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**Citation for published version:**

El-Manstrly, D & Harrison, T 2013, 'A critical examination of service loyalty measures', *Journal of Marketing Management*, vol. 29, no. 15-16, pp. 1834-1861. <https://doi.org/10.1080/0267257X.2013.803139>

**Digital Object Identifier (DOI):**

[10.1080/0267257X.2013.803139](https://doi.org/10.1080/0267257X.2013.803139)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Peer reviewed version

**Published In:**

Journal of Marketing Management

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## **A Critical Examination of Service Loyalty Measures**

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**ACKNOWLEDGEMENT:** The authors thank three anonymous JMM reviewers for their valuable comments and their helpful suggestions.

## A Critical Examination of Service Loyalty Measures

**Abstract** Service loyalty is attracting growing interest as a result of the important role that services play in today's global economy. Advances in technology have increased demand for a services-based economy and prompted a shift from a product-centred logic to a service-centred logic. Despite general agreement between researchers and practitioners of the strategic importance of service loyalty, and growing acceptance of a dynamic or processual perspective, scales used to measure the dynamic view of service loyalty can be criticised for their lack of methodological robustness. This paper contributes both theoretically and practically by critically examining these service loyalty scales and proposing a new multi-item scale based on Oliver's (1997) conceptualisation using a mixed method study. Qualitative and quantitative data were collected from UK retail bank customers using in-depth interviews and an interviewer-administered survey. A two-step structural equation modelling strategy was used to validate the measurement and structural models. The results provide support for a four-dimensional scale of service loyalty. This study provides service researchers and managers with a better understanding of service loyalty and presents them with a robust scale for its measurement, in turn improving their ability to make accurate conclusions.

**Keywords:** Service loyalty structure, scale development, UK financial services, model misspecification, non-recursive models.

## **Introduction**

Interest in the strategic importance of loyalty to service firms is growing amongst academics and practitioners (Russell-Bennett, McColl-Kennedy, & Coote, 2007). Customers develop service loyalty due to difficulties associated with evaluating services prior to purchase (Ang & Buttle, 2006). Service loyal customers are expected to pay more, buy more, and act as advocates, in turn leading to cost reduction and enhanced customer retention (Reichheld, 1996). This is particularly important at a time of current economic austerity and increased competition (Cooil, Keiningham, Aksoy, & Hsu, 2007).

Despite the strategic importance of loyalty, Knox and Walker (2001) argue that progress in defining and measuring it has been limited, and there is a lack of empirical validation of loyalty as a dynamic four-dimensional view (Curran, Varki, & Rosen, 2010).

Early views have tended to focus on a uni-dimensional (behavioural) view of customer loyalty (e.g. Ehrenberg & Goodhardt, 2000; Tucker, 1964; Uncles & Laurent, 1997), which is limited in a number of ways: it lacks a conceptual basis (Dick & Basu, 1994) although it assumes a stochastic view of consumers' behaviour (Jacoby & Kyner, 1973). It focuses on macro (i.e. group) rather than micro (i.e. individual) data (Jacoby & Kyner, 1973) and can reflect false or spurious loyalty, as indicated by habitual or incentive driven behaviour (Uncles & Laurent, 1997). It has also been criticised for being too simplistic, failing to capture the multi-dimensionality of the construct of loyalty (Kumar & Shah, 2004) and psychological (decision making or evaluative) processes in relation to a brand or store (Han & Back, 2008). These limitations have led to a paradigm shift to explain the concept in psychological terms.

According to Oliver (1997), previous efforts to explain loyalty in psychological terms do not provide a unitary definition without reliance on two or three components, namely

cognition, affect, and behavioural intentions. Oliver defines customer loyalty as ‘a deeply held commitment to rebuy or repatronize a preferred brand or service consistently in the future, thereby causing repetitive same brand or same brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour’ (1997, p. 392). Therefore, to provide a unitary definition that extends loyalty conceptualisation beyond two or three components (i.e. nonaction loyalty), Oliver (1997) suggests that loyalty develops as a sequential four-phase process involving cognitive loyalty, affective loyalty, conative loyalty and action loyalty.

Whilst Oliver’s dynamic view of loyalty is widely accepted (e.g. Evanschitzky & Wunderlich, 2006; Han, Kwortnik, & Wang, 2008; Harris & Goode, 2004), empirically validating it has proved challenging (Curran, Varki, & Rosen, 2010). One possible explanation is the lack of robust measures that have been used to capture Oliver’s (1997) view of service loyalty. Arguably this can limit our understanding of service loyalty formation and development and affect service managers’ and researchers’ abilities to make accurate conclusions about customers’ level of profitability (McMullan, 2005).

The purpose and contribution of the paper is threefold: methodologically it develops a more accurate measure of service loyalty based on Oliver’s (1997) four-phase loyalty conceptualisation. Empirically, it is to our best knowledge the first study to provide a psychometrically sound and operationally valid measure of service loyalty. Theoretically, it offers insights into how service loyalty is formulated and developed as a dynamic reciprocal process.

The paper is structured as follows: a brief synthesis of the extant literature on measuring service loyalty is provided, followed by research methodology, presentation of the results of

both exploratory and confirmatory factor analyses, discussion of findings and their implications, concluding with recommendations for future research.

## **Established service loyalty scales**

According to Oliver (1997), cognitive loyalty is conceptualized as the *belief* that an offering is superior to alternatives, which is based on the available information about them (Oliver, 1997). Affective loyalty reflects a customer's favourable *attitudes* toward a brand/service provider; it is assumed to be stronger than cognitive loyalty because it is shaped by both cognition and satisfaction. Conative loyalty refers to a customer's *behavioural intentions* to continue using a service provider, and is associated with a deeply held commitment to rebuy from the provider (Harris & Goode, 2004). Action loyalty refers to the *conversion of intentions to action* and the desire to overcome obstacles that may prevent action: it is assumed to be the strongest form of loyalty because thought is suppressed, behaviour guides itself and the customer is unlikely to be susceptible to competitive offerings.

Oliver's (1997) four-dimensional dynamic view of loyalty is hypothetical but compelling. It incorporates the impact of situational factors and distinguishes between 'situational'/'spurious' loyal customers (i.e. those only buying the preferred brand on special occasions or as a result of inertia) and active loyal customers (i.e. those frequently buying the preferred brand). It highlights the dynamic and, multi-dimensional nature of the construct and is sufficiently abstract to be applied to many loyalty objects (Russell-Bennett & Bove, 2001). It extends previous research (e.g. Morgan and Hunt, 1994) by seeking to predict actual behaviour rather than using behavioural intentions as a proxy for measuring actual behaviour.

A comprehensive review of the literature (see Appendix 1) indicates that Oliver's (1997) conceptualisation has received limited empirical testing, and that the few studies conducted are not without their limitations. A detailed deconstruction of all these studies is not possible within the limits of this paper; a number of papers were excluded from the critical analysis for several reasons. For example, McMullan's (2005) seminal paper includes mediating factors in the developed scale, which may blur the boundaries between the nature of a concept (i.e. what something means) and its antecedents (why it occurs). Previously, researchers (e.g. Gill, Boies, Finegan, & McNally, 2005) have argued for a clear distinction to be maintained between constructs and their antecedents, otherwise 'one runs the risk of burdening the construct with undesirable 'excess baggage' (Mittal, 1989, p. 697). Therefore, we contend that to capture service loyalty accurately, we must distinguish between the antecedents (i.e. mediators) and the construct itself.

