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On the importance of mediating dynamic capabilities for ambidextrous organizations

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Abstract

Recent literature has shown that performance increases with early customer integration in product development as early as the ramp-up stage, accommodating fast-changing demands. Additionally, literature elucidates the importance of entrepreneurial orientation. However, empirical analysis as to potential entrepreneurial antecedents of customer integration is scarce. This article examines the influence of entrepreneurial orientation on customer process integration using structural equation modeling. Data from US manufacturing firms show a negative relationship between the constructs. Due to the necessity of both for success, this article emphasizes the mediating role of dynamic capabilities. Results suggest that ambidexterity reaps innovation benefits. Finally, important implications for research and managerial practice are provided.

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1. Introduction

Management and marketing literatures emphasize the relevance of customer integration for sustainable competitive advantage [1,2,3], since it facilitates the understanding of explicit and tacit customer needs [4]. Knowledge about customer needs is important to improve product variations for existing customers and markets. Continually improving products is necessary to maintain a customer base. Hence, the inclusion of customer resources is critical for gaining superior knowledge about needs. Thus, integrating them in a stage as early as ramp-up becomes more and more relevant. Firms gain a unique understanding about customer behavior and desires and are able to exploit their existing products and processes [8]. In addition, firms need to create radical innovation since a majority of profits originate from them [9,10,11]. Exploitation does not fully sustain a firm's competitive advantage since imitation is common in fast-paced industries [11]. Therefore, innovative ambidexterity [12], meaning the combination of exploratory and exploitative actions, becomes necessary. Entrepreneurial orientation is a strategic orientation that pro-

notes exploration in firms [13]. Thus, the relationship between customer process integration and entrepreneurial orientation has moved to the forefront of the debate within innovation and strategic management [14]. However, empirical research as to the relationship is scarce. Researchers emphasize that both constructs combined grant firms the ability to gain competitive advantage over the long haul [14,15]. Hence, the combination of both is crucial. It has often been stated that having both is essential for firm success [16,17]. Nevertheless, difficulties in combining them have been noticed [11]. Still, their relationship has not been empirically evaluated.

The construct entrepreneurial orientation is often associated with new entry or newness in general. It indicates a management's extent of innovativeness, proactiveness, and its willingness to take risks [18,19]. It involves the promotion of explorative efforts and innovation through strategic, top management decisions that are intended to create sustained competitive advantage in the long-term [18]. But, concentrating on newness and innovations alone could lead to neglect of the short-term aspects, and therefore short-term profits. Hence, the inclusion of mediators that balance the relationship between

customer process integration and entrepreneurial orientation is necessary. Anderson et al. (2009) discuss the relationship of entrepreneurial orientation and strategic learning capability [13]. Strategic learning capability is the ability to create, or acquire knowledge, and subsequently apply that information, to transform it into firm routines and strategies [20,21]. According to several researchers, the two constructs are positively related. This relationship is explained by an entrepreneurial orientation's beneficial effect on the creation of learning cultures [17]. Furthermore, literature states that a learning culture explicitly benefits customer integration [17,22,23]. Firms that have an established learning culture are better able to implement changes and learn from customer information. Thus, they are better equipped to satisfy customer needs [17,22,24]. Another capability frequently discussed is strategic flexibility. It is associated with a firm's capability of adapting to environmental change related to dynamic markets [25]. It enables them to seize opportunities arising from changes through resource, process, or strategy reallocation and configuration [25,26,27,28]. Entrepreneurial orientation is said to enhance and facilitate the development of flexibility in firms and their processes [18,29,30]. This is attributed to entrepreneurial managers who are more willing to take risks and implement new, innovative processes. For obtaining strategic flexibility in firms, an organizational culture that promotes the design of new, flexible structures, which enables the implementation of flexible manufacturing processes and to reallocate resources faster is necessary [31,32]. Firm hierarchies are less bureaucratic in entrepreneurial firms [33], therefore, firm structures are more easily changed and renewed. This article argues that an entrepreneurial orientation facilitates strategic flexibility. This, on the other hand, increases the probability of successful customer integration. As customer needs change more rapidly, and product life cycles become shorter, firms need to develop faster [34]. Strategic flexibility will play a significant role in the future.

