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Abstract

Firm performance in turbulent business environments strongly depends on the adaptive (re)generation of the firm's business model. However, studies on the enablers of business model innovation are sparse. This study leverages the literature on dynamic capabilities, on organizational ambidexterity/vacillation, and Lewis's view of organizational paradoxes to build an integrated model of organizational dynamism that includes seven dimensions: three pairs of paradoxical constructs (cooperation-competition, exploration-exploitation, conformity-agency) and dynamic capabilities. The study posits that these seven dimensions of organizational dynamism describe the key enablers of adaptive business model innovation (ABMI). The results of applying a fuzzy set qualitative comparative analysis (fsQCA) to 35 selected cases confirm that the paradoxical dimensions of organizational dynamism, although logically opposed, strongly intertwine in enabling the adaptive (re)generation of a firm's business model. Further, this article highlights fsQCA's suitability to test models that include paradoxical constructs.

Keywords: Adaptive organizational learning; ambidexterity; coopetition; dual tuning; embedded agency; organizational vacillation; paradoxical management

1.   Introduction

In recent years, the role of business model innovation (BMI) in firm survival and thrive has attracted growing scholarly attention (DaSilva & Trkman, 2014; Schneider & Spieth, 2013; Spieth et al., 2014). In spite of its novelty, this literature shows that business model innovation, *per se*, is not sufficient: business models must evolve adaptively, that is, business models must change consistently with the firm's evolving economic, ecologic, social, and technological environments (Chesbrough, 2007; Morris et al., 2005). Which organizational features, then, are key enablers of adaptive, successful BMI throughout time?

Thus far, various literature streams have shed light on different, specific aspects of this matter, particularly research on entrepreneurial learning (Franco & Haase, 2009), organizational learning (Crossan et al., 2011), organizational ambidexterity (Markides, 2013; O'Reilly & Tushman, 2013), and dynamic capabilities (Cepeda & Vera, 2007; Schreyögg & Kliesch-Eberl, 2007). These research streams provide valuable insights into the enablers of successful BMI in turbulent, fast-paced business environments, but the academic boundaries between these streams often hinder the cross-fertilization and accumulation of the respective results.

Two notable exceptions to this theoretical fragmentation are the articles by Zahra et al. (2006) and by O'Reilly and Tushman (2008). The former paves the way for studies that use dynamic capabilities as key enablers of the entrepreneurial processes of BMI, based on the logic of opportunity (Sambamurthy et al., 2003). The latter explicitly links dynamic capabilities to the paradoxical interplay of the two key learning mechanisms the ambidexterity literature identifies: exploration and exploitation (Gupta et al., 2013). Partly thanks to these boundary-spanning articles, the link between

exploration-exploitation, on the one side, and BMI, on the other side, is starting to attract scholarly attention (Khanagha et al., 2014).

However, the literature on paradoxical management highlights that the interplay of exploration and exploitation is not the only key paradoxical phenomenon in organizations. Other core organizational paradoxes make organizational life more dynamic through the opposing tensions the paradoxes generate. Therefore, this study leverages Lewis's (2000) classification of organizational paradoxes (paradoxes of learning, paradoxes of belonging, and paradoxes of organizing). This study translates and synthesizes this classification into a list comprising the three core organizational paradoxes of organization and management literature: exploitation-exploration, cooperation-competition, and institutional conformity-agency. Based on this framework, the study proposes that high engagement in the three pairs of paradoxical activities generates a continuous flow of feedback and opportunities. Dynamic capabilities allow firms to leverage this flow of feedback and opportunities and concretely enable adaptive processes of BMI. These claims provide the backbone for the novel theoretical model that this study proposes; this model presents organizational dynamism (composed of triple paradoxical management and resilient dynamic capabilities) as a key antecedent of adaptive BMI (ABMI).

A two-step field research aims to support the theory-building effort, and to conduct a pilot test of the resulting ABMI model. In the first step, an experience survey resulted in fine-tuning of the model and constructs, and in the definition of the questionnaire items and interview protocols. The second phase consists of a fuzzy set qualitative comparative analysis (fsQCA) of 35 carefully selected cases.

