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Implementing customer relationship management successfully:

A configurational perspective

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Abstract

Although the management of customer relationships has become a key priority in firms in a broad range of industries, its effective implementation often creates major challenges. Couched in configuration theory and using a configurational approach, this article investigates how factors associated with firms' customer management, market approach, and business environment interact and fall into patterns to predict profitability. The results of a fuzzy-set qualitative comparative analysis reveal different configurations to a profitable implementation of customer relationship management. Insight into these configurations contributes to a deeper understanding of digital ecodynamics and advances the understanding of the interplay among important strategic, technological, and environmental factors. The findings of this inquiry can guide managers in designing effective customer relationship management approaches.

Keywords: Configurational approach, Customer relationship management, Digital ecodynamics, Profitability

1. Introduction

As digitization increases and customers' options to interact with firms multiply (Brenner et al., 2014), firms that ignore customers' experiences and hesitate to build and strengthen trustful customer relationships may fail in the long run. For example, McKinsey & Company stresses that "a customer-centric organizational culture … is more than merely a good thing – it's becoming a matter of survival" (Goran et al., 2017, p. 6). Apart from business practice, the question of how firms can intensify their customer focus and develop and maintain effective relationships with customers has received strong attention from several fields, including information systems and business research. Prior work demonstrates that firms' customer orientation (e.g., Deshpandé et al., 1993), customer centricity (e.g., Shah et al., 2006), and customer relationship management (CRM) (e.g., Parvatiyar and Sheth, 2001) can unfold significant positive effects for firm performance. However, studies also indicate that a more nuanced understanding of how firms can effectively implement and capitalize on such approaches requires insight into the interplay and complex dynamics of strategic, technological, and environmental factors. According to El Sawy et al. (2010), "digital ecodynamics" pose the next frontier for academic inquiry in information systems research. Digital ecodynamics refer to "the holistic confluence among environmental turbulence, dynamic capabilities, and IT [information technology] systems—and their fused dynamic interactions unfolding as an ecosystem" (El Sawy et al., 2010, p. 835), and they often come with major challenges, including conjunctural causality, equifinality, and asymmetric effects.

Thus, this research aims to further improve the understanding of digital ecodynamics by investigating how factors associated with firms' customer management, market approach, and business environment interact and fall into patterns to predict profitability. The research question

guiding our inquiry is: How do firms configure CRM implementation profitably? This study endeavors to advance current knowledge by examining CRM within the broader scope of the firm and its environment. In line with prior studies emphasizing the value of the configurational approach to unmask the complex patterns underlying the interplay of organizational and environmental factors (e.g., El Sawy et al., 2010; Fiss, 2011; Misangyi et al., 2017), this research uses configuration theory (Ketchen et al., 1993) as the primary theoretical lens and conducts a configurational analysis based on fuzzy-set qualitative comparative analysis (fsQCA) (Ragin, 2008). Configuration theory as an inquiry system has sparked multiple studies on the complexities of business phenomena (e.g., Kumar et al., 2022). Using data from a survey of 109 firms operating in different industries, we conduct necessity and sufficiency analyses to better understand the relationships between factors associated with firms' CRM, market approach, business environment, and profitability.

The findings reveal different configurations of factors for achieving high profitability. These configurations represent alternative pathways to a profitable implementation of CRM. In addition, they deepen the understanding of the reinforcing effects among factors of different domains. Insights into these alternative configurations extend work on CRM that adopts a configurational approach (Guerola-Navarro et al., 2021). In addition, the insights give managers the opportunity to reevaluate CRM implementation. The configurations obtained in the analysis offer design choices that can guide executives in developing new or amending existing CRM approaches.

2. Conceptual background

2.1. Theoretical underpinnings

Configuration theory serves as the focal theoretical lens of this study. The theory contributes to a holistic understanding of complex phenomena (Doty and Glick, 1994), in that it assumes that the identification of distinct, internally consistent sets of firms and their relationships with their environments and performance outcomes can best explain organizational phenomena (Ketchen et al., 1997). A configuration theoretical perspective "allows researchers to express complicated and interrelated relationships among many variables without resorting to artificial oversimplification of the phenomenon of interest. Configurations are a means of achieving parsimony while presenting rich, complex descriptions" (Dess et al., 1993, p. 776).

Configurations denote multidimensional patterns of attributes that commonly occur together (Meyer et al., 1993). These attributes can originate from varying domains, including strategy, processes, technologies, and environmental elements (Dess et al., 1993; Meyer et al., 1993). The attributes can coalesce based on a unifying theme that connects them (Meyer et al., 1993; Miller, 1996).

Configuration theory views firms as systems of interrelated attributes that bind to form reoccurring patterns (Meyer et al., 1993; Miller, 1996). It contends that for any given set of attributes, only a limited range of configurations exist that engender superior performance (Ketchen et al., 1993). In this view, order emerges through the interplay of elements that can be characterized by reciprocal and non-linear effects and equifinal solutions for an outcome (Meyer et al., 1993).

2.2. Research framework

The focus of this research is on CRM implementation. Specifically, this study investigates how configurations of factors pertaining to CRM lead to profitability, considering that firms may

use alternative market approaches and operate in dynamic business environments. This research thus aims to provide a more holistic understanding of digital ecosystems (El Sawy et al., 2010).

Fig. 1 depicts the research framework of this study in the form of a 6 Venn diagram to illustrate the configurational approach employed herein (Grünbaum, 1975). The left side shows the six antecedents and the right side the outcome of interest (i.e., profitability). The six antecedents cover different aspects of CRM implementation as well as firms' market approach and characteristics of their business environment. In this study, we regard customer asset orientation, customer segment–specific approach, and CRM-system adoption as important implementation-related CRM factors, covering strategic, procedural, and technological aspects. The market approach reflects firms' focus on business-to-business (BtB) and/or business-to-consumer (BtC) markets and on selling services and/or goods. Market dynamism is the environmental factor. The overlapping areas in Fig. 1 symbolize logically possible configurations of these antecedents. As such, this research follows the notion that demands triggered through external conditions require firms to create suitable internally consistent factor constellations to achieve superior performance (Ketchen et al., 1993). For profitability, firms need to combine CRM elements in such a way that they match the demands, which arise from a chosen market approach and level of market dynamism (Payne and Frow, 2005).

--- Insert Fig. 1 here. ---

Customer asset orientation is the set of beliefs that prioritizes the customer asset's value contribution to the firm value. It represents the firm's understanding that "the customer is an entity (organization, household, or individual consumer) that provides the firm with a stream of revenue (and costs) and therefore becomes an integral component in the tabulation of a firm's overall net worth" (Berger et al., 2002, p. 40). Optimizing the customer asset implies prioritizing

investments according to the inherent value of customers and allocating resources to individual accounts or segments (Zeithaml et al., 2001). Customer asset orientation is associated with IT adoption and process design. A firm that views its customers as an asset has a strong interest in accumulating information on customer-related transaction and relationship measures to be able to estimate the inherent value of its customer asset. In addition, such a firm uses IT to manage its digital customer touchpoints to cost-effectively satisfy the information needs of its customers and harness IT value that originates from knowledge sharing (Saraf et al., 2007). Moreover, in a firm with a customer asset orientation, customer-facing processes need to be optimized to minimize operational costs of activities, thus maximizing margins, and to create a satisfying customer experience that minimizes the likelihood of customer churn through, for example, process coupling (Saraf et al., 2007).

