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Toward a further understanding of drivers of customer loyalty across economic conditions, industries, firms, and customers

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Chapter 2

2 THE ROLE OF CONSUMER CONFIDENCE IN CREATING CUSTOMER LOYALTY²

2.1 Introduction

How can firms retain customers during recessions? Firms are seeking answers to this question, as they encounter reduced customer loyalty during recessions (Estelami, Lehmann, and Holden 2001; Lamey et al. 2007). While a number of speculations suggesting effective marketing strategies during recessions appear, these speculations do not provide clear guidance for firms. For example, some propose that service value is of importance (e.g., The Independent 2010), some claim that good brands are recession-proof (e.g., Knowledge@Wharton 2010), and others suggest that customer relationship management is a useful loyalty tool (e.g., Knowledge@Wharton 2010). Since it is unknown when the recent global economic crisis will end or when the next one will start, it is urgent to answer how firms can retain customers during recessions.

One particular phenomenon during recessions is that consumer confidence is relatively low. Consumer confidence is a psychological construct that measures customers' perceptions about their recent and future financial situation and economic climate. The permanent income hypothesis (Friedman 1957) proposes that consumption behavior is affected only by permanent income or an external shock (e.g., changes in customer preferences), but not by current income. Consumer confidence may be affected by a shock, which influences consumption behavior and

² This Chapter is based on Yi-Chun Ou, Lisette de Vries, Thorsten Wiesel, and Peter C. Verhoef (2014), "The Moderating Role of Consumer Confidence in Creating Customer Loyalty in Service Industries," *Journal of Service Research*, forthcoming.

reflects different customer preferences (e.g., Allenby, Jen, and Leone 1996; Katona 1968). For example, lower consumer confidence usually leads to lower spending, whereas higher consumer confidence leads to higher spending.

Having loyal customers, especially during recessions, may protect firms from financial turmoil since customer loyalty leads to a larger customer base (Reinartz and Kumar 2000) and higher profitability (Seiders et al. 2005). Previous research has identified three important customer equity drivers (i.e., CEDs: value equity, brand equity, and relationship equity) that enhance customer loyalty (e.g., Rust, Lemon, and Zeithaml 2004). The positive link between CEDs and loyalty is empirically well supported (Rust, Lemon, and Zeithaml 2004; Vogel, Evanschitzky, and Ramaseshan 2008). What remains unclear is whether the effects of CEDs differ for different levels of consumer confidence, which is particularly relevant during recessions when consumer confidence is relatively low. Hence, the first aim of this study is to examine whether and how consumer confidence moderates the link between CEDs and customer loyalty. The second aim is to examine whether the moderating role of consumer confidence varies across industries since it has been noted that the impact of consumer confidence on consumption behavior differs across industries (e.g., Curtin 1982; Leeflang and van Raaij 1993). We take an initial step and explain potential differences across industries by considering the unique characteristics of contractual and non-contractual settings.

In sum, we contribute to the customer loyalty literature by investigating (1) the moderating role of consumer confidence in loyalty creation and (2) the potential variance of this moderating role across a large number of service industries. To test the hypotheses and examine whether the moderating role of consumer confidence can be generalized across industries, we use a meta-analysis to summarize the multilevel results of 13 service industries. We find that consumer

confidence partly influences the effects of CEDs on customer loyalty and that this influence varies across industries. Value equity is in general more important for customers with lower consumer confidence, but this is more apparent for non-contractual settings than for contractual settings. Brand equity is also more important for customers with lower consumer confidence, but only for non-contractual settings. As a result, we provide a more nuanced understanding of how firms in different service industries need to adapt their marketing communication strategies in creating loyalty among customers with different levels of consumer confidence.

2.2 Overview of the Major Constructs

2.2.1 Customer equity drivers and customer loyalty

The conceptual framework of this study is shown in Figure 2.1. We build upon the customer equity model of Rust, Lemon, and Zeithaml (2004), in which CEDs are determinants of customer loyalty. Following Rust, Lemon, and Zeithaml (2004), we use loyalty intentions to measure customer loyalty for two reasons: first, it is practically infeasible to compare loyalty behavior across a large number of industries for a large number of firms since loyalty behavior has different meanings across industries. Second, loyalty intentions are a forward-looking measurement (i.e., predictor of sales) and thus provide firms a direction for strategy development (Gustafsson, Johnson, and Roos 2005). The definition of CEDs is specified and the link between CEDs and customer loyalty is illustrated in Chapter 1 (see pages 3-4). Previous research has convincingly shown that CEDs are positively related to loyalty intentions and actual loyalty (e.g., Rust, Lemon, and Zeithaml 2004; Vogel, Evanschitzky, and Ramaseshan 2008). Hence, we do not formulate hypotheses regarding the effects of CEDs on loyalty intentions, but rather focus on the moderating role of consumer confidence on the CEDs-loyalty link.

2.2.2 Consumer confidence

Consumer confidence (CC) is a commonly used measure in the economics literature, but its impact on customers' perceptions is relatively less examined in marketing. To justify the potential role of CC in the customer loyalty literature, we elaborate on the following issues: (1) the definition of CC, (2) economics theory on CC, (3) the impact of CC on consumption, and (4) the use of CC as a moderator in this study.

Definition of CC: CC is a psychological construct that measures customers' expected changes and variance of their household finances and the economic climate (Curtin 2007; Katona 1974; Lemmens, Croux, and DeKimpe 2007). At the lower end of the CC continuum, customers pessimistically expect a financially worse-off outlook that is attached with uncertainty. At the higher end of the CC continuum, customers optimistically expect a financially better-off outlook that is attached with certainty. These dimensions of pessimism/ optimism and uncertainty/ certainty mainly guide customers' purchase decisions (Curtin 2007).

Economics Theory on CC: Economists argue that consumer spending is a function of the "ability to buy" and the "willingness to buy" (e.g., Katona 1968). The "ability to buy" refers to income and assets possessed by customers. The "willingness to buy" refers to customers' subjective expectations of their household finances and the economic climate (i.e., the definition of CC). Conventionally, economists mainly focused on the "ability to buy" to predict customer spending. However, they noticed that the "ability to buy" is not sufficient to predict consumer spending. For example, in 1951 in the U.S. spending levels decreased, but personal incomes were increasing (Mueller 1957). In this sense, Katona (1979) argues that the "willingness to buy" should play a role in explaining the variance of spending levels, as it may respond more quickly to macro-level situations (e.g., the economic climate, political situations, news, and wars) than