The analysis revealed that in the cases under study only two among the possible 128 configurations of the seven dimensions of organizational dynamism are antecedents

of ABMI. The two successful configurations are strongly consistent with the combined predictions of the paradoxical view and the dynamic capabilities view.

The novel theoretical model that this study proposes contributes to the cross-fertilization of several different literature streams, such as those on paradoxical management, ambidexterity, dynamic capabilities, entrepreneurial learning, organizational learning, and BMI. Further, this article highlights the reasons of fsQCA's (Ragin, 2008; Woodside, 2010) suitability to test models that include paradoxical constructs.

2.   **Background and theory development**

The business model concept is extremely successful and highly common among practitioners, but a lack of consensus exists among scholars on the definition of the business model and its key elements (DaSilva & Trkman, 2014; Zott et al., 2011). Leveraging Zott and Amit (2007), this study defines an organization's business model as the system of the boundary-spanning interactions of the organization that are key to the organization's revenue flows.

More specifically, according to the literature (Håkansson et al., 2009; Zott & Amit, 2007; Zott et al., 2011) and the experience survey described in the following section, this study proposes that the foundation of a business model includes the following elements: the *social identities of the actors involved* in key expected interactions (e.g., the identity of a supplier, or a certain customer segment); the key *processes* that enable these interactions (e.g., a certain logistic activity of product delivery); the key *resources* these interactions enable/create/exchange (e.g., a certain product, a certain expertise, a certain reputation); and the *cause–effect relationships* between the key expected interactions and value creation/protection/appropriation.

In this light, the business model construct aims to synthesize the aspects of the interaction between the firm and its environment that are key to the firm's revenue. As the social environment changes continuously, business models are also dynamic configurations. Under selective pressures due to economic, ecologic, technological, relational and institutional phenomena, business models evolve through micro-adaptations and/or disruptive changes. At any given moment, then, each firm has its own business model, whose details are likely to be idiosyncratic to the firm, but whose general architecture is likely to reflect a business model type, which the social environment may recognize and evaluate as innovative, obsolete, sound, fragile, etc.

What factors help firms become or remain capable of adapting their system of key interactions to the emerging features of the environment? In other words, what factors enable ABMI by existing firms? Although highly relevant, research on this issue is surprisingly scarce even in the emerging literature on BMI (Zott et al., 2011).

This study leverages the emerging stream of research on paradoxical management (Smith & Lewis, 2011) to shed light on the factors that enable ABMI. The paradoxical management view assumes that human beings tend to understand the world in terms of pairs of opposites, for example, conformism and rebellion, fairness and opportunism, cooperation and competition. Social and cognitive mechanisms tend to reinforce a perception of incompatibility between these poles and "freeze" social actors (for example, organizations) into polarized, either-or configurations. For example, a longstanding rivalry between two firms makes cooperation between them much less likely.

According to the paradoxical management view, an excessive prolongation of this polarized rigidity is harmful. In fact, many pairs of phenomena, although logically opposing and reciprocally eroding in practice, are also reciprocally necessary for the

survival of the organization. For example, even if cooperation and competition are logically opposing and reciprocally eroding in practice, competition triggers and enables (new forms of) cooperation, and vice versa (Bengtsson & Kock, 2014). The same paradoxical relationship characterizes other pairs of organizational phenomena. The literature on paradoxical management labels such pairs of logically opposing organizational phenomena, which are contemporaneously reciprocally eroding and reciprocally enabling, *organizational paradoxes* (Lewis, 2000).

The literature on paradoxical management states that managers should address organizational paradoxes with an open mind, by considering each organizational paradox as a source of opportunities, overcoming the a priori "either-or" assumptions stemming from cognitive and social prejudices. In this way, managers can find a way to continuously (re)activate the positive and complementary forces of each organizational paradox (Khanagha et al., 2014). For example, through paradoxical management, a firm may find a way to start cooperating with a competitor to develop a new product. In this light, paradoxical management is a powerful antidote to organizational rigidity and inertia, and a key strategy for preventing maladaptive drifts in the firm's business model.

Paradoxical management then is the smart cross-activation of the opposing attitudes, behaviors, and capabilities that lead to organizational paradoxes. Although challenging and arduous, this approach to management leverages many complementarities that otherwise would remain unexploited. This "dual tuning" (George & Zhou, 2007) allows dynamic oscillation around a fuzzy optimum, even when the optimum itself is moving unpredictably (Boumgarden et al., 2012).