A customer segment–specific approach acknowledges the differences in customer contribution margins across different accounts and segments (Shah et al., 2006). This approach aligns processes and structures with customers' varying profitability. With firms aiming to meet customer needs as close as possible while maintaining profitability, these needs as well as their constraints should be reflected in the organization (Kohli and Jaworski, 1990). These reflections manifest in processes and structures that enable firms to match resource allocations to customer profitability estimates (Reinartz et al., 2004). Thus, firms assess their customers' value potential and assign their resources accordingly, which may require different processes for relationship management depending on the customer segment (Zeithaml, 2000). The use of key account management or the serving of customers with lower value through digital channels and call centers reflects discrete manifestations of organizations that pursue a dedicated customer segment–specific approach.

The pursuit of profitability requires real-time monitoring of account profitability across all available channels combined with efforts to increase it (Payne and Frow, 2005). Depending on the firm, the integration of customer account information across channels and the delivery of marketing and sales force automation require augmentation through CRM-system adoption (Payne and Frow, 2005). A CRM system is the IT backbone of a firm that helps implement a customer focus. It centralizes information from all customer touchpoints and serves as a boundary-spanning piece of technology. Its functionalities cater to the separate processes of strategic, operational, and analytical CRM (Buttle and Maklan, 2015). Strategic CRM focuses on the choice of the right customer segments, the right strategies for approaching them, and the right organizational structure and processes for serving them. Operational and analytical CRM manages all customer interactions, distilling and condensing relevant information on individual accounts and customer segments (Iriana and Buttle, 2007). Effective CRM systems create knowledge about and for customers and enable proactive customer strategies that also result in improved profitability (Hein et al., 2017). With today's cloud- and artificial intelligence–based CRM-system solutions, affordable to small and medium-sized enterprises, the presence of dedicated IT to support CRM is available to many types of firms (e.g., Chatterjee et al., 2021; Härting et al., 2016; Ledro et al., 2022). Yet, even today, not all enterprises make use of such technologies and solutions to their full potential.

We consider firms' market approaches by capturing two important facets: (1) firms' focus on BtB markets and/or BtC markets (Homburg et al., 1999) and (2) firms' focus on selling services and/or goods (Verhoef and Leeflang, 2009). Firms approach the market with varying offer characteristics, ranging from pure manufacturers of goods, to pure service providers, to solution providers that combine both approaches in a meaningful way to address a specific

customer need (Tuli et al., 2007). Services differ from goods in a range of dimensions, including intangibility, simultaneous production and consumption, storage inability, and non-standardization due to customer integration (Zeithaml et al., 1985), which implies rich potential for service providers to benefit from a customer focus. For example, service providers often have no intermediaries that may withhold information about end-consumer preferences, thereby allowing customer-focused firms to gather firsthand information about consumer needs and expectations. In addition, many service processes require integration of the customer or some customer assets, exposing the customer's business logic and thus leading to an improved understanding of the dynamics of the derived demand and further opportunities for expanding the business. Similar to an offer structure that may vary between goods and services, a firm's market approach may also vary by its client focus, with extremes of operating exclusively in BtB or BtC markets. However, firms may also operate in both types of markets simultaneously. This is relevant because business markets are characterized by more complex purchasing processes, higher importance of industry standards, and product complexity (e.g., Brown et al., 2007; Fern and Brown, 1984).

The environmental characteristic we consider herein is market dynamism. Market dynamism covers the turbulence surrounding a firm in terms of changes regarding competitor behavior and customer preferences (Maltz and Kohli, 1996). Firms in dynamic market environments benefit from sensing and reacting capabilities (Leischnig et al., 2016). In a similar fashion, a firm with a policy that sets up structures and processes to incorporate and profitably serve customer needs may benefit in a dynamic market, as the company can sense changes and react accordingly. However, a customer focus that is implemented with a customer asset orientation may also interact negatively with a dynamic market environment. The constraint for

positive customer contribution margins may prevent the firm from responding to frequent changes in customer preferences, because these responses would result in frequent setup costs, thus lowering profitability. This rationale is likely to be more pertinent for some industries in which setup costs play a bigger role than for others.

In summary, prior research indicates that the implementation of CRM can vary across firms. Depending on the interplay among the aforementioned factors and the respective market conditions, profitability can vary. These considerations give rise to the question of how firms should implement CRM to achieve profitability. This question serves as the starting point for the current exploratory inquiry.

3. Research approach

3.1. Data collection and sample characteristics

Data for this study come from a cross-sectional online survey of firms in Germany. The planned sample consists of 2,000 firms provided by a professional panel service provider, covering a broad range of industries such as the automobile industry, consumer goods industry, energy industry, and retail and wholesale. The firms in the planned sample were randomly selected and covered different industries to ensure sufficient variation. Key informants in these firms received an email, including a link to the online questionnaire, together with a cover letter that invited their participation, informed them that there were no correct or incorrect answers, and assured anonymity of data collection (Podsakoff et al., 2003). After the initial mailing, a reminder email was sent. In total, and after excluding responses with missing values, we received 109 valid questionnaires useful for further analysis (for a net response rate of 5.5%). The average firm in the sample has a sales volume between €5 million and €25 million and has 50 to 100

employees. Approximately 50% of the firms are family businesses. Of the respondents, 34% have a top management position (e.g., CEO, managing director), 39% have a senior-level management position (e.g., marketing or sales director), 23% have a mid-level management position (e.g., marketing or sales manager), and 4% have other functions (e.g., technical director). Respondents' average organizational tenure is 11.7 years (SD = 8.82), and the mean age is 46.9 (SD = 9.54).

3.2. Construct measures, measurement validation, and tests for potential biases

A standardized questionnaire was the data collection instrument. This questionnaire was based on established scales for the construct measures whenever possible. The questionnaire contained multiple-item scales for the measurement of customer asset orientation, customer segment–specific approach, CRM-system adoption, and profitability. Single items captured the dimensions of firms' market approaches. Four items adopted from Reinartz et al. (2004) and measured with a 7-point Likert scale capture customer asset orientation. To measure the degree of a customer segment–specific approach, we used four items from Reinartz et al. (2004). A scale with five items adopted from Reinartz et al. (2004) and Hillebrand et al. (2011) captures CRM-system adoption. The scale for firms' share of business in BtB or BtC markets was based on Homburg et al. (1999), and firms' offer focus as the share of business from selling services and/or goods was based on Verhoef and Leeflang (2009). Four items adopted from Jaworski and Kohli (1993) measure market dynamism. Finally, a scale with four items adopted from Vorhies and Morgan (2005) captures firms' profitability. This scale asked respondents on a 7-point Likert-type scale to indicate the achievement of goals in terms of their firm's profitability. Table 1 details the measurement instruments for each of the constructs, provides information on

reliability and validity criteria, and indicates the items eliminated during the scale purification procedure.

