snijders and Bosker 2012) on data from 15,045 consumers across 24 countries. In terms of consumer richness and global geographical coverage, this wide scope enabled us to observe the considerable differences that national culture induces. Our contribution to the literature on international marketing is twofold. To the best of our knowledge, this study is

among the first to explore how national culture directly affects WTS and moderates the effect of privacy concerns and perceived benefits on WTS across countries. Prior research has predominantly explored the main effects of specific cultural dimensions with a fairly limited geographical scope (e.g., Bellman et al. 2004; Milberg, Smith, and Burke 2000). Additionally, this paper connected the privacy calculus with the moderating effects of national culture, positioning it among the few studies to address notions of national culture and WTS from a privacy calculus perspective (Dinev and Hart 2006).

This study empirically confirms the negative effect of privacy concerns on WTS and the positive effect of perceived benefits on WTS (Krafft, Arden, and Verhoef 2017; Beke, Eggers, and Verhoef 2018). Consumers with concerns about their privacy are less likely to share their personal information with firms; less-concerned consumers are more willing to reveal their information. Furthermore, as we expected, a strong positive relationship exists between perceived benefits and WTS.

Our results show that national culture has a direct effect on WTS. We found a significant main effect of Power Distance. WTS is higher (lower) in countries that rank high (low) on Power Distance. The relationship between Long-Term Orientation and WTS is negative but marginally insignificant. Consumers in countries that rank high on Long-Term Orientation tend to divulge less personal information than consumers in countries that rank low on Long-Term Orientation. We did not find significant main effects of Masculinity or Uncertainty Avoidance on WTS. The insignificant effect of Masculinity is surprising, as we argued that the promotion focus would reflect consumers from Masculine countries being keen on sharing their personal information. Comparing the mean value of Masculinity across all considered countries with those of Power Distance, Uncertainty Avoidance, and Long-Term Orientation, we recognize that it is the lowest mean across all national culture dimensions. It is possible that feminine consumers were over-represented in our data set. The results for

Uncertainty Avoidance are in the expected direction but insignificant. Considering prior findings on the influence of a consumer's uncertainty on consumer behavior, this is surprising (Acquisti, Brandimarte, and Loewenstein 2015). However, we measured Uncertainty Avoidance as a macro-level factor and not as an individual consumer's propensity, which makes obtaining a significant effect more difficult.

Our results show significant moderating effects of national culture on the effects of privacy concerns and perceived benefits on WTS. Power Distance moderates the effects of privacy concerns and perceived benefits on WTS. Thus, it can be seen as a crucial moderator in our conceptual framework. In line with the main effect of Power Distance on WTS, both moderation effects suggest a positive effect on WTS. These results are not in line with what we hypothesized. An explanation could be that governments in countries that rank high on Power Distance (e.g., China, India, and Malaysia) force consumers to share personal information. Effects of privacy concerns and perceived benefits are then of minor importance. We further investigated information-sharing behaviors in countries that rank high on Power Distance. For this purpose, we ran an additional analysis in which we excluded the countries with exceptionally high scores on Power Distance—China (n = 622), India (n = 620), and Malaysia (n = 634)—from our sample. The new, more parsimonious model (without these three countries) shows that the effect size of Power Distance decreased by approximately 50%, compared to our full model (which included all three countries). While the coefficient of Power Distance was 0.512 (p = 0.026) in our full model, its magnitude decreased to 0.252 in the model without China, India, and Malaysia. Thus, the effect turned insignificant (p = 0.253) but remained positive.

Furthermore, we found that Masculinity does not moderate the relationship between either privacy concerns or perceived benefits and WTS. A potential underrepresentation of masculine consumers may have triggered the insignificant moderation effects. Furthermore,

prior research has shown mixed effects of Masculinity on privacy concerns (e.g., Milberg, Smith, and Burke 2000; Bellman et al. 2004; Lowry, Cao, and Everard 2011) and, in fact, that Masculinity's role in shaping how consumers deal with privacy issues is not straightforward.