To model paradoxical management, this study builds upon Lewis's (2000) seminal paper to identify three core organizational paradoxes as the key targets of paradoxical management: (1) paradoxical management of knowledge, leveraging the

dual tuning of exploitation and exploration (Gupta et al., 2013); (2) paradoxical management of social relationships, leveraging the dual tuning of cooperation and competition (Bengtsson & Kock, 2014); and (3) paradoxical management of rules, leveraging the dual tuning of institutional conformity and agency (Heugens & Lander, 2009).

In this light, paradoxical management is a three-dimensional construct measuring the extent to which a firm engages in exploitation and exploration, cooperation and competition, conformity and agency. Thus far, different research streams have separately investigated the three core paradoxes Lewis identifies (2000); instead, this study considers the three great "classical" paradoxes of organizational literature (exploitation-exploration, cooperation-competition, and structure-agency) together.

The paradoxical management approach invites managers to continuously adjust decisions and actions under the conflicting pressures of paradoxical forces. In other words, paradoxical management draws on the dynamic management of tensions and disequilibria. Therefore, this approach is quite compatible with the findings of the literature on entrepreneurial learning (Franco & Haase, 2009), that, in turn, usually draws on the Austrian view of entrepreneurship (Schumpeter, 1934). In this view, highly dynamic organizations (i.e., those that continuously challenge existing equilibria, and rapidly respond to emerging threats and opportunities) are more likely to be flexible enough to adapt to rapidly changing business environments, and then survive and thrive. Thus far, organization and management scholars have overlooked this complementarity between the paradoxical view and the Schumpeterian explanations of innovation processes. This study leverages this complementarity to build a causal model that links paradoxical management to ABMI.

However, the construct of paradoxical management alone does not explain effectively a firm's capability to concretely seize the opportunities that paradoxical management has generated. To complete the model of ABMI, this study also leverages the literature on dynamic capabilities (Cepeda & Vera, 2007; Zollo & Winter, 2002). This procedure, together with the explorative survey described in the following section, allows to develop the construct "resilient dynamic capabilities." This construct measures the extent to which an organization's resources and capabilities (Cepeda & Vera, 2007): (a) enable sensing and alertness, thus allowing the organization to be quickly aware of emerging threats and opportunities, as well as of environmental feedback; (b) allow the rapid activation, deactivation, recombination, and collaboration of practices, resources and capabilities; and (c) support change, trial-and-error, and improvisation by controlling the related costs and risks.

This study proposes a model that, leveraging the Schumpeterian logic of opportunity (Sambamurthy et al., 2003), links the triple paradoxical management to resilient dynamic capabilities and thus to ABMI (Figure 1).

FIGURE 1 here.

In this model of ABMI, the paradoxical management variables (engagement in exploitation, exploration, cooperation, competition, conformity, agency), along with resilient dynamic capabilities, constitute the key elements of organizational dynamism, which, in turn, enables ABMI.

The organizational dynamism's modeling follows Woodside (2010, p. 359) by grouping the possible values of its seven dimensions into high or medium-low values. In this way, $2^7 = 128$ configurations of organizational dynamism are possible, depending on the possible high or medium-low value of the seven dimensions of organizational

dynamism (resilient dynamic capabilities and engagement in exploitation, exploration, cooperation, competition, conformity, and agency).

As for dynamic capabilities, a simple prediction stems from related theories: Proposition 1: Only cases with high dynamic capabilities display high levels of ABMI, while cases with medium and low dynamic capabilities do not.

