



Competitiveness vis-à-vis service quality as drivers of customer loyalty mediated by perceptions of regulation and stability in steady and volatile markets



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ABSTRACT

The purpose of this research is to investigate predictors of customer loyalty in order to identify alternatives to customer satisfaction with service quality, which has been traditionally accepted as the primary predictor of customer loyalty, particularly for services. A stratified sample of bank customers was surveyed to collect information on customer perceptions and behaviors in relation to satisfaction with service quality, competitiveness, risk, regulation, stability and loyalty. Partial least squares path modelling (PLSPM) was applied to develop loyalty models for a steady market (Australia) and a volatile market (Greece). This study's empirical findings support theoretical arguments for the inclusion of customer perceptions of competitiveness in loyalty modelling. Perceptions of regulation and stability intervene in the relationship between drivers of loyalty and loyalty itself. For bankers, the study emphasizes the need to move away from customer satisfaction with service quality to explain customer loyalty, towards focusing efforts on achieving relative superiority in competitiveness, namely competitive productivity and products. Profiling customers based on their perceptions of a bank's competitiveness can provide additional explanatory power beyond traditional satisfaction based loyalty models. Services marketing has focused on the service components, and there is no doubt about its crucial role. But given this focus, other factors, such as the actual product component, have been somewhat overlooked in services research. The study makes a unique contribution to understanding and modelling customer loyalty by demonstrating the importance of the inclusion of customer perceptions of other factors as appropriate to market conditions.

1. Introduction

The evolution of customer loyalty in terms of how it is predicted and explained has received massive attention in the marketing literature. The focus in explaining loyalty has been on customer demographics, such as age, gender or cultural background, and customer satisfaction, specifically with service quality (Baumann, Burton, Elliott and Kehr, 2007) measured by the SERVQUAL scale (Parasuraman et al., 1991). As a result, the literature is rather 'stuck' in the traditional 'satisfaction leads to loyalty' narrative. However, Kumar et al. (2013) conclude in their literature review of customer loyalty research that many research papers demonstrate that the effect of satisfaction on loyalty is in fact weak, suggesting an exploration into new drivers of loyalty. Further, the services marketing literature has given only minimal attention to

the complexity of the often non-linear relationship (Baumann et al., 2012b) between satisfaction and loyalty; a relationship that also suggests that satisfaction alone cannot fully explain loyalty. For example, in the airline industry, low cost carriers typically have very low satisfaction levels, but repeat purchasing is astonishingly high. At the same time, for full service airlines, satisfaction levels are much higher but these carriers are losing market share.

Such complexity in consumer behavior is not well understood, and we want to shed light on this phenomenon and explore the explanatory potential of factors beyond customer satisfaction with service quality. We argue that customer satisfaction with service quality as measured by SERVQUAL is not a sufficient predictor of customer loyalty because satisfaction with service quality is considered in isolation, as if other factors, such as competitiveness, do not exist (Baumann et al., 2016).

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In extending the modelling of customer loyalty to include competitiveness, this study for the first time combines two separate streams of business literature: the measurement and prediction of customer loyalty from the marketing literature and the Harvard based Porter school of competitive advantage from the business literature (Porter, 1985).

Whilst we primarily examine the association between customer perceptions of competitiveness and customer loyalty, we also explore other factors that have been overlooked in the literature, despite the fact that they have been found to add explanatory power in previous loyalty research (Baumann et al., 2012b). Specifically, we examine the role of customer perceptions of risk, regulation and stability to further explain customer loyalty in the context of retail banking and financial services. By utilizing separate samples of Australian and Greek respondents, we compare the effects of perceptions of these factors in steady and volatile markets to provide an understanding of the role that actual market volatility plays in influencing customer loyalty in this context. These markets were chosen because of the Australian market's demonstrated stability in its resilience to the Global Financial Crisis (GFC) and Greece is a market characterized by high volatility similarly magnified in the GFC (Baumann and Valentine, 2010). The data consist of a stratified sample of bank customers from each market. Given the sample size is 97 from Australia and 109 from Greece the modelling applies Partial Least Squares (PLS) following Helm, Eggert and Garnefeld (2009).

Our approach is based on seminal work on customer loyalty measurement that utilizes both current behavioral loyalty and future intentions (e.g. Baumann et al., 2007, Baumann et al., 2011). In terms of predictors, for customer satisfaction with service quality we use the classic SERVQUAL scale as originally introduced by Parasuraman and his colleagues (see, e.g. Parasuraman et al., 1991). For competitiveness predictors, we distil the competitiveness concept into two distinct dimensions, the first being the newly introduced competitive productivity paradigm (Baumann and Pintado, 2013) evaluated through customer judgment of firm performance in the key areas of competitiveness and the second being the price point competitiveness represented by competitive products offered by service providers (Edvardsson et al., 2000). We also test perceived risk of the firm's bankruptcy as a predictor of customer loyalty. In addition, we explore the role perceptions of regulation and stability at industry and country level (Northcott, 2004). Our work offers a new perspective in researching and achieving customer loyalty by understanding the interplay between service quality, competitiveness and other factors and how this interplay varies depending on whether the market is steady or volatile.

In the literature review following this section, we summarise the historical trajectory of customer loyalty modelling, including the origins and use of SERVQUAL. We also present evidence from the literature to support the inclusion of other factors in loyalty modelling, particularly competitiveness, leading to the presentation of the hypothetical model and hypotheses for this study. Subsequent sections describe and present our methodology and results. The final two sections of the paper discuss the extent to which the hypotheses are supported, including variations between the two markets, and draw some final overall conclusions, particularly in relation to future research and business practice.

2. Literature review

Customer loyalty theory has developed over many years of researching consumer behavior such as shopping habits or tenure for services. The theory endeavors to determine what drives loyalty in customers. If predictors of loyalty are well understood, this can be a powerful tool for establishing and maintaining customers. While the

common practice is to measure consumer perspectives of service and product quality as predictors of customer loyalty, few studies have empirically examined perceptions of performance *relative* to competitors. Thus whilst, the marketing literature implies there is a link between competitiveness and customer loyalty, it does not generally provide empirical evidence. In addition, other contextual factors have been overlooked in the literature, despite the fact that they have been found to add explanatory power in previous loyalty research (Baumann et al., 2012b, 2012a). In the following sections, we review the literature on conceptualization and measurement of customer loyalty, potential drivers of customer loyalty, as well as the role of perceptions of regulation and stability as potential mediators in the formation of customer loyalty.