Other studies were excluded on the grounds of scale comparability and construct validity. Specifically, Blut, Evanschitzky, Vogel, and Ahlert's (2007) paper was excluded because it measures cognitive loyalty in absolute (non comparative) rather than relative (comparative) terms, which can lead to an inaccurate assessment of this stage of loyalty (Olsen, 2002) and, in turn, restrict comparison with Oliver's (1997) scale. Furthermore, despite Oliver's recommendation that cognitive loyalty should be measured using items that refer to service quality or superiority, Blut et al.'s (2007) items refer to the perceived value associated with the retail outlet rather than the perceived superior quality. Despite them being closely related constructs they are however theoretically distinct: 'quality represents an extrinsic, higher-level abstraction rather than a concrete attribute and consequently is viewed as a separate construct that sits outside rather than being embedded within value' (Ledden, Kalafatis, & Mathioudakis, 2011, p. 1241). We argue that attempting to capture loyalty using a measure

that is either inconsistent with its definition or that captures loyalty in absolute rather than relative terms can undermine its content validity and lead to inaccurate conclusions.

The following discussion provides a more critical evaluation of the common shortcomings of empirical testing of Oliver's conceptualisation to date, focusing on three illustrative studies (e.g. Evanschitzky & Wunderlich, 2006; Han et al., 2008; Harris & Goode, 2004). We argue that despite their significant contributions to service loyalty literature, these studies do not offer an accurate measure of the loyalty phases as conceptualised by Oliver (1997). This is crucial, since no valid conclusions can be drawn without a valid measure (Hair, Black, Babin, Anderson, & Tatham, 2006).

Harris and Goode (2004) developed a multi-item scale to measure service loyalty in the online service context, then used it to validate a framework that positions trust as a pivotal driver of online service loyalty. Evanschitzky and Wunderlich (2006) confirm Harris and Goode's sequential four-phase loyalty conceptualisation, extending it by identifying and testing the influence of selected moderating variables (e.g. demographic and situational) on the links between loyalty phases. Han et al. (2008) validated a four-phase loyalty scale and offered an integrative model of service loyalty linking a system of determinants (e.g. satisfaction, commitment, trust) to the four loyalty dimensions proposed by Oliver (1997).

A critical examination of these three studies reveals a number of methodological concerns, particularly in terms of content and convergent validity. *Content validity* is crucial for scales, as it refers to the extent to which the content of items is consistent with the construct definition (Brewer & Venaik, 2011; Hair et al., 2006). We suggest that violating content validity could lead researchers and practitioners to assign meaning and significance to service loyalty phases that are different from what these constructs actually capture. *Convergent validity* refers to the extent to which indicators of a specific construct converge or

have a high proportion of variance in common (Hair et al., 2006). Bagozzi (1981, p. 376), argues that ‘convergence in measurement should be considered a criterion to apply before performing the causal analysis because it represents a condition that must be satisfied as a matter of logical necessity.’ Furthermore, while a valid scale is reliable, a reliable scale is not necessarily valid (Fornell & Lanker, 1981). The following sections provide a detailed critical analysis of these studies taking each loyalty phase in turn.

### ***Cognitive loyalty***

According to Oliver (1999), items measuring cognitive loyalty relate to *beliefs* about brand superiority in terms of perceived quality, rather than behavioural tendencies. Harris and Goode (2004) measure cognitive loyalty using four items, one of which refers to *preference* (‘I *prefer* the service of books.com/flights.com to the service of competitors’). Similarly, Han et al. (2008) include a preference item (‘I am *willing to pay more* to be a guest at this hotel...’). As Zajonc and Markus (1982, p.124) observe, ‘preferences are themselves primarily affectively based behavioural phenomena’.

Another of Harris and Goode’s items measures affective evaluation by focusing on *likeability* (‘I believe that the features of books.com/flights.com are badly suited to what I *like*’). Oliver (1997, p. 398) suggests that ‘items relating to liking would be needed to measure affective loyalty, hence this item does not seem to reflect cognitive loyalty.’

The underlying tenet of the loyalty phases is the three-component view of attitudes: affect (i.e. emotions, feelings), cognition (i.e. beliefs and opinions) and conation (i.e. action tendencies) (Greenwald, 1968). To capture cognitive loyalty accurately, items should reflect beliefs and opinions rather than feelings and intentions. Taken together, the above items undermine the content validity of this phase of loyalty.

### *Affective loyalty*

Affective loyalty is understood as favourable *attitudes* toward a brand/service provider and includes affective evaluations such as ‘liking’ or ‘enjoyment’, as suggested by Oliver (1999). Han et al. (2006) measure affective loyalty using four items. However, one of these items (‘Compared with X-star hotels, I *prefer* this hotel more’) also measures preferences or behavioural tendencies (Zajonc & Markus, 1982). Another item also does not reflect affective evaluations such as ‘liking’ or ‘enjoyment’ (‘This hotel is the one that I *appreciate* most in this city’). We argue that these items do not capture accurately the conceptual definition of the construct.

Harris and Goode (2004) measure affective loyalty using four items. Although all four items capture affective evaluations, they are problematic for two reasons. The first two items are ‘I like the *features of books.com/flights.com services* and offer’ and ‘I like the performance and *services of books.com/flights.com*’. Since liking the features of a service (i.e. attribute evaluations) can be captured by or subsumed within liking services (i.e. overall evaluation), these items seem to overlap and add little to convergent validity. The remaining two items are reverse-coded (e.g. ‘I have a negative attitude to books.com/flights.com’ and ‘I dislike the books.com/flights.com offerings’), which may create respondent confusion (Colosi, 2005; Swain, Weathers, & Niedrich, 2008) and the production of unexpected factor structures (Netemeyer, Bearden, & Sharma, 2003). Data from the author’s previous research (reference withheld to retain anonymity) suggests that reverse-coded items are not well perceived in British culture. Therefore, such items arguably are not appropriate to use in the given context.

Evanschitzky and Wunderlich (2006) operationalised affective loyalty as overall satisfaction, however scale item wording was not provided to allow an assessment of content validity. According to Oliver (1997) affective loyalty is a function of cognition (i.e.

expectancy confirmation), prior attitude and satisfaction in later periods. Similarly, Harris and Goode (2004, p. 141) state that ‘affective loyalty reflects a favourable attitude or liking based on satisfied usage’. We therefore argue that equating affective loyalty with overall satisfaction only may not sufficiently encapsulate the construct.

### ***Conative loyalty***

Oliver (1997, p. 398) states that ‘items related to commitment and purchase intentions would be required to measure this stage of loyalty’. Behavioural intentions refer to the likelihood to perform the behaviour (Ajzen & Fishbein, 1980) and commitment refers to a desire to perform an action (Moorman, Zaltman, & Deshpande, 1993).

It is worth noting that conative loyalty should reflect only behavioural intentions rather than behavioural intentions and commitment. We argue that commitment defined as desire (Moorman, Zaltman, & Deshpande, 1993) or psychological attachment (Evanschitzky et al., 2006) is conceptually different from behavioural intentions and the causal sequence should indicate the transition from desire to intentions. Bagozzi (1992) offers support for this view, arguing that in order for attitudes to transform into intentions, motivational properties such as desire are needed. Moreover, Evanschitzky et al. (2006) argue that customer economic and/or emotional psychological attachments (commitment) toward a brand or organisation are important evaluative mechanisms that precede customer decisions in terms of what to do (i.e. intentions and behaviour).