For the six variables of paradoxical management, the predictions are more complex. The paradoxical literature describes two possible strategies for managing paradoxical tensions: ambidexterity and vacillation/tacking (Boumgarden et al., 2012). Ambidexterity consists of contemporaneous engagement in both poles of an organizational paradox, for example, exploitation and exploration. Vacillation, in contrast, consists of periodically tacking from one pole to the opposite one, such as a sailing boat coursing against the wind. For example, a firm may display high engagement in exploitation and low in exploration, but some months later, the situation will reverse. Ambidexterity-based management of paradoxical tensions corresponds to only one configuration, in which all six variables of paradoxical management rank high. Instead, vacillation-based management of paradoxical tensions may correspond to eight possible configurations, in which each key organizational paradox is (temporarily) activated through one high-ranked pole only (for example, medium/low exploitation but high exploration, high cooperation but medium/low competition, high conformity but medium/low agency). An additional 18 mixed configurations include one or two organizational paradoxes managed through ambidexterity and one or two organizational paradoxes managed through vacillation (for example, high exploitation and high exploration, high cooperation but medium/low competition, high conformity but medium/low agency) (Table 1).

TABLE 1 here.

Therefore, one ambidexterity-based, eight vacillation-based, and 18 mixed configurations (out of 128) may correspond to high levels of paradoxical management coupled with high resilient dynamic capabilities, whereas the remaining 101 configurations describe medium or low levels of organizational dynamism. In this light, the paradoxical view of organizational dynamism and ABMI translates into the following prediction:

Proposition 2: Only cases falling within one of the 27 configurations corresponding to highly paradoxical ambidexterity-based, vacillation-based, and mixed organizational dynamism display highly adaptive BMI; the cases falling within the other 101 possible configurations of organizational dynamism do not.

3.   Method

3.1.   *Suitability of fsQCA for models including paradoxical constructs*

Traditional statistical methods are not appropriate for conducting the pilot testing of the organizational dynamism and ABMI model. The paradoxical approach admits ambidexterity and vacillation/tacking as possible strategies for successfully coping with paradoxical tensions. The vacillation approach complements the ambidexterity approach to paradoxical tensions by predicting that, under certain circumstances, some dynamically polarized configurations (in which some paradoxical variables rank high whereas the opposing ones rank medium/low) may enable success just as well as, or even better than, full ambidexterity. Thus, all the paradoxical variables ranking high at the same time is not always necessary or helpful. In this view, several equifinal configurations of the seven dimensions of organizational dynamism at a certain time t_o may lead to high performance, whereas other configurations may lead to medium-level performance, and other configurations, not necessarily symmetric with

the successful configurations, may lead to low performance. Traditional correlation-based statistical analyses, in contrast, are suitable for investigating only symmetric causal correlations. In other words, correlational analysis is unsuitable for capturing the possible causal asymmetries the paradoxical vacillation view predicts.

Thus, in this study, the authors adopt fsQCA (Woodside, 2015) to conduct the pilot test of the explanatory power of the triple paradox model of organizational dynamism. This method effectively addresses causal asymmetry, equifinality, and the possible interdependence of the input variables (Cooper & Glaesser, 2015; Greckhamer et al., 2007; Pajunen, 2008; Ragin, 2000; 2008; Woodside, 2010). As Woodside (2010) argues, fsQCA allows to rigorously associate, for example, low values of an input variable with low and high values of the output variable. With this method, the sets of causal conditions leading to low, moderate, or high performance differ with no symmetry assumption, while completely different configurations of equifinal predictors occur. Fiss (2011) highlights that "set-theoretic methods such as fuzzy-set QCA are uniquely suitable for testing typological and configurational theory because they explicitly conceptualize cases as combinations of attributes" (p. 401).

3.2.   Questionnaire development and data collection

A preliminary experience survey serves to build a sound instrument for collecting data (Zikmund et al., 2012) to discuss the model and operationalize the constructs into questionnaire items suited to the context of Italian small and medium size enterprises (SMEs). The experience survey witnessed the participation of two senior managers at the leading Italian industrial association (who participated in a program aimed at encouraging innovation and entrepreneurship in Italian SMEs) and four managers of a major Italian bank (who had a sound expertise in scouting the

business environment and selecting the soundest and most dynamic SMEs as target clients for the bank). These managers provided a valuable contribution to the discussion of the potential of the triple paradox model of organizational dynamism and iteratively developing the questionnaire items, taking as a basis the scales available in the relevant literature. Six meetings with these managers took place between September 2014 and July 2015; the process led to the final version of the scales for the seven input variables and the output variable (Table 2). This questionnaire adopts firm performance, measured through perceptive items after the business model innovation process, as a proxy of the output variable, ABMI.

TABLE 2 here.