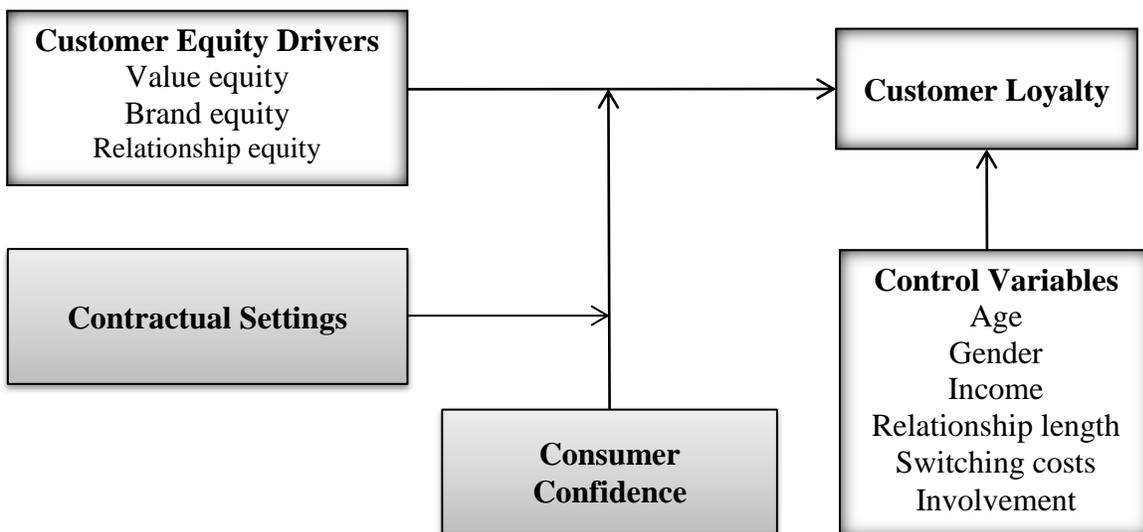
the “ability to buy” variables (De Boef and Kellstedt 2004; Kumar, Leone, and Gaskins 1995). To measure “willingness to buy,” Katona (1968) introduces the concept of CC, which is summarized in the Index of Consumer Sentiment at the Social Research Center of the University of Michigan (Curtin 2007).

Impact of CC on Consumption: Lower-CC customers tend to spend less and save more to prepare for potential bad times than higher-CC customers (Garner 1991). Additionally, CC is a key precursor of customer spending beyond traditional economics variables (i.e., income) and has a significant impact on consumption growth, discretionary expenditures, consumption of durable goods, and so forth (Allenby, Jen, and Leone 1996; Katona 1968; Ludvigson 2004; Qiao, McAleer, and Wong 2009).

Use of CC as a Moderator: The above discussion clearly shows that CC is a leading psychological construct in economics for predicting consumer spending, in particular in different product categories. For example, customers with lower CC tend to purchase less discretionary or durable goods (Katona 1974; Mueller 1957). Beyond product categories, some marketing studies have observed a shift in brand preference when CC is lower (Lamey et al. 2007; Leeflang and van Raaij 1993). Customers with lower CC tend to purchase more private labels and low-priced brands. This implies that CC may be also a variable differentiating brands. However, little is known about how customers with different levels of CC choose among competing firms/brands. Specifically, there is a lack of knowledge regarding whether CC influences the importance of the determinants that drive customer loyalty. This issue is particularly important when firms are confronted with increasing disloyalty during recessions (Estelami, Lehmann, and Holden 2001). As customers with different levels of CC have different expectations for their future, they may value the factors that drive loyalty differently. In this study, we consider how CC impacts the

link between CEDs and customer loyalty. Our conceptual model in Figure 1 shows that we include CC as a factor moderating the link between CEDs and customer loyalty. Beyond that, we include several control variables in our model. In the subsequent section, we theoretically discuss and hypothesize on the moderating role of CC.

Figure 2.1 Conceptual Framework



2.3 Development of Hypotheses

2.3.1 CC and value equity

Value equity is defined as customers' objective assessment of "what is given up" for "what is received" (e.g., Lemon, Rust, and Zeithaml 2001). Because lower-CC customers tend to spend less and save more than higher-CC customers to prepare for potential bad times (e.g., Ludvigson 2004), they may be more selective and aware of the rational calculation of "what is given up" and "what is received" to obtain the best offer (Lamey et al. 2007; Leeflang and van Raaij 1993; Souleles 2001). This is consistent with some indirect evidence: value-oriented stores (i.e., those

providing a better price-quality ratio) become popular during recessions (Zurawicki and Braidot 2005). On the other hand, since higher-CC customers tend to spend more (e.g., Garner 1991), they may be less concerned about the “value for money,” and more likely to buy impulsively (Shama 1980; Souleles 2001). Based on the above discussion, we put forward the first hypothesis:

H₁: The positive link between value equity and loyalty intentions is stronger for lower-CC customers, but weaker for higher-CC customers.

2.3.2 CC and brand equity

Brand equity reflects customers’ subjective and intangible assessment of the brand image (e.g., Lemon, Rust, and Zeithaml 2001). Strong brands have higher credibility and thereby simplify product choice, as proposed by signal theory (Erdem and Swait 1998; Rust, Lemon, and Zeithaml 2004). Strong brands in this sense are not necessarily expensive, but rather meant to provide credible information to customers (Erdem and Swait 1998). Brands increase the credibility of claimed information, and reduce customers’ information costs and perceived performance risks of services. Therefore, strong brands are presumably preferred among a set of choices (Erdem and Swait 2004). Since previous studies found that during recessions customers whose CC becomes lower tend to have a skeptical consumption attitude and are more considerate of what they buy (Shama 1980), we expect that lower-CC customers prefer credibility provided by strong brands to decrease uncertainty in transactions. In contrast, it is found that higher-CC customers tend to buy different brands and try new things (Homburg and Giering 2001; Kahn 1995). These findings imply that higher-CC customers pay less attention to performance risks of services. As a consequence, the credibility of strong brands may be less

necessary for higher-CC customers when making a purchase. Following the above reasoning, we provide the second hypothesis:

H₂: The positive link between brand equity and loyalty intentions is stronger for lower-CC customers, but weaker for higher-CC customers.

2.3.3 CC and relationship equity

In service industries, relationship marketing functions as a crucial strategy for decreasing customers' purchase uncertainty (e.g., Lemon, Rust, and Zeithaml 2001). This is because most services are intangible, which makes it difficult for customers to evaluate the quality before or even after consumption (Berry 1995; Crosby and Stephens 1987). When discussing the role of customer relationships, one can take two perspectives: a benefit and a cost perspective. Benefits of relationships can be financial and social (Bolton, Lemon and Verhoef 2004). Financial benefits may arise from loyalty programs that reward continued patronage, for example (Berry 1995; Dorotic, Bijmolt and Verhoef 2012; Liu 2007). These financial benefits may be more important for lower-CC customers than for higher-CC customers, as the former experiences some financial distress. On the other hand, social incentives involve emotional ties and induced trust by frequent interactions between customers and firms (Bolton, Lemon, and Verhoef 2004; Rousseau et al. 1998). Trust in a partnership refers to mutual benefits and benevolence and thereby helps decrease any uncertainties between customers and firms (Briggs and Grisaffe 2010; Morgan and Hunt 1994). These social incentives may be more helpful for lower-CC customers than higher-CC customers to decrease uncertainties and skepticism (Shama 1980). From a benefit perspective on customer relationships, we expect that relationship equity becomes more important for lower-CC customers than for higher-CC customers.

