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Journal of Interactive Marketing xx (2012) xxx–xxx

**JOURNAL OF  
INTERACTIVE  
MARKETING**[www.elsevier.com/locate/intmar](http://www.elsevier.com/locate/intmar)

## A Cross-national Investigation of the Satisfaction and Loyalty Linkage for Mobile Telecommunications Services across Eight Countries

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### Abstract

Improving customer satisfaction has become a strategic imperative for managers and researchers given the benefits of developing customer loyalty for long-term financial success. Creating these linkages becomes even more important in the context of mobile telecommunications due to the ubiquitous nature of mobile phones and the potential this creates to engage in interactive marketing for firms. Further, with increased global penetration of mobile telecommunications, examining cross-national differences in consumer attitudes and behaviors has become critical. Most studies that examine customer satisfaction and loyalty linkages however have traditionally focused on single countries and/or single industries. This study extends the literature by testing the moderating impact of cultural variables on the impact of satisfaction on loyalty intentions using data from 3,393 mobile telecommunications customers in Australia, Brazil, Canada, China, France, Spain, UK, and USA. Our findings reveal that the impact of satisfaction on loyalty in the mobile telecommunications context depends on cultural differences. The results demonstrate non-linear threshold effects where managers operating in countries characterized by self-expressionist values will have an easier time creating satisfaction and loyalty with mobile customers compared to those operating in cultures dominated by high survivalist values.

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*Keywords:* Customer satisfaction; Loyalty; Repurchase intention; Recommend intention; Mobile telecommunications; Cross-cultural

Managers and researchers have long recognized the importance of customer loyalty to companies' financial performance and long-term success. Loyal customers create value through repeat purchases, positive word of mouth, and referrals, which ultimately contributes to increased cash flow. As a result, in an effort to increase customers' loyalty, managers have focused on improving customers' level of satisfaction. While there is a great deal of research examining the linkages between satisfaction and loyalty (Blattberg, Malthouse, and Neslin 2009; Kumar et al.

2009), studies investigating this linkage in the context of mobile telecommunications is limited. The notable exception is a study of telecommunications services by Gustafsson, Johnson, and Roos (2005) where the authors examine the effects of customer satisfaction and commitment on retention and find that overall satisfaction is a significant predictor of loyalty (operationalized in this paper as reduced churn).

The context of mobile telecommunications is an important one as mobile devices have become ubiquitous in everyday life. There is an explosion globally in the use of handheld electronic communication devices, such as mobile phones, digital music players, and other handheld Internet accessible devices. The large number of adopters of these devices and related services indicates a huge potential for mobile electronic communication and promotion and the delivery of mobile electronic services (Shankar et al. 2010). Mobile marketing has therefore increased in popularity in recent

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<http://dx.doi.org/10.1016/j.intmar.2012.09.003>

years where consumers are involved in two- or multi-way communication and promotion of an offer between a firm and its customers through a mobile medium, device, channel, or technology.

As consumer demand for mobile services increases globally and firms (some of which include Vodafone and T-Mobile) respond to such opportunities by becoming more global, examining cross-national differences in consumer attitudes and behaviors becomes a topic of considerable relevance. Researchers, managers and corporations have become closely interested in determining the sources and consequences of cross-national differences in consumer satisfaction and loyalty. Despite this increased interest however, the majority of studies in marketing have focused on examining these links within single industries and single countries, or at best compared differences between two countries. Therefore, studies examining cross national differences is limited. Those cross cultural studies that do exist tend to draw upon Hofstede's cross cultural dimensions (Hofstede 1983; Hofstede 1994) to examine the impact of culture on the relationships (Donthu and Yoo 1998; Furrer, Liu, and Sudharshan 2000), with comparisons across limited number of countries (Patterson and Mattila 2008; Winstead 1999). This research extends the satisfaction and loyalty literature in the mobile telecommunications industry by investigating the moderating effects of cultural dimensions in creating customer loyalty by employing an extensive data set from a diverse sample of eight countries.