Using a data set of top managers in the United States, this article analyses the mediating role of dynamic capabilities on innovation orientation, namely the relationship between entrepreneurial orientation and customer process integration. The contribution is, at least, twofold: First, it sheds some light onto the relationship between customer process integration and entrepreneurial orientation. This is accomplished through theoretically grounded argumentation based on an extensive literature review as well as empirical evidence provided by the analysis through structural equation modeling. Secondly, the two proposed mediators are tested in order to learn if their positive mediating effects are supported by empirical data.

2. Theory and Hypotheses

Nowadays, the needs of customers change rapidly. New technologies are introduced with shorter life cycles so that a faster ramp-up, innovativeness and, thus, the establishment of competitive advantage are of growing importance. According to many researchers, working closely with customers often results in new services and products [35,36,37]. This, on the other hand, is closely related to firm performance and success [35,38,39]. Customer integration is a means of developing

superior performance than competitors. The possibility of meeting customer needs is greatly improved [8,38]. Also, integrating customers in development processes increases buyer potential for newly developed products or processes, due to meeting their specific needs [40]. It reduces the likelihood for newly developed products, processes or services becoming a failure. Customer integration is especially important in highly turbulent and dynamic markets [37], where customer requirements and needs change fast. However, there are certain drawbacks to customer orientation, likely limiting a firm to only incremental innovations as it often tends to create only incremental changes and innovation [14].

Entrepreneurial orientation describes management's behavior in market situations, meaning their magnitude of innovativeness, proactiveness and the amount of risk they are willing to take [13,14,43]. Generally speaking, entrepreneurial firms are first and foremost concerned with the creation of newness. Therefore, they are more likely to make risky decisions to be pioneers or first-movers. They have the intention of gaining a superior position compared to competitors in existing markets, but also striving to enter new markets [19,43,45]. Because of an entrepreneurial manager's inclination to be innovative, the company is often granted knowledge about industry trends, allowing the development of adequate competitive strategies [15]. Entrepreneurial firms gain superior positioning by taking advantage of uncertain and risky opportunities and the exploration of new ideas [45]. Moreover, the acquisition of knowledge, as well as the ability of its subsequent utilization, is increased by entrepreneurial orientation [46]. This, in turn, influences firm performance [45]. Consequently, an entrepreneurial orientation impacts a firm's performance positively [29,47,48].

Looking at the direct link between the two constructs, entrepreneurial orientation is closely related to a constant quest for new businesses and markets, promoting the exploration of new, unique resources and capabilities. Whereas, customer process integration is known to strive for the improvement of a firm's relationship with already existing customers in existing markets. It is therefore associated with the creation of incremental innovations. The goal of customer integration is more the improvement of a firm's existing products and processes in markets it currently operates in, and less the development of radical innovation [3] or the exploration of new markets. If firms exercise customer integration excessively without balancing their efforts through explorative activities, they, most likely, will not be able to create sustainable competitive advantage [49]. Most customers do not have the ability to think ahead of time, or know what they may need in the future [27]. They cannot utter their latent needs. Thus, we propose that customer integration alone does not lead to superior firm performance. It requires the aid of an entrepreneurially oriented management. This argument is supported by prior work that makes the necessity of balancing exploration and exploitation clear [12,50,51]. Unfortunately, research also spotted the difficulties in combining both constructs. Firms have difficulties with the preservation of balance between exploration and exploitation [11]. In most firms, either one or the other is preferred, which results in contradictory cultural orientations [50]. Recapitulating, it is obvious

that entrepreneurial orientation, which has an exploratory nature, and customer process integration, with its more exploitative aspects, are opposing constructs. Thus, we hypothesize that entrepreneurial orientation negatively influences customer process integration.

H1. The direct link between entrepreneurial orientation and customer process integration is a negative one.