--- Insert Table 1 here. ---

Analysis of the measurement model included a confirmatory factor analysis (CFA) and assessment of global fit indices and other criteria to evaluate the internal model structure (e.g., Bagozzi and Yi, 1988; Bagozzi et al., 1991). We assessed overall model fit by inspecting the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA). The results of the CFA indicate that the measurement model has a satisfactory overall model fit ($\chi^2 = 165.76$, $df = 133$, $\chi^2/df = 1.25$; CFI = 0.97; TLI = 0.96; RMSEA = 0.05). We assessed the internal structure of the measurement model and reliability and validity with additional parameters. The results indicate that Cronbach's alpha for the scales ranges between 0.77 and 0.96, thus achieving satisfactory scores considering the usually employed threshold of 0.70 (Nunnally, 1978). Composite reliability scores range between 0.73 and 0.96, and the scores for average variance extracted (AVE) range between 0.53 and 0.86. These values exceed the thresholds of 0.6 and 0.5, respectively, for these parameters (Bagozzi and Yi, 1988). Assessment of discriminant validity as recommended by Fornell and Larcker (1981) reveals that the AVE for each construct is higher than the squared inter-construct correlations. Table 2 shows the descriptive statistics for the construct measures and discriminant validity. In summary, the results indicate that the model fits the empirical data well.

--- Insert Table 2 here. ---

We ran additional tests to control for potential biases. We conducted two tests to assess non-response bias. In line with the recommendations of Armstrong and Overton (1977), we assessed non-response bias by comparing the early and late responses for the focal constructs. To

this end, we split the sample into three groups and conducted a series of t-tests comparing the responses for early (group 1) and late responses (group 3). The results of this analysis revealed no significant differences (all *p*s > 0.05). In organizational surveys, non-response due to factors such as high workload or busyness is a frequent problem (Rogelberg et al., 2003). Thus, we ran an additional test to examine the association between the focal constructs and respondents' job position as a proxy for busyness (Rogelberg and Stanton, 2007). The analysis uncovered no significant results (all *p*s > 0.05). Given these findings, non-response bias does not constitute an issue in this study.

We also controlled for possible common method bias (Podsakoff et al., 2003; Podsakoff and Organ, 1986). To assess common method variance, we conducted Harman's one-factor test. The results showed that no single factor emerged from the unrotated factor solution and no first factor explained the majority of the variance in the variables. We also ran a chi-square difference test based on CFA (Malhotra et al., 2006) to further supplement these results. The results of this analysis revealed that a single-factor model with all construct indicators loading on a single factor fit the data significantly worse than the postulated multi-factor model ($\Delta\chi^2 = 509.6$, $\Delta df = 19$, $p < 0.001$). Given these results, common method bias does not constitute an issue in this study.

3.3. FsQCA

This study uses fsQCA to identify configurations of CRM, business conduct, and market factors sufficient for profitability. FsQCA has captured strong interest from researchers across disciplines as a useful method for probing configuration theoretical considerations and uncovering configurations of factors that are sufficient for a particular outcome under study (e.g.,

Kumar et al., 2022). FsQCA embraces causal complexity, that is, a situation "in which a given outcome may follow from several different combinations of causal conditions—from different causal 'recipes'" (Ragin, 2008, p. 124), and it accounts for conjunction, equifinality, and asymmetry (Misangyi et al., 2017). FsQCA interprets individual cases as a combination of attributes, where the attributes include the antecedent conditions and the outcome condition of interest (Ragin, 2008). The connections between antecedent and outcome conditions are then assessed in terms of set relations (Fiss, 2011). For fsQCA to be applicable to the data set, the first step is to convert measures of antecedents and outcomes into fuzzy-set membership scores. These scores are limited to a range between 0 and 1 and indicate the degree to which a case is a member of a given set as well as its logical opposite (i.e., the negation; Ragin, 2008). For example, a case with a fuzzy-set membership score of 0.65 in the set of profitable firms has a fuzzy-set membership score of 0.35 (i.e., $1 - 0.65 = 0.35$) in the complement set of not profitable firms. FsQCA conveys how the membership of cases in sets of different antecedents relates to membership in a single outcome set (Fiss, 2011; Ragin, 2008). It describes the connections between the antecedents and the outcome along the lines of logical necessity and sufficiency. A relationship of necessity is present when an outcome never occurs without the respective antecedent (Ragin, 2008). From a set-theory perspective, this means that necessity exists when the occurrences of the antecedent are a superset of the occurrence of the outcome (Ragin, 2006). By contrast, sufficiency means that occurrences of the antecedent conditions (or their combinations) are a subset of the occurrence of the outcome (Ragin, 2006). Sufficiency exists when an antecedent (or a combination of several antecedents) can produce an outcome (Ragin, 2008).

The fsQCA here includes six antecedents assumed to affect profitability as shown in Fig. 1. Following established standards (Fiss, 2011; Ragin, 2008; Schneider and Wagemann, 2010), we conduct the fsQCA in three steps: calibration of the fuzzy sets, analysis of necessity (superset analysis), and analysis of sufficiency (subset analysis). We used version 2.5 of the fs/QCA software program (Ragin et al., 2006) for each of the steps.

3.3.1. Calibration

For calibration, we combined the multi-item construct measures to composite scores. Following the literature on QCA, we defined three qualitative anchors to structure the calibration: the threshold for full non-membership in a set, the threshold for full membership in a set, and the crossover point (Ragin, 2006). Calibration involves the conversion of the construct measures to odds ratios and centers them on the crossover point. Next, the logarithm of these odds ratios is calculated and fuzzy-set membership scores that incorporate both membership thresholds and the chosen crossover point.

For customer asset orientation (measured on a 7-point Likert scale), we set the threshold for full membership at 7 (the scale maximum) and the threshold for full non-membership in the fuzzy set at 1 (the scale minimum). Value 4 (the scale midpoint) marked the crossover point. Thus, cases that indicate complete agreement with all items for customer asset orientation are fully in the fuzzy set of customer asset–oriented firms, whereas cases that indicate complete disagreement are fully out of it. In addition, cases with a composite construct value between 1 and 4 are more out of than in the fuzzy set, and cases with a composite construct score between 4 and 7 are more in than out of the fuzzy set. These calibration rules tie fuzzy-set membership to respondents' levels of agreement with the construct measures. We assigned the fuzzy-set

membership scores for the customer segment–specific approach, CRM-system adoption, market dynamism, and profitability analogously. For all these concepts, the scale maximum defined the threshold for full membership in the set, whereas the scale minimum marked the threshold for full non-membership; the scale midpoint marked the crossover point. For the dimensions of firms' market approach as represented by the share of business in BtB and/or BtC markets and the share of business from selling services and/or goods in percentage, we obtained fuzzy-set membership scores through the linear transformation of percentage values. For example, a firm with a share of business in BtB markets of 45% has a fuzzy-set membership score of 0.45 for the set of firms that are BtB-oriented. This example firm is more out of than in the fuzzy set of firms with a BtB focus (and more in than out of the set of firms with a BtC focus [i.e., the negation] based on the corresponding fuzzy-set membership score of 0.55). Likewise, a firm with a share of business from selling goods of, for example, 85% has a fuzzy-set membership score of 0.85 in the fuzzy set of firms that are goods-focused; accordingly, it is more in than out of the fuzzy set of manufacturers and more out of than in the fuzzy set of firms that focus on selling services (corresponding fuzzy-set membership score: 0.15).