To identify suitable firms for the study, the authors used a database of the leading Italian industrial association. This database lists all Italian firms (9238 in November 2014) that have formally established a business network agreement (Cantele et al. , 2016) to pursue a specific business project. The authors read the documents describing 350 business projects submitted between 2010 and 2013, a period of severe economic crisis in Italy, during which the turbulence affected all sectors in the business environment. These documents serve as a basis to rank the firms' business projects by BMI intensity and group the firms according to size and sector. This process allows to pick the highest-ranking firms for each sector and size, resulting in 100 firms that, in the years 2010-2013, had decided to pursue BMI. Those 100 firms received email invitations to answer the questionnaire; 35 respondents returned complete and usable questionnaires (35%) within approximately 8 weeks. The study triangulated all the questionnaires with document analysis and at least one interview for each case. Following the literature on fsQCA (Fiss, 2011; Woodside, 2010), a set of 35 cases was appropriate for the pilot testing of the model.

The respondents represent a broad and balanced variety of industries, such as services (30%), manufacturing (36%), fashion and clothing (10%), information and telecommunication (10%), and food and beverage (14%). As for firm size, 32% of the firms have 10–50 employees, 44% have 50–249, and 15% have 250–499.

3.3.   Calibration and fsQCA

Fuzzy set QCA preserves information by allowing gradual set membership. This method involves a calibration process, that is, the transformation of original data into a continuous value interval from 0 to 1 (Ragin & Fiss, 2008; Woodside, 2010). The study uses the average value of the items of each variable for each questionnaire; because the questionnaire answers used a 5-point Likert scale, this value was between 1 and 5. Then, the study converted the values in "fuzzy value" (Fiss, 2011). According to Woodside (2015), "the software program at fsQCA.com […] includes a sub-routine for calibrating continuous values into membership scores for a logarithmic function (whereby values distant from the median are nearly equal to one another and values near the median are not equal to one another)" (p. 252). This leads to variables ranging from 0 to 1. To validate the calibration, the study also uses the Fuzzification model (Li, 2013). The values obtained with these two techniques were similar.

4.   Findings

4.1.   FsQCA results

Starting from the Pearson bivariate correlations matrix analysis (Table 3) between the seven input conditions and the outcome measure (firm performance), three significant correlations exist among the input characteristics. Furthermore, the results show evidence of a significant, positive correlation between exploitation, cooperation,

and conformity, and the outcome measure. However, none of the input items had a significant net effect because all values are not high (Ragin, 2008), which also excludes the presence of a multicollinearity effect. Given these results, the input characteristics and the output measure are non-linear and asymmetric. Therefore, fsQCA is appropriate.

TABLE 3 here.

Following Greckhamer (2011), the authors use a combination of intermediate and parsimonious solutions, which include all counterfactuals, irrespective of their plausibility (Ragin, 2008; Ragin & Rihoux, 2009). In fact, fsQCA differentiates among parsimonious, complex, and intermediate solutions. Each type of solution draws on a different treatment of the combinations. Parsimonious solutions correspond to the highest model consistency. Following Ragin's recommendations (2008), the study sets a consistency benchmark of 0.90 for necessary conditions. According to Ragin (2014), the distribution of cases is not random, because the χ^2 value is 69.87, and the level of significance is less than 0.001. As a result, the fsQCA analysis identifies two solutions (i.e. equifinal configurations (S1 and S2)) associated with the outcome under study (performance after BMI). In particular, adopting the notation system from Ragin and Fiss (2008), each column represents a configuration of conditions linked to the respective outcome; full circles (•) indicate the presence of a condition, whereas cross circles ($\otimes$) indicate the condition's absence (Table 4).

TABLE 4 here.

Solution 1 (S1) indicates that 98% of all firms with the characteristics of a high degree of engagement in exploitation, exploration, cooperation, conformity, in conjunction with high resilient dynamic capabilities, are members of one of the 18 sets of "organizations with high organizational dynamism through mixed ambidexterity-vacillation paradoxical management."

The second solution (S2), with a consistency of 0.94, and, notably, unique coverage 0.63, represents "organizations with high dynamism through fully ambidextrous paradoxical management." The solution coverage of the sufficient combination is 0.88 (Table 1), which means that the configuration of the attributes captured 88% of the set membership in compensation-level outcomes (Greckhamer, 2011).