In summary, this research contributes to the literature by extending the variables previously used in satisfaction studies by examining the moderating role of cultural dimensions (using dimensions from Inglehart and Baker (2000), i.e., traditional vs. secular-rational values, and survival vs. self-expression values) on loyalty intentions in the context of mobile telecommunications services. This research provides important insight regarding the ability to generalize this chain of effects across countries with significant differences in cultural conditions. Furthermore, it has important implications for managers of multinational companies or managers of companies that have plans to expand their business internationally. The potential growth in Asian economies (e.g., China, Hong Kong, Japan, Korea, Singapore, and Taiwan) as well as in emerging and developing economies has not gone unnoticed by many US and European managers targeting a greater piece of the pie. These countries however, differ substantially in terms of cultural dimensions from the US and other Western countries such as those located in Europe. In particular, managers must recognize that the cultural landscape within a nation will condition the satisfaction of consumers within that market, and therefore impact their prospects for creating customer satisfaction and loyalty.

## Theoretical Background

### *Global Mobile Telecommunications Industry*

The mobile telecommunications industry has experienced expansive growth since its infancy in 1946 when the first mobile telephone system (MTS) was offered to consumers in only 25

cities in the US (Papadimitriou et al. 2003). The rate of growth increased remarkably, starting in the 1990s when the first generation (1G) voice-only analog systems were replaced with their subsequent counterparts of second generation (2G) digital systems offering additional features such as text messaging to subscribers. With the rate of convergence<sup>1</sup> that has occurred, especially over the past decade, and increased consumer demand, the telecommunications infrastructure (including hardware and software) has undergone several changes and upgrades as 1G systems have evolved into 4G and beyond. A recent study by the The World Bank (2012) states that “around three-quarters of the world's inhabitants now have access to a mobile phone,” an indicator of the extremely prolific nature of these devices.

The information technology industry in general, including the mobile telecommunications sector, possesses a unique and under-investigated set of factors that impacts consumers and shapes their behaviors compared to other traditional services such as banking and retail. One research finding related to the area of mobile telecommunications suggests that retaining customers is more crucial than attaining new ones due to increased market saturation (Lee 2010), making the contribution of this particular research even more relevant. Furthermore, there are cross national differences in access to, growth of and consumption of information technology. Two of the largest consumers of mobile services today are China and India. Globally, the number of mobile devices connected to the Internet is projected to increase to ten billion by the year 2016 as specified in a press release by CISCO (2012). Also, a recent study related to the Information technology sector focusing on Internet search engines found that cultural, behavioral, and economic factors cause differences in the way that Chinese and Western Europeans perform search for information before completing a purchase (Vuylsteke et al. 2010). Furthermore, other studies have found cross cultural differences in E-service quality perceptions, online advertising effectiveness, online review usage and purchase influence and interactive review feature implementation (Brettel and Spilker-Attig 2010; Kim and Kim 2010; Park and Lee 2009; Yun, Park, and Ha 2008). Focusing on youth consumers, one study empirically tests a mobile technology adoption model using data collected in both an established (U.S.A.) and an emerging market (Pakistan) and finds similarities and differences across these two markets (Sultan, Rohm, and Gao 2009). The prevailing results from these studies point to the fact that users of information technology in general have some unique patterns of behavior compared to consumers of traditional services that need to be taken into account when managing for loyalty cross-culturally, especially given the projected expansion of the mobile telecommunications sector.

Furthermore, mobile technology is changing the way companies think of and implement marketing (Shankar et al. 2010) making the context of the current study relevant and important. Due to the time-sensitive and location-sensitive nature of the mobile medium and devices, mobile marketing has the potential to

<sup>1</sup> Convergence is a term that describes the unification of technologies to offer different information services through a single device or system (Aksoy and DeNardis 2007).

change the paradigm of how marketing is able to reach and touch the customer. Since the mobile device stays with the consumer, reach can be anywhere, anytime. Furthermore, mobile marketing is a form of two- or multi-way communication (Shankar and Balasubramanian 2010) in which mobility and the personal nature of the mobile device distinguish it from other electronic devices such as the television (TV) and the personal computer (PC) and other channels, with important implications for marketers.

### *Impact of Customer Satisfaction on Loyalty Intentions*

There is a large body of research that demonstrates the favorable responses that customer satisfaction is likely to elicit. Customer satisfaction has been found to have an overall positive effect on a company's relationship with its customers (Bolton, Lemon, and Verhoef 2004). More specifically, research has found that customer satisfaction has a measurable impact on purchase intentions (Bolton and Drew 1991; Larivière 2008), customer retention (Mittal and Kamakura 2001; Oliver 1980; Yi 1990), reduced customer defections (Anderson 1996), share-of-wallet (Coil et al. 2007; Keiningham, Perkins-Munn, and Evans 2003), increased receptiveness to cross selling efforts (Fornell 1992), reduced complaints (Bolton 1998; Fornell 1992) and spreading of word-of-mouth (Anderson 1998).