2.1. Customer loyalty

The marketing literature has come to conceptualize measures of customer loyalty as either behavioral or attitudinal (Dick and Basu, 1994; Oliver, 1999). These two dimensions of loyalty were first introduced by Day (1969), who recognized that purchase patterns (behavioral loyalty) cannot distinguish between true loyalty and spurious loyalty resulting from lack of choices or mere convenience. What seems to have emerged from this debate within the literature is that both behavioral and attitudinal measures of loyalty are valuable and pertinent. Recent studies use both attitudinal and behavioral measures to successfully extract meaningful indicators of customer loyalty (Baumann et al., 2007; Kassim and Abdullah, 2010; McMullan, 2005). A new perspective has been offered by conceptualizing these two dimensions of loyalty as current behavioral loyalty and future intentions (Baumann et al., 2011) and this study follows this approach. For the purpose of this paper, the two dimensions of loyalty are modelled independent of one another, because the aim is to probe the effects of the predictors on the two dimensions separately (Raza et al., 2012; Um et al., 2006; Zeithaml et al., 1996).

2.1.1. Behavioral loyalty

The concept of behavioral loyalty primarily refers to continuous, repeat purchases by a customer (Dick and Basu, 1994). However, some authors have found that behavioral loyalty has additional measures; for example, Kumar et al. (2013) include relationship duration, cross-buying, word of mouth (WOM) and share of wallet (SOW). SOW is often used as a measure of current behavioral loyalty in the retail banking literature and Keiningham et al. (2007) define SOW for the banking industry as the stated percentage of the customer's total assets held by the bank. Baumann et al. (2005) first used SOW as a measure of behavioral loyalty while exploring the predictors of behavioral loyalty and behavioral intentions. Cooil et al. (2007), Foscht et al. (2009), Baumann et al. (2012a) and Hamin et al. (2016) follow Baumann et al.'s (2005) use of SOW to measure behavioral loyalty in retail banking. Overall, SOW is a widely proven and accepted measure of behavioral loyalty. For behavioral loyalty in this study, we use percentage SOW measured separately for assets (savings account, mutual funds etc.) and debts (credit card, mortgage, loans etc.) and hypothesize that this will be a dependent variable affected by the factors we are investigating.

2.1.2. Future intentions

Reichheld (2003) states that customers' future intentions in relation to repurchasing are effective predictors of customer loyalty and growth. Other literature has recognized customers' future intentions, in terms of the likelihood to recommend or repurchase, as a form of attitudinal loyalty (Agustin and Singh, 2005; Cronin et al., 2000; Anderson and Sullivan, 1993). In this study, for future intentions we

use likelihood of purchasing a product from another bank as a dependent variable indicating customer loyalty which is likely to be affected by the factors we are investigating.

2.2. Drivers of customer loyalty

The association between customer satisfaction and loyalty has long been investigated, both within and beyond the retail banking sector.¹ For example, [Hallowell \(1996\)](#) found a positive association between satisfaction and WOM; [Moutinho and Smith \(2000\)](#) found a positive relationship between satisfaction and retention; and [Methlie and Nysveen \(1999\)](#) and [Veloutsou et al. \(2004\)](#) found a positive relationship between satisfaction and behavioral intentions. As mentioned previously, a recent study established a non-linear association between customer satisfaction and loyalty, in that dissatisfied customers' loyalty is disproportionately low and increased satisfaction will not translate to increased loyalty ([Baumann et al., 2012b](#)). This finding indicates that, whilst customer satisfaction is a driver of customer loyalty, there is scope to extend the modelling of customer loyalty to identify more sensitive drivers.

2.2.1. Service quality

[Baumann et al. \(2007\)](#) and his colleagues probed the SERVQUAL scale dimensions to explain different types of loyalty such as WOM and short and long term future intentions to remain a customer ([Baumann et al., 2007](#)). Other studies have focused on the potential of service quality to explain loyalty in different sectors. For example, in the hospitality sector, a robust model with solid Structural Equation Modelling (SEM) fit was established, with aspects of quality (cleanliness, room quality, family friendliness, customer service) in part explaining customer loyalty ([Ramanathan and Ramanathan, 2013](#)). In the airline industry, pre-flight, in-flight and post-flight service quality was found to explain roughly 7–21% of passenger satisfaction, which in turn explained nearly 26% of passenger loyalty ([Namukasa, 2013](#)).

Service quality is most typically measured using the SERVQUAL scale and the five dimensions (reliability, responsiveness, assurance, empathy, tangibles) introduced by [Parasuraman et al. \(1988\)](#). We build on this literature by using the five SERVQUAL dimensions to capture service quality as a potential driver of customer loyalty. However, given that we are critiquing the use of service quality in isolation of other factors, particularly competitiveness, as discussed below, as a driver of customer loyalty, we have adapted the SERVQUAL items in our survey to make them sensitive to competitiveness ([Appendix A](#)). For example, the item on Internet banking reads: “My main bank's internet banking system is more user friendly compared to other banks in Australia [or Greece for the Greek version]”.

2.2.2. Competitiveness

Competitiveness is a company's possession of competitive advantage. [Porter \(1985\)](#) described the aim of a competitive strategy as being to achieve a profitable and sustainable position in relation to the factors that define competition within an industry. [Barney et al. \(1989\)](#) define competitive advantage as the situation where a firm is implementing a strategy that creates value and is not being contemporaneously implemented by its current competitors. This advantage is said to be sustained if the strategy cannot be replicated, or substantively imitated, by the firm's current or potential competitors ([Rumelt, 1984](#); [Dierickx and Cool, 1989](#)), though the competitive advantage can cease to exist due to structural changes to the industry or environment ([Barney, 1991](#)). According to these conceptualizations of competitiveness, customers perceive and evaluate their service provider in comparison to other providers in the industry. Favorable comparison constitutes

competitive advantage. Therefore, competitiveness as perceived by customers is likely to contribute to the explanation of customer loyalty, beyond traditional isolated service/satisfaction quality measures. Purely looking at satisfaction with one provider and excluding competitiveness intuitively appears insufficient, and may well contribute to the limited explanatory power in previous loyalty models.

The customer loyalty literature has nearly entirely overlooked customers' perceptions of competitiveness, despite indications that this could be an important factor in loyalty formation. Of particular interest is the finding that higher performance relative to alternative suppliers has a positive effect on customer loyalty in business markets ([Bitner et al., 1990](#)). In addition, [Chen \(2015\)](#) demonstrates that the level of competition (low, moderate, high) moderates the relationship between service quality and customer loyalty, notwithstanding that *competition* is a market condition, whereas *competitiveness* is about the ability to create competitive advantage. Competitive advantage in factors such as supply chain can act as a shield against competitors and contribute to competitive advantage ([Howgego, 2002](#)). In relation to future intentions, [Kumar \(2002\)](#) establishes that customer repurchase intent is dependent on relative satisfaction compared with a previous supplier. Competitive performance is recognized as an important measure of market share and satisfaction levels ([Rust et al., 2000](#); [Ganesh et al., 2000](#)). From these studies, we can see that there is value and precedence in further investigating customers' perceptions of relative competitiveness as a driver of customer loyalty.