Firms that are able to positively connect entrepreneurial orientation with customer integration gain the ability to create and sustain their competitive advantage [15]. Slater (1997) sees successful innovation as an outcome of a coupling between customer orientation and entrepreneurial values [52]. Furthermore, customer integration can only achieve its maximum in effectiveness if it is combined with an entrepreneurial culture [17,53]. Unfortunately, the theoretical analysis and literature review granted negative results. The direct connection between entrepreneurial orientation and customer process integration resulted in a negative hypothesis. In order to build a positive relationship, we argue that mediating constructs between entrepreneurial orientation and customer process integration are necessary.

Dynamic capabilities are strategic, or core resources for firms that compete in turbulent markets. These resources distinguish firms from their competitors, and are therefore more important than other, non-strategic, assets [54]. They are defined as “processes, strategies and plans that create new knowledge”, and are used in order to “create, extend, upgrade, protect, and keep relevant the enterprise’s unique asset base” [37,55,56]. They aggregate abilities, that “integrate, build, and reconfigure” internal and external competences to address changes in new environments [37,56]. With regard to this article’s topic, the capabilities strategic flexibility, and strategic learning capability, are analysed and reviewed.

Strategic flexibility is defined as the ability of adapting to changing environments. It describes the handling of substantial changes in the environment that have a significant effect on a performance, and thereby developing, or maintaining competitive advantage [57,58]. This is achieved by modifying the organizational resources and assets, firm processes, and strategic actions through the reallocation and reconfiguration of firm strategies [25,26,28,59]. Strategic flexibility is especially important in dynamic environments where firms can achieve competitive advantages through the development of multiple strategic options and ways to react to market changes [25,27,59]. Hence, it entails the development, maintenance, and realization of a firm’s future opportunities [60]. By means of strategic flexibility, innovative firm behavior is promoted, and employee creativity inspired. Thus, a firm’s competitive capability is improved. Flexibility increases the speed with which firms react to change, and broadens the scope of possible strategic actions [61]. It is increased by the adoption of new technology within the firm, and therefore a firm’s innovativeness [57]. This statement is supported by Lumpkin & Dess (1996) and Wang (2008), who corroborate that firms who are entrepreneurial in nature will more likely inspire the rest of the firm to be flexible [18,30]. This is achieved by allowing employees to exercise their creativity, and follow

new and promising ideas. The attributes of an entrepreneurial orientation benefit the promotion of flexibility [29]. Therefore, we hypothesize that an entrepreneurial firm orientation positively influences the facilitation of strategic flexibility. Future opportunities are often argued to lie in dynamic markets and the ability to develop competitive advantages. The capability of being flexible is necessary for integrating customers in firm processes, as their needs change rapidly and are not entirely predictable. The firm needs to be flexible in order to react in time. Strategic flexibility prepares a firm for changing environments and exploitation of opportunities [62]. Consequently, we argue that strategic flexibility positively influences the integration of customers in firm processes. For tight integration, firms have to act according to customer demand as well as react to competitor actions by being proactive, arguing for entrepreneurial orientation. We propose that strategic flexibility has a positive effect on customer process integration. Contrary to the first hypothesis, we now posit that the mediation through strategic flexibility achieves a positive outcome. It balances the exploitation and exploration activities.

H2. Entrepreneurial orientation is positively associated with strategic flexibility, which in turn enhances customer process integration.