Furthermore, there is substantial evidence to suggest that the strength of a firm's customer relationships is an important indicator of firm performance (Amber et al. 2002; Bell et al. 2002; Berger et al. 2002; Blattberg and Deighton 1996; Hogan, Lemon, and Rust 2002; Rust, Lemon, and Zeithaml 2004). Longitudinal examinations of customer satisfaction on other performance measures have also similarly found a positive relationship with customer retention (Bolton 1998), firm revenues (Gruca and Rego 2005; Ittner and Larcker 1998), and shareholder value (Anderson, Fornell, and Mazvanchery 2004; Fornell 2003; Fornell et al. 2006; Gruca and Rego 2005).

Given that the current study operationalizes loyalty in terms of loyalty intentions, i.e., recommend intention and repurchase intention, and based on the overwhelming evidence from prior studies indicating the positive impact that satisfaction has on customer purchase behaviors, we would expect the following effect on customer loyalty intentions (see Fig. 1).

**H1.** Overall satisfaction will be positively related to loyalty intentions.

### *Moderating Impact of Culture Variables on the Customer Satisfaction and Loyalty Intentions Linkage*

For many of the decisions we make, our cultural background and learning inevitably play an important role. We interpret information and formulate our responses based on the web of cultural networks that shape our thinking. Hofstede (1994, p 4) defines culture as “the collective programming of the mind which distinguishes the members of one group or category of people from those of another” which has the potential to effect consumption behavior as well.

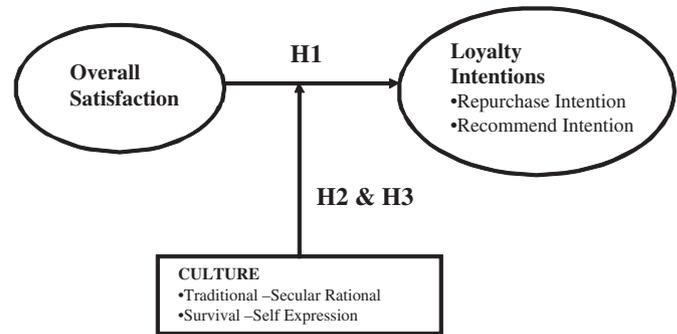


Fig. 1. Theoretical model.

A large body of research has confirmed the importance of culture to effective marketing across national boundaries, discovering a link between it and a range of relevant consumer intentions and behaviors. Prior research for instance finds a link between culture and customer satisfaction (Khan et al. 2009), consumer tipping behavior (Lynn, Zinkhan, and Harris 1993), perceptions of service quality (Furrer, Liu, and Sudharshan 2000; Mattila 1999), the relationship between price and perceived quality (Jo and Sarigollu 2007), between perceived service quality and satisfaction (Reimann, Lunemann, and Chase 2008), complaint behavior (Liu and McClure 2001), consumer expectations (Donthu and Yoo 1998; Tsikriktsis 2002), sensitivity to prices (Ackerman and Tellis 2001), brand loyalty intention (Lam 2007), and loyalty to domestic (versus foreign) retailers (Straughan and Albers-Miller 2001) among others. Given that culture impacts many consumer related behaviors, we would expect that national culture would also help explain cross-cultural differences in how satisfaction impacts loyalty.

Most cross-cultural studies in the marketing discipline have relied upon Hofstede's (1983) dimensions of culture to test its importance. Although these dimensions were uncovered following a very extensive data gathering effort, it is not without limitations. Specifically, the first of which is the age of the data for Hofstede's study. Furthermore, there are more recent papers linking other cultural classifications (Inglehart and Baker dimensions) to the current variable of interest, i.e., customer satisfaction using very large datasets (Morgeson et al. 2011). As a result, we adopt a different set of cultural classification variables to conduct our analyses, i.e., Inglehart and Baker's dichotomous measures of national-cultural: traditional vs. secular-rational values, and survival vs. self-expression values (Inglehart 1997; Inglehart and Baker 2000). To make sure we were not overlooking cultural effects stemming from the two different cultural classification approaches, we conducted a test for the overlap between Hofstede and Inglehart–Baker's dimensions. The results revealed a high degree of inter-relatedness between them, similar to the findings of Morgeson et al. (2011).<sup>2</sup> These

<sup>2</sup> Regressing the traditional vs. secular-rational values dimension on the four Hofstede predictors produces a multiple correlation of  $r=0.51$ , with Power Distance Index having the strongest influence. Likewise, regressing the survival vs. self-expression values dimension on the same four predictors produces a multiple correlation of  $r=0.97$ , with Individualism/Collectivism Index having the strongest influence.