Harris and Goode (2004) measure conative loyalty using four items, although none of these accurately capture the meaning of the construct. Rather than measuring behavioural intentions, they reflect cognitive evaluations of service provider attributes (e.g. performance, offers and features). (‘I have repeatedly found that books.com/flights.com *is better* than others’; ‘I nearly always find the offer of books.com/flights.com *inferior*’; ‘I have repeatedly

found the *features* of books.com/flights.com *inferior*'; and 'Repeatedly the *performance* of books.com/flights.com is *superior* to that of competitor firms'). This raises concerns about content validity.

Turning to construct convergent validity, Evanschitzky and Wunderlich (2006) assessed this for their conative loyalty scale based on Fornell and Lanker's (1981) criterion of minimum average variance extracted (AVE) of .5. However, their reported AVE was .355. We therefore argue that the convergent validity of the conative stage of loyalty is questionable.

### ***Action loyalty***

One key contribution of Oliver's (1999) loyalty work is the incorporation of actual overt behaviour in his measures. Oliver suggests using items measuring past behaviour (i.e. purchase history) as a proxy for measuring actual rather than intended behaviour (e.g. 'when I have a need for a product of this type, I buy only brand X') (Oliver, 1997, p. 398).

Harris and Goode (2004) measure the fourth phase of action loyalty, using four items. Rather than measure actual behaviour (or purchase history), all four items reflect behavioural intentions. ('I would *always continue to choose* books.com/flights.com before others'; 'I will *always continue to choose* the features of books.com/flights.com before others'; 'I would *always continue to favour* the offerings of books.com/flights.com before others' and 'I will *always choose* to use books.com/flights.com *in preference to* competitor firms'). This further questions the content validity of the construct and the contribution of Harris and Goode's (2004) loyalty scale.

In terms of convergent validity, Evanschitzky and Wunderlich's (2006) reported AVE for action loyalty reveals a value of .428, which again is lower than Fornell and Lanker's (1981) minimum AVE criterion of .5. We therefore argue that the convergent validity of the action

stage of loyalty is questionable. We seek to address the limitations above through the development of a new service loyalty scale.

## **Research methodology**

### ***Study context***

We chose the retail financial services industry as an appropriate context for several theoretical and empirical reasons. Financial services account for a wide range of service variation in terms of employee contact and customisation according to Bowen's (1990) service taxonomy and include complex services, high in experience and credence (Zeithaml, 1981). Financial services interactions range in frequency from low to high, allowing us to address the failure of previous research to distinguish between true loyalty (high relative attitude and repurchase behaviour) and situational loyalty (high relative attitude but low repurchase behaviour) (Dick & Basu, 2004). Collectively, this allows for a stronger test of our scale and addresses the shortcomings of previous studies that have focused on a narrower range of service variation.

Furthermore, the retail financial services industry is an appropriate context for service loyalty to be established (Hubbert, Sehorn, & Brown, 1995): the distrust caused by the mis-selling of personal pensions in the UK (Ennew, Sekhon, & Kharouf, 2011) and the wider ramifications of the financial crisis have impacted on customer loyalty. Hence, financial services firms devote significant investment to customer loyalty programmes to overcome aggressive competitors and variety-seeking behaviour of consumers (Raimondo, Miceli, & Costabile, 2011).

### ***Scale development process***

The preceding analysis highlights the lack of adequate scales to measure service loyalty accurately and robustly and points to the need for new scale development (Hair et al., 2006).

We operationalised the constructs using multi-item (rather than single-item) scales for several reasons. Multi-item scales tend to capture a construct better (Yi, 1990), since a single question may be misleading and lacking in context. They also allow for greater precision when ranking or classifying groups (Green, Tull, & Albaum, 1988) and can be reduced to one aggregated variable, simplifying statistical analysis. Multi-item scales are preferable when using structural equation modelling, since insufficient degrees of freedom may erroneously allow the data to fit perfectly (Parasuraman, Zeithaml, & Berry, 1994).

In line with previous scale development studies in marketing, Churchill's (1979) scale development procedure was followed.

#### *Stage 1. Item generation*

Existing literature was reviewed to provide a list of 100 items that sufficiently encapsulate the construct definition relating to the four phases of loyalty. Items were generated from the work of Back and Parks (2003), Oliver (1997), Zeithaml, Berry, and Parasuraman (1996), De Wulf, Odekerken-Schröder, and Iacobucci (2001), and Lam, Shankar, Erramilli, and Murthy (2004).

#### *Stage 2. Pretest and item refinement*

In order to assess content validity (Hair et al., 2006), the 100 items were pretested and refined using a panel of experts consisting of five academics in services marketing. They were asked to assess whether the content of scale items captured the definition of a given latent construct, whether the item content was overlapping with other items and to trim the initial list of items. A strict definition of loyalty phases was provided to assure consistent interpretation. None of the five experts identified items that seemed inconsistent with the definition of their latent constructs. However minor changes were made to the wording (e.g. replace the word 'employees' with 'staff') and ordering of items to reduce respondent fatigue.

The optimum length of a scale is debated within the literature: suggestions range from 20 to 33 items (Prichard, Havitz, & Howard, 1999; Raju, 1980). Using the expert panel, and in line with McMullan (2005), the number of items was reduced from 100 to 28. The remaining items offered a balanced representation of all four customer loyalty phases.

A pilot survey was administered to a sample of 120 retail bank customers. This represented approximately 10 percent of the final sample, which is adequate for testing (Chisnall, 2001). The 28 items were measured using 7-point Likert-type scales to facilitate a wide range of scores (McMullan, 2005). Interviewer administration facilitated a response rate of 67%, resulting in 80 usable questionnaires.

Principal component factor analyses (PCA) with varimax rotation were conducted for each construct as a first test of the scales' unidimensionality, to identify problematic cross-loading items (Hair et al., 2006), and to check convergent validity. The scales were re-specified by eliminating items with cross-loadings (Anderson & Gerbing, 1988) and low item-to-scale correlations (Churchill, 1979). This resulted in an 18-item scale (see Appendix 2) consisting of five items each for cognitive and affective loyalty, and four items each for conative and action loyalty. After re-specification, each item loaded cleanly on a single latent construct with all cross loadings below .4.

### *Stage 3. Scale validation*

In the third stage, the refined scales were validated by a survey based on a random sample of 300 retail banking customers at one of the biggest airports in Scotland (Glasgow airport) over a six-week period. An interviewer-administered questionnaire was chosen because it is often used in loyalty research (e.g. Gremler, 1995), achieves high response rates (Yu & Cooper, 1983), and is considered an appropriate and well understood data collection method

in Britain (references withheld to retain anonymity); British customers are more willing to respond to questionnaires administered in person rather than via mail or telephone.

A systematic sampling technique was used to select one person in every five seated in the waiting areas. Respondents were invited to take part if they were British and had made use of their banking provider at least once in the previous six months. In total, 252 questionnaires were collected in this manner. Following Hair et al.'s (2006) recommendations, four questionnaires containing more than 50% missing data were discarded, this left 248 questionnaires with no missing data, representing a high response rate of 83% which meant that it was not necessary to examine non-response bias (Salant & Dillman, 1994).

The sample characteristics were compared to the 2001 census data for Scotland, confirming that the sample is broadly representative of customers of retail banks and similar services, and therefore acceptable for theory testing. The sample comprises 55% females and 45% males, with a median age between 40 and 49. In terms of employment, 84% are in paid employment, whereas 15% are unemployed. The median household income is between £35,000-55,000, and the majority of the sample (57%) have completed their university education and obtained an undergraduate degree.