The calibration rules outlined here allow the possibility for cases to receive a fuzzy-set membership score of 0.5, which corresponds to a case that is neither in nor out of a given set and thus cannot contribute to analysis as it exactly meets the crossover point (Ragin, 2008). In line with the QCA literature, we added a constant of 0.001 to all fuzzy-set membership scores that did not indicate full membership (i.e., a fuzzy-set score of 1) (Fiss, 2011).

3.3.2. Analysis of set relations

Analysis of set relations consists of superset analysis ("test for necessity") and subset analysis ("test for sufficiency"). Necessity is expressed through all empirical cases having a fuzzy-set membership score of the outcome that is smaller than the fuzzy-set membership score of the antecedent (Ragin, 2006; Schneider and Wagemann, 2012). Typically, there are some contradictions to this rule, which implies analyzing consistency scores. Consistency in a superset analysis measures the degree to which occurrences of the outcome agree with the occurrences in the antecedent tested for necessity (Ragin, 2006). Antecedent conditions are considered truly necessary or "almost always necessary" if the consistency score meets or exceeds the value of 0.9 (e.g., Schneider et al., 2010).

We then examined configurations of the six antecedents for profitability in an analysis for sufficiency. Following prior research (Ragin, 2008; Schneider and Wagemann, 2012), we established a so-called truth table, referring to a data matrix that holds all logically possible combinations of the six antecedent conditions. Each row of the truth table reflects one possible combination of antecedents. The number of rows of a truth table is determined by the number of antecedents analyzed (i.e., $n = 2^k$, where n represents the number of rows and k the number of antecedents considered). We further refined this truth table on the basis of frequency and consistency (Fiss, 2011; Ragin, 2008; Schneider and Wagemann, 2012). Frequency refers to the number of empirically observed cases that correspond to a respective combination of antecedents. The truth table consists of rows that hold all logically possible configurations of antecedents, some of which are empirically represented by many cases, some by only a few cases, and some by no cases at all. Setting a frequency cutoff value ensures that only the configurations that have a minimum of empirical representation become part of the analysis. Configurations that have no empirical counterpart are referred to as logical remainders. The

recommendations for frequency cutoff values in the literature depend on the size of the sample under investigation. Small to medium-sized samples should be treated with a frequency cutoff value of 1. For larger samples, frequency cutoff values can be respectively higher (Ragin, 2008). In line with this reasoning, we set the cutoff value to 2, which led to the inclusion of 86% of the cases in the sample. We treated configurations with one or no cases as logical remainders (for further details, see Greckhamer et al., 2013). The refinement based on consistency follows the idea that researchers need to differentiate between configurations that consistently show an outcome and those that do not. A minimum consistency threshold value for differentiation is 0.8 (Fiss, 2011; Ragin, 2008). Consistency in an analysis of sufficiency refers to the degree to which the occurrence of an antecedent (or a combination of several antecedents) co-occurs with an outcome (Ragin, 2006). We set the minimum acceptable level of consistency to 0.96 after examining the ordered consistency scores and noticing a dip in the scores at this value (Schneider and Wagemann, 2010). Next, we inspected the proportional reduction in inconsistency (PRI) scores of the configurations that passed the consistency threshold (Misangyi and Acharya, 2014). PRI consistency is sensitive to conditions that describe a subset of the presence and the negation of an outcome (Schneider and Wagemann, 2012). Inspection of the PRI values showed a dip at 0.86 (Misangyi and Acharya, 2014). The reported solution of the sufficiency analysis distinguishes between core and peripheral conditions, which differ by their causal importance for the respective outcome (Fiss, 2011). The core factors of a configuration are causally essential for an outcome, while peripheral conditions surround the core conditions and underline their features (Fiss, 2011; Grandori and Furnari, 2008).

4. Results

Table 3 summarizes the results obtained from the analysis of necessity and shows consistency and coverage scores for each antecedent condition and the negations. In an analysis of necessity, coverage refers to the overlap between the antecedent condition set and the outcome condition set and assesses the trivialness of a necessary condition (Ragin, 2006). As the results show, consistency scores for the presence of customer asset orientation exceed the threshold of 0.9. All other antecedents as well as their negations are lower than the threshold value, indicating that customer asset orientation is a necessary condition for profitability.

--- Insert Table 3 here. ---

Table 4 depicts the results of the analysis of sufficiency for profitability. To illustrate the findings, we apply the notation Ragin and Fiss (2008) use. Black circles indicate the presence of an antecedent condition, and crossed-out circles indicate the negation of an antecedent condition. Large circles represent core conditions in a configuration, and small circles indicate peripheral conditions in a configuration. Blank spaces in a column indicate that the respective antecedent condition has a subordinate role and could be either present or absent. We order the configurations by their raw coverage scores.

--- Insert Table 4 here. ---

Table 4 shows six configurations that are sufficient for profitability. From a technical standpoint, the configurations obtained through the sufficiency analysis represent conjunctions—that is, Boolean-algebraic products of multiple antecedent conditions (Thiem et al., 2016). The particular conditions fall into patterns that achieve profitability as the focal outcome of interest. The identified configurations are descriptions for multiple conjunctural causality (Ragin, 2008), and the occurrence of alternative configurations indicates equifinality (Fiss, 2011).

Table 4 also provides further information on consistency and coverage scores for the overall solution and all individual configurations. Consistency is a measure for the significance of the subset relation, whereas coverage hints at the empirical relevance of the solution and the configurations (Ragin, 2006). The overall solution consistency is 0.91, and the overall solution coverage score of 0.73 indicates that the six configurations have considerable overlap with the outcome set, which is a sign of high "explanatory power." Regarding the individual configurations, consistency scores range between 0.94 and 0.99, which indicates consistently sufficient pathways to profitability. For the particular configurations, both raw and unique coverage scores exist. Raw coverage scores indicate the overlap of the configuration sets and the outcome set relative to the outcome set; unique coverage scores partition the raw coverage to parcel out any overlap between configuration sets (Ragin, 2006). Raw coverage scores range from 0.23 to 0.61, while unique coverage scores range from 0.01 to 0.11.

Configuration 1 combines the presence of customer asset orientation and both the presence of a customer segment–specific approach and a focus on BtB customers. The customer segment–specific approach is a core condition in this configuration. CRM-system adoption, the offering (selling services or goods), and market dynamism have a subordinate role in configuration 1. This configuration reflects firms that derive most of their business from serving BtB markets, that prioritize investments according to the inherent value of customers, and that acknowledge the differences in customer contribution margin across different customer segments.

Configuration 2 also combines the presence of customer asset orientation and the presence of a customer segment–specific approach. In addition, it shows the presence of market dynamism and the negation of a BtB focus. The customer segment–specific approach, market dynamism, and the negation of BtB focus are core conditions in configuration 2. CRM-system adoption and

the offering focus have a subordinate role. Configuration 2 reflects manufacturing firms that mainly focus on selling goods and operate in a dynamic market. Similar to the firms in configuration 1, the firms in configuration 2 have a high customer asset orientation and employ a customer segment–specific approach.