Inglehart (1997) dimensions would be classified on two different continua that tap into different dimensions of culture. The first dimension is the extent to which a culture embraces traditional versus secular-rational values. Inglehart and Baker (2000) describe the traditional vs. secular-rational cultural values dichotomy (Morgeson et al. 2011, p 201) in the following way:

*“Although the people of traditional societies have high levels of national pride, favor more respect for authority, take protectionist attitudes toward foreign trade, and feel that environmental problems can be solved without international agreements, they accept national authority passively... They emphasize social conformity rather than individualistic striving, favor consensus rather than open political conflict, support deference to authority, and have high levels of national pride and a nationalistic outlook. Societies with secular-rational values have the opposite preferences on all of these topics.”*

Based on Inglehart and Baker’s (2000) conceptualization, individuals in traditional societies aim for collective consensus and look to minimize conflict. They value conformity over individuality. Inviting conflict or open disagreement is generally frowned upon and individuals are expected to be passive and defer to authority. This outlook is expected to be pervasive across different life domains including consumption patterns. Consumers in traditional cultures would therefore be expected to accept efforts to improve satisfaction levels from firms with much less resistance and hence be influenced by them to a greater extent. This would then translate to improved consumer loyalty. On the other hand, secular-rational societies tend to value individuality and create members of society who are not constrained by traditional structures and are open to sharing opinions. Therefore, as societies move away from traditional and toward secular-rational values, individual consumers should be more willing to reject conformity, question institutions, be more skeptical of marketing practices in general and be more able and willing to form independent critical judgments. As a result, consumers dominated by secular-rational cultural values are expected to be influenced to a lesser extent by firm efforts to improve satisfaction levels. This should in turn lower the effect of the satisfaction experience on their loyalty intentions. Based on these arguments, the following hypothesis is set forth regarding the impact that traditional–secular-rational values are expected to have on the satisfaction–loyalty linkage:

**H2.** Satisfaction will have a weaker effect on loyalty intentions in countries with secular-rational values.

The second dichotomy of cultural values that Inglehart and Baker (2000) propose is survival vs. self-expression values. This can be described (Morgeson et al. 2011, p 201) in the following way:

*“Societies that emphasize survival values show relatively low levels of subjective well-being, report relatively poor health, are low on interpersonal trust and relatively*

*intolerant of outgroups, are low on support for gender equality, emphasize materialist values, have relatively high levels of faith in science and technology, are relatively low on environmental activism, and relatively favorable to authoritarian government. Societies high on self-expression values tend to have the opposite preferences on these topics.”*

Furthermore, in survival dominated cultures, financial well being is much more uncertain causing individuals to cling to traditional gender roles, and emphasize more conservative norms in an attempt to increase predictability in an uncertain world. This leads individuals to be much less trusting towards out-groups including large corporations. In self-expressive societies however, contrary to survival dominated societies, individuals have high degrees of physical and economic security and therefore greater levels of interpersonal trust. As a result, societies high on self expressiveness are also known to be more accepting of diversity and out-groups and much more liberal in their outlook. They also hold stronger perceptions of general reported well-being which is linked to more happiness and satisfaction with different aspects of their lives. In self expression dominated cultures, such higher levels of trust and general openness would be expected to extend beyond personal relationships and apply to consumption related behaviors as well. For these reasons, as societies move away from survival and toward self-expressive values, consumers would be more receptive to firm efforts aimed at improving satisfaction which would in turn have a stronger effect on increasing loyalty intentions. Based on these arguments, the following hypothesis is set forth regarding the impact that survival–self-expressionist values is expected to have on the satisfaction–loyalty linkage:

**H3.** Satisfaction will have a stronger effect on loyalty intentions in countries with self expressionist values.

## Methodology

### Data

Data for the analysis were collected by a large marketing research firm in its annual global norms survey and includes 3,393 responses from mobile telecommunications customers in eight countries: Australia (n=401), Brazil (n=409), Canada (n=462), China (n=406), France (n=426), Spain (n=423), UK (n=406), and USA (n=460). The countries were selected for inclusion in the study with the purpose of creating a diverse set that corresponds to varying levels of the Inglehart–Baker cultural dimensions. Within each country, survey respondents were members of nationally representative online panels, balanced on official census demographics. The data were collected as part of a third party online source panel actively managed, continuously refreshed and compliant with EFAMRO Access Panel rules and ESOMAR regulations. These are double opt-in panels in which respondents are required to complete an online recruitment survey (and agree to the terms and conditions of membership in the panel) and then respond to an opt in email. Panel members are incentivized for their participation in surveys.

For the target population of cellular telephone subscribers, representative quotas were developed based on sub-populations of each country's panel. To qualify for inclusion, respondents had to currently own a mobile phone. Questions were then asked regarding their primary mobile phone service provider—respondents were clearly instructed to respond regarding the company that provides the network coverage and not the company that makes the mobile phone handset. Overall, respondents were 47% male, 53% female and well-represented across age ranges (38% 18–34, 47% 35–54, 15% 55 and up).

### Measures

#### Loyalty Intention

The dependent variable in the analysis is an index comprised of two measures: (1) a 5-point, labeled repurchase intention scale (5 = Definitely will, 4 = Probably will, 3 = Might or might not, 2 = Probably will not, 1 = Definitely will not) and (2) an 11-point anchored recommendation intention scale (0 = Definitely will not recommend, 10 = Definitely will recommend). The two constitutive scales were standardized and then averaged to create the final loyalty intention scale. Cronbach's alpha for the standardized components is .71.

#### Overall Satisfaction (SAT)

Respondents were asked to rate their satisfaction with their mobile telecommunications service provider on a scale of 1 = "completely dissatisfied" to 10 = "completely satisfied."

#### Cultural Variables

Inglehart and Baker's traditional vs. secular-rational and survival vs. self-expressive culture variables were appended to the dataset. The data are publicly available through the "World Values Survey" (WVS) website (<http://www.worldvaluessurvey.org/>) for all of the countries in the sample. These cultural indicators – each based on five survey items – reflect national-level factor loadings from a case-level principal component factor analysis performed by Inglehart and Baker (2000). The resulting factors reflect "low to high" results for each country, from traditional (low) to secular-rational (high), and from survival (low) to self-expression (high) values. Fig. 2 provides a visual representation of how the countries in our sample fall out along these dimensions.

Descriptive statistics and also correlations between variables included in the study can be found in [Appendices A and B](#).

### Method

To test the hypothesis that satisfaction has different effects on loyalty intentions dependent on national levels of survival/self-expression values, we conducted ANCOVA tests positing loyalty intentions as our dependent variable, overall satisfaction as our independent variable, with ordinal groupings of survival/self-expression as our categorical covariate. Countries in the sample were divided into terciles and quartiles based on and their relative levels of self-survival/self-expression and interactions between overall satisfaction and survival/self-expression were

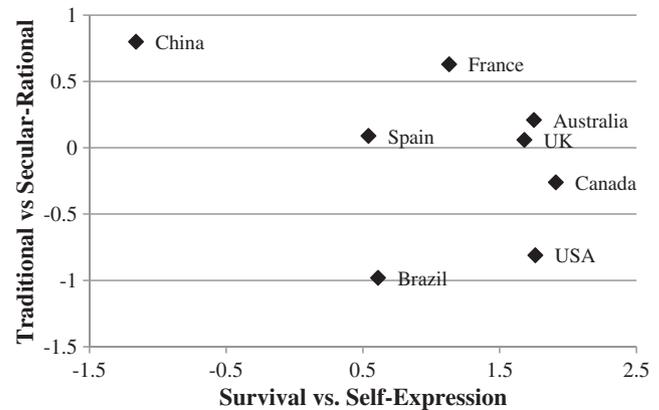


Fig. 2. Traditional vs. secular-rational and survival vs. self-expression values by nation.

regressed against the loyalty intention variable. The different approaches to categorization was conducted to demonstrate the robustness of the results with broader versus more granular classifications. Categorization of the countries into terciles and quartiles are presented in [Table 1](#).