We use two dimensions of competitiveness; competitive productivity and competitive products. The concept of *competitive productivity* has been introduced to describe attitudes and behaviors that are adopted to continuously achieve competitiveness in dynamic market and industry conditions ([Baumann and Pintado, 2013](#)). The competitive productivity paradigm recognizes that productivity is not a factor that can be taken as an absolute measure. Competitive productivity contextualizes productivity through benchmarking to competitors, such that relatively higher levels constitute competitive advantage potentially contributing to customer loyalty. In this study, although the six dimensions of competitive productivity originally conceptualised by [Baumann and Pintado \(ibid.\)](#) were captured, only two, infrastructure (the extent to which the customers perceived their bank to focus on infrastructure) and innovation (the extent to which the customers considered their bank to be innovative relative to other banks) were found to be significant and thus included in the modelling.

The second dimension of competitiveness used in the study is *competitive products*, being the price point competitiveness of products offered by service providers ([Edvardsson et al., 2000](#)). Competitive products was measured by customers' perceptions of the competitiveness of the products offered by their bank in comparison to other domestic banks in relation to rates of return (savings and investments) and interest rates charged on loans and credit card services.

2.2.3. Risk

[Baumann et al., \(2011\)](#) find that other factors, namely risk taking behavior, variety seeking and resistance to change, have explanatory power in modelling customer loyalty in financial services. In addition, risk and risk seeking/avoidance has been associated with consumer behavior ([Gounaris and Stathakopoulos, 2004](#); [Mitchell, 1999](#)) and investment decisions (e.g. [Jacoby and Skoufias, 1997](#); [Jarrow and Turnbull, 1995](#); [Long et al., 1990](#); [Sharpe, 1964](#)). Therefore, the extent to which customers perceive their bank, and by implication their investments, to be at risk of bankruptcy is a potential predictor of customer loyalty included in our hypotheses and model.

2.3. Mediators of customer loyalty

[Northcott \(2004\)](#) examines the role of stability and regulation in banking systems, and the complexity of the interplay between these

¹ For a comprehensive meta-analysis of the antecedents of customer loyalty see [Pan, Sheng and Xie \(2012\)](#).

factors. Given this complexity, whilst perceptions of these factors may intervene in the relationship between drivers of loyalty and loyalty itself, they are not likely to be drivers of customer loyalty to the service provider per se, in the same way as customer perceptions of service quality, competitiveness and risk. Rather, they are likely to have an indirect impact. To examine this indirect impact this study tests perceptions of regulation and stability as mediators of customer loyalty in both steady (Australia) and volatile markets (Greece), where such perceptions and their role as mediators might most be expected to differ.

In this study, perceptions of regulation is the extent to which the customer perceives the regulatory framework within the country is effective in limiting risky banking activities, considered in isolation and relative to other countries. Similarly, perceptions of stability is the extent to which the customer perceives the financial system within the country to be stable and the extent to which domestic banks generally are at risk of bankruptcy, again in isolation and relative to other countries.

3. Model development

As foreshadowed in the literature review, we propose an extended model and test a set of hypotheses to explain customer loyalty, based on the following rationales arising from the literature review:

- Customer loyalty is conceptualised as two dependent variables: behavioral loyalty and future intentions (Baumann et al., 2011).
- Customer satisfaction with service quality (as measured by SERVQUAL) has been shown to be a driver of customer loyalty (ie behavioral loyalty and future intentions) (Ramanathan et al., 2013).
- Competitiveness, being favorable comparison with other providers, is a potential driver of customer loyalty (Bitner et al., 1990; Kumar, 2002).
- Competitiveness is conceptualised as having two dimensions. One dimension is Competitive Productivity, being relative customer satisfaction with attitudes and behaviors that are adopted to continuously achieve competitiveness in dynamic market and industry conditions (Baumann and Pintado, 2013). The other is Competitive Products, being relative customer satisfaction with the competitiveness of products (Edvardsson et al., 2000).
- Risk is also a potential driver of customer loyalty (Jacoby and Skoufias, 1997; Jarow and Turnbull, 1995).
- Customers perceptions of (the effectiveness of) regulation and stability are potential mediators in the relationship between (the dependent variables used to measure) customer loyalty and (their) its drivers (Northcott, 2004).

The way the model has been developed and the hypotheses worded, incorporating the mediating affects, are informed by Baumann et al. (2015). It should be noted that we use the term “impact” in the hypotheses to include positive and negative effects because the aim of our study is solely to test for fully mediated associations (partial relationships and direct effects are beyond the scope of this study). We test the model and hypotheses for steady and volatile markets. The model (Fig. 1) and hypotheses are shown below.

3.1. Hypotheses

H1 : Service quality has a significant impact on behavioral loyalty mediated by perceptions of regulation.

H2 : Service quality has a significant impact on behavioral loyalty mediated by perceptions of stability.

H3 : Service quality has a significant impact on future intentions mediated by perceptions of regulation.

H4 : Service quality has a significant impact on future intentions mediated by perceptions of stability.

H5 : Competitive productivity has a significant impact on behavioral loyalty mediated by perceptions of regulation.

H6 : Competitive productivity has a significant impact on behavioral loyalty mediated by perceptions of stability.

H7 : Competitive productivity has a significant impact on future intentions mediated by perceptions of regulation.

H8 : Competitive productivity has a significant impact on future intentions mediated by perceptions of stability.

H9 : Competitive products has a significant impact on behavioral loyalty mediated by perceptions of regulation.

H10 : Competitive products has a significant impact on behavioral loyalty mediated by perceptions of stability.

H11 : Competitive products has a significant impact on future intentions mediated by perceptions of regulation.

H12 : Competitive products has a significant impact on future intentions mediated by perceptions of stability.

H13 : Risk has a significant impact on behavioral loyalty mediated by perceptions of regulation.

H14 : Risk has a significant impact on behavioral loyalty mediated by perceptions of stability.

H15 : Risk has a significant impact on future intentions mediated by perceptions of regulation.

H16 : Risk has a significant impact on future intentions mediated by perceptions of stability.

4. Methodology

4.1. Data collection

The study involved the use of a professional data collection service to obtain a sufficient sample size and ensure high quality data was gathered from two different countries. Previous studies have successfully used professional data collection agencies and found such consumer panel data to be reliable (see e.g. Drew and Stanford, 2001; Faber et al., 1987). Following Craig and McCann (1978), the professional data collection service surveyed a stratified sample of domestic retail bank customers in Australia and Greece, representing the steady and volatile market respectively.