Strategic Learning Capability is defined as a firm’s dexterity in the acquisition and creation of knowledge, and also comprises the firm’s subsequent ability of leveraging that knowledge [13,63]. It integrates various levels of learning processes. The core processes being the generation and distillation of strategic knowledge. During the knowledge distillation process, tacit, individual or business-level knowledge is first converted into explicit, corporate level knowledge and then transformed into new corporate routines [64,65]. Strategic learning capability differentiates itself from other forms of learning through its dual nature, i. e., the generation of strategic knowledge and strategic change [13]. It has four dimensions, which namely are: “knowledge creation, distribution, interpretation, and implementation” [66], enabling a firm to be competitive where it is necessary to respond to rapid developments and fast diffusion of new, innovative technologies [57]. Also, it has been perceived as being highly advantageous for the development of radical innovation in the long run [63,64]. Firms capable of strategic learning are argued to hold the key to future firm success [30] due to their ability of gathering information and knowledge faster than competitors. The ability to develop knowledge resources that are hard to imitate is a valuable asset in dynamic markets where imitation is widespread. In the future, this might even be a rare source of sustainable advantages [22,30]. Following this logic, entrepreneurial orientation is acknowledged as a driver of knowledge generation, and a promoter of the strategic change component. Firms with an entrepreneurially oriented top management tend to support creativity inside their firms and welcome change if it is promising. This hypothesis is supported by Wang (2008), who states that in an entrepreneurially oriented firm, employees and teams are more motivated and inspired to learn than in firms that are not entrepreneurially

al [30]. Individuals in an entrepreneurial environment tend to be more committed to learning compared to others. Therefore, we posit that the eagerness to learn increases with the degree of entrepreneurial orientation. In order to promote strategic learning capability, it is necessary for top management to inspire employees to take up new and risky projects with the prospect of acquiring new knowledge [66,67]. The firm, then, can implement that knowledge into its routines. We hypothesize that an entrepreneurial orientation promotes the strategic learning capability of a firm. This argument is confirmed by Slater & Narver (1995), who state that an “entrepreneurial culture promotes organizational learning” [17]. We also assume the strategic learning capability and customer process integration relationship to be positive. Strategic learning within a firm is considered highly valuable for its customers, as it enables firms to be better at understanding and learning from their needs. A firm with a stronger learning capability has larger absorptive capacities [68], and is therefore better able to learn [54,69]. Thus, we assume that customer orientation will only positively affect performance if it is combined with a learning culture. The more successful a firm explores opportunities and the more it is able to transform them into new, radical products and processes, the more it will be able to exploit them in the future through incremental changes. Hence, strategic learning capability mediates the relationship between entrepreneurial orientation and customer process integration, as well. Thus we propose hypothesis 3.

H3. Entrepreneurial orientation promotes the strategic learning capability of a firm, which in turn positively influences customer process integration.

3. Research Method

The data used in this article is part of the sample of a greater research project on ambidextrous organizations [70]. Only senior- and top-level executives in the United States were addressed. The survey was carried out in a structured online questionnaires with closed questions [71]. The final sample size was $N = 88$. The survey's response rate was 48.62%. Key informants were used instead of multiple informants due to the advantages of asking top-executives only as they are exceptionally qualified to provide information on the issues under investigation [72,73]. The causal relationships previously developed were assessed in a structural equation model through the application of the partial least squares (PLS) technique using SmartPLS programming software [74,75]. Our objective is to test the significance of the relationships and the testing of predictive capabilities [76,77]. The goal of validating the exploratory model, and the explanation of the endogenous constructs within the model is one of the main reasons why PLS was chosen [78].

The constructs were each measured by several items per construct, ranging from one to nine. The items used were previously validated through scales from strategic management, marketing, and innovation management. Entrepreneurial orientation is adapted from Hult, Ketchen, & Arrfelt (2007) [80]. The construct strategic flexibility is based on items from Zhou & Wu (2010) [28]. Strategic learning capability was

based on Anderson et al., (2009) [13]. Customer process integration was adapted from Narayanan et al. (2011) [81]. The questionnaire applied was designed on a seven-point Likert-type scale for each item, ranging from 1: completely disagree to 7: completely agree. Control variables were chosen based on previous empirical work [80,81, 85,90,91,92].