### Analysis and Results

Results of the ANCOVA analyses are presented in [Table 2](#). Although the fixed effect for country is significant, the traditional/secular-rational values variable had no statistically significant impact on the model and so it was dropped from further analyses. [H2](#) is therefore not supported. The remainder of the analysis and results section will therefore focus only on the second cultural classification i.e., survival/self-expression. In both the quartile and tercile versions of the model, the main effect of overall satisfaction is very strong relative to other effects in the model providing support for [H1](#). This finding is in line with results from prior research. The impact of the survival/self-expression categories is demonstrated through the statistically significant ( $p < .01$ ) interaction with overall satisfaction in both the tercile and quartile classification versions. This robust finding across models provides support for [H3](#). Satisfaction has a greater impact on loyalty intentions when countries are higher on the survival/self expression continuum.

To gain deeper insight into the significant interaction effect proposed in [H3](#), we examine individual comparisons of the survival/self expression using quartile classification to determine

Table 1

Countries in sample ranked into quartiles and terciles by survival/self-expression.

Country	Survival/self-expression score	Quartile	Tercile
Canada	1.91	Top	Top
US	1.76	Top	Top
Australia	1.75	Upper middle	Top
UK	1.68	Upper middle	Middle
France	1.13	Lower middle	Middle
Brazil	.61	Lower Middle	Bottom
Spain	.54	Bottom	Bottom
China	-1.16	Bottom	Bottom

Table 2  
Results of ANCOVA tests: overall satisfaction by levels of survival/self-expression on loyalty intention.

Dependent variable and effects	4 Levels of survival/self-expression		
	F(11,3381)	p Value	Partial $\eta^2$
Loyalty intention ( $R^2 = .663$ )			
Main effects			
Country	33.83	<.0001	.038
Overall satisfaction	5710.63	<.0001	.628
Survival/self-expression (quartiles)			
Two-way interaction			
Overall satisfaction $\times$ survival/self-expression (quartiles)	4.08	.007	.004
Dependent variable and effects	3 Levels of survival/self-expression		
	F(10,3382)	p Value	Partial $\eta^2$
Loyalty intention ( $R^2 = .662$ )			
Main effects			
Country	33.66	<.0001	.047
Overall satisfaction	5482.27	<.0001	.618
Survival/self-expression (terciles)			
Two-way interaction			
Overall satisfaction $\times$ survival/self-expression (terciles)	4.39	.012	.003

the point at which survival/self-expression appears to alter the effect of overall satisfaction on loyalty intentions (Table 3). In each comparison with the bottom quartile (comprised of respondents in Spain, China), we see significant differences, whether we are contrasting the bottom quartile solely with the top quartile or the bottom quartile vs. everything above it. In fact, the largest contrast occurs when comparing the bottom quartile to the top 75% collectively. In contrast, comparisons between the bottom half (i.e., bottom two quartiles) and either the top quartile alone or versus the top half results in no statistically significant differentiation. Thus, the moderating impact of satisfaction on loyalty intentions kicks in at the point where countries transition from being very high survival/very low self expression (bottom quartile) to moderate/high on the continuum (top, top half or top 75%).

In Table 4, we perform a similar battery of tests looking at the various comparisons that can be made across and between terciles. Again we find that the relevant point of differentiation is at the bottom of the distribution, with the most evident difference between the bottom tercile and the top two-thirds. In both the tercile and quartile models, there does not appear to be significant differentiation between the very top and upper middle levels of survival/self-expression on the impact of overall satisfaction on loyalty intentions. Once again the

Table 3  
Results of quartile comparisons of interaction of overall satisfaction  $\times$  survival/self-expression on loyalty intention.

Comparison	Estimate	Standard error	t Value	Pr> t
Top quartile vs. bottom quartile	.035	.014	2.41	.016
Top half vs. bottom quartile	.077	.026	2.91	.004
Top 75% vs. bottom quartile	.126	.038	3.35	.001
Top quartile vs. bottom half	.019	.023	.82	.411
Top half vs. bottom half	.027	.020	1.31	.189

Table 4  
Results of tercile comparisons of interaction of overall satisfaction  $\times$  survival/self-expression on loyalty intention.