The data collection agency emailed the survey link to 214 panel members who qualified to participate (over eighteen years of age and a domestic retail bank customer) in accordance with the stratified sample criteria (age, income and gender). The stratified sample criteria specifies a balance of income ranges (low, middle and high), age ranges (low, middle and high) and gender (Table 1). In contrast to surveys often used, the stratified sample approach is similar to a shopping mall intercept, in that the sample is selected based on certain criteria from a near random population. This means that the response rate as a proportion of the population and non-response bias does not apply. Following data screening, the usable data were from 97 respondents in Australia and 109 in Greece (8 responses were omitted due to incomplete and or outlying data). The data were collected during 2013.

4.2. Survey design

The variables and related items are shown in Appendix A. Most of the items are statements for which respondents were required to indicate their agreement on a 7-point Likert scale, where “1= strongly disagree” and “7=strongly agree”. The exception to this is the two items for behavioral loyalty, where respondents were asked for the percen-

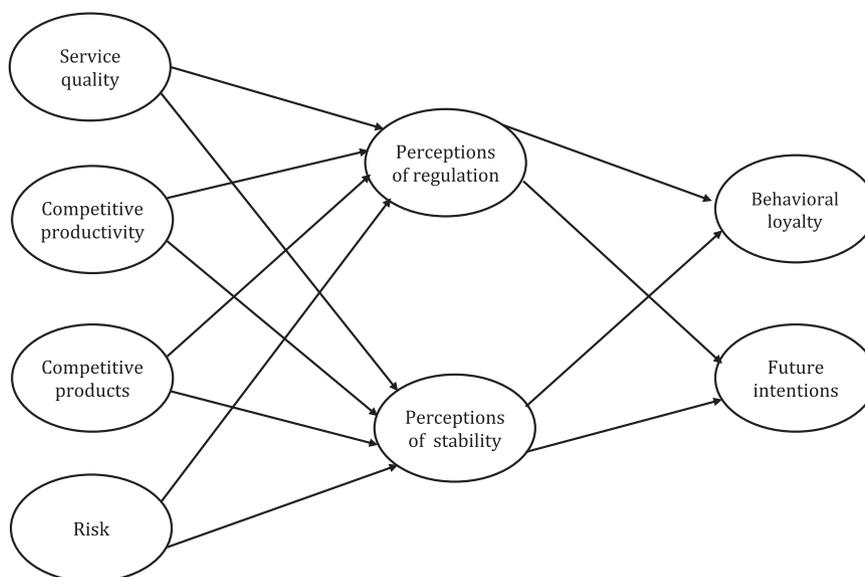


Fig. 1. Hypothetical model.

Table 1. Stratified sample.

	Australia	Greece
Income	Low: 32 respondents	Low: 38 respondents
	Mid: 34 respondents	Mid: 37 respondents
	High: 31 respondents	High: 34 respondents
Age	Low: 33 respondents	Low: 39 respondents
	Mid: 36 respondents	Mid: 37 respondents
	High: 28 respondents	High: 33 respondents
Gender	50% female respondents	50% female respondents
	50% male respondents	50% male respondents

tage SOW for both assets and debts.

Service quality (Parasuraman *et al.*, 1988) was captured using 12 items in respect of the five SERVQUAL dimensions. These dimensions are traditionally measured in *absolute* terms (i.e. detached from the competition), whereas we adapted them to make the measures *relative* to the competition. For competitive productivity (Baumann and Pintado, 2013), only two of the six original dimensions were found to be significant, infrastructure and innovation. These dimensions were captured by two items each. Competitive products (Edvardsson *et al.*, 2000) was captured by three items relating to the respondents' perceptions of the competitiveness of the products offered by their bank. Risk (Baumann *et al.*, 2012b) was captured by one item relating to perceived likelihood of the respondent's main bank going bankrupt. Perceptions of regulation and stability (Northcott, 2004) were captured by two and four items respectively. The regulation items relate to the perceived effects of the regulatory framework, and the stability items relate to perceptions of stability of the overall financial system as well as domestic banks. The two items for behavioral loyalty (Keiningham *et al.*, 2007) capture percentage share of wallet for assets and debts as described in the literature review. Future intentions (Reichheld, 2003) was captured by one item relating to the respondents likelihood of purchasing from another bank in the next six months.

5. Results

5.1. Testing measurement invariance across groups

A metric invariant test was generated from Confirmatory Factor

Analysis (CFA) model testing, with subsequent *t*-test analysis comparing the steady and volatile market model. The results (Appendix B) indicate that the metric measurement invariant criteria are generally met. Following Byrne *et al.* (1989), a result of partial measurement invariance is considered a sufficient basis for analysis. In addition, Milfont and Fischer (2010) argue that full measurement invariance is so unlikely as to be unrealistic in practice, thus partial measurement invariance is sufficient to conclude the two markets are different.

Following Chin (2010) this study uses two phases of fit measurement evaluation: measurement model evaluation and structural model evaluation. The measurement model evaluation focuses on the validity and reliability of the items used for each construct. To test the construct validity, we employed average variance extracted (AVE) as originally proposed by Fornell and Larcker (1981). Cronbach's alpha was used to examine the construct reliability. The objective of the structural model evaluation is assessment, using predictive relevance and GoF index, of the theoretical model (Akter *et al.*, 2011). Predictive relevance (Q2) assesses the predictive validity of a complex model (Stone 1974; Geisser 1975; Fornell and Cha 1994; Chin 1998). The GoF (Goodness of Fit) index proposed by Tenenhaus *et al.* (2005) assesses the global validity of a PLS based complex model.² The GOF index is the geometric mean of the average communality and average R2 for all endogenous constructs.

5.2. Measurement model: Average variance extracted (AVE)

The study tested for convergent validity using discriminant validity testing and factor loading analysis, following the AVE Method (Fornell and Larcker, 1981) as shown in Table 2. The results indicate that the value of AVE for each construct meets the expected value for discriminant validity.

Further, all items that correspond to each latent variable have factor loadings > 0.5 (Appendix C and D). These results indicate that convergent validity was achieved for all items.

In addition, Cronbach's Alpha method was employed to test the constructs' reliability (Appendix C). The tests revealed that the

² For further discussion of the suitability and application of PLS (not least vis-à-vis covariance-based structural equation modelling or CBSEM), including appropriate indicators of model fit, see for example, Henseler *et al.* (2009) and Henseler, Hubona and Ray (2016).

Table 2.
Average variance extracted (AVE).