4. Model Testing

Before hypothesis testing, the survey instruments have to be verified. Thus, the measurement model is tested for consistency and applicability. The reliability of the items used within the measurement model, as well as the validity of the measurement model, was assessed. We first looked at the reliability of single items, their loadings have to be greater than 0.70 [88,89]. Exceptions can be made for new constructs. In that event, the threshold for a reliable item lies at 0.50. All of the items in our model proved reliable according to these definitions. Secondly, we assessed the convergent validity of the individual latent variable's measures. We examined it by means of Cronbach's alpha, composite reliability, and the average variance extracted (AVE). The items' internal consistency is proven if Cronbach's alpha is larger than 0.70, composite reliability is larger than 0.70 [88,89], and the AVE larger than 0.50. All of the scales in our analysis exceed the recommended values. Third, we consider the discriminant validity of the model. Discriminant validity is measured through the latent variable's AVE and the squared correlations of the latent variables with other constructs within the model [90,91]. Discriminant validity is proven, when the square root of the AVE is larger than the construct's correlation coefficient with any of the other constructs, which is the case in our model. According to Podsakoff et al. (2003), caution has to be paid if survey data were collected from single informants [92]. Thus, we assessed the impact of common method bias through (1) Harman's (1967) single factor approach [93], as well as (2) a test with an unmeasured latent methods factor [82,92]. The first test shows that no single factor explains the majority of the variance (a variance of 37.42% is explained by a single factor). Implementing a method factor shows that the average variance between the constructs and the indicators is 0.632 compared to the method-based variance of 0.023, which results in a ratio of 27:1 [82]. This, and the fact that most of the resulting method-based loadings are not significant leads to the same outcome as Harman's single factor test, i. e. that the common method bias is not a problem. Moreover, the overall fit of the model has to be assessed. Due to PLS' missing indices with which the model's global fit can be evaluated, alternative tests such as the Goodness-of-Fit index and Stone-Geisser's Q^2 were applied. The overall GoF in this model was 0.438 which is larger than the cut-off level for large effect sizes (0.26) [94]. Thus, the model performs well. For the assessment of the model's predictive capabilities, we calculated Stone-Geisser Q^2 [78,95,96]. If the Q^2 criterion is larger than zero, the model's predictive validity is assured. Otherwise, its predictive relevance is questionable [78,97]. Since all of the constructs show positive Stone-Geisser Q^2 values, the model shows strong predictive power. Last but not least, non-response bias

has to be ruled out. The sample was tested for deviations between early and late respondents [104,105,106], as well as for differences between participants that completed the survey and those who cancelled it [101]. The results yielded no significant differences between the samples. Therefore, non-response bias was not considered a problem.

5. Results

The hypotheses are tested using the bootstrapping technique with replacement. For the assessment of the parameter estimates' stability in the model, varying bootstrap sample sizes were generated (sample sizes of 250, 500, and 1000 samples). Stability is assured through the proven consistency across all of the different sample outputs. The following results are based on a bootstrap run with 500 samples. H1 predicts that the direct link between entrepreneurial orientation and customer process integration is negative. The results support this hypothesis ($\beta=-0.32$; $p=0.004$). H2 predicts that entrepreneurial orientation is positively associated with strategic flexibility, which in turn is supposed to enhance customer process integration. This hypothesis' first ($\beta=0.63$; $p<0.001$), and second part ($\beta=0.23$; $p=0.077$) are supported by the findings. H3 predicted that entrepreneurial orientation promotes strategic learning capability, which in turn positively influences customer process integration. In this case, both the first ($\beta=0.53$; $p<0.001$) and the second part ($\beta=0.42$; $p=0.001$) of the hypothesis are supported. The relationships between the different constructs, as inferred by the bootstrapping test, are depicted in Fig. 1. All of the paths analysed in the model were found to be statistically significant.

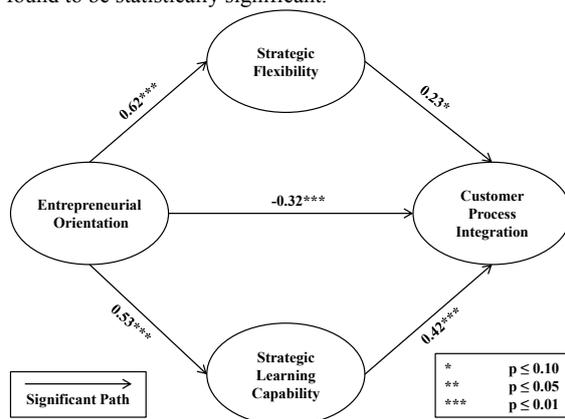


Fig. 1. Hypotheses testing results.