The moderating effects of Uncertainty Avoidance are mixed. First, its interaction with privacy concerns was insignificant; at the same time, we found that Uncertainty Avoidance moderates the relationship between perceived benefits and WTS. The effect of perceived benefits on WTS is lower in countries with high Uncertainty Avoidance. This confirms our notion that these consumers are less promotion-focused and, thus, consider the benefits of sharing data less relevant. This also confirms prior findings in the context of financial decision-making (Petersen, Kushwaha, and Kumar 2015).

Finally, Long-Term Orientation significantly moderates the link between privacy concerns and WTS, but its impact on the link between perceived benefits and WTS is insignificant. Consumers in more long-term-oriented countries focus more on privacy in their decision to share data, confirming that these consumers are more prevention-focused. This again confirms the findings of Petersen, Kushwaha, and Kumar (2015).

Overall, we find both significant main effects and moderating effects of national culture. Importantly, we find both main and moderating effects for Power Distance, suggesting that this is the most relevant cultural dimension, shaping WTS directly and indirectly, via the moderating effects of privacy concerns and perceived benefits. Research in other domains, such as information systems (Leidner and Kayworth 2006) and international business (Slangen and Hennart 2008), also show the importance of this cultural dimension.

This study discussed both the main and moderating effects of national culture on WTS, unveiling the effects of national-culture dimensions that research had not previously explored jointly. The examination of cross-cultural differences in privacy concerns, especially in under-researched parts of the world, reflects another relatively untapped domain (Martin and

Palmatier 2020). Our data set covered countries from all continents, including some less researched regions, such as emerging markets (e.g., Brazil, China, India, Malaysia, Mexico, South Africa, and Turkey). Hence, in investigating cross-cultural and cross-national variation in consumer preferences, we addressed calls to investigate Asian consumers (Hong, Chan, and Thong 2019) and consumers in developing countries (Martin and Murphy 2017).

Managerial Implications

To increase WTS, firms should aim to mitigate privacy concerns, enhance benefits, and adapt data-collection strategies to national cultures. Hofstede's value dimensions may serve as segmentation criteria for this strategy. Our empirical findings suggest that collecting consumer data will be easier in countries with a higher level of Power Distance. Data-intensive strategies will likely be more successful in these countries. Our study also provides some potential strategies for firms to more successfully get data from customers in countries with specific cultural characteristics. However, we also urge managers and marketers to take these suggestions with a pinch of salt, as we did not test whether it is beneficial for firms to adapt their strategies to countries' specific cultural traits.

While we argued that higher Power Distance scores decrease WTS, our empirical findings show the opposite: Higher Power Distance scores increase WTS. That is, firms can create environments that foster information-sharing by increasing their perceived distance from consumers. However, we expect that firms can only stretch this to a certain degree. Those that push the boundaries too hard might appear untrustworthy and only interested in consumers' data. Also, prior research has shown that consumers on "eye-level" with firms are more likely to trust such firms, a determining factor of a fruitful relationship (Bleier, Goldfarb, and Tucker 2020). Thus, firms in high-Power Distance countries must find the right balance between increasing perceived Power Distance and trustworthiness regarding consumer data.

In high-Uncertainty Avoidance countries, firms should focus on risk avoidance and reduction (Segalla et al. 2006) through transparency and providing consumers with control over the collection, storage, and use of their data (Martin, Borah, and Palmatier 2017; Wieringa et al. 2021). Firms should tell consumers why they are requesting certain information (Martin and Palmatier 2020). Higher levels of privacy regulation help to reduce uncertainty and address consumers' prevention focus. While public policy drives privacy regulations, firms should focus more on corporate digital responsibility (Lobschat et al. 2021), willingly granting consumers more transparency and control over their data. Establishing privacy policies and strengthening privacy practices can also reduce uncertainty (Martin and Palmatier 2020; Schneider et al. 2017), which may even serve as a source of competitive advantage (Martin et al. 2020).