Configuration 3 combines the presence of customer asset orientation and the presence of a customer segment–specific approach, with the latter being a core condition. In addition, this configuration shows the negations of CRM-system adoption and a focus on selling services. BtB focus and market dynamism have a subordinate role in this solution. These firms have a high customer asset orientation and use a customer segment–specific approach. However, they put little emphasis on CRM-system adoption.

Configuration 4 combines the presence of customer asset orientation and both the presence of a BtB focus and market dynamism. In addition, it includes the negation of a focus on selling services. Market dynamism and the negation of a focus on selling services are core conditions in this configuration. A customer segment–specific approach and CRM-system adoption have minor roles. This configuration represents manufacturing firms that serve dynamic business markets and have a high customer asset orientation.

Configuration 5 combines the presence of customer asset orientation and the presence of CRM-system adoption, a focus on selling services, and a focus on BtB markets. CRM-system adoption and the focus on selling services are core conditions; a customer segment–specific approach and market dynamism have a subordinate role in this solution. Configuration 5 represents professional service providers with a high customer asset orientation. In addition, these firms rely on advanced CRM systems to manage customer relationships.

Finally, configuration 6 shows the combination of customer asset orientation, a customer segment–specific approach, and CRM-system adoption together with a focus on selling services and the negation of market dynamism. A customer segment–specific approach, CRM-system adoption, and the services focus are core conditions; a BtB focus has a subordinate role in this configuration. This solution reflects firms that generate major sales through selling services and that operate in a stable market environment. These firms have a strong CRM capability, as reflected by a high customer asset orientation, the use of a segment–specific approach, and the use of advanced CRM systems.

Notably, all configurations share the presence of customer asset orientation. This finding corroborates the results of the necessity analysis, which indicated that customer asset orientation is a necessary condition for profitability (Table 3).

5. Discussion

While both academics and practitioners stress the importance of CRM, the question of how to implement it effectively has sparked much interest and produced mixed results. The purpose of this research was to unmask how firms employing different market approaches and operating under different environmental conditions configure CRM elements to achieve profitability. As such, this research aimed to further advance the understanding of digital ecodynamics (El Sawy et al., 2010), with a particular focus on CRM implementation.

This study chose configurational theory as the primary theoretical lens and used a configurational approach based on fsQCA to investigate how firms configure CRM for profitability. The focal constructs were customer asset orientation, a customer segment–specific approach, and CRM-system adoption. The study also included two dimensions of a firm's

market approach (i.e., a focus on BtB/BtC markets and a focus on selling services/goods) and environmental characteristics (i.e., market dynamism). Thus, this research responds to calls for research to adopt the configurational lens when investigating the interplay among firms' IT, environment, and additional organizational properties (El Sawy et al., 2010) and contributes to current research strands using such an inquiring system (e.g., Kumar et al., 2022).

This study adds to the literature by identifying alternative, consistently sufficient configurations for achieving high profitability. Each of these configurations or "causal recipes" of antecedent conditions represents a pathway to achieve profitability, thus reflecting equifinal solutions to a profitable implementation of CRM. This finding contributes to the ongoing empirical base produced by configuration theory (Gresov and Drazin, 1997) and confirms the notion that multiple realities that all result in a specific outcome exist (Woodside, 2014).

The different configurations help understand the interplay of strategy, process, and IT in the implementation of CRM. Firms need to consider these domains jointly when devising a pathway toward digital transformation. Regarding customer focus, the results show that a customer asset orientation is a necessary condition for profitability. Therefore, firms should treat customers as entities that provide a stream of revenue (and costs) and prioritize valuable customer assets. The contributions of a customer segment–specific approach and CRM-system adoption are dependent on the chosen market approach and the environmental turbulence. Implementation of CRM that either includes or excludes the use of a customer segment–specific process design and a dedicated CRM-system can be profitable, depending on the chosen market approach and market dynamism.

With regard to the market approach and market dynamism, the findings suggest that manufacturing firms operating in a dynamic market benefit from a strong customer asset

orientation, in combination with a customer segment–specific approach (configurations 2 and 4). For firms that derive the majority of their business from selling services, a strong customer asset orientation and CRM-system adoption, in combination with a customer segment–specific approach, reflect profitability-enhancing configurations. These findings reveal the nature of services and imply customization of the value creation process for each customer along several dimensions (Zeithaml et al., 1985). A customer segment–specific approach emphasizes the treatment of customers considering their actual and potential profitability.

Furthermore, CRM that is based on a strong customer asset orientation, a customer segment–specific approach, and CRM-system adoption benefits service-offering firms in a stable market. Such markets may be characterized by commoditization (Reimann et al., 2010). The implementation of CRM may pay off in such an environment because CRM helps gather and store customer information, acknowledges and develops appropriate selling strategies (Leischnig and Kasper-Brauer, 2016), and establishes bonds with customers (e.g., Enke et al., 2022).

6. Conclusion

This study advances the current body of literature on the performance effects of CRM. Prior work reveals mixed results, including positive (e.g., Becker et al., 2009; Jayachandran et al., 2005), non-significant, and even negative performance effects (e.g., Reinartz et al., 2004). Following calls for research to account for industry properties when assessing the performance effects of CRM technology (Reinartz et al., 2004) and to investigate the mechanisms of digital ecodynamics (El Sawy et al., 2010), we examined CRM within the broader scope of the firm and its environment. The findings of our analysis indicate alternative pathways to implement CRM profitably. Knowledge of these configurations provides design choices to managers interested in

developing new or revising existing CRM programs and systems. While the particular configurations differ in their composition, they all reflect consistently sufficient solutions. As such, they may serve as templates for firm-internal benchmarking and monitoring processes.

The findings of our study provide impetus for future research on digital ecodynamics and CRM. Future studies could extend the research framework and include additional or other antecedent conditions. For example, future work could further examine the interplay among strategic, technological, and environmental factors in predicting CRM effectiveness. Such studies could focus on, for example, artificial intelligence– and blockchain-related capabilities (Ledro et al., 2022) and their interplay with factors such as customer-bonding strategies (Yuen et al., 2023) and customer privacy concerns (Martin et al., 2017). In addition, future studies could focus on alternative outcome conditions. While our research centers on profitability as a dimension of financial performance, future work could examine relational outcome conditions, such as trust or relationship strength (e.g., Leischnig et al., 2020), especially when CRM systems and programs involve non-human entities. Finally, future research could approach CRM implementation from the perspective of customers. For example, research could explore how the use of CRM systems and digital technologies affects the perception and reputation of firms—that is, whether such use increases or decreases relationship quality and, eventually, customer relationship performance (e.g., Lin and Lin, 2023).

References

Armstrong, J.S., Overton, T.S., 1977. Estimating nonresponse bias in mail surveys. Journal of Marketing Research 14 (3), 396–402.

Bagozzi, R.P., Yi, Y., 1988. On the evaluation of structural equation models. Journal of the Academy of Marketing Science 16 (1), 74–94.