Building relationships with firms costs time and effort for customers. Being in such a relationship may give customers the feeling of a loss of privacy (Leenheer et al. 2007). Lower-CC customers may avoid these costs and investments of building relationships because they are more skeptical toward firms' offerings and less certain of the return on their investments in the relationships than higher-CC customers (Shama 1980). Hence, from a cost perspective we expect that relationship equity becomes less important for lower-CC customers than for higher-CC customers.

Taking both the benefit- and cost perspective into account, we propose the following two competing hypotheses:

H_{3a} (benefit perspective): The positive link between relationship equity and loyalty intentions is stronger for lower-CC customers, but weaker for higher-CC customers.

H_{3b} (cost perspective): The positive link between relationship equity and loyalty intentions is stronger for higher-CC customers, but weaker for lower-CC customers.

2.3.4 Differences between contractual and non-contractual industries

Previous studies propose that CC does not equally influence consumption across industries (Curtin 1982; Qiao, McAleer, and Wong 2009; Quelch and Jocz 2009). For three reasons, we argue that CC may have more moderating impact on loyalty decisions in non-contractual settings than in contractual settings.

First, although customers have different levels of CC, customers in contractual settings are less able to adjust their preferences to the perceived levels of CC, as the contract duration stated in the contract may restrict customers' actions (Bucklin and Sengupta 1993; Reinartz and Kumar 2002). Second, a contract reduces performance risks of services and uncertainties about future transactions (Macaulay 1963). Firms that offer contractual services usually provide their

customers relatively stable and well-defined performance, as stated in the contract. Third, frequent interactions with firms in contractual settings allow customers to accumulate experiences and become more confident of their own judgment about the firm's performance (Garbarino and Johnson 1999). Therefore, they may tend to rely on their individual perceptions of CEDs, which remain stable regardless of their levels of CC. In sum, these three reasons lead to the following hypothesis:

H₄: The moderating effects of CC on the link between CEDs and loyalty intentions are less apparent in contractual settings than in non-contractual settings.

2.3.5 Control variables

We account for several variables that possibly influence loyalty intentions. These are three customer characteristics: age, gender, and income (e.g., Melnyk, van Osselaer, and Bijmolt 2009; Mittal and Kamakura 2001; Mittal, Kamakura, and Govind 2004). There can be differences across age groups or gender in their intention to remain loyal. Previous studies show that there are differences between men and women regarding their loyalty (e.g., Melnyk, van Osselaer, and Bijmolt 2009). We also account for income (euros) in order to measure the "ability to buy" (Katona 1968; 1979). Similarly, as income influences consumption, it may also influence loyalty intentions. Along with customer characteristics, we account for customer-firm characteristics: relationship length, switching costs, and involvement. The length of the customer-firm relationship can be an indicator of past loyalty, which often translates into future loyalty (Verhoef 2003). Moreover, when it is difficult to switch to another firm, customers may remain loyal not because they favor the firm, but simply because it is too difficult or too much effort to switch (e.g., Bolton 1998; Bolton, Lemon, and Verhoef 2004). Lastly, the level of involvement of customers with services in a certain industry may influence their loyalty intentions. When

customers feel that a specific type of service is important and relevant to them, they are more likely to be involved in it. This in turn affects their intention to stay loyal (Bloemer and de Ruyter 1999).

2.4 Research Design

2.4.1 Data

We collect customer data of 71 leading Dutch firms (based on revenues) from 13 service industries in 2010 (i.e., DCPI 2010). These 13 service industries are divided further into contractual and non-contractual settings. Contractual settings include insurance, health insurance, telecommunication, banking, and energy. Non-contractual settings include supermarkets, gasoline stations, health & beauty stores, department stores, fashion stores, music/book/toy (MBT) stores, furnishing warehouses, and travel agencies. Respondents are randomly chosen and asked to rate multiple instances of a phenomenon (i.e., relationships with different firms – Rindfleisch et al. 2008) per industry. The advantage of this method is its ability to generate more responses with a limited number of respondents. For each industry, a list of firms (between 3 and 10) was provided to the respondents, who chose the firms of which s/he is currently a customer and repeatedly answered the same questions about those firms. There are 3,592 total eligible respondents and 6,641 total responses. The data contain 49.1% males. 23.7% of the respondents are between 18 and 29 years old, 23.3% between 30 and 39, 21.3% between 40 and 49, 26.3% between 50 and 64, and 5.4% more than 65 years old. The majority of respondents (52.9%) earns between €30,000 and €60,000 per year.

2.4.2 Measurement of variables

We draw on prior studies for the measurement of variables in the conceptual model. Following Rust, Lemon, and Zeithaml (2004), we adopt self-reported probabilities of engaging in repurchase behavior to measure loyalty intentions. CEDs are measured by multiple items with seven-point Likert scales (1 = totally disagree; 7 = totally agree). Value equity (VE) focuses on the price-quality ratio and convenience (Rust, Lemon, and Zeithaml 2004; Verhoef, Langerak, and Donkers 2007). Brand equity (BE) measures the perceived strength and innovativeness of the brand (Verhoef, Langerak, and Donkers 2007). Relationship equity (RE) consists of items focusing on perceived commitment as well as feeling 'at home' and connected to the firm (Verhoef 2003; Verhoef, Langerak, and Donkers 2007; Bügel, Verhoef, and Buunk 2011). To measure CC, three questions are adapted from the Index of Consumer Sentiment of the University of Michigan (Curtin 1982). These questions are also used by the Dutch Central Institution of Statistics to measure CC for the Dutch Government. The questions measure the current and future financial situation of the household and the future expectation of the Dutch economy with seven-point Likert scales (1 = will become worse; 4 = will remain the same; 7 = will become better). We control for age, gender, income, relationship length (RL), switching costs (SC), and involvement (INV). We refer to Appendix 1 for the questions of the relevant variables of this study. Two pre-tests are conducted: The first pre-test (n=27) investigates whether the questions are understandable. The second pre-test (n=393) is conducted in the banking industry to examine reliability and face validity of the completely filled in questions. The results of both pre-tests do not show any problems regarding understandability, reliability, and face validity.