The effects of mediation are first tested according to a nested model test [102]. The second approach tests the mediation impact of the two constructs [103]. In the first procedure, the proposed mediated model, i. e. the one including the mediated and direct paths, is compared to the same model without the direct path. The findings confirm full mediation for the mediator strategic flexibility (pseudo-F = 1.868; $p=0.175$), and partial mediation for the mediator strategic learning capability (pseudo-F = 3.484; $p=0.065$). It seems that the model with both, the direct and the indirect path, contributes more expla-

natory power than the one without the direct path. The conclusion is that both direct and indirect paths are necessary to explain the variance in customer process integration. Overall, mediation in the model is confirmed. The second approach uses techniques that measure the magnitude and significance of the individual mediated paths [103]. The results of the test show that both mediated paths are positive and significant. This finding supports the preceding mediation analysis. Summarizing, strategic flexibility fully mediates, and strategic learning capability partially mediates the relationship between entrepreneurial orientation and customer process integration. The second approach provides knowledge about the magnitude and significance of the individual mediated paths. They are both positive and significant.

6. Discussion

The purpose of this article was the evaluation of existing literature on the subject of customer process integration and entrepreneurial orientation, going beyond literature review and supplying empirical evidence, resulting in implications for management and future research. Prior literature argues for the inclusion of customers in firm processes [1,3,8,104]. Existing research, however, indicates that imitation is a problem for firms. They, therefore, need to create a balance between exploitation and exploration [11]. Entrepreneurial orientation promotes exploration [13] and leads to sustained competitive advantage in combination with customer integration [16]. This, again, grants success over the short- and long-term [14,15]. This article provides empirical evidence on the relationship. We show that an entrepreneurial, and therefore explorative, orientation has a negative effect on customer process integration, which is an exploitative approach. This supports the posited hypothesis that was deduced according to the literature review. The path was found to be negative and significant ($\beta=-0.32$; $p=0.004$). The results support the findings of existing literature. They also contribute to a general understanding of how entrepreneurial orientation influences customer integration. The results indicate that the orientations should not be combined without further action. We recommend the implementation of dynamic capabilities that balance the allocation or configuration of firm resources in order to enable the existence of entrepreneurial orientation and customer integration, simultaneously. Hence, we proposed two dynamic capabilities as mediators. We suggest that firms should try to implement these in order to achieve short-term success and competitive advantage over the long haul. Researchers noted that entrepreneurial orientation has a positive effect on strategic learning and specifically the establishment of learning cultures within firms [17]. A learning culture explicitly benefits the integration of customers in firms and enables them to better satisfy customer needs [17,22,23]. Consistent with the hypotheses and existing literature, the relationship between entrepreneurial orientation and strategic learning capability was tested to be positive and significant ($\beta=0.53$; $p<0.001$). The effect of a strategic learning capability on customer process integration was also found to be positive and significant ($\beta=0.42$; $p=0.001$). Thus, relationship is empirically supported. Furthermore, the mediation tests ap-