	Steady			Volatile		
	AVE	t-values	p-values	AVE	t-values	p-values
Behavioral loyalty	0.522	15.215	0.000	0.521	13.374	0.000
Competitive products	0.642	7.468	0.000	0.726	15.542	0.000
Competitive productivity	0.691	16.529	0.000	0.774	20.360	0.000
Future intentions	0.652	4.446	0.000	0.508	11.164	0.000
Perceptions of regulation	0.663	11.424	0.000	0.754	16.483	0.000
Risk	1			1		
Service quality	0.804	24.888	0.000	0.78	26.545	0.000
Perceptions of stability	0.81	29.849	0.000	0.776	20.657	0.000

Table 3.
Stone-Geisser's Q2: Cross-validated redundancy.

	SSO	SSE	Q2≤(=1-SSE/SSO)
Behavioral loyalty	412	395.702	0.04
Competitive products	618	618	
Competitive productivity	618	618	
Future intentions	412	379.775	0.078
Perceptions of regulation	824	613.58	0.255
Risk	206	206	
Service quality	1,030.00	1,030.00	
Perceptions of stability	824	572.058	0.306

Cronbach's Alpha were, with one exception, above 0.7 which is generally considered acceptable, indicating good internal consistency. The exception is Competitive productivity with a value of 0.66 which is still above the minimally accepted threshold of 0.6 and the factor loadings are realistic for the two aggregates, Infrastructure and Innovation.

5.3. Structural model: Stone-Geisser's Q² and GoF index

5.3.1. Stone-Geisser's Q²

Stone-Geisser's Q² is indicative of the capability of a model to conduct prediction (Henseler et al., 2009). The Q² value is generated using a blindfolding procedure in PLS software (Chin, 1998). As a rule

Table 4.
Gof, SRMR, NFI.

	SSO	SSE	Q ² (=1-SSE/SSO)	R ²
Behavioral loyalty	412.000	416.546	-0.011	0.095
Competitive productivity	618.000	327.221	0.471	
Competitive products	618.000	377.401	0.389	
Perception of stability	824.000	182.621	0.778	0.355
Perceptions of regulation	824.000	331.707	0.597	0.349
Future intentions	412.000	443.160	-0.076	0.140
Risk	206.000	1.000		
Service quality	1,030.000	320.755	0.689	
Average			0.480	0.235
Goodness of Fit (GoF)				0.33541
Chi-square				795.165
NFI				0.801
SRMR				0.062

of thumb, Q² values greater than or equal to zero indicate that the model has predictive relevance (Table 3).

5.3.2. GoF index

The GoF index is bounded between 0 and 1. According to Vinzi et al. (2010) the GoF index is descriptive and hence there is no criteria for significance (Vinzi et al., 2010). However, Akter et al. (2011) calculate GoFsmall=(0.10), GoFmedium=(0.25) and GoFlarge=(0.36) for PLS model validity.

5.3.3. Standardized Root Mean Square Residual (SRMR)

The standardized root mean square residual (SRMR) is the difference between the observed correlation and the model implied correlation matrix, the average magnitude such discrepancies providing a measure of model fit. A value less than 0.10 or of 0.08 (in a more conservative version; see Hu and Bentler, 1999) are considered a good fit (Table 4).

5.3.4. Normed Fit Index (NFI)

The normed fit index (NFI) is 1 minus the Chi² value of the proposed model divided by the Chi² values of the null model. Consequently, the NFI values lie between 0 and 1, with the closer to 1 the better the fit, and values above 0.9 representing acceptable fit.

5.4. Drivers of customer loyalty

The associations between the variables in the model (Fig. 1) for steady and volatile markets are shown in Table 5.³ In addition, the path coefficients and the significance (p-values) are indicated for each market separately on Figs. 2 and 3.

For the steady market (Fig. 2), risk has a highly significant association with both perceptions of regulation and perceptions of stability and competitive productivity has a significant association with perceptions of regulation. There are no significant associations between service quality or competitive products and perceptions of regulation or stability. Perceptions of stability has a significant association with future intentions and perceptions of regulation has a significant association with behavioral loyalty.

In the volatile market (Fig. 3), competitive products has a highly significant association with perceptions of stability and a significant association with perceptions of regulation. Service quality also has a highly significant association with perceptions of regulation. There are no significant associations between competitive productivity or risk and perceptions of regulation or stability. Perceptions of regulation has a highly significant association with future intentions and a significant association with behavioral loyalty. Perceptions of stability does not have a significant association with behavioral loyalty or future intentions.

In terms of explanatory power, the R² values for perceptions of regulation have similarly high results for both markets, being 34.7% for the steady market and 33.6% for the volatile market. The R² values for perceptions of stability are also high but there is more difference between the markets, being 39.8% for the steady market compared to 23.4% for the volatile markets. The R² value for behavioral loyalty is 2.3% for the steady market and 4.6% for the volatile market. The value R² for future intentions is 5.1% for the steady market and 12.8% in the volatile market.

6. Discussion

Our study provides empirical evidence to support arguments put

³ Given that the objective of this study is to compare the drivers of customer loyalty across steady and volatile markets, the iterative approach, that is, omitting the non-significant relationships to identify the most parsimonious model, is not appropriate.

Table 5.
Drivers of customer loyalty.

	Steady			Volatile		
	Path coefficient	t- values	p-values	Path coefficient	t- values	p-values
Service quality→Perceptions of regulation	-0.072	0.631	0.528	0.364	2.638	0.009
Service quality →Perceptions of stability	-0.007	0.072	0.943	0.004	0.053	0.958
Competitive productivity→Perceptions of regulation	0.409	2.571	0.010	-0.040	0.555	0.579
Competitive productivity→Perceptions of stability	0.122	1.024	0.306	0.069	0.776	0.438
Competitive products→Perceptions of regulation	-0.028	0.331	0.741	0.234	2.126	0.034
Competitive products→Perceptions of stability	-0.083	0.797	0.426	0.381	3.877	0.000
Risk→Perceptions of regulation	0.348	3.594	0.000	0.105	1.297	0.195
Risk→Perceptions of stability	0.582	5.478	0.000	0.115	1.295	0.196
Perceptions of regulation→Behavioral Loyalty	-0.183	1.659	0.098	0.244	2.373	0.018
Perceptions of regulation→Future Intentions	-0.041	0.396	0.692	0.361	3.546	0.000
Perceptions of stability→Behavioral Loyalty	0.082	0.846	0.398	-0.118	1.263	0.207
Perceptions of stability→Future Intentions	0.248	2.140	0.033	-0.009	0.125	0.900