Comparison	Estimate	Standard error	t Value	Pr> t
Top third vs. bottom third	.023	.012	2.03	.043
Top two-thirds vs. bottom third	.063	.022	2.89	.004
Top third vs. bottom two-thirds	.007	.021	.35	.730

moderating impact of satisfaction on loyalty intentions kicks in at the point where countries transition from being very high survival/very low self expression (bottom tercile) to moderate/high on the continuum (top third or top two thirds). These results provide further support for H3 and also indicate a threshold effect when it comes to the moderating impact of culture on the satisfaction–loyalty intentions linkage.

The graphical presentation of the interaction effect supports this conclusion. Fig. 3 presents a visual depiction of the slope of overall satisfaction on loyalty intentions, for high, medium and low (tercile) survival/self-expression countries. Examining the graph in greater detail it is clear that the slope of the line depicting the impact of satisfaction on loyalty intentions for those cultures in the highest tercile of survival/self-expression values is steeper compared to the slope of the line for those in the lowest tercile. The differences in slope are statistically significant.

Conclusions, Managerial Implications and Limitations

This research contributes to both theory and managerial practice in several important ways. The results indicate that, using our eight country dataset for global mobile telecommunication services, satisfaction is a significant determinant of a consumers’ likelihood to recommend and repurchase a product/brand. Furthermore, some cultural variables turn out to be important in the satisfaction loyalty linkage whereas others do not. Although traditional/rational-secular values did not appear to

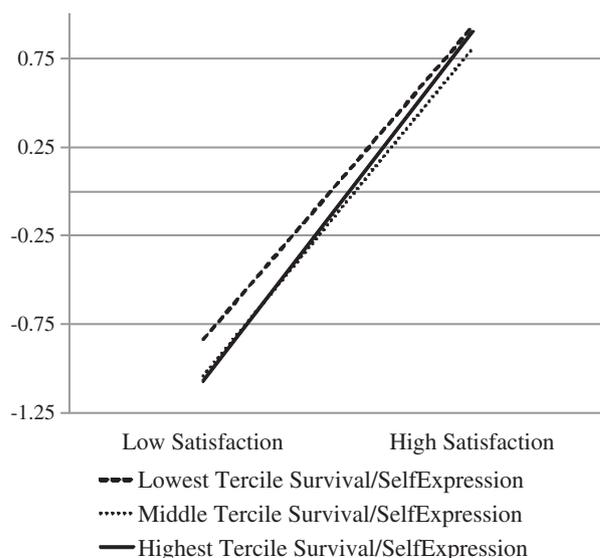


Fig. 3. Comparison of slopes of overall satisfaction against loyalty intention by high, middle versus low survival self-expression.

have a significant moderating effect, survival/self-expression was found to impact the relationship between satisfaction and loyalty intentions. These results have several important theoretical and managerial implications.

First, in line with prior research, this suggests that creating satisfied customers is still a very important strategic imperative to get customers talking about your company and also to get them to come back. This implies that to create stronger loyalty, it is important to help develop the bond between the customer and the product/company. This can be achieved by building more direct relationships with customers (Gustafsson, Johnson, and Roos 2005). In the context of this study (i.e., mobile telecommunication services), however, the providers do not have many occasions to meet and greet their customers especially in person, as compared with other services like healthcare, restaurants, hairdresser, etc. where the providers interact more frequently with their customers face to face. In addition, most mobile shops sell mobile phones and telecom services from different providers simultaneously making it even more difficult to promote specific brands and to build direct relationships. Hence, this presents a real challenge for telecommunication managers to find creative ways to interact with their customers in order to develop their attachment. Connecting with customers through community clubs (e.g., My Nokia) and social media like Facebook, Twitter, LinkedIn, YouTube and Netlog offer some viable opportunities for telecommunications services providers. The impact of such tools on subsequent customer loyalty offers a fruitful area for further research. Also, instilling switching costs, differentiating in order to make the competitors' offerings less attractive, creating a sense of obligation to stick with the company enhances the likelihood that customers will be loyal.