Bagozzi, R.P., Yi, Y., Phillips, L. W., 1991. Assessing construct validity in organizational research. Administrative Science Quarterly 36 (3), 421–458.

Becker, J.U., Greve, G., Albers, S., 2009. The impact of technological and organizational implementation of CRM on customer acquisition, maintenance, and retention. International Journal of Research in Marketing 26 (3), 207–215.

Berger, P.D., Bolton, R.N., Bowman, D., Briggs, E., Kumar, V., Parasuraman, A., Terry, C., 2002. Marketing actions and the value of customer assets: a framework for customer asset management. Journal of Service Research 5 (1), 39–54.

Brenner, W., Karagiannis, D., Kolbe, L., Krüger, J., Leifer, L., Lamberti, H.-J., Leimeister, J.M., Österle, H., Petrie, C., Plattner, H., Schwabe, G., Uebernickel, F., Winter, R., Zarnekow R., 2014. User, use & utility research. Business Information Systems Engineering 6 (1), 55–61.

Brown, B.P., Bellenger, D.N., Johnston, W.J., 2007. The implications of business-to-business and consumer market differences for B2B branding strategy. Journal of Business Market Management 1 (3), 209–230.

Buttle, F., Maklan, S., 2015. Customer Relationship Management. Routledge, New York.

Chatterjee, S., Chaudhuri, R., Vrontis, D., Thrassou, A., Ghosh, S.K. (2021). Adoption of artificial intelligence-integrated CRM systems in agile organizations in India. Technological Forecasting and Social Change, 168, 120783.

Deshpandé, R., Farley, J.U., Webster Jr, F.E., 1993. Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. Journal of Marketing 57 (1), 23–37.

Dess, G.G., Newport, S., Rasheed, A.M., 1993. Configuration research in strategic management: key issues and suggestions. Journal of Management 19 (4), 775–795.

Doty, D.H., Glick, W.H., 1994. Typologies as a unique form of theory building: toward improved understanding and modeling. Academy of Management Review 19 (2), 230–251.

El Sawy, O.A., Malhotra, A., Park, Y., Pavlou, P.A., 2010. Research commentary-seeking the configurations of digital ecodynamics: it takes three to tango. Information Systems Research 21 (4), 835–848.

Enke, M., Geigenmüller, A., Leischnig, A., 2022. Commodity marketing: An introduction into key concepts and processes. In: Enke, M., Geigenmüller, A., Leischnig, A. (Eds.), Commodity Marketing – Strategies, Concepts, and Cases. Springer, Cham, pp. 3–20.

Fern, E.F., Brown, J.R., 1984. The industrial/consumer marketing dichotomy: a case of insufficient justification. Journal of Marketing 48 (2), 68–77.

Fiss, P.C., 2011. Building better causal theories: a fuzzy set approach to typologies in organization research. Academy of Management Journal 54 (2), 393–420.

Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research 18 (1), 39–50.

Goran, J., LaBerge, L., Srinivasan, R., 2017. Culture for a digital age. McKinsey Quarterly 3 (1), 56–67.

Grandori, A., Furnari, S., 2008. A chemistry of organizations: combinatory analysis and design. Organization Studies 29 (3), 459–485.

Greckhamer, T., Misangyi, V.F., Fiss, P.C., 2013. The two QCAs: from a small-N to a large-N set theoretic approach. In: Fiss, P., Cambré, B., Marx, A. (Eds.), Configurational Theory and Methods in Organizational Research. Emerald, Bingley, pp. 49–75.

Gresov, C., Drazin, R., 1997. Equifinality: functional equivalence in organization design. Academy of Management Review 22 (2), 403–428.

Grünbaum, B., 1975. Venn diagrams and independent families of sets. Mathematics Magazine 48 (1), 12–23.

Guerola-Navarro, V., Oltra-Badenes, R., Gil-Gomez, H., Fernández, A.I. (2021). Customer relationship management (CRM) and innovation: a qualitative comparative analysis (QCA) in the search for improvements on the firm performance in winery sector. Technological Forecasting and Social Change, 169, 120838.

Härting, R.C., Moehring, M., Schmidt, R., Reichstein, C., Keller, B., 2016. What drives users to use CRM in a public cloud environment? Insights from European experts. In: Bui, T.X., Sprague Jr., R.H. (Eds.), 49th Hawaii International Conference on System Sciences (HICSS), IEEE, Piscataway, NJ, pp. 3999–4008.

Hein, D., Ivens, B., Leischnig, A., Wölfl, S., 2017. From CRM-system-effectiveness to profitability. In: Proceedings of the 38th International Conference on Information Systems, Association for Information Systems, Atlanta, GA.

Hillebrand, B., Nijholt, J.J., Nijssen, E.J., 2011. Exploring CRM effectiveness: an institutional theory perspective. Journal of the Academy of Marketing Science 39 (4), 592–608.

Homburg, C., Workman Jr, J.P., Krohmer, H., 1999. Marketing's influence within the firm. Journal of Marketing 63 (2), 1–17.

Iriana, R., Buttle, F., 2007. Strategic, operational, and analytical customer relationship management: attributes and measures. Journal of Relationship Marketing 5 (4), 23–42.

Jaworski, B.J., Kohli, A.K., 1993. Market orientation: antecedents and consequences. Journal of Marketing 57 (3), 53–70.

Jayachandran, S., Sharma, S., Kaufman, P., Raman, P., 2005. The role of relational information processes and technology use in customer relationship management. Journal of Marketing 69 (4), 177–192.

Ketchen, D.J., Combs, J.G., Russell, C.J., Shook, C., Dean, M.A., Runge, J., Lohrke, F.T., Naumann, S.E., Haptonstahl, D.E. Baker, R., Beckstein, B.A., Handler, C., Honig, H., Lamoureux, S., 1997. Organizational configurations and performance: a meta-analysis. Academy of Management Journal 40 (1), 223–240.

Ketchen, D.J., Thomas, J.B., Snow, C.C., 1993. Organizational configurations and performance: a comparison of theoretical approaches. Academy of Management Journal 36 (6), 1278–1313.

Kohli, A.K., Jaworski, B.J., 1990. Market orientation: the construct, research propositions, and managerial implications. Journal of Marketing 54 (2), 1–18.

Kumar, S., Sahoo, S., Lim, W.M., Kraus, S., Bamel, U., 2022. Fuzzy-set qualitative comparative analysis (fsQCA) in business and management research: a contemporary overview. Technological Forecasting and Social Change, 178, 121599.

Ledro, C., Nosella, A., Vinelli, A., 2022. Artificial intelligence in customer relationship management: literature review and future research directions. Journal of Business & Industrial Marketing 37 (13), 48–63.

Leischnig, A., Kasper-Brauer, K., 2016. How to sell in diverse markets? A two-level approach to industry factors and selling factors for explaining firm profitability. Journal of Business Research 69 (4), 1307–1313.

Leischnig, A., Kasper-Brauer, K., Thornton, S.C., 2020. Configuring effective client-adviser interactions. Journal of Business Research, 115, 234–240.