We use the averages of the items to form the CEDs constructs and the CC construct for each industry³. Due to space limitations, Table 2.1 summarizes the descriptive statistics of the data across all 13 industries. The reliability (Cronbach's α) of the CEDs and CC per industry is above 0.6. To measure discriminant validity of the main constructs, we calculate the average variance extracted (AVE) of each construct and also a construct's shared variance with any other construct (e.g., Fornell and Larcker 1981). Given that a construct's AVE is larger than its shared variance with any other construct, discriminant validity is supported (Campbell and Fiske 1959). The AVEs of CEDs and CC are larger than its shared variance with any others, which means that these scales measure different constructs.

To test for common method bias (CMB), we use two methods: (1) Harman's one-factor test (Podsakoff and Organ 1986) and (2) partial correlation with a marker variable (Lindell and Whitney 2001). Neither Harman's one-factor test nor the partial correlation with a marker variable provides evidence for CMB.

2.4.3 Methodology

We analyze the data in two steps. First, we use a multilevel model to analyze the data for each individual industry. Second, we adopt a meta-analysis to summarize the multilevel results across the 13 industries to examine whether the concerned effects in the conceptual model can be generalized to the 13 industries, rather than focus on the result of each individual industry. Hence, the results of the meta-analysis are used to test the hypotheses. The specification of these two steps is as follows.

Multilevel analysis: To analyze each industry, we adopt a random-intercept multilevel analysis for three reasons (Snijders and Bosker 1999). Firstly, the dataset of each industry is hierarchical.

³ We also used factor scores to form the constructs – see robustness checks.

Customers (level two or customer-level) may repeatedly respond to the same questions concerning more than one firm (level one or firm-level) because a customer may be a current customer of multiple firms of an industry. The rows of “Responses” and “Respondents” in Table 2.2 show the sample sizes of level one and level two, respectively, of each industry. For example, in the insurance industry the level-one sample size is 972 responses to different insurance firms and the level-two sample size is 514 customers. Secondly, when a customer has transactions with more than one firm within an industry, s/he repeatedly answers questions concerning those relevant firms. Hence, this customer provides multiple dependent responses, which lead to an overestimation of the precision of the parameters (*t*-values) when using OLS. In addition, because the dependent variable, loyalty intentions, contains values only between 0 and 100, which is between 0% and 100% in percentage, we transform it with a logarithm, $\ln(LI/1 - LI)$, to assume a linear relationship of loyalty intentions and the relevant independent variables. To avoid $\ln(0)$ and a zero in the denominator, we recode 0% with 0.00001 and 100% with 0.99999. We notice that the number of the decimals does not have the impact on the multilevel results. The following equations represent the used random intercept model:

$$LI_{ij} = \beta_{0j} + \beta_{1j}VE_{ij} + \beta_{2j}BE_{ij} + \beta_{3j}RE_{ij} + \beta_{4j}CV_{1j} + \beta_{5j}CV_{2ij} + \sum_{k=1}^K \beta_{6k}FD_k + R_{ij} \quad (1)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}CC_j + \mu_{0j} \quad (1.1)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}CC_j \quad (1.2)$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}CC_j \quad (1.3)$$

$$\beta_{3j} = \gamma_{30} + \gamma_{31}CC_j \quad (1.4)$$

where,

LI_{ij} : loyalty intentions for firm *i* evaluated by customer *j*,

- VE_{ij} : value equity for firm i evaluated by customer j ,
- BE_{ij} : brand equity for firm i evaluated by customer j ,
- RE_{ij} : relationship equity for firm i evaluated by customer j ,
- CC_j : consumer confidence for each customer j ,
- CV_{1j} : a vector of customer-level j (level two) control variables (i.e., age, gender, and income),
- CV_{2ij} : a vector of firm-level i (level one) control variables (i.e., relationship length, switching costs, and involvement),
- FD_k : dummy variables for firm k in each industry,
- R_{ij} : level one (firm i) residuals,
- μ_{0j} : level two (customer j) residuals.

β_{0j} is the random level-one intercept; β_{1j} , β_{2j} , β_{3j} , and γ_{01} are the fixed coefficients of VE_{ij} , BE_{ij} , RE_{ij} , and CC_j respectively. β_4 and β_5 are a vector of coefficients corresponding to level two and level one control variables respectively. β_{6k} are the fixed coefficients for the k firm dummy variables of each industry. Finally, γ_{00} , γ_{10} , γ_{20} , and γ_{30} are the level two intercepts; γ_{11} , γ_{21} , and γ_{31} are the coefficients for the interaction terms.

Meta-analysis: To test whether the moderating role of CC can be generalized to the studied industries, we summarize the multilevel results of 13 industries. There are several methods to summarize individual effects. “Simple counting” used to be a common method to summarize the effects (i.e., *summary effects*). It simply calculates the number of significant and insignificant results (Borenstein et al. 2009). However, simple counting has several limitations, for which a meta-analysis provides a remedy. First, simple counting uses the p -value to summarize the effects. However, the validity of p -values is vulnerable to several factors, such as the sample size

and the effect size of the concerned link (Rosenthal 1991). As such, it is difficult to say whether an insignificant result is true or is rather due to the sample size or the effect size. A meta-analysis instead takes both the sample size and effect size into account. Second, simple counting is more likely to have a smaller statistical power and to cause type-II errors than a meta-analysis (Borenstein et al. 2009). Finally, simple counting does not provide a statistical test for the summary effect, but a meta-analysis does (Borenstein et al. 2009). Hence, a meta-analysis is an appropriate method to summarize the concerned effects.

Following previous studies (e.g., Borenstein et al. 2009; Palmatier et al. 2006; Deleersnyder et al. 2009), we conduct the meta-analysis as follows. The effect size test is adopted for the validity of the summary effects, which uses the sample-weighted-adjusted *Fisher's z* to present the magnitudes of summary effects (M), shown in Equations 2, 3, 3.1, and 3.2.

$$Fisher's\ z = Y_i = 0.5 \times \ln\left(\frac{1+r}{1-r}\right) \quad (2)$$

where r is the correlation coefficient of the concerned effects.

$$M = \frac{\sum_{i=1}^k W_i Y_i}{\sum_{i=1}^k W_i} \quad (3)$$

$$W_i = \frac{1}{V_{Y_i}} \quad (3.1)$$

$$V_{Y_i} = \frac{1}{n_i - 3} \quad (3.2)$$

where k is the number of the industries, W_i is the weight assigned to each single industry, Y_i is *Fisher's z*, V_{Y_i} is the within-industry variance for industry i , and n_i is the sample size of industry i .

Next, we test whether the summary effects are significantly different from zero by using a Z -value (see Equation 4).

$$Z = \frac{M}{SE_M} \quad (4)$$

where M is the summary effect, SE_M is the estimated standard error of M .

Note that a summary effect across these 13 industries can be significantly different from zero and (for example) positive, despite the fact that the estimated coefficients in some industries are insignificant and even negative. This can be attributed to the potential vulnerability of the p -value and/ or the lower statistical power in each single industry.