## **Analysis and results**

### ***Measurement model***

Law and Wong (1999) warn that measurement model mis-specification (in terms of the direction of causality) can lead to inaccurate conclusions. In a *reflective* measurement model, the latent construct is manifested by its indicators, which should be interchangeable. Covariation is necessary and indicators should have the same antecedents and consequences (Jarvis, MacKenzie, & Podsakoff, 2003). In contrast, in a *formative* measurement model indicators cause the latent construct, indicators are not interchangeable, covariation is not

necessary and indicators do not have the same antecedents and consequences. These criteria suggest that a reflective measurement model is appropriate to model service loyalty. Viewing service loyalty as a psychological state and behaviour toward an object is more likely to be a manifestation of its indicators rather than caused by them.

Separate testing of the theoretical model via a two-step approach was performed, since according to Hair et al. (2006) a valid structural theory test cannot be conducted if one does not know what the constructs actually mean. Therefore, we first report on measurement model validity, followed by structural model validity.

#### *Model fit*

Confirmatory factor analysis (CFA) was used to provide a more restrictive test of the factor structure (see Appendix 3), requiring each item to load only on its posited factor (Anderson & Gerbing, 1988). The CFA results indicate that the model provides a good fit. The chi square value is 284.49 with 129 degrees of freedom and a p value of .000, which is significant using a Type I error rate of .05. The chi-square goodness-of-fit statistic does not indicate that the observed covariance matrix matches the estimated covariance matrix within sampling variation. Examining other fit indices however indicates good fit as recommended by Hair et al. (2006). CFI, an incremental fit index, is .96 and higher than the recommended level of .90. The Standardised Root Mean Residual (SRMR) is .05 and below the recommended level of .09. The Root Mean Square Error of Approximation (RMSEA) is .07 and below the recommended level of .10 (Kline, 2005). The 90 percent confidence interval for RMSEA is between .06 and .08, thus the upper bound of RMSEA is below the recommended cut off point of .10 (Kline, 2005).

#### *Convergent validity*

To test for convergent validity, item loadings, average variance extracted (AVE) and construct reliability were assessed. The lowest loadings obtained are .51 linking item AFL5

to the affective loyalty construct, .55 linking CNL4 to the conative loyalty construct, and .55 linking item ACL5 to the action loyalty construct (see Appendix 2). All other factor loadings are either higher or just fall below the .7 standard (Hair et al., 2006). Given the overall goodness-of-fit results, no items are candidates for deletion based on the values of their factor loadings.

Variance extracted (VE) is the variance in the measures accounted for by the latent construct (Bagozzi & Yi, 1988). A VE of .5 or higher is a good indicator of convergent validity, whereas a VE less than .5 indicates that on average more errors remain in the items than variance explained by the latent construct (Hair et al., 2006). Most of the items exceed the .5 threshold with only three exceptions (CNL4, ACL5, and AFL5) which measure conative loyalty, action loyalty, and affective loyalty respectively. However, AVE estimates per construct range from .65 percent to .71. Construct reliabilities range from .75 to .93. These values again exceed .7 (Nunnally, 1967) suggesting adequate reliability.

To sum up, the evidence supports the convergent validity of the measurement model. Although three loading estimates are below .7, they do not appear to be significantly harming model fit or internal consistency. The AVE estimates all exceed .5 and reliability estimates all exceed .7. Hence, the model fits relatively well.

#### *Discriminant validity*

Discriminant validity ‘assesses the degree to which two measures are designed to measure similar but conceptually different constructs’ (Netemeyer, Bearden, & Sharma, 2003, p. 142). Discriminant validity is evident (see Appendix 6) because the AVE of each construct is higher than the squared correlations between each pair of constructs (Fornell & Larker, 1981). Discriminant validity is also supported because the CFA model does not contain any cross-loadings either among the measured variables or among the error terms (Hair et al.,

2006). Taken together, these results support the discriminant validity of the measurement model.

### ***Structural model***

#### *Model fit*

In line with Jöreskog and Sörbom's (1992) recommendation, the sequential order of loyalty phases was evaluated by a competing modelling strategy, using structural equation modelling for each possible order sequence. In total, 24 alternative sequential models of loyalty were developed and compared to identify the most robust and valid model. Model fits provided support for an order sequence of loyalty as cognitive-affective-conative-action ( $\chi = 287.0$ ,  $df = 132$ ,  $CFI = .96$ ,  $RMSEA = .07$  and  $SRMR = .05$ ) and as action-conative-affective-conative ( $\chi = 287.0$ ,  $df = 132$ ,  $CFI = .96$ ,  $RMSEA = .07$  and  $SRMR = .05$ ) (see Appendix 4). Thus, the results suggest the existence of reciprocal effect; in other words, the loyalty phases can act as both cause and effect for each other.

#### *Nomological validity*

Nomological validity addresses whether the associations between the constructs make sense, are in the right direction (Peter, 1981) and are statistically significant (Hair et al., 2006). Nomological validity is tested either by examining the relationship between the service loyalty scale and other related construct(s) (Churchill, 1995) and/or examining the correlation matrix (Hair et al., 2006). We established nomological validity by testing the relationship between the service loyalty scale and trust as a related construct identified in the literature (e.g. Palmatier, Dant, & Grewal, 2007; Sirdeshmukh, Singh, & Sabol, 2002). Trust was operationalised by five items (see Appendix 2) based on the work of Morgan and Hunt (1994) to capture customers' trust in the service provider and a scale anchored (1) "strongly disagree" to (7) "strongly agree" was employed.

The results of model fit indicate that the data fit the model well ( $\chi = 441.87$ ,  $df = 223$ ,  $CFI = .96$ ,  $RMSEA = .06$  and  $SRMR = .05$ ). The estimates support the nomological validity as the effects of trust on cognitive loyalty, affective loyalty, conative loyalty and action loyalty are significant ( $b = .50$ ,  $t = 7.16$ ,  $p < .001$ ), ( $b = .55$ ,  $t = 9.12$ ,  $p < .001$ ), ( $b = .17$ ,  $t = 2.65$ ,  $p < .01$ ), ( $b = .18$ ,  $t = 2.89$ ,  $p < .001$ ) respectively.

Further evidence of nomological validity is demonstrated by inspecting the correlations between the dimensions of the service loyalty scale and between the dimensions of the service loyalty scale and trust (see Appendix 6). The results indicate that all pair-wise correlations are statistically significant and in the expected direction, although some are stronger than others. The strongest relationships reported are the link between affective and conative loyalty (.73,  $p < .001$ ) and the link between conative and action loyalty (.73,  $p < .001$ ). Based on this analysis, it can be concluded that the measure of service loyalty has nomological validity.

Taken together, the results of convergent, discriminant and nomological validity tests, it can be concluded that the newly developed scale satisfies all the psychometric properties.

## **Discussion**

This study provides insights into service loyalty, both in terms of its theoretical understanding and how it can be measured. Theoretically, our findings confirm the validity of Oliver's (1997) four-phase loyalty model and highlight the direction and strength of the relationships between them. Our analysis suggests that loyalty is a reciprocal process and that the loyalty phases potentially act as cause *and* effect of each other. Our results also draw attention to the strength of relationships between the four phases: the strongest relationships are the affective-conative and the conative-action loyalty links, whereas the weakest relationship is the cognitive-affective link.

