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Business Process Management (BPM): How complementary BPM capabilities can build an ambidextrous state in business process activities of family firms

Elisa Giacosa, Alberto Mazzoleni, Antonio Usai,

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Business Process Management (BPM)

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How complementary BPM capabilities can build an ambidextrous state in business process activities of family firms

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Elisa Giacosa

University of Turin, Turin, Italy

Alberto Mazzoleni

Economics and Management, University of Brescia, Brescia, Italy, and

Antonio Usai

University of Sassari, Sassari, Italy

Abstract

Purpose – Although Business Process Management (BPM) is a critical issue and small- and medium-sized family firms (SMFFs) frequently adopt process organization, very little literature focuses on the processes by which family firms remain distinctive (Chrisman *et al.*, 2016) or on their approach to BPM. The current research aims to fill this gap by analyzing dynamic companies' attitudes to process-driven ability that concern exploitative as well as explorative processes. The purpose of this paper is to identify which kinds of dimensions may build an ambidextrous state in BPM in SMFFs, also favored by entrepreneurial IT capabilities and influenced by a stable but changeable context.

Design/methodology/approach – The authors referred to vom Brocke *et al.*'s (2014) study as it allows a focus on BPM research in the context of SMFFs. Then, the authors adapted the framework to the context of SMFFs. In addition, an empirical analysis has been made for applying the framework's principles on effective BPM requirements to SMFFs. In the research, the authors applied grounded theory, according to which observation and theorization are linked by circularity, as they represent moments being managed simultaneously. The theorization emerged in different moments of the empirical surveys, influencing the next data gathering and the data gathering was the object of a de-structured matching and analysis process.

Findings – Specific cultural and cognitive aspects, values and abilities affect the company behavior of SMFFs in terms of BPM, and this is influenced by the connection between the family and the business. Therefore, it confirms that the family is a missing variable in organizational research (Dyer, 2006) also in BPM. A good BPM permits the definition of business abilities of running the current processes, along with of acclimatizing the company to a changeable context. In regard to the exploitative and explorative strengths typical of organizational ambidexterity, the research favors, respectively, transactional excellence with a focus on net cost reduction and transformational excellence based on net revenue generation. This approach requires consideration of the difference between external and internal contingencies as well as of the different processes to manage. However, despite IT-based BPM tools and the new era of IT-based process thinking, technology appropriation is only one of our dimensions, and each dimension plays a role in good BPM behavior; only a combination of dimensions favors effective and flexible BPM.

Research limitations/implications – The research contributes to the literature on BPM through theoretical implications, in particular two main implications. First, the research emphasizes the impact of familiness on good BPM practice. Family appears to be a missing variable in organizational research on BPM, even though familiness affects process specificity and mechanisms. Second, the research is based on certain category dimensions that characterize management models common in the literature, allowing the application of BPM in FFs by taking advantage of their confidence and adaptability. Limitations are related to different points of view on the model's scope and design, the recipient and the research method.

Practical implications – The research has two main practical implications, representing managerial potential, that improve the significance and originality of the research in internal and external contexts. In the internal context, this permits a new BPM mind-set.

Originality/value – The research is original for the following two reasons. First, when FF complexity grows and/or new organizational issues emerge, FFs are faced with two challenges: an increased number of complex



processes to handle, along with a lack of IT-based BPM for organizational ambidexterity. In such a context, this research can suggest a solution. Second, the research is based on dimensions that have been widely characterized in general management models. For this reason, FFs may already be familiar with these dimensions. In addition, the model strongly valorizes the familiness impact on BPM development and takes into consideration the context awareness of the company.

Keywords Exploration and exploitation, Business Process Management

Paper type Research paper

1. Introduction

Although research in the field of Business Process Management (BPM) has reached a degree of maturity (vom Brocke *et al.*, 2014), interest has been rising in BPM as a result of the IT-based atmosphere and emerging digital breakthroughs, which require additional BPM capabilities. In fact, using IT to inspire and enable contemporary entrepreneurial endeavors (Del Giudice and