Finally, in order to justify potential systematic differences between industries, we test whether summary effects are heterogeneous across the studied industries (i.e., homogeneity test). Two indices for the homogeneity test are adopted. First, Q (χ^2 -distributed) tests the null hypothesis of no variation in the summary effects across industries (see Equation 5).

$$Q = \sum_{i=1}^k W_i(Y_i - M)^2 \quad (5)$$

However, since insignificant results of Q may be attributed to low power, we also used the I^2 statistic to test for heterogeneity. I^2 represents the proportion of variation of the summary effect, which in fact takes place between industries (see equation 6). Borenstein et al. (2009) suggest that the proportions of 25%, 50%, and 75% are regarded as respective threshold values for low, moderate, and high variation between industries.

$$I^2 = \left(\frac{Q-df}{Q} \right) \times 100\% \quad (6)$$

where df is the degrees of freedom.

Table 2.1 Descriptive statistics

	Mean	SD	VE	BE	RE	CC	Age	Gender	Income	Relationship length	Switching costs	Involvement
VE	5.00	1.16	1	0.577	0.554	0.018	0.067	0.050	-0.056	0.056	-0.114	0.469
BE	4.81	1.14		1	0.599	0.041	0.049	0.001	-0.017	0.071	-0.028	0.468
RE	4.12	1.29			1	0.023	0.037	0.044	-0.050	0.087	0.010	0.613
CC	3.78	0.84				1	-0.206	-0.136	0.170	-0.087	-0.007	-0.047
Age	-	-					1	-0.111	0.057	0.237	0.045	0.072
Gender	-	-						1	-0.102	-0.015	0.032	0.067
Income	-	-							1	0.080	-0.007	-0.063
Relationship length	-	-								1	0.062	0.084
Switching costs	3.57	1.71									1	0.057
Involvement	4.52	1.32										1

-: ordinal measurements

2.5 Results

2.5.1 Summary effects of CEDs and summary moderating effects of CC across 13 industries

Table 2.2 shows the multilevel results of 13 service industries. These multilevel results will not be discussed in detail, but are used as input for the meta-analysis. Table 2.3 summarizes the results of Table 2.2 by using the meta-analysis, which are used to test the hypotheses. Across 13 industries, the summary effects of CEDs on loyalty intentions are significantly positive (p -value < 0.01): 0.329 for relationship equity, 0.319 for brand equity, and 0.377 for value equity. The results provide additional evidence for previous research on the positive link between CEDs and customer loyalty (Rust, Lemon, and Zeithaml 2004; Vogel, Evanschitzky, and Ramaseshan 2008). The summary effect of CC is not significantly related to loyalty intentions (0.009, p -value > 0.1).

Next, we investigate the summary moderating effects of CC. The interactions of CEDs and CC are among the mean-centered variables. Consistent with *hypothesis 1*, the interaction between value equity and CC is significant and negatively related to loyalty intentions (-0.032, p -value < 0.05). This means that the moderating role of CC on the effect of value equity is generally negative (i.e., different from zero) and the average magnitude is -0.032 across all studied service industries. This also shows that the link between value equity and customer loyalty is stronger for lower-CC customers and weaker for higher-CC customers. The other two interactions, namely brand equity and CC (-0.012, p -value > 0.1) as well as relationship equity and CC (-0.014, p -value > 0.1), are not significant.

2.5.2 Homogeneity test: summary moderating effects of CC across 13 industries

With regard to the moderating effects of CC, the homogeneity test for Q shows that the effects vary significantly across the 13 industries ($Q=58.77$ for VE×CC, p -value < 0.01; $Q=48.22$ for BE×CC, p -value < 0.01; $Q=28.80$ for RE×CC, p -value < 0.05; see Table 2.3). The homogeneity test for I^2 equals 80% for VE×CC, 75% for BE×CC, and 58% for RE×CC. These results show that the variance of the VE×CC and BE×CC interactions highly stem from differences between industries. They also indicate that the variance of the RE×CC interaction only moderately stems from differences between industries. Additionally, Table 2.3 shows the 95% of the confidence interval (CI) of the summary moderating effects. The range of the moderating effects is between -0.057 and -0.008 for the interaction of VE×CC, between -0.036 and 0.012 for BE×CC, and between -0.038 and 0.010 for RE×CC. Taken together, the homogeneity test shows that, while we do not find the general moderating effects of CC on the link between brand equity and loyalty and on the link of relationship equity and loyalty, these moderating effects may exist in some industries. The homogeneity test encourages us to further examine the potential differences of these interactions between industries. In this study, we take an initial step by taking contractual and non-contractual settings into account, as suggested in *hypothesis 4*.

2.5.3 Summary moderating effect of CC in contractual and non-contractual settings

Table 2.3 shows the results of the meta-analysis conducted separately for contractual and non-contractual settings. We focus only on the results of the moderating effect of CC. As expected, no significant moderating effects are found in contractual settings. However, in non-contractual settings, the summary effects of the interaction of VE×CC (-0.046, p -value < 0.01) and the interaction of BE×CC (-0.034, p -value < 0.05) are significantly negative. We do not find a significant moderating effect of CC on the link between relationship equity and customer loyalty

in either setting (-0.008 for contractual settings, p -value > 0.10; -0.020 for non-contractual settings, p -value > 0.10).

The results of the meta-analysis may be perceived as different from the analysis per industry shown in Table 2.2. Please note that it is not uncommon in meta-analytic research, that although there are only a few significant parameters in the individual results, the meta-analytical results provide support for a significant summary effect (e.g., Abelson 1997; Lau et al. 1992; Rossi 1997). In the Appendix 2 we further provide an in-depth discussion about the findings reported in Table 2.3.

2.5.4 Robustness checks

To test whether the results are robust, we conduct several robustness checks: (1) we include random parameters for CEDs; (2) we transform the independent and dependent variables to logarithms to capture potential non-linear effects; (3) we estimate our model with factor scores for CEDs to account for potential multicollinearity; (4) we pool the data across the 13 industries and estimate a logit model with dummies for contractual vs. non-contractual settings and for firms; (5) we estimate the models on a randomly chosen 90% of the sample⁴. The results of the robustness checks are consistent with the results presented in this section, which provides sufficient support for the robustness of our findings.

We also examine whether income and CC are similar constructs, since some economists argue that CC is similar to income (Burch and Gordon 1984). Firstly, CC and income are not highly correlated. The correlation coefficients are between -0.133 and -0.390 across most industries. Secondly, we conduct an additional analysis in which income is used as a moderating variable instead of CC. The meta-analysis shows that the summary moderating effect of income

⁴ Results of these analyses are available upon request.

is not significant across 13 industries, neither in contractual settings nor in non-contractual settings. These results are clearly different from the results of CC as a moderator. These examinations indicate that CC and income are different constructs and cannot be used interchangeably in analyses.