Cognitive loyalty has a positive direct influence on affective loyalty. Customers are more likely to enjoy the service consumption experience and to like a service provider more than others, if they perceive a service to be superior. This is consistent with previous findings that affective evaluations are influenced by attributes and overall cognitive evaluations (Brady, Cronin, & Brand, 2002; Dean, 2007). However, as Harris and Goode (2004) argue, there are theoretical reasons to propose reverse causality: affective evaluations (e.g. satisfaction) may foster cognitive evaluations (e.g. trust) in relational services exchange, especially over time. Therefore, one could argue that if customers are happy with their service provider and like it more than others, they are more likely to perceive it as superior.

Our finding that the level of conative loyalty increases with the level of affective loyalty indicates that customers' intentions to buy, recommend, and spend more at a particular service provider are mainly influenced by their overall affective evaluations. Similarly, Lee et al. (2008) argue that customers with higher satisfaction levels are more likely to have higher usage intentions than customers with lower satisfaction levels. However, previous research also supports reverse causality in the relationship between behavioural intentions evaluations and affective evaluations. For example, Gómez and Rubio (2010) urge researchers to model the relationship between attitude (store brand attitude) and behaviour (store brand intentional loyalty) as bidirectional rather than unidirectional. They argue that in low-involvement products with repeated purchases, a reciprocal relationship may exist, with positive attitudes potentially resulting from the consumption experience.

The emergence of this link as one of the strongest highlights the importance of the experiential nature of services, particularly those high in credence. The difficulty of forming reliable beliefs prior to experience has been identified as a key challenge in evaluating services (Zeithaml, Bitner, & Gremler, 2009).

We also found that the level of action loyalty increases with the level of conative loyalty. One would expect customers with strong behavioural intentions to actually perform these intended behaviours when the need arises, particularly when they have the ability and the resources to do so (Ajzen, 2006). Indeed, prior marketing literature links conative loyalty to action loyalty in various contexts, including the lodging industry (Back & Parks, 2003), DIY (Evanschitzky & Wunderlich, 2006) and online book sales and airline services (Harris & Goode, 2004). Therefore, this study adds to existing research on the intention-behaviour gap and supports the immediate determinant role of intentions in relation to behaviour. Our study is also consistent with previous evidence of a dynamic and reciprocal relationship between attitude and behaviour (e.g. Liska, Felson, Chamlin, & Baccaglini, 1984). Therefore, it seems that repeated purchase behaviour over time (action loyalty) can influence future behaviour intentions (conative loyalty).

Our study also confirms that the developed measure is robust, overcomes previous research limitations in relation to content validity and convergent validity, and supports a reflective rather than a formative modelling strategy. The five items developed to measure cognitive loyalty performed well in ensuring the content validity of this stage of loyalty. In relation to convergent validity, item CGL4 ('I consider X my first choice when I need a service of this type'), as suggested by Oliver (1999), loaded highly on the latent factor and explained more than seventy percent of the variance. Hence, a strong indicator of cognitive loyalty is to be considered by consumers as their first choice.

The five items developed to capture affective loyalty also performed well in ensuring content and convergent validity. They captured the overall feelings toward the service provider in relation to satisfaction and liking. In relation to convergent validity, item AFL2 ('I like the product and services offered by X more than others'), as suggested by Oliver (1999), loaded highly on the latent construct and explained more than eighty percent of the

variance. Hence, relative rather than absolute liking appears to be a strong indicator of affective loyalty.

The four items retained to capture conative loyalty reflect aspects such as intending to engage in positive word-of-mouth, repurchase intentions and share of wallet intentions. These scale items sufficiently encapsulate the various aspects of behavioural intentions, in turn enhancing content validity and extending the service loyalty literature as a result of these items not being addressed adequately in previous studies. In relation to convergent validity, item CNL2 ('I would recommend X to someone who seeks my advice'), as suggested by Oliver (1999), loaded highly on the latent construct and explained more than eighty percent of the variance. Hence, a strong indicator of conative loyalty is to be recommended by consumers to others.

The four items used to measure action loyalty reflect different aspects of actual behaviours that are consistent with behavioural intentions. Capturing past behaviours such as engaging in positive word of mouth, making recommendations and spending more money with the service provider reflect not only passive, but also active behaviours, leading to a more accurate meaning of ultimate loyalty as suggested by Oliver (1997). In relation to convergent validity, item ACL2 ('I encourage friends and relatives to use X'), as suggested by Oliver (1999), loaded highly on the latent construct and explained more than ninety percent of the variance. Hence, a strong indicator of action loyalty is whether customers have already encouraged other customers to use their service provider.

### ***Theoretical contributions***

*Service loyalty structure.* Our results support previous scholars (e.g. Oliver, 1997; Morgan & Hunt, 1994; Russell-Bennett, McColl-Kennedy, & Coote, 2007), who argue that a more complete understanding of loyalty is obtained by understanding the composite and

dynamic nature of loyalty. Additionally, we advocate that service loyalty develops in a sequential reciprocal manner rather than sequential linear manner. Theoretical support for a reciprocal relationship can be found by drawing upon broader psychological theories of the attitude–behaviour relationship such as cognitive dissonance (Festinger, 1957). We argue, moreover, that attitudes towards loyalty are more likely to be inferred from behaviour in the absence of environmental forces (Liska, Felson, Chamlin, & Baccaglini, 1984) such as ignoring competitive offerings. Most social systems are ongoing dynamic systems (Ban, 2009), hence, future research should use non-recursive models (as suggested by Wong & Law, 1999) to test these reciprocal relationships further to validate our finding.

*Channel/loyalty interaction.* Our findings potentially provide evidence of a differential impact of online/offline channels on the links between loyalty phases. In our offline study context the strongest relationships in the loyalty chain are between affective and conative loyalty and between conative and action loyalty, whereas the weakest relationship is between cognition and affect. In the online context of Harris and Goode’s (2004) study, the strongest relationships were between cognitive and affective loyalty and between affective and conative loyalty. One explanation relates to the influence of the internet’s informational capacity (Harrison, Waite, & Hunter, 2006) on cognitive and affective processes. An alternative explanation relates to the perceived risk associated with online retailing (Kwon & Lennon, 2009). Further studies, comparing online and offline service contexts, could shed further light on the factors influencing the strength of these relationships.

*A more accurate, multidimensional and reflective measure of service loyalty.* An important contribution of this study is the development of a robust scale to measure and validate Oliver’s (1997) service loyalty model, supporting formulations of loyalty as a multidimensional (rather than unidimensional) and reflective (rather than formative) latent construct. Previous studies treated loyalty as unidimensional, measuring only some aspects of

it (e.g. repeat purchase), or using an overall index (e.g. Chandrashekar, Rotte, Tax, & Grewal, 2007; Sierra & McQuitty, 2005) which defeats the theoretical promise of multidimensionality (Pritchard, Havitz, & Howard, 1999).

To our knowledge, this is the first study to provide a comprehensive, psychometrically sound and operationally valid measure of service loyalty, which could reduce the errors associated with model mis-specification in prior research and provide more accurate assessments of service loyalty and its different facets.

*Empirical grounding from the customer perspective.* A further theoretical contribution relates to the empirical grounding of service loyalty development from the customer perspective. Oliver's model examines customer loyalty development from the perspective of academics, but lacks empirical grounding. This was overcome within this research through surveying customers of a high experience and credence service context. In particular, the results highlight the important role of trust in building and sustaining service loyalty from the customer perspective.