Furthermore, the results of this study have both important theoretical implications and provide substantial managerial insights to managers of global mobile services. From a theoretical perspective, this study expands the variables traditionally used in the cross-cultural marketing literature by introducing a new set of cultural variables (Inglehart and Baker 2000). From a managerial perspective, while multinational companies are constrained by the cultural and economic conditions within the countries in which they operate, managers must recognize that the cultural landscape of a nation will impact their prospects for creating customer satisfaction and loyalty. Hence, companies that (or intend to) operate in different countries could take advantage of knowing the differences in cultural values among countries by including them into their country-specific marketing campaigns and decision making. The higher the fit between the company and a country's culture, the higher to impact on loyalty intentions through the creation of satisfaction.

The results indicate that while traditional–secular values do not affect the relationship between satisfaction and loyalty intentions, survival–self expressionist values play an important role. Managers operating in countries characterized by survivalist values will have a more difficult time creating satisfaction and loyalty while on the other hand those that operate in nations that possess more self expressionist values will find it much easier and will need to spend less effort. This finding however is found to be non-linear and the results demonstrate threshold effects when it

comes to the cultural variables of interest. The results show that efforts to improve satisfaction levels will have increased returns only when operating in countries characterized by moderate to high self expressionist values. It is important for managers to understand how national culture has the potential to affect consumer behavior outcomes.

In sum, the results of this study have implications for managers of multinational companies. Typically, a multinational company develops its firm strategy from global headquarters. Our results clearly demonstrate that multinational companies can take advantage of taking cultural differences into account in order to fine-tune their marketing strategies and campaigns that aim to maximize customer loyalty when conducting business in other countries. In addition, our findings are also pertinent to companies that want to expand by globalization. The potential growth in Asian economies (e.g., China, Hong Kong, Japan, Korea, Singapore, and Taiwan) and in emerging and developing economies (e.g., Brazil, Ghana, Republic of Congo, Uruguay, and Zimbabwe) has not gone unnoticed by many US and European managers. Our analysis sample contains a balanced mix of countries that not only differ in the cultural dimensions, but also show significant differences in economic growth rates. Countries like China and Brazil are fast growing economies as opposed to the US, Australia, Canada and European countries. These emerging and developing countries have maintained high growth rates for several decades, and this trend appears to continue into the future (Economic indicators for year 2010 and forecasts until 2016: <http://www.economywatch.com/economic-statistics/>). Fig. 2, however, reveals that these same countries often have quite opposite cultural values compared to the countries with lower growth potential. Finally, our results also provide insight for small and medium-sized enterprises (SMEs), who often do not have large marketing research budgets to conduct surveys across different countries. In a globalized world, SMEs need to be able to confront an increasing competition from developed and emerging economies and take advantage of new market opportunities these countries provide.

Although the current study utilizes a very large dataset encompassing eight countries, there are several important limitations that should be noted. First, the research presented focuses on a single industry. Therefore, it is important to note that the findings may not be generalizable to other industries that have very different competitive dynamics both within industry and also between nations. For instance in the mobile telecommunications industry, consumers have binding contracts that require them to stick with certain providers for predetermined timelines. While it was not possible to include such variables into the current model, future research should investigate the incremental impact of such variables. The results, however, may be applicable to other industries with similar dynamics to the industry under investigation (e.g., online services, etc.). In industries where there is a greater degree of face-to-face interaction between employees and customers (e.g., retail, restaurants, banking, etc.) the traditional vs. secular-rational cultural dimension may significantly impact the relationship between satisfaction and loyalty intentions. Future research should investigate the applicability of these findings to other industries.

Another important limitation is the cross-sectional nature of the data and as such conclusions of causality cannot be conclusively made. Future research should explore these relationships over time.

## Appendix A. Descriptive Statistics

Label	N	Mean	Std. dev	Minimum	Maximum
Loyalty intention	3393	.00	1.00	-3.47	1.29
Overall satisfaction	3393	7.15	2.03	1.00	10.00
Survival/self-expression	3393	1.05	.96	-1.16	1.91
Traditional/secular-rational	3393	-.05	.59	-.98	.80

## Appendix B. Correlation Matrix

Pearson correlation coefficients, N=3393				
Prob> r  under H0: Rho=0				
	Loyalty intention	Overall satisfaction	Survival vs. self-expression	Traditional vs. secular-rational
Loyalty intention	1.00	.800	-.175	.069
		<.0001	<.0001	<.0001
Overall satisfaction		1.00	-.067	.002
			<.0001	.8947
Survival vs. self-expression			1.00	-.437
				<.0001
Traditional vs. secular-rational				1.00

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