The prior analyses are based on cross-sectional data, meaning that results only show differences between customers with higher- and lower CC levels and not how changes in CC induce different relationships between CEDs and customer loyalty⁵. We use data on 419 respondents that participated in the annual survey in two subsequent years (2011 and 2012) for an additional panel analysis.

In this additional analysis, we cannot perform the analysis per industry since the sample sizes per industry are too small. Based on the scores of CC within respondents in year 1 (2011) and year 2 (2012), we calculate changes of CC for each respondent. We divide the respondents into two groups: one group in which CC has decreased (n=291) and one in which CC has increased or remained the same (n=128). Subsequently, we compare the parameters of CEDs in year 1 and year 2 for the two different CC groups. By doing so, we investigate for both groups whether the parameters are higher or lower in year 2, compared to year 1. We expect that for the decreasing-CC group, the parameters for value equity and brand equity would increase (i.e., value equity and brand equity become more important). The result shows that while not all CEDs significantly affect loyalty, CEDs that are significant do affect loyalty positively (see Table 2.4). Overall, the results of the panel data confirm the expectations. For the decreasing-CC group, the effects of value equity (0.226 for year 1; 0.608 for year 2) and brand equity (0.689 for year 1;

⁵ We thank the editor and an anonymous reviewer for providing this suggestion.

Table 2.2 Results of the Multilevel Analyses (Random Intercept), Function of Loyalty Intentions

	Contractual setting					Non-contractual setting							
	Insurance	Health insurance	Telecom	Banking	Energy	Super-markets	Gasoline stations	Health & Beauty	Department stores	Fashion stores	MBT	Furnishing warehouses	Travel agencies
VE	0.494***	0.013	0.732***	0.470*	0.164	0.689***	0.620***	0.094	0.157*	0.170	0.621 ***	0.129	0.456***
BE	0.423***	0.593***	0.181	0.654**	0.426	-0.128	0.582***	0.228*	0.149*	0.079	0.120	0.149	0.316***
RE	0.699***	0.807***	0.851***	0.869***	1.458***	0.294**	0.613**	0.363**	0.195*	0.418**	0.266*	0.166	0.722***
CC	-0.230	-0.030	-0.161	0.172	0.366	0.193	-0.644**	-0.256*	0.117	0.035	0.027	0.120	-0.127
VE × CC	0.204	-0.336*	-0.013	-0.667**	-0.682**	-0.334***	-0.205	0.191	-0.144	0.206	0.113	0.052	-0.072
BE × CC	0.060	0.048	0.286	0.123	0.461	0.192	0.250	-0.093	-0.056	0.065	0.057	0.099	-0.479***
RE × CC	-0.101	-0.057	-0.211	0.140	0.018	-0.114	0.389	-0.087	0.041	0.103	0.008	-0.506**	0.162
Age	-0.338***	-0.105	-0.228*	-0.410**	0.485**	-0.134	-0.172	-0.142*	-0.030	-0.155	0.199*	-0.125	-0.012
Gender (female)	0.486*	-0.192	0.083	-0.140	0.363	-0.217	-0.140	-0.791***	-0.147	0.027	0.107	-0.223	0.198
Income	-0.162	0.243	0.077	-0.485*	0.282	0.214*	0.497**	0.055	-0.053	0.008	-0.175	-0.107	-0.095
RL	-0.001	0.048	0.313***	0.015	0.359*	0.232***	0.048	0.111	0.294***	-0.161	-0.090	0.090	0.097
SC	0.028	0.070	-0.130	0.203	0.229	0.046	n.a.	0.049	0.030	-0.083	0.138*	-0.044	-0.051
Involvement	0.810***	0.079	0.508***	0.330	-0.097	0.351***	-0.050	0.574***	0.464***	0.518***	0.428***	0.460***	0.171
Constant	-2.574***	0.898***	-3.101***	-0.309	3.192***	-1.171***	-1.115***	-0.559***	-1.217***	0.078	-0.788***	-0.975***	-0.694***
LL^a: null model^b	-2861.72	-1241.87	-2364.35	-1315.49	-1059.72	-1596.92	-1381.11	-1071.64	-1226.55	-639.43	-987.60	-759.89	-1074.88
LL^a	-2683.43	-1184.01	-2193.62	-1261.66	-1021.54	-1496.72	-1342.48	-1026.86	-1153.28	-616.57	-939.87	-735.40	-1011.13
AIC	-2657.43	-1158.01	-2167.62	-1235.66	-995.54	-1470.72	-1316.48	-1001.32	-1127.71	-590.43	-914.05	-709.10	-985.47
BIC	-2667.44	-1168.34	-2231.03	-1246.03	-1006.01	-1480.91	-1326.81	-1011.66	-1137.95	-600.97	-924.43	-719.56	-995.81
Respondents	513	463	383	251	321	240	189	180	192	154	188	132	386
Responses	971	472	764	430	340	651	471	456	579	287	416	346	458

*** p -value < 0.01; ** p -value < 0.05; * p -value < 0.10 (two-tailed test)

Note: We assume that the datasets of these 13 industries are independent from each other because there are only 5 respondents repeatedly responding to two industries.

^a: The abbreviation of Log Likelihood.

^b: A null model includes only the random intercept, level-one and level-two residuals.

n.a.: Not available.

Table 2.3 Results of Meta-Analyses

	VE	BE	RE	CC	VE×CC	BE×CC	RE×CC
<i>Across 13 industries</i>							
Summary effect ^a	0.329***	0.319***	0.377***	0.009	-0.032**	-0.012	-0.014
95% CI (Lower-/ Upper bound)	(0.30/ 0.35)	(0.29/ 0.34)	(0.35/ 0.40)	(-0.015/ 0.033)	(-0.057/ -0.008)	(-0.036/ 0.012)	(-0.038/ 0.010)
Homogeneity test: Q^b	69.63***	37.88***	42.43**	18.12	58.77***	48.22***	28.80**
Homogeneity test: I^2c	83%	68%	72%	34%	80%	75%	58%
<i>Contractual settings</i>							
Summary effect ^a	0.382***	0.388***	0.449***	0.003	-0.015	0.016	-0.008
95% CI (Lower-/ Upper bound)	(0.35/ 0.42)	(0.35/ 0.42)	(0.41/ 0.49)	(-0.033/ 0.039)	(-0.052/ 0.020)	(-0.021/ 0.051)	(-0.044/ 0.028)
Homogeneity test: Q^b	15.47**	4.55	5.04	3.46	14.36**	9.56*	9.56
Homogeneity test: I^2c	74%	12%	21%	16%	72%	58%	58%
<i>Non-contractual settings</i>							
Summary effect ^a	0.285***	0.262***	0.318***	-0.013	-0.046***	-0.034**	-0.020
95% CI (Lower-/ Upper bound)	(0.26/ 0.32)	(0.23/ 0.29)	(0.29/ 0.35)	(-0.019/ 0.046)	(-0.079/ -0.014)	(-0.066/ -0.001)	(-0.05/ 0.013)
Homogeneity test: Q^b	38.81***	7.50	9.16	14.51	42.85***	34.71***	19.00***
Homogeneity test: I^2c	82%	7%	24%	52%	84%	80%	63%

*** p -value < 0.01; ** p -value < 0.05; * p -value < 0.1 (two-tailed test)

^a: Null hypothesis: The summary effect is zero.