Leischnig, A., Wölfl, S., Ivens, B., 2016. When does digital business strategy matter to market performance? In: Proceedings of the 37th International Conference on Information Systems, Association for Information Systems, Atlanta, GA.

Lin, S., Lin, J., 2023. How organizations leverage digital technology to develop customization and enhance customer relationship performance: an empirical investigation. Technological Forecasting and Social Change, 188, 122254.

Malhotra, N.K., Kim, S.S., Patil, A., 2006. Common method variance in IS research: a comparison of alternative approaches and a reanalysis of past research. Management Science 52 (12), 1865–1883.

Maltz, E., Kohli, A.K., 1996. Market intelligence dissemination across functional boundaries. Journal of Marketing Research 33 (1), 47–61.

Martin, K.D., Borah, A., Palmatier, R.W., 2017. Data privacy: effects on customer and firm performance. Journal of Marketing, 81 (1), 36–58.

Meyer, A.D., Tsui, A.S., Hinings, C.R., 1993. Configurational approaches to organizational analysis. Academy of Management Journal 36 (6), 1175–1195.

Miller, D. ,1996. Configurations revisited. Strategic Management Journal 1 (7), 505–512.

Misangyi, V.F., Acharya, A.G., 2014. Substitutes or complements? A configurational examination of corporate governance mechanisms. Academy of Management Journal 57 (6), 1681–1705.

Misangyi, V.F., Greckhamer, T., Furnari, S., Fiss, P.C., Crilly, D., Aguilera, R., 2017. Embracing causal complexity: the emergence of a neo-configurational perspective. Journal of Management, 43 (1), 255-282.

Nunnally, J., 1978. Psychometric Methods. McGraw-Hill, New York.

Parvatiyar, A., Sheth, J.N., 2001. Customer relationship management: emerging practice, process, and discipline. Journal of Economic & Social Research 3 (2), 1–34.

Payne, A., Frow, P., 2005. A strategic framework for customer relationship management. Journal of Marketing 69 (4), 167–176.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. Journal of Applied Psychology 88 (5), 879–903.

Podsakoff, P.M., Organ, D.W., 1986. Self-reports in organizational research: problems and prospects. Journal of Management 12 (4), 531–544.

Ragin, C.C., 2006. Set relations in social research: evaluating their consistency and coverage. Political Analysis 14 (3), 291–310.

Ragin, C.C., 2008. Redesigning Social Inquiry: Fuzzy Sets and Beyond. University of Chicago Press, Chicago.

Ragin, C.C., Drass, K.A., Davey, S., 2006. Fuzzy-Set/Qualitative Comparative Analysis 2.0. Department of Sociology, University of Arizona, Tucson, AZ.

Ragin, C.C., Fiss, P.C., 2008. Net effects analysis versus configurational analysis: an empirical demonstration. In: Ragin, C.C. (Ed.), Redesigning Social Inquiry: Fuzzy Sets and Beyond. University of Chicago Press, Chicago, pp. 190–212.

Reimann, M., Schilke, O., Thomas, J. S. 2010. Toward an understanding of industry commoditization: its nature and role in evolving marketing competition. International Journal of Research in Marketing 27 (2), 188–197.

Reinartz, W., Krafft, M., Hoyer, W.D., 2004. The customer relationship management process: its measurement and impact on performance. Journal of Marketing Research 41 (3), 293–305.

Rogelberg, S. G., Conway, J. M., Sederburg, M. E., Spitzmüller, C., Aziz, S., Knight, W. E., 2003. Profiling active and passive nonrespondents to an organizational survey. Journal of Applied Psychology 88 (6), 1104–1113.

Rogelberg, S. G., Stanton, J. M., 2007. Introduction: understanding and dealing with organizational survey nonresponse. Organizational Research Methods 10 (2), 195–209.

Saraf, N., Langdon, C.S., Gosain, S., 2007. IS application capabilities and relational value in interfirm partnerships. Information Systems Research 18 (3), 320–339.

Schneider, C.Q., Wagemann, C., 2010. Standards of good practice in qualitative comparative analysis (QCA) and fuzzy-sets. Comparative Sociology 9 (3), 397–418.

Schneider, C.Q., Wagemann, C., 2012. Set-theoretic Methods for the Social Sciences: A Guide to Qualitative Comparative Analysis. Cambridge University Press, Cambridge.

Schneider, M.R., Schulze-Bentrop, C., Paunescu, M., 2010. Mapping the institutional capital of high-tech firms: a fuzzy-set analysis of capitalist variety and export performance. Journal of International Business Studies 41 (2), 246–266.

Shah, D., Rust, R.T., Parasuraman, A., Staelin, R., Day, G.S., 2006. The path to customer centricity. Journal of Service Research 9 (2), 113–124.

Thiem, A., Baumgartner, M., Bol, D., 2016. Still lost in translation! A correction of three misunderstandings between configurational comparativists and regressional analysts. Comparative Political Studies 49 (6), 742–775.

Tuli, K.R., Kohli, A.K., Bharadwaj, S.G., 2007. Rethinking customer solutions: from product bundles to relational processes. Journal of Marketing 71 (3), 1–17.

Verhoef, P.C., Leeflang, P.S., 2009. Understanding the marketing department's influence within the firm. Journal of Marketing 73 (2), 14–37.

Vorhies, D.W., Morgan, N.A., 2005. Benchmarking marketing capabilities for sustainable competitive advantage. Journal of Marketing 69 (1), 80–94.

Woodside, A.G., 2014. Embrace • perform • model: complexity theory, contrarian case analysis, and multiple realities. Journal of Business Research 67 (12), 2495–2503.

Yuen, K F., Ng, W. H., Wang, X., 2023. Switching intention in the online crowdsourced delivery environment: the influence of a platform's technological characteristics and relational bonding strategies. Technology in Society, 72, 102167.

Zeithaml, V.A., 2000. Service quality, profitability, and the economic worth of customers: what we know and what we need to learn. Journal of the Academy of Marketing Science 28 (1), 67–85.

Zeithaml, V.A., Parasuraman, A., Berry, L.L., 1985. Problems and strategies in services marketing. Journal of Marketing 49 (2), 33–46.

Zeithaml, V.A., Rust, R.T., Lemon, K.N., 2001. The customer pyramid: creating and serving profitable customers. California Management Review 43 (4), 118–142.

Fig. 1 Research framework.