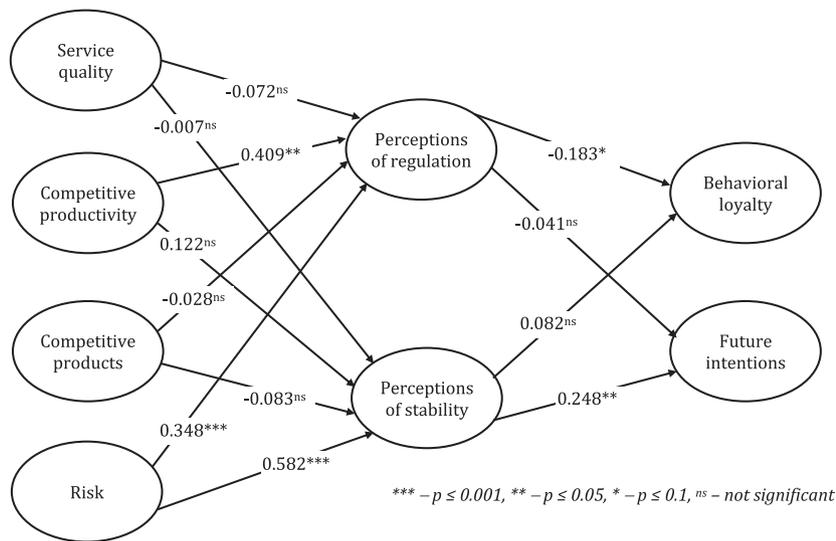


Fig. 2. Steady market model.

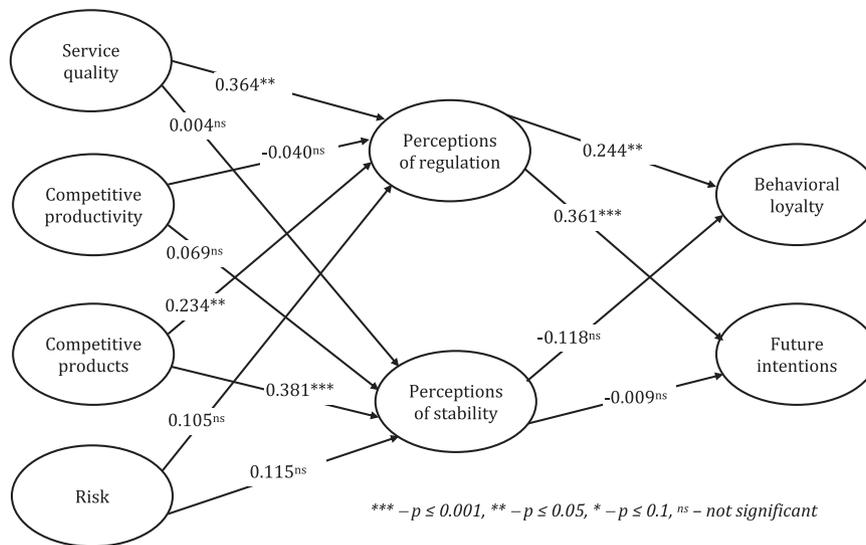


Fig. 3. Volatile market model.

Table 6.
Results for steady and volatile markets.

	Steady	Volatile
H1: Service quality has a significant impact on behavioral loyalty mediated by perceptions of regulation.	Not supported	Supported
H2: Service quality has a significant impact on behavioral loyalty mediated by perceptions of stability.	Not supported	Not supported
H3: Service quality has a significant impact on future intentions mediated by perceptions of regulation.	Not supported	Supported
H4: Service quality has a significant impact on future intentions mediated by perceptions of stability.	Not supported	Not supported
H5: Competitive productivity has a significant impact on behavioral loyalty mediated by perceptions of regulation.	Supported	Not supported
H6: Competitive productivity has a significant impact on behavioral loyalty mediated by perceptions of stability.	Not supported	Not supported
H7: Competitive productivity has a significant impact on future intentions mediated by perceptions of regulation.	Not supported	Not supported
H8: Competitive productivity has a significant impact on future intentions mediated by perceptions of stability.	Not supported	Not supported
H9: Competitive products has a significant impact on behavioral loyalty mediated by perceptions of regulation.	Not supported	Supported
H10: Competitive products has a significant impact on behavioral loyalty mediated by perceptions of stability.	Not supported	Not supported
H11: Competitive products has a significant impact on future intentions mediated by perceptions of regulation.	Not supported	Supported
H12: Competitive products has a significant impact on future intentions mediated by perceptions of stability.	Not supported	Not supported
H13: Risk has a significant impact on behavioral loyalty mediated by perceptions of regulation.	Supported	Not supported
H14: Risk has a significant impact on behavioral loyalty mediated by perceptions of stability.	Not supported	Not supported
H15: Risk has a significant impact on future intentions mediated by perceptions of regulation.	Not supported	Not supported
H16: Risk has a significant impact on future intentions mediated by perceptions of stability.	Supported	Not supported

forward in the literature review for the inclusion of perceptions of competitiveness and risk as drivers in loyalty modelling. Further, our study also supports our proposition that perceptions of regulation and stability mediate the relationship between drivers of customer loyalty and loyalty itself in the banking industry (Northcott, 2004).

The specific hypotheses were assessed based on their mediated associations between the four drivers (service quality, competitive productivity, competitive products and risk) and the two dimensions of customer loyalty (behavioral loyalty and future intentions). Only where the drivers were mediated by perceptions of regulation or stability in their association with behavioral loyalty or future intentions was the hypothesis deemed supported. As presented in Table 6 seven of the sixteen hypotheses were supported in either steady or volatile markets. For seven of the hypotheses the result is different for the two different markets, indicating that volatility has a moderating effect. Further testing of interaction effects is beyond the scope of this study with its key focus on mediating effects.

The key finding of this study is that competitiveness does drive customer loyalty in both steady and volatile markets, in line with the related findings of Bitner et al. (1990) and Kumar (2002). Competitive products performed strongly as a driver of both behavioral loyalty and future intentions in the volatile market, in both cases mediated by perceptions of regulation. In contrast, in the steady market only competitive productivity is a strong driver and only of behavioral loyalty. Again, this relationship is mediated by perceptions of regulation. It may be that in the steady market product offerings have become somewhat standardized, thus competitive products does not have a significant impact on customer loyalty. Given this, steady market customers value innovative product design and superior infrastructure, and thus competitive productivity has a significant impact on behavioral loyalty. In contrast, in a volatile market, there is more scope for gaining competitive advantage in products, and so competitive products has a significant impact on both behavioral and attitudinal loyalty. This indicates that customers in volatile markets will not remain loyal to a bank if there is a better product elsewhere. Importantly, competitive productivity does not have a significant impact on future intentions in either markets. This indicates that customers are not likely to diversify their banking relationship because of it.