Receiving data from consumers in countries that rank high on Long-Term Orientation is particularly challenging, given their prevention focus (Petersen, Kushwaha, and Kumar 2015). While firms can benefit immediately from consumers sharing their personal information, it may take some time for consumers to reap the benefits the firm promotes (Wieringa et al. 2021). However, given that consumers inclined toward a Long-Term Orientation accept delayed gratification (Boninger, Gleicher, and Strathman 1994), firms should establish long-term relationships with these consumers (Barkema and Vermeulen 1997). They can do so by building trust and demonstrating to consumers that the firm keeps their information safe, enabling consumers to willingly share it bit by bit.

Limitations and Further Research

As with all empirical research, we acknowledge the specific limitations of our study. However, these limitations offer several avenues for further research. First, we measured WTS, privacy concerns, and perceived benefits on the individual level but culture on the national level. Using

Hofstede's value dimensions, we generalized each country's consumers. To maintain a reasonable questionnaire length, we did not include questions to measure each of the six national culture dimensions Hofstede proposed. This approach is in line with other studies that drew on available country-level data (e.g., Petersen, Kushwaha, and Kumar 2015; Steenkamp and Geyskens 2012). However, each individual consumer has his or her own cultural values. The merits of measuring culture on the individual level are obvious—researchers could derive more nuanced findings (Farh, Hackett, and Liang 2007). To draw more finely grained conclusions about national culture, we encourage future research to consider Hofstede's value dimensions at the individual level.

Second, we did not measure consumers' regulatory focus. Since the two most prominent scales for measuring RFT—the regulatory focus questionnaire (RFQ) and the general regulatory focus measure (GRFM)—have considerable differences, Summerville and Roese (2008) advocate caution when selecting a scale and interpreting results. One of the core weaknesses of RFT is that the scales are "limited by the degree to which participants possess insight into their own motivational state and experiences" (Summerville and Roese 2008, p. 249). Thus, instead of independently measuring RFT, we relied on established conceptualizations of RFT (e.g., Petersen, Kushwaha, and Kumar 2015; Wirtz and Lwin 2009). Further research could build on our findings by measuring RFT using both scales (RFQ and GRFM). Researchers could elaborate on the potential differences between the scales and the ways in which these differences influence national culture and WTS. Thus, measuring RFT and linking it to our conceptual framework could be a promising and relevant avenue for further research.

Third, we did not test whether culture is an antecedent of WTS, privacy concerns, or perceived benefits. While such a mediation model is possible, we could not test it with our data. Beyond this alternative structure, researchers could systematically test other variables using

our conceptual framework, to provide a more comprehensive understanding of WTS. The existing literature indicates that control (Acquisti, John, and Loewenstein 2013; Tucker 2014), transparency (Dinev et al. 2013), and privacy legislation (Cockcroft and Rekker 2016) influence consumers' information disclosure. Each of these factors may also be subject to cultural differences, contributing to the further exploration of the culture-affected antecedents of WTS.

Finally, some of the observed effects were not very robust when adding control variables and taking out outliers. For instance, when considering consumers' relationship with the firm (CRF), the effect of Long-Term Orientation becomes insignificant ($b = –0.351$, $t = –1.573$, $p = 0.137$). This could occur because of the positive relationships between Long-Term Orientation and the individual CRF constructs—Long-Term Orientation and satisfaction ($b = 0.029$, $p < 0.001$), Long-Term Orientation and trust ($b = 0.023$, $p = 0.005$), Long-Term Orientation and WOM ($b = 0.043$, $p < 0.001$), and Long-Term Orientation and loyalty ($b = 0.040$, $p < 0.001$). Moreover, CRF as an individual measure may extract variance from the data-sharing measure. As our data does not allow us to differentiate between the effects of Long-Term Orientation and CRF, addressing these effects in more detail requires further research.

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