*The role of trust in loyalty development.* Interestingly, the results indicate a stronger association between trust and earlier stages of loyalty (i.e. cognitive and affective) rather than later stages of loyalty (conative and action). This indicates that service customers are more likely to rely on trust in forming their initial loyalty judgements due to the difficulty associated with evaluating services. However, the role of trust is more likely to be reduced over time as service experience and relationship develop.

### ***Managerial implications***

*An effective segmentation tool.* Russell-Bennett and Bove (2001) argue that customers should be segmented on the basis of attitudes and purchase behaviour. Indeed, customers at different stages of loyalty constitute market segments with varying profitability potential

(Backman & Crompton, 1991; Petrick, 2004). Our scale enables service marketing managers to measure a customer's level of loyalty more accurately and distinguish between different types of loyal customers. This in turn helps marketers understand their respective impact on profitability and select appropriate marketing strategies to move customers along the loyalty ladder.

*A benchmarking and positioning tool.* Back and Parks (2003, p. 431) suggest that 'service loyalty measures should be used as a tool to evaluate services'. Our scale permits a service provider to assess how it is perceived in consumers' minds or benchmark against competitors or the industry leader. For example, benchmarking cognitive loyalty can help service managers to position their services to be considered as the consumer's first choice in their choice set. Benchmarking affective, conative and action loyalty can help service managers to ensure that their customers like them, are willing to recommend them to others and have actually done it.

*Service innovative tool.* The developed loyalty scale allows managers to identify the most important and innovative aspects of the customer's service experience in relation to the development of the earlier stages of loyalty. Service managers need to think beyond the tangible aspects of their service offerings to avoid 'marketing myopia' (Levitt, 1960). If service firms can provide customers with innovative (e.g. live chat), differentiated (e.g. insider information about new products/services), and unique services (e.g. special treatment) (Miller & Grazer, 2003), which are not readily available from competitors, customers are more likely to perceive competing service offerings as inferior. We argue that customers are less likely to switch if they perceive their service provider as more inclined to provide innovative services or experiences.

*Effective loyalty programme development.* Many existing loyalty programmes do not address attitudinal and behavioural loyalty together, rewarding instead short-term behavioural actions without encouraging positive attitudinal evaluations. Thus, the effectiveness of such programmes is limited and may even mislead managers about the nature of loyalty to their services. Using our validated and comprehensive measure could enable managers to understand the impact of attitudes on behaviour and, where necessary, target marketing effort to effect a positive change in attitudes.

## **Limitations and directions for future research**

Although this study provides a number of new insights, several limitations should be acknowledged, whilst identifying fruitful areas for future research.

*Context.* This study was based on one service context from the UK retail service sector, which offers the advantage of studying loyalty formulation and development across a range of service variation. However, caution is needed when generalising the results of the study. The mono-cultural setting of the results is a potential limitation, if the service loyalty mechanism for Scottish customers is systematically different from that of other UK customers (e.g. English, Welsh and Irish) or those in other countries. Thus, the generalisability of the measurement scale could be established by replication in other cultural (Steenkamp & Baumgartner, 1998) and service settings, and surveying customers with different demographic characteristics.

*Research design.* Although the results of the study (largely) support an *a priori* causal model, causal effects cannot be inferred. Using a cross-sectional research design and SEM analytic method only allows for correlational, rather than causal inferences to be made (MacCallum & Austin, 2000) thus the possibility of alternative paths and causality is

acknowledged. Further research using dynamic non-recursive models is needed to further validate our reciprocal causal sequence.

*Common method effect.* The results might also be subject to limited generalisability because of the possibility of common-method effects (Friedrich, Byrne, & Munford, 2009) arising from the cross-sectional design. Thus, Harman's single-factor (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) test was conducted where all four related loyalty constructs were loaded into an explanatory factor analysis. As a result, it was felt that common method variance (CMV) did not have a profound effect on the results, because either constructs did not load on a single factor, or no single factor accounted for a majority of the covariance of the constructs. We acknowledge, however, that this technique might be more useful in determining if CMV is present rather than controlling for it (Friedrich et al., 2009). Using other techniques such as multitrait-multimethod (MTMM) requires at least twice as many measures as a conventional design, which may limit the scope of a study or result in a reduced response rate if some respondents refuse to complete a lengthy questionnaire (Lindell & Whitney, 2001).

*Non-linear effects.* Recent research reveals that non-linear effects (i.e. curvilinear effects (e.g. Agustin & Singh, 2005; Anderson & Mittal, 2000)) influence loyalty development. This study only considers linear relationships between loyalty stages. Therefore, further research is needed to control for these nonlinear effects. However, our results suggest the potential of a reciprocal development process. Furthermore, similar to Evanschitzky and Wunderlich (2006), testing for nonlinear relationships in this study did not explain the relationships between loyalty stages any better than linear relationships.

## Conclusions

The core argument underpinning this paper is that services marketers need to be able to measure their customers' loyalty accurately and robustly, in order to build and sustain it, segment their market effectively, and benchmark their own performance relative to competitors.

An examination of previous service loyalty measures reveals that multidimensional dynamic measures of service loyalty have been limited in their psychometric properties. Therefore, a more robust multidimensional reflective service loyalty scale was developed based on Oliver's (1997) four phase-loyalty conceptualisation.

Empirical evidence validated our new scale and demonstrated its superiority to previous scales in terms of content and convergent validity as well as measurement modelling strategy, thereby highlighting its value as an analytical tool. Our results also provide insights into the structure of service loyalty in terms of its formulation and development. In contrast to previous research, our study suggests that loyalty is a dynamic construct that develops in a reciprocal sequential order, with trust playing a diminishing role as loyalty progresses. Furthermore, our results indicate that the strength of the links between loyalty stages is contingent on the channel context. For example, the link between conative and action loyalty is stronger in an offline rather than online context.

In summary, this study contributes to the service loyalty literature by providing insights into how service loyalty is formulated and developed as a dynamic reciprocal process, developing a more accurate measure of service loyalty based on Oliver's (1997) four-phase loyalty conceptualisation and being the first study, to our knowledge, to provide a psychometrically sound and operationally valid measure of service loyalty.