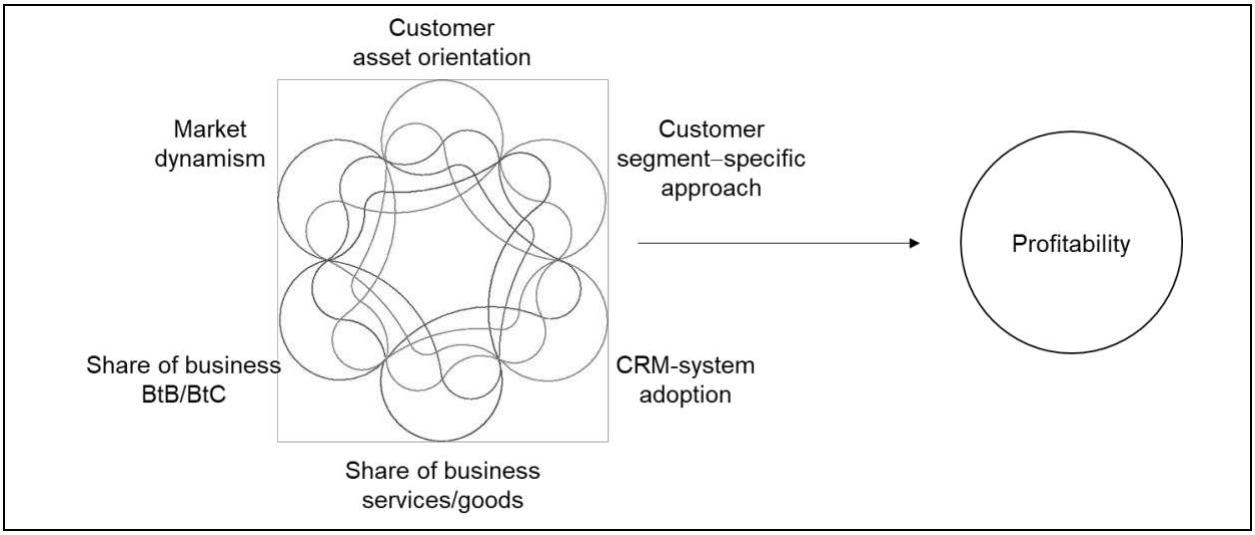

Table 1
Information on construct measures.

Customer asset orientation (Reinartz et al., 2004) (CA = 0.84, CR = 0.84, AVE = 0.64)

To what extent do you agree or disagree with the following statements?

7-point Likert scale (1 = "completely disagree," 7 = "completely agree")

- Our firm recognizes customers as assets.
- Our firm is willing to spend dollars to nurture our customers.
- We have designed systems to better understand and serve our customers.*
- We look upon CRM as the most important business process for driving financial performance.

Customer segment–specific approach (Reinartz et al., 2004) (CA = 0.77, CR = 0.73, AVE = 0.53)

To what extent do you agree or disagree with the following statements?

7-point Likert scale (1 = "completely disagree," 7 = "completely agree")

- We have systematic training procedures for helping employees deal differently with high- and low-value customers.*
- We reward employees for building and deepening relationships with high-value customers.
- Our SBU is organized in a way to optimally respond to customer groups with different profitability.
- Organizing people (i.e., changing organizational structure) to deliver differentiated treatment and products to different customer segments presents a strength for our SBU.

CRM-system adoption (Hillebrand et al., 2011; Reinartz et al., 2004) (CA = 0.87, CR = 0.87, AVE = 0.62)

To what extent do you agree or disagree with the following statements?

7-point Likert scale (1 = "completely disagree," 7 = "completely agree")

- We have a customer information system that is fully automated.
- In our organization, software applications for analyzing customer information are present.
- In our organization, our automated customer information system is integrated with other communication systems (switchboard operators, complaints services).
- We have a dedicated CRM technology in place.*
- We have a customer information system that is fully automated.

Share of business BtB/BtC (Homburg et al., 1999) (CA = n.a., CR = n.a., AVE = n.a.)

Please indicate the percentage of your turnover that arises from BtB or BtC markets. (total = 100 %)

- Share BtB in %
- Share BtC in %

Table 1 continued

Share of business services/goods (Verhoef and Leeflang, 2009) (CA = n.a., CR = n.a., AVE = n.a.) Please indicate the percentage of your turnover that arises from selling goods or services. (total = 100 %) – Share goods in % – Share services in %
Market dynamism (Jaworski and Kohli, 1993) (CA = 0.79, CR = 0.80, AVE = 0.57) Please indicate how frequently the following aspects change in the market: 7-point Likert-type scale (1 = "very rarely," 7 = "very often") – Product and services offered by competition – Marketing and sales strategy of competitors – Customers' preferences for product features – The price–value ratio customers expect*
Profitability (Vorhies and Morgan, 2005) (CA = 0.96, CR = 0.96, AVE = 0.86) How well did your SBU achieve its goals regarding the following performance aspects? 7-point Likert-type scale (–3 = "not at all," +3 = "completely") – Business unit profitability – Return on investment (ROI) – Return on sales (ROS) – Reaching financial goals

Notes: CA = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted; * = item was eliminated during scale purification; n.a. = not applicable; SBU = strategic business unit.

Table 2
Descriptive statistics and discriminant validity.

	M	SD	1	2	3	4	5	6	7
1. Customer asset orientation	5.4	1.26	0.64						
2. Customer segment–specific approach	4.4	1.41	0.24	0.53					
3. CRM-system adoption	3.8	1.67	0.04	0.03	0.62				
4. Share of business services/goods	44.0/55.0	41.25	0.01	0.02	0.01	–			
5. Share of business BtB/BtC	78.8/21.2	33.9	0.05	0.00	0.00	0.00	–		
6. Market dynamism	4.0	1.15	0.09	0.08	0.04	0.00	0.02	0.57	
7. Profitability	5.1	1.29	0.13	0.19	0.02	0.01	0.00	0.03	0.86

Notes: AVE is on the diagonal, and squared correlations are below the diagonal.

Table 3
Necessary conditions for profitability.

Antecedents	Consistency	Coverage
Customer asset orientation	0.91	0.84
Customer segment–specific approach	0.75	0.91
CRM-system adoption	0.60	0.89
Share of business services/goods[a]	0.51	0.81
Share of business BtB/BtC[b]	0.82	0.73
Market dynamism	0.65	0.89
~Customer asset orientation	0.30	0.87
~Customer segment–specific approach	0.50	0.82
~CRM-system adoption	0.63	0.83
~Share of business services/goods[a]	0.60	0.75
~Share of business BtB/BtC[b]	0.25	0.79
~Market dynamism	0.61	0.85

Notes: ~ = logical not (i.e., negation); necessity consistency threshold = 0.9; [a] Indicates focus on selling services; [b] Indicates focus on BtB markets.

Table 4
Sufficient conditions for profitability.

	Configurations					
Antecedents	1	2	3	4	5	6
Customer asset orientation	●	●	●	●	●	●
Customer segment–specific approach	●	●	●			●
CRM-system adoption			⊗		●	●
Share of business services/goods[a]		⊗	⊗	⊗	●	●
Share of business BtB/BtC[b]	●			●	●	
Market dynamism		●		●		⊗
Consistency	0.94	0.95	0.95	0.95	0.96	0.99
Raw coverage	0.61	0.36	0.34	0.32	0.30	0.23
Unique coverage	0.11	0.02	0.01	0.02	0.02	0.02
Overall solution consistency	0.91					
Overall solution coverage	0.73					

Notes: ● = presence of a condition; ⊗ = negation of a condition; big circle = core condition; small circle = peripheral condition; blank space = condition has a subordinate role in a configuration; analysis thresholds: frequency = 2 (86 % of the cases); raw consistency = 0.96; PRI consistency = 0.86; intermediate and parsimonious solutions. [a] Indicates focus on selling services; [b] Indicates focus on BtB markets.