In particular, the fsQCA analysis (Ragin & Sean, 2014) of the model presented in this study shows that the same solutions (Solution 1 and Solution 2) emerge as complex, parsimonious, and intermediate solutions. This result means that the model proposed in this study is highly consistent. In fact, as Greckhamer (2011) notes, the matching of the parsimonious, complex, and intermediate solutions strongly corroborates the claim that the corresponding configurations are core to influence the outcome.

4.2. *Discussion*

Both solutions include only firms that rank high in resilient dynamic capabilities, thus confirming the claims of the dynamic capabilities literature (Proposition 1). One set (Solution 2) corresponds to the only fully ambidexterity-based configuration (Configuration A1 in Table 1), confirming that triple ambidexterity (of knowledge, relationships, and rules) is a successful strategy for paradoxical management. The other set (Solution 1), conversely, corresponds to one of the 18 possible mixed configurations of highly paradoxical management (Configuration M1 in Table 1); in fact, in this set, the management of one of the three organizational paradoxes (exploration-exploitation) has ambidexterity as a basis, whereas the other two organizational paradoxes (cooperation-competition and conformity-agency) present strong polarization toward

social embeddedness (with high engagement in cooperation and conformity and low in competition and agency), thus suggesting a possible vacillation-based paradoxical management of the related tensions. Both Solution 1 and Solution 2 are in the list of 27 possible configurations of high paradoxical management (Table 1), thus confirming Proposition 2.

All 35 cases under study include firms whose recent business model innovation efforts draw on collaborative business networking. Thus, unsurprisingly, the dynamic vacillation toward the socially embedded poles (cooperation and conformity) is a more effective strategy than other possible vacillation-based or mixed configurations for these firms in this phase. However, the ambidexterity-based paradoxical management of exploitation-exploration is present in Solution 1, thus suggesting that the vacillation-based management of knowledge may be less effective for these firms than the vacillation-based management of relationships and rules.

In any case, none of the 101 configurations that include medium- or low-resilient dynamic capabilities and/or medium or low paradoxical management is an antecedent of high firm performance after BMI in turbulent environments. These results confirm propositions 1 and 2, corroborate the claims in the literature on dynamic capabilities and paradoxical management, and also corroborate the explanatory power of the integrated model (Figure 1) that this study proposes.

## 5.	Conclusion

This study builds upon the cross-fertilization of different research streams to develop an original, integrated model of the key organizational antecedents of ABMI.

This is seemingly the first study to leverage fsQCA to test a model based on the paradoxical management view, which is quite surprising, because the analysis of the

model clearly highlighted that the paradoxical view implies causal asymmetry and equifinality. For these reasons, scholars should consider fsQCA among the preferred methods of analysis when paradoxical constructs (i.e., constructs describing pairs of opposing and interrelated phenomena) are in the independent variables.

Further, this study contributes to link the concept of ambidexterity (usually referring to exploration-exploitation) to other organizational paradoxes, such as cooperation-competition and structure-agency, and to resilient dynamic capabilities, thus paving the way towards an evolutionary, adaptive view of organizational learning as key antecedent of strategic renewal (Crossan et al., 2011).

Finally, this study contributes to the literature on BMI, by proposing the concept of ABMI and highlighting the importance of organizational factors, such as the cultivation of resilient dynamic capabilities and paradoxical management culture, for successful BMI.

This study has limitations owing to its explorative nature; nevertheless, the model of organizational dynamism that this study proposes may have relevant implications for practice, because the study helps define a comprehensive, granular view of the many aspects of organizational dynamism that are key to firm survival and prosperity in turbulent business environments.