## Appendix 1

**Table 1: Literature Review of Selected Studies on Loyalty Operational Measures**

Conceptualisation	Study	Context	Operational Measures Used
<b>Uni-dimensional</b>	Palmatier, Dant, and Grewal (2007)	Industrial suppliers, telecommunications and electric components utility	Service loyalty <b>WOM, repurchase intentions</b> and self reported WOM
	Chandrashekar et al. (2007)	Large service organisation	Customer loyalty <b>WOM intentions</b>
	Cooil et al. (2007)	Banks	Share-of-wallet Self-reported SOW
	Homburg and Furst (2005)	Range of services and manufacturing industries	Customer loyalty after the complaint Self-reported purchase behaviour, <b>purchase and retention intentions</b>
<b>Multidimensional (Synchrony)</b>	Agustin and Singh (2005)	Retail clothing and airline	Loyalty intentions <b>SOW and purchase intentions</b>
	Rauyruen and Miller (2007)	Courier services	Customer loyalty Two separate dimensions; <b>WOM and repurchase intentions</b>
	Bove and Johnson (2006)	Hairdressing services	Service loyalty (attitudinal and behavioural loyalty) Two separate dimensions: 1) Liking, satisfaction and <b>WOM intentions</b> and 2) self-reported SOW
	Chiou and Droge (2006)	Cosmetics company	Brand loyalty (attitudinal and behavioural loyalty) Two separate dimensions: 1) <b>purchase intentions</b> and 2) self-reported repurchase and SOW
<b>Multidimensional (Sequential-two dimensions)</b>	Auh et al. (2007)	Financial and medical services	Customer loyalty (attitudinal and behavioural loyalty) Two related dimensions: 1) <b>repurchase and retention intentions</b> and 2) self-reported SOW
	Russell-Bennett, McColl-Kennedy, and Coote (2007)	Advertising firm	Brand loyalty (behavioural and attitudinal loyalty) Two related dimensions: 1) <b>WOM intentions, preference and commitment</b> and 2) self-reported SOW
	Evanschitzky et al (2006)	Mass transit services	Customer loyalty (behavioural and attitudinal loyalty) Two related dimensions: 1) <b>WOM and preference intentions</b> and 2) self reported usage and preference behaviour
	Methlie and Nysveen (1999)	Online banking industry	Customer loyalty (affective and conative loyalty) Two related dimensions: 1) involvement and 2) <b>repurchase intentions</b> and self-reported WOM
<b>Multidimensional (Sequential-four phases)</b>	Blut et al. (2007)	DIY	Customer loyalty (cognitive, affective, conative and action loyalty ) Four sequential phases: 1) perceived value 2) overall satisfaction 3) <b>WOM and repurchase intentions</b> and 4) self-reported purchase and SOW behaviour
	Evanschitzky and Wunderlich (2006)	DIY	Customer loyalty (cognitive, affective, conative and action loyalty ) Four sequential phases: 1) perceived attribute satisfaction 2) overall satisfaction 3) <b>WOM, repurchase and cross buying intentions</b> and 4) self-reported WOM, repurchase and SOW
	Harris and Goode (2004)	Books and flights e-retailer	<b>Customer loyalty</b> Four sequential phases: 1) preference 2) negative attitude and liking 3) perceived quality and 4) <b>purchase and preference intentions</b>

## Appendix 2

**Table 2: Scale Items Mean, Standard Deviation, Reliability, Factor loadings and Convergent validity**

Scale Item	Mean	S.D	Coeff. Alpha	Factor loading	VE per item	VE per construct
<b>Cognitive Loyalty</b>						
CGL1 I believe X has more offers than others	4.91	1.18	.90	.78	.61	.65
CGL2 The service of X is better than others of its class	4.83	1.32		.83	.69	
CGL3 I believe X is cheaper than others when I need to buy a service of this type	5.11	1.24		.87	.75	
CGL4 I consider X my first choice when I need a service of this type	4.75	1.37		.76	.57	
CGL5 X provides me with superior service quality compared to others in its category	4.95	1.28		.81	.65	
<b>Affective Loyalty</b>			.88			.65
AFL1 I have grown to like X more than other service providers	4.76	1.25		.85	.72	
AFL2 I like the product and services offered by X more than others	4.96	1.27		.87	.76	
AFL3 To me, X is the one whose services I enjoy using the most	4.85	1.24		.83	.73	
AFL4 Compared with other service providers, I am happy with the services it provides	4.81	1.24		.87	.73	
AFL5 I am usually pleased with my purchase decisions from X	4.54	1.53		.51	.26	
<b>Conative Loyalty</b>			.87			.69
CNL1 I am likely to say positive things about X to other people	4.66	1.28		.87	.76	
CNL2 I would recommend X to someone who seeks my advice	4.81	1.28		.93	.87	
CNL3 I intend to continue to use X if its prices increase somewhat	4.74	1.28		.92	.84	
CNL4 I am likely to spend more money at X than other service providers	4.69	1.49		.55	.31	
<b>Action Loyalty</b>			.90			.71
ACL1 I say positive things about X to other people	4.63	1.47		.92	.85	
ACL2 I encourage friends and relatives to use X	4.65	1.48		.97	.93	
ACL3 I have spent more money at X than at other service providers	4.45	1.46		.87	.76	
ACL4 I have bought more products and services from X than from other service providers	5.30	1.20		.55	.30	
<b>Trust</b>			.93			.73
TR1 X can be trusted at all times	4.63	1.37		.83	.69	
TR2 X can be counted on to do what is right	4.22	1.31		.86	.74	
TR3 X is very dependable	4.40	1.30		.88	.77	
TR4 X has high integrity	4.56	1.22		.87	.75	
TR5 X is very competent	4.21	1.26		.83	.68	