In relation to other drivers of loyalty, risk is a strong driver of

behavioral loyalty and future intentions in the steady market, mediated by perceptions of regulation and stability respectively. However, risk is not a driver of loyalty at all in the volatile markets. This could be because, in the low risk, steady market, customers are risk adverse and they have less risky banks to move to if they do perceive their bank to be at risk, so risk has a significant impact behavioral and attitudinal loyalty. In contrast, in the volatile market, customers become more immune to and accepting of risk, and there may not be less risky banks to move to, so risk does not have a significant impact on loyalty. Service quality is a driver of both behavioral loyalty and future loyalty in the volatile market, in both cases mediated by perceptions of regulation, but not at all in the steady market. Again, this could be because service quality, like product design has become so standardized in the steady market as to become practically irrelevant and therefore have no significant impact on loyalty, whereas it is more relevant in the seemingly more competitive and fluid volatile market and therefore is significant.

Another key finding of our study is the role of perceptions of regulation as a mediator of customer loyalty in both steady and volatile markets. Six out of the seven supported hypotheses include perceptions of regulation as a mediator. In the steady market, perceptions of regulation mediates two out of the three significant relationships between customer loyalty and its antecedents (competitive productivity and risk). One possible explanation for this result is that prudential regulation in Australia, as the steady market, is both strict relative to other countries and highly enforced, using the ‘twin peaks’ regulation system (Hill, 2012). Further, the success of this approach has been recently highlighted through Australia’s financial system remaining steady and unscathed through the GFC. Thus, in the steady market regulation, and, by association, stability are highly visible and highly valued, and therefore are mediators of customer loyalty. In the volatile market, perceptions of regulation mediates all four of the significant relationships between customer loyalty and its antecedents (service quality, competitive products and risk). This is interesting because, in Greece, as the volatile market, in contrast to Australia, the financial regulatory systems in place have in essence failed to fully protect Greek consumers, subjecting them to widespread financial system instability (Blundell-Wignall and Slovik, 2011). Thus, it seems that whilst perceptions of regulation plays a mediating role in the formation of customer loyalty in both steady and volatile markets, it is for different

reasons. Conversely, seven of the nine unsupported hypotheses include perceptions of stability as a mediator, indicating that customers' perceptions of the stability of domestic banks/financial systems are less likely to mediate customer loyalty.

It has long been established that firm competitiveness is essential to the survival of the firm (Schumpeter, 2013), and given consumers' increasing power to compare retail banking service providers through the medium of the internet (Gray, 2011), it is ever more essential for retail banks to understand competitiveness as a driver of customer loyalty. Thus, for bankers, our finding that competitiveness does have an impact on customer loyalty emphasizes the need to move away from service quality dominated views that largely exclude competitive forces towards focusing efforts on achieving *relative* superiority in their product and service design, positioning and promotion. In other words, bankers can use our findings to firstly realize how important competitiveness is in the first place, and secondly, they can now see the effects it has on forming customer loyalty.

This study demonstrates that other factors, particularly competitiveness (competitive productivity and competitive products), are predictors of loyalty in addition to service quality in the financial services industry (Baumann and Pintado, 2013; Edvardsson et al., 2000). We anticipate that this is not only true for financial services, where we have empirically demonstrated this effect, but also for other services such as hospitality, travel, education and even medical services, with intensified competition from new key players in medical tourism in the hyper competitive East Asian markets, for instance. Our study can assist newcomers to understand competitive forces better, and can equally assist existing providers to defend their market share. The difference between losers and winners in many service industries will be a more refined understanding of competitiveness, as shown in our study.

7. Conclusion

Our study advances the general understanding of customer loyalty in financial services by the incorporation of customer perceptions of competitiveness, risk, regulation and stability, moving away from modelling customer loyalty based primarily on customer satisfaction with service quality. The key finding in this study is that competitiveness is capable of explaining customer loyalty in both steady and volatile markets for domestic retail banking. The study suggests that competitiveness in the financial services industry impacts both behavioral loyalty and future intentions mediated by perceptions of regulation. In contrast, the other hypothesized mediator, perceptions of stability played a surprisingly unimportant role, given that the study investigated customer loyalty in financial services. The study provides empirical support for theoretical arguments that service quality does not fully explain customer loyalty.

As discussed, the findings of this study in relation to the role of

competitiveness as a driver of customer loyalty are likely to extend to other service industries. Thus, there is scope for more research that investigates the role of service quality, and other factors, in conjunction with competitiveness for conceptualizing and modelling customer loyalty. This study also extends existing customer loyalty research by including perceptions of regulation and stability as mediators. However, further research is required to investigate the role of these and other (more relevant) factors in other industries, as well as financial services. For example, loyalty programs are an important instrument in retail, travel, tourism and hospitality. Furthermore, whereas previous customer loyalty studies have predominantly focused on economies in steady financial conditions (USA, UK, Europe), this study has introduced the comparison between steady and volatile financial markets. The results of this study demonstrate that a factor that is significant in one market may not be significant in another. Again, further research is required to investigate whether this is the case for other types of markets, such as the increasing important emerging markets such as China, Indonesia and India (Baumann and Hamin, 2013), as well as for other industries. Further, our study is based on cross-sectional data and there is scope to replicate our study using a longitudinal approach.

Future research involving a larger sample would be beneficial to verify our extended model. The sample size for each market in our study is around the 100 minimum suggested by Kline (2011). Our study uses PLS as "a powerful method of analysis because of the minimal demands on measurement scales, sample size, and residual distributions (Fornell and Bookstein 1982; Chin, 1998), and the validity and reliability tests did not reveal any unexplained anomalies. Admittedly, the explanatory power and our minimal sample size are a limitation of the study given the number of scale items involved.

In conclusion, the results of this study provide a more holistic comprehension of factors that determine customer loyalty. For financial services, the study suggests a new and cross-disciplinary direction for future research in customer loyalty, incorporating competitiveness, currently in the domain of the managerial literature, and financial factors, currently in the domain of the finance literature. For other (service) industries, the study suggests incorporating competitiveness with other factors as most relevant to that industry. In factoring competitive forces into marketing research and practice, marketing professionals gain insights into the market situation of the offering *relative* to the competition (Einstein Marketing), which is much more effective than traditional paradigms based on absolutes (Baumann et al., 2016).

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Appendix A. Construct Measurements

The following table presents a breakdown of latent variables, indicator variables and items employed.