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Figure 1. Research model: Organizational dynamism (comprised of paradoxical management and resilient dynamic capabilities) enables adaptive BMI.
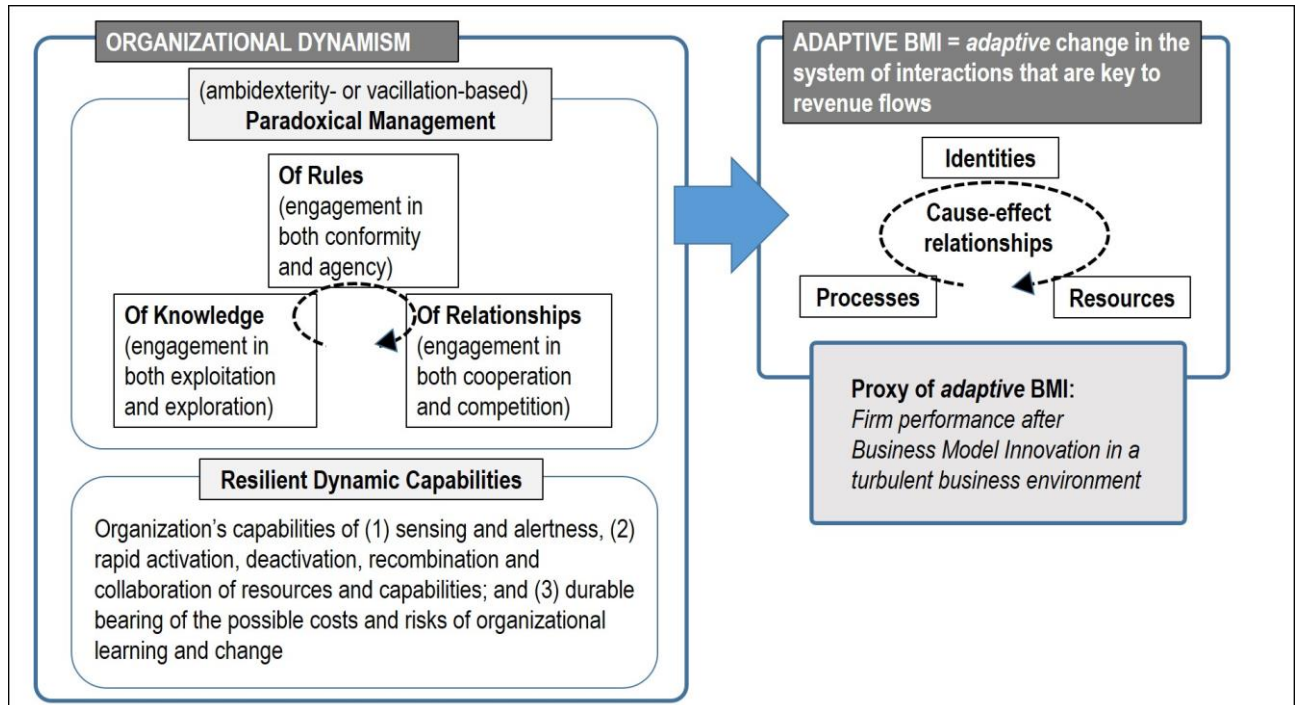
Table 1. The 27 configurations of paradoxical management (out of 128) that may enable adaptive business model innovation according to Proposition 2.

Configurations		Engagement in Exploitative Learning	Engagement in Explorative Learning	Engagement in Cooperation	Engagement in Competition	Engagement in Institutional Conformity	Engagement in Institutional Agency
Ambidexterity-based	*A1*	*High*	*High*	*High*	*High*	*High*	*High*
Vacillation-based	V1	High	Medium/Low	High	Medium/Low	High	Medium/Low
	V2	High	Medium/Low	Medium/Low	High	Medium/Low	High
	V3	High	Medium/Low	High	Medium/Low	Medium/Low	High
	V4	High	Medium/Low	Medium/Low	High	High	Medium/Low
	V5	Medium/Low	High	Medium/Low	High	Medium/Low	High
	V6	Medium/Low	High	High	Medium/Low	High	Medium/Low
	V7	Medium/Low	High	High	Medium/Low	Medium/Low	High
	V8	Medium/Low	High	Medium/Low	High	High	Medium/Low
Mixed	*M1*	*High*	*High*	*High*	*Medium/Low*	*High*	*Medium/Low*
	M2	High	High	Medium/Low	High	Medium/Low	High
	M3	High	High	High	Medium/Low	Medium/Low	High
	M4	High	High	Medium/Low	High	High	Medium/Low
	M5	High	High	High	High	High	Medium/Low
	M6	High	High	High	High	Medium/Low	High
	M7	High	High	High		High	High
	M8	High	High	Medium/Low	High	High	High
	M9	High	Medium/Low	High	High	High	Medium/Low
	M10	Medium/Low	High	High	High	Medium/Low	High
	M11	Medium/Low	High	High	High	High	
	M12	High	Medium/Low	High	High	Medium/Low	High
	M13	Medium/Low	High	High	High	High	High
	M14	High	Medium/Low	High	High	High	High
	M15	Medium/Low	High	Medium/Low	High	High	High
	M16	High	Medium/Low	High	Medium/Low	High	High
	M17	Medium/Low	High	High	Medium/Low	High	High
	M18	High	Medium/Low	Medium/Low	High	High	High