^b: Null hypothesis: Industries share the same summary effect.

^c: The proportion of heterogeneity takes place between industries, rather than sampling error.

1.146 for year 2) in year 2 are significantly higher than those in year 1 (p -value < 0.01 for differences in the effects using a t -test). This means that these two drivers are more important for customers with decreasing CC. In the increasing-CC group, no significant differences in coefficients are found for brand equity and relationship equity. Note, however, that the sample size is smaller in this group, as CC decreased for most respondents due to the recent economic developments. Despite the value of this additional analysis, we want to emphasize that the results should be considered with care, as sample sizes are small. Some selection effects may exist (i.e., selective group of respondents in the panel), and we estimate the model aggregated across industries, which did not allow us to account for industry differences. Still, these findings provide initial evidence confirming the results of the cross-sectional data. But, further examination is needed which is discussed in the limitations.

Table 2.5 summarizes the multiple results of the meta-analysis, pooled data, and panel data. These results in general indicate that *hypothesis 1* is supported across 13 industries; *hypothesis 2* is partly supported (only for non-contractual settings); none of *hypothesis 3a* and *3b* is salient; *hypothesis 4* is partly supported by the different moderating role of CC on the link between value equity and loyalty intentions and on the link between brand equity and loyalty intentions. Overall, our different analyses are relatively consistent and show initial evidence for the moderating role of CC on the effect of CEDs on customer loyalty.

2.6 Discussion

During recessions, CC is generally relatively low; consequently, firms typically lose customer loyalty during recessions (Estelami, Lehmann, and Holden 2001). Therefore, this study uncovers whether and how CC impacts the effectiveness of loyalty drivers. In addition, this study investigates whether the moderating role of CC varies across service industries. In doing so,

firms in different service industries can develop a better understanding of how to adapt their loyalty strategies for creating loyalty among customers with different levels of CC. We provide initial empirical evidence of which loyalty strategy is more effective during recessions for firms in different industries.

Table 2.4 Results of the Panel Data Analysis, Function of Loyalty Intentions

Variables	Decreasing-CC group		Increasing-CC group	
	2011	2012	2011	2012
VE	.226(.32)	.608(.35)*	.109(.43)	-.258(.62)
BE	.689(.26)***	1.146(.28)***	.668(.30)**	.359(.54)
RE	.093(.27)	-.235(.30)	.314(.39)	.332(.56)
Age	.189(.19)	-.141(.20)	.166(.28)	.532(.40)
Gender (female)	-.505(.44)	-.582(.46)	.232(.58)	-.193(.90)
Income	.268(.22)	.174(.24)	-.098(.29)	-.086(.43)
Relationship length	.077(.15)	.092(.17)	.001(.21)	-.079(.38)
Switching costs	.404(.13)***	.232(.13)	-.058(.16)	.046(.28)
Involvement	-.176(.21)	-.047(.20)	-.518(.27)*	-.585(.45)
R²	.125	.163	.103	.043
Sample size	279	279	124	124

****p*-value < 0.01; ** *p*-value < 0.05; * *p*-value < 0.1 (two-tailed test)

2.6.1 Meta-analytic results

The main contribution of this study concerns the investigation of the summary moderating role of CC on the CEDs-loyalty link across all studied industries. In doing so, a meta-analysis is an appropriate method of obtaining empirical generalizations in marketing (Farley, Lehmann, and Sawyer 1995). It examines the pattern (i.e., the summary effect) and also estimates the systematic variance of the pattern in different settings (i.e., parameter adjustability; Bass 1995).

The results of the meta-analysis show that the positive effects of CEDs on loyalty intentions are

partly contingent on different levels of CC. Value equity is more important for lower-CC customers across industries. This finding provides evidence for a common anecdote during recessions that lower-CC customers are more cautious and selective than higher-CC customers. They hence tend to carefully calculate value for money when making purchasing decisions (e.g., Katona 1968; Leeflang and van Raaij 1993). This observation is also consistent with some previous findings in the marketing literature. Lamey et al. (2007), for example, found that the popularity of good-quality private labels increases in recessions.

2.6.2 Differences in contractual and non-contractual settings

Further examination indicates that the moderating effects of CC vary systematically across industries. The result of this systematic variation across industries responds to the findings of some previous studies with regard to CC and consumption, in which the impact of CC differs across industries (e.g., Curtin 1982; Leeflang and van Raaij 1993). In order to explain the industry-specific moderating role of CC in this study, we take an initial step by considering the unique characteristics of contractual and non-contractual settings.

As expected, CC has a more significant impact on the effects of CEDs in non-contractual settings than in contractual settings. Value equity and brand equity become more important for lower-CC customers in non-contractual settings, which may be attributed to the unique characteristics of these settings. For example, compared to non-contractual settings, a contract constrains customers to adjust their consumption level. In other words, it is more difficult for customers in contractual settings to adapt their behavior according to their preferences, which may be reflected in different levels of CC. This further indicates that the adaptation of loyalty strategies partly depends on whether a firm operates in contractual or non-contractual settings.

Table 2.5 Summary of the Meta-Analysis, Pooled Data, and Panel Data

Variables	Meta-analysis						Pooled data			Panel data ¹	
	13 industries		Contractual settings		Non-contractual settings		13 industries	Contractual settings	Non-contractual settings	Decreasing-CC group	Increasing-CC group
	Mean scores	Factor scores	Mean scores	Factor scores	Mean scores	Factor scores	Mean scores	Mean scores	Mean scores	2011-2012	2011-2012
VE×CC	-	-	n.s.	n.s.	-	-	n.s.	n.s.	-		
BE×CC	n.s.	n.s.	n.s.	+	-	-	n.s.	n.s.	-		
RE×CC	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.		
VE	+	+	+	+	+	+	+	+	+	+	n.s.
BE	+	+	+	+	+	+	+	+	n.s.	+	n.s.
RE	+	+	+	+	+	+	+	+	+	n.s.	n.s.

VE: value equity; BE: brand equity; RE: relationship equity; CC: consumer confidence

+: positive significant; -: negative significant; n.s.: not significant

¹: The symbol in the panel data shows the results of comparing the coefficients of CEDs in 2011 and 2012 by using the t-test

Additionally, while we find a pattern that value equity is effective for enhancing customer loyalty for lower-CC customers across service industries, we notice that contractual firms are more deviant from the pattern than non-contractual firms (i.e., parameter adjustability). This shows that contractual firms should be more cautious of using value equity as strategies to improve lower-CC customers' loyalty than non-contractual firms.