Latent Variable	Indicator	Survey item (s)
Service quality (Parasuraman et al., 1991)	Tangible	<ol style="list-style-type: none"> 1. My main bank's internet banking system is more user-friendly compared to other banks in Australia/Greece. 2. My main bank's mobile banking applications are more user-friendly compared to other banks in Australia/Greece. 3. My main bank's telephone banking service is more user-friendly compared to other banks in Australia/Greece. 4. The physical facilities of my main bank are more visually appealing compared to other banks in Australia/Greece.
	Reliability	<ol style="list-style-type: none"> 1. The employees of my main bank follow my instructions more exactly compared to other banks in Australia/Greece. 2. My main bank conducts all my transactions with fewer errors compared to other banks in Australia/Greece.
	Responsiveness	<ol style="list-style-type: none"> 1. The employees of my main bank are more willing to help me compared to other banks in Australia/Greece. 2. My main bank responds to my requests more promptly compared to other banks in Australia/Greece.
	Assurance	<ol style="list-style-type: none"> 1. The employees of my main bank have the knowledge to better answer my questions compared to other banks in Australia/Greece. 2. I trust the management of my main bank more compared to other banks in Australia/Greece.
	Empathy	<ol style="list-style-type: none"> 1. The employees of my main bank give me more personal attention compared to other banks in Australia. 2. My main bank better caters to my specific needs compared to other banks in Australia.
	Competitive Productivity (Baumann and Pintado, 2013)	Infrastructure
Innovation		<ol style="list-style-type: none"> 1. The speed to market with new products and services of my main bank is more competitive than other banks in Australia. 2. The level of innovation of my main bank is higher than other banks in Australia.
Risk (Baumann, Elliott and Burton, 2011)		<ol style="list-style-type: none"> 1. My main bank is not at risk of bankruptcy
Behavioral Loyalty (Keiningham et al., 2007)		<ol style="list-style-type: none"> 1. Please enter the names of your banks and estimate the proportion of your assets held at each bank. 2. Please enter the names of your banks and estimate the proportion of your debts/loan held at each bank.
Future Intention (Reichheld, 2003)		<ol style="list-style-type: none"> 1. It is very unlikely that I will choose a product from another bank in the next six months.
Competitive Products (Edvardsson et al., 2000)		<ol style="list-style-type: none"> 1. The interest rates on the savings and investment accounts of my main bank are more competitive than other banks in Australia/Greece. 2. The interest rate on loan offerings (i.e. motor vehicle loans, mortgages) of my main bank is more competitive than other banks in Australia/Greece. 3. The credit card services (i.e. interest rate, rewards scheme) of my main bank are more competitive than other banks in Australia/Greece.
Perceptions of regulation (Northcott, 2004)		<ol style="list-style-type: none"> 1. The existing laws and financial regulations of Australia/Greece are capable of keeping risky banking activities in check. 2. The existing laws and financial regulations of Australia/Greece are more capable of keeping risky banking activities in check compared to other countries.
Perceptions of stability (Northcott, 2004)		<ol style="list-style-type: none"> 1. The financial system in Australia/Greece is stable. 2. The financial system in Australia/Greece is more stable than the financial system in other countries. 3. The banks in Australia/Greece are not likely to go bankrupt. 4. The banks in Australia/Greece are less likely to go bankrupt compared to banks in other countries.

APPENDIX B. Testing measurement invariance across groups

	Outer Loadings-diffr	t-Value	p-Value ¹
Assurance < - Service quality	0.027	0.899	0.370
CProduct1 < - Competitive products	0.058	0.353	0.724
CProduct2 < - Competitive products	0.040	0.290	0.772
CProduct3 < - Competitive products	0.153	0.967	0.335
CompetitiveValue -> Competitive productivity	0.032	0.167	0.867
Empathy < - Service quality	0.047	2.019	0.045**
FIntent1 < - Future Intentions	0.449	1.886	0.061*
FIntent2 < - Future Intentions	1.127	3.848	0.000***
HighAssets < - Behavioral Loyalty	1.670	4.253	0.000***
HighDebts < - Behavioral Loyalty	0.319	0.772	0.441
Infrastructure -> Competitive productivity	0.001	0.003	0.998
Innovation -> Competitive productivity	0.134	0.861	0.390
Regu1 < - Perceptions of regulation	0.032	0.563	0.574
Regu2 < - Perceptions of regulation	0.020	0.429	0.669
Regu3 < - Perceptions of regulation	0.202	1.415	0.159
Regu4 < - Perceptions of regulation	0.093	0.976	0.330
Sta1 < - Perceptions of stability	0.008	0.193	0.848
Sta2 < - Perceptions of stability	0.006	0.136	0.892
Sta3 < - Perceptions of stability	0.055	0.902	0.368
Sta4 < - Perceptions of stability	0.025	0.976	0.330
Reliability < - Service quality	0.026	0.884	0.378
Responsiveness < - Service quality	0.010	0.499	0.618
Tangibility < - Service quality	0.064	0.510	0.610

¹ ***- p≤0.001, **- p≤0.05, *- p≤0.1

APPENDIX C. Factor Cross Loading and Cronbach α test for Australia and Greece Model

Manifest Variable	Service quality	Competitive-productivity	Risk	Competitive Products	Behavioral Loyalty	Future Intention	Cronbach α
Australian Model							
Tangibility	0.624						
Reliability	0.940						
Responsiveness	0.962						0.940
Assurance	0.932						
Empathy	0.963						
Infrastructure		0.578					0.660
Innovation		0.995					
Risk			1.000				
CProduct1				0.960			
CProduct2				0.767			0.719
CProduct3				0.591			
Greece Model							
Tangibility	0.655						
Reliability	0.930						
Responsiveness	0.957						0.930
Assurance	0.913						
Empathy	0.930						
Infrastructure		0.739					0.755
Innovation		0.984					
Risk			1.000				
CProduct1				0.864			0.809
CProduct2				0.855			
CProduct3				0.834			

APPENDIX D. Discriminant Validity Test Using Average Variance Extracted (AVE)

Latent Variable	Service quality	Competitive-productivity	Risk	Competitive Products	Behavioral Loyalty	Future Intention	Mean Communalities (AVE)
Australian Model							
Service quality	1	0.551	0.161	0.333	0.012	0.121	0.799
Competitive-productivity	0.551	1	0.126	0.392	0.006	0.085	0.662
Risk	0.161	0.126	1	0.015	0.015	0.000	–
Competitive Products	0.333	0.392	0.015	1	0.058	0.171	0.620
Behavioral Loyalty	0.012	0.006	0.015	0.058	1	0.042	–
Future Intention	0.121	0.085	0.000	0.171	0.042	1	–
Greece Model							
Service quality	1	0.516	0.291	0.397	0.007	0.075	0.782
Competitive-productivity	0.516	1	0.203	0.251	0.003	0.054	0.757
Risk	0.291	0.203	1	0.220	0.005	0.039	–
Competitive Products	0.397	0.251	0.220	1	0.000	0.178	0.724
Behavioral Loyalty	0.007	0.003	0.005	0.000	1	0.021	–
Future Intention	0.075	0.054	0.039	0.178	0.021	1	–

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