Table 2. Questionnaire items.

	PARADOXICAL MANAGEMENT ITEMS
	In the last 2/3 years, our firm has made significant efforts to:
Engagement in Exploitative Learning	*Improve the quality of our products and/or services*
	Optimize our business processes and/or workflow
Engagement in Explorative Learning	*Explore new markets*
	Develop new generations of products and/or services
Engagement in Cooperation	*Develop projects and/or plans that imply a high level of cooperation within and/or across our firm's boundaries*
	Develop trustful interpersonal relationships within and/or across our firm's boundaries
Engagement in Competition	*Develop a culture of merit and excellence in our firm*
	Achieve and/or maintain control on resources or capabilities that provide our firm with advantages over competitor
Engagement in Institutional Conformity	*Adopt approaches, practices and/or technical solutions that meet the highest standards in our context*
	Develop initiatives aimed to increase our firm's reputation with the business environment and/or local community
Engagement in Institutional Agency	*Develop a new culture and mindset, that differ from the traditional habits of our business environment*
	Participate in associations, clubs, communities or networks, that raise our firm's capacity to defend its interests and/or influence political decisions
	RESILIENT DYNAMIC CAPABILITY ITEMS
	Our firm has good capacity to:
Resilient Dynamic Capabilities	*Make rapid changes in business routines, if necessary*
	Perceive the emerging threats and opportunities in advance
	Effectively monitor the impact of the firm's choices and activities on the customers and business environment
	Effectively manage the operating risks
	Effectively guard against negligence and/or willful misconduct
	ADAPTIVE BUSINESS MODEL INNOVATION ITEMS
	Our firm has achieved or maintained results that the owners / shareholders consider satisfactory as regards:
Performance after BMI	*Sales*
	Market shares
	Productivity
	Profitability
	Return on investments
	Public sympathy

Table 3. Pearson correlations matrix.

		Correlations Matrix							
		PT	PR	CO	CM	EM	AC	RS	PERF
PT	Pearson Correlation	1							
	Sig. (2-tailed)								
PR	Pearson Correlation	,285**	1						
	Sig. (2-tailed)	,000							
CO	Pearson Correlation	,305**	,327*	1					
	Sig. (2-tailed)	,002	,011						
CM	Pearson Correlation	,244**	,306*	,321**	1				
	Sig. (2-tailed)	,001	,042	,000					
EM	Pearson Correlation	,264**	,195	,333	,323**	1			
	Sig. (2-tailed)	,000	,261	,051	,001				
AC	Pearson Correlation	,307**	,325*	,249**	,332**	,267**	1		
	Sig. (2-tailed)	,004	,011	,007	,000	,005			
RS	Pearson Correlation	,331**	,320*	,315**	,312**	,309**	,311**	1	
	Sig. (2-tailed)	,001	,024	,002	,000	,002	,000		
PERF	Pearson Correlation	,331	,322	,247	,297**	,292**	,249	,302*	1
	Sig. (2-tailed)	,052	,059	,152	,002	,000	,149	,033	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4. FsQCA results.

Conditions	S1	S2
Exploitation	●	●
Exploration	●	●
Cooperation	●	●
Competition	⊗	●
Conformity	●	●
Agency	⊗	●
Resil. Dyn.Capabilities	●	●
Consistency	*0.98*	*0.94*
Raw coverage	*0.25*	*0.87*
Unique coverage	*0.02*	*0.63*
Solution consistency	*0.94*	
Solution coverage	*0.88*	