2.6.3 Insignificant impact of CC on the effectiveness of relationship equity

We do not find any significant impact of CC on the link between relationship equity and customer loyalty. We provide a statistical and a theoretical explanation for this. Regarding the potential statistical explanation, both perspectives of benefits and costs (as proposed in *hypotheses 3a* and *3b*) arrive at different directions of the presumed moderating effects of CC. As such, these two competing effects may nullify each other. The potential solution to the nullification problem is to collect customer information of mechanisms underlying building relationship equity with firms, namely, either perceiving benefits or costs. In terms of the potential theoretical explanation, the insignificant result could be attributed to how customers respond to CEDs. Value equity and brand equity are often effective in attracting new customers, but are relatively shallow determinants of customer loyalty compared to relationship equity (Oliver 1999; Singh and Sirdeshmukh 2000). As such, we assume that value and brand equity may be more likely to be influenced by external forces, such as different economic situations which are reflected in different levels of CC. Instead, relationship equity builds up a solid partnership between customers and firms. The partnership derived from relationship equity provides embeddedness and reciprocity in a transaction, which lessens opportunism and self-interest (e.g., Morgan and Hunt 1994). This may imply that the magnitude of relationship equity is more likely to remain the same across different levels of CC.

2.7 Managerial Implications

How can firms retain customers during recessions? Does it still pay off to invest in the three CEDs for enhancing customer loyalty? Our main finding indicates that firms need to adapt their strategies during recessions since customers with different levels of CC have different preferences. Firms should focus on the value offered by improving their price-quality ratio. This can be done by either lowering prices and/or by increasing quality. Quality in this respect is defined broadly, as it also includes convenience. For example, to lessen the threat of hard discounters and to maintain a market leader in the Netherlands during recessions, a Dutch supermarket chain (Albert Heijn) notices the importance of providing value to customers. It decreased the prices of a large number of products in 2012 and again in the fall of 2013, but still strives to maintain or even improve service quality. Additionally, to increase convenience in buying, Albert Heijn increased the number of convenience stores (i.e., AH to Go) from 51 in 2011 to 55 in 2012 and aims to double the product assortment of the web-store in 2013. Although there is no direct empirical evidence showing the link between providing a better price-quality ratio and customer loyalty or other measures of firm performance, Albert Heijn manages to remain market leader and is also able to increase revenue by 2.7% in the first half of 2013 (Brabants Dagblad 2013; NRC 2013).

In addition, firms in non-contractual settings trying to increase customer loyalty should also focus on improving their brand equity during recessions. The emphasis on brand equity responds to a debate in recessions: pro-cyclical vs. counter-cyclical advertising behavior (Deleersnyder et al. 2009). Theoretically, counter-cyclical behavior is encouraged in order to grasp chances during recessions because more advertising should reduce quality uncertainties, in particular for risk-averse customers (Wiggins and Lane 1983). However, in practice, firms

behave pro-cyclically (e.g., Deleersnyder et al. 2009; Srinivasan, Lilien, and Sridhar 2011). Our findings suggest that managers in non-contractual settings should behave counter-cyclically by investing more in advertising to improve brand equity during recessions. This is likely to be rewarded with increased loyalty.

2.8 Limitations and Future Research

The above findings should be viewed by their limitations, which provide directions for further research. First, since loyalty behavior has different meanings across industries, loyalty intentions are used as a measure to compare customer loyalty across industries for a large number of firms. However, observed loyalty behavior is the ultimate proof of loyalty and is more related to the metrics of firm performance. We encourage further research to uncover an adequate proxy of loyalty behavior as a comparison criterion across industries. Second, to explain the variation of the moderating effects of CC on the CEDs-loyalty link, we distinguish between contractual and non-contractual settings. However, the cross-industry variance of the moderating effects still remains significant in both contractual and non-contractual settings. This remained variance can further be explained by the use of loyalty programs in non-contractual settings to some extent. Non-contractual firms often use loyalty programs to “lock-in” their customers, which may have a similar effect as a contract. That is, the moderating impact of CC may be lessened for non-contractual firms that use loyalty programs. Since we cannot infer from our data whether customers joined a loyalty program, we leave this interesting issue for future research. Third, it might be that different industry characteristics besides the presence of contracts would explain the differences in the moderating role of CC across industries. This implies that it is necessary to consider additional industry characteristics to further explain the cross-industry variance and give an interesting insight into which firms should consider CC, and which should ignore it.

Fourth, there are only five contractual firms in our data, which limits the variance for the explanation. We encourage future research to include more contractual industries to examine whether the relevant findings can be replicated. Fifth, we do not take into account the presence of a possible mental contract, which invisibly connects customers and firms. A mental contract may take place in both contractual and non-contractual settings, meaning that the moderating role of CC may be overestimated for customers with a mental contract. Sixth, one may further examine the insignificant summary moderating effects of CC on the link between relationship equity and customer loyalty. As we explain in the development of our hypotheses, customer-firm relationships come with benefits and costs. To investigate whether these two competing effects indeed nullify each other, one could deconstruct and measure both the benefit and cost perspective of relationship equity as perceived by customers. Seventh, although we use a panel dataset over two years to validate the results of the cross-sectional data, we do not examine whether changes of CC before, during, and after recessions. A potential way to investigate changes of CC is to conduct a scenario-based experiment. In such an experiment one could manipulate the timing of recessions and observe several changes of CC over time. It is also necessary to collect a large-scale dataset with more than two-year time series. Eighth, the findings are from service industries in the Dutch consumer market. Conducting research in other contexts may further strengthen generalizations. For example, the Netherlands is a high-welfare country, meaning that people's lives are secured by the social welfare system, which may explain some small differences between customers with different levels of CC. Hence, an opportunity for further research is to include high-welfare and low-welfare countries in the analysis in order to compare results. Lastly, one interesting thought is whether longitudinal satisfaction studies (i.e., ACSI), should also include CC measures. We find a moderating effect

of CC on the effect of value equity on customer loyalty. Given that customer satisfaction is a component of the value equity construct and the longitudinal nature of ACSI, researchers could include external CC measures (i.e., the one of the University of Michigan) as moderators to study how CC affects the link between satisfaction and customer metrics over time at the national level (Fornell, Rust, and Dekimpe 2010).

To conclude, this study takes a first step in providing evidence for the moderating role of CC in the formation of customer loyalty. Given some limitations of the data (e.g., no behavioral loyalty, limited time series data, number of industries studied), clearly more research is required on the moderating role of CC. We provide some fruitful avenues and hope that this research provides a starting point for further efforts on this important topic.