plied supported the hypothesized mediation effect of strategic learning capability. The nested model approach provided evidence about partial mediation. The partial model including the direct path explained significantly more of the variation in the customer process integration construct (the explanatory power of the full model fell from 0.204 to 0.171 in the nested model). Moreover, the Aroian test supplied evidence for the significance of the single mediated paths. Strategic learning capability tested as positive and significant (path magnitude=0.0.256; $p=0.001$). The mediation of strategic learning capability can be explained through an increased ability to acquire and use new knowledge. Exploration enables the entrance of new markets and business opportunities. Knowledge utilization becomes easier and more sufficient so that exploitation efforts become more successful. Thus, short-term profit is ensured and long-term growth is made possible. The other mediator analysed is strategic flexibility. Several authors argue for its critical importance in fast-changing environments. Strategic flexibility enables firms to seize opportunities within new markets [25,26,27,28]. Entrepreneurial orientation facilitates flexibility development due to entrepreneurial managers' more innovative and risk-taking nature [18,29,30,32,49]. Strategic flexibility, increases the probability of success for customer integration efforts, especially now that product life cycles are shorter [25,105]. The findings affirm the influence of strategic flexibility on the entrepreneurial orientation and customer process integration relationship. Entrepreneurial orientation has a positive, significant effect on strategic flexibility ($\beta=0.63$; $p<0.001$). The impact of strategic flexibility on customer process integration was also positive and significant ($\beta=0.23$; $p=0.077$). Additionally, we tested for mediation and found full mediation. The explanatory power of the partial model including the direct path was not significantly larger than the nested model. It changed from 0.120 to 0.100. Hence, the path including only strategic flexibility is able to explain significantly more of the outcome variable's variance compared to the model including the direct link. The mediated path has a positive magnitude and the mediator was tested statistically significant (path magnitude=0.224; $p=0.026$). Strategic flexibility improves a firm's timing in fast changing, dynamic environments and enables the implementation of new, innovative processes. Entrepreneurial orientation often leads to an increased output of radical innovations. These, change markets significantly so that existing offerings and incremental innovations are less profitable. Customer process integration produces mainly incremental innovations and leads to temporary competitive advantages. Thus, strategic flexibility is necessary to balance both. Building on a literature review and data analysis, we examined the effects of entrepreneurial orientation on customer process integration. This contribution results in the provision of a better understanding on how to balance exploration and exploitation. The empirical evaluation adds to existing work by showing how the different components interact with each other. We highlight the importance of certain balancing components in their relationship. The implementation of a customer oriented approach in an entrepreneurially oriented firm is not recommended without taking certain balancing dynamic capabilities into account. Contrary to beliefs that being entre-

preneurial and customer oriented are both important factors to stay competitive, they cannot be combined carelessly. We identified two balancing capabilities that enable the implementation of both.

7. Managerial Implications

Existing literature supplies a number of reasons why managers would want to integrate customers in firm processes. Still, there is a necessity of explorative efforts and radical innovations. Our findings support the results of prior studies that found a contradictory nature between the two. Due to the ambiguity of the preceding work, managers often struggle with the achievement of a crucial balance between exploration and exploitation. We argue that firms that are able to develop a strategic learning morale and/or are flexible in their processes will have the ability of integrating customers successfully, and exploring new markets with radically innovative solutions and ideas, simultaneously. Our results show that these capabilities are able to balance out the negative effect that an entrepreneurial orientation has on customer integration. Managers should, thus, try to build flexibility in their firm processes and structures and promote strategic learning in their employees. All in all, while it is important for managers to accommodate different strategic orientations, they should bear in mind each orientation's implicit nature for a successful integration.

8. Limitations and Possibilities for Future Research

As in any research model, limitations remain as the model was analysed with the help of a distinct set of variables and research context in mind. For once, an organization's culture is complex and cannot be covered through the analyses of two orientations. Future research should extend the analysis to other orientations, such as a cross-functional integration [106,107]. The sample originates from a larger survey in eight different industries in the United States. The sub-samples of each of the single industries are relatively small. Hence, the effects in the single industries are not. Because the sample was generated in distinct industries, other industries that could contribute to the investigation are excluded. Therefore, we suggest the collection of larger samples in more industries in future studies to generalize the findings. Moreover, the samples originated from a sample collected from key respondents. Although the samples were tested for common method bias in order to validate the results, the utilization of multiple respondents would be beneficial for validation and to rule out common method bias entirely. Also, while the mediators determined are certainly helpful for successful implementation of customer process integration and entrepreneurial orientation, other capabilities could benefit this relationship as well and we encourage to study these in future work. Last but not least, the construct customer process integration is fairly new and has not been validated in previous work. Hence, doing this should be considered in future research.

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