Appendix 3

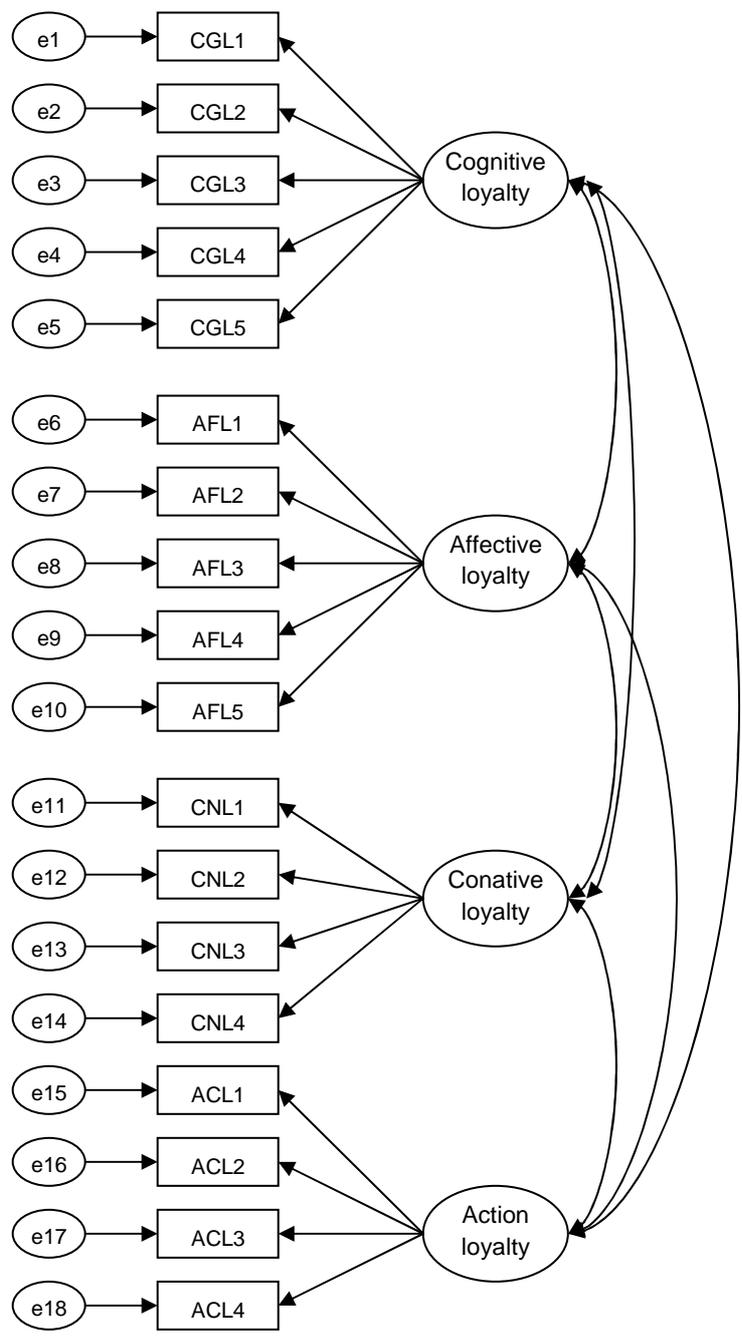


Figure 1: Measurement model

## Appendix 4

**Table 3: Competing Models**

Model sequences	Chi-square, df	CFI	RMSEA	SRMR
1. Cognitive-affective-conative-action	287.00, 132	.96	.07	.05
2. Cognitive-conative-action-affective	395.96, 132	.93	.09	.10
3. Cognitive-action-conative-affective	340.51, 132	.94	.08	.09
4. Cognitive-action-affective-conative	401.91, 132	.93	.09	.11
5. Cognitive-conative-affective-action	360.21, 132	.94	.08	.07
6. Cognitive-affective-action-conative	376.63, 132	.94	.09	.09
7. Affective-conative-action-cognitive	340.51, 132	.94	.08	.10
8. Affective-action-cognitive-conative	565.41, 132	.89	.12	.19
9. Affective-cognitive-conative-action	425.02, 132	.92	.09	.13
10. Affective-conative-cognitive-action	461.93, 132	.91	.10	.15
11. Affective-action-conative-cognitive	395.96, 132	.93	.09	.10
12. Affective-cognitive-action-conative	464.31, 132	.91	.10	.16
13. Conative-action-cognitive-affective	464.31, 132	.91	.10	.16
14. Conative-cognitive-affective-action	507.24, 132	.90	.11	.15
15. Conative-affective-cognitive-action	450.75, 132	.92	.10	.15
16. Conative-action-affective-cognitive	376.63, 132	.94	.09	.09
17. Conative-cognitive-action-affective	565.41, 132	.89	.12	.19
18. Conative-affective-action-cognitive	401.91, 132	.93	.09	.11
19. Action-cognitive-affective-conative	450.75, 132	.92	.10	.15
20. Action-affective-conative-cognitive	360.21, 132	.94	.08	.07
21. Action-conative-cognitive-affective	425.02, 132	.92	.09	.13
22. Action-cognitive-conative-affective	461.93, 132	.91	.10	.15
23. Action-affective-cognitive-conative	507.24, 132	.90	.11	.15
24. Action-conative-affective-cognitive	287.00, 132	.96	.07	.05

**Appendix 5**

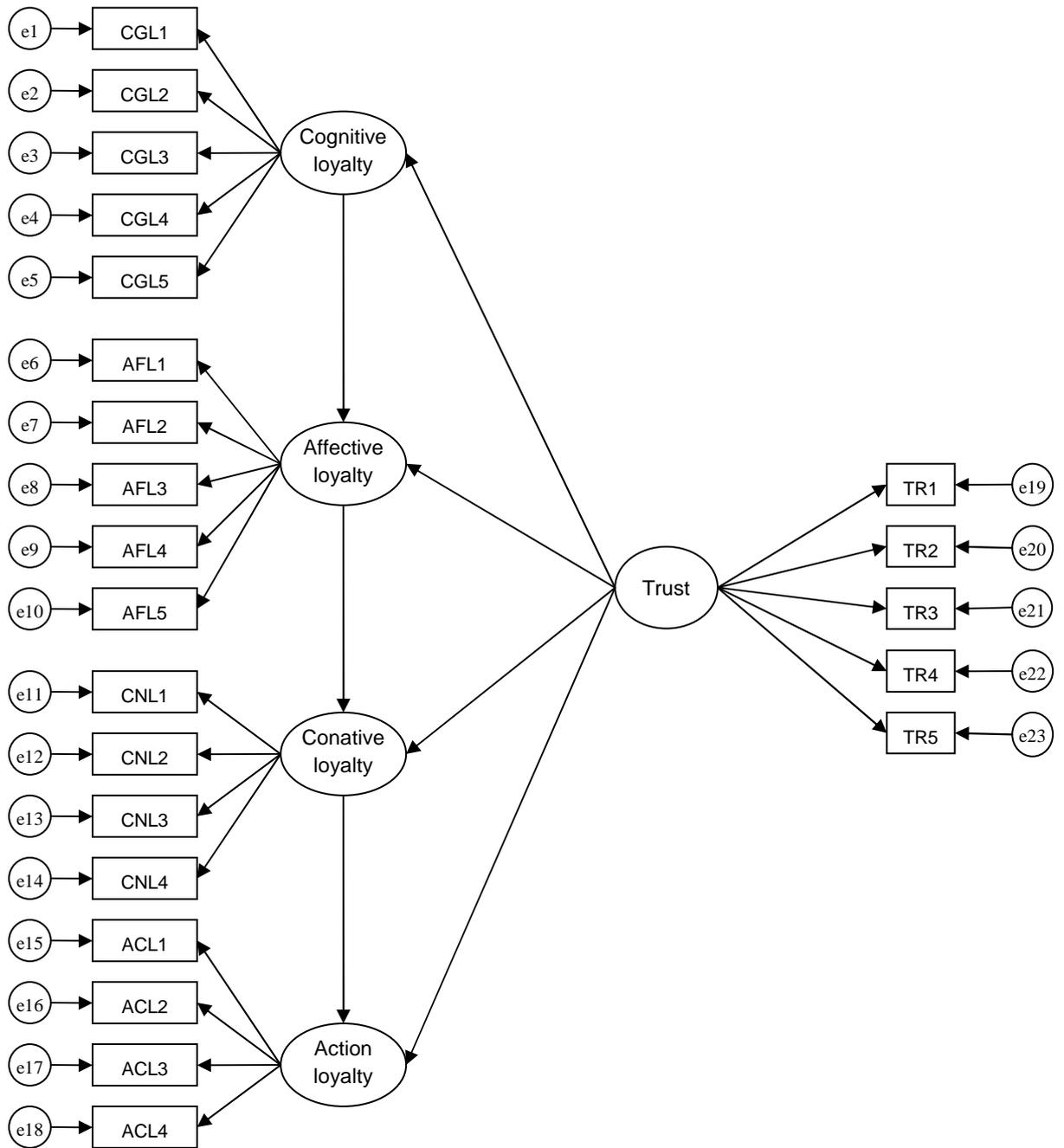


Figure 2: Assessment of nomological validity with SEM

## Appendix 6

**Table 4: Discriminant Validity of the Scale**

Variable	CGL	AFL	CNL	ACL
CGL	<b>.65</b>	.37	.34	.30
AFL	.61	<b>.65</b>	.53	.48
CNL	.58	.73	<b>.69</b>	.53
ACL	.55	.69	.73	<b>.71</b>

Notes: CGL = cognitive loyalty, AFL = affective loyalty, CNL = conative loyalty, ACL = action loyalty; left of the diagonal (bolded) is the correlation matrix; the value on the diagonal is the average variance extracted; right of the diagonal is squared correlations. All correlations are significant at the .01 level.

**Table 5: Nomological Validity of the Scale**

Variables	CGL	AFL	CNL	ACL	TR1
GGL	1.00				
AFL	.61	1.00			
CNL	.58	.73	1.00		
ACL	.52	.69	.73	1.00	
TR	.57	.63	.58	.54	1.00

Notes: CGL = cognitive loyalty, AFL = affective loyalty, CNL = conative loyalty, ACL = action loyalty, TR = trust; composite scores for each construct were obtained by averaging scores across items representing that latent construct. All correlations are significant at the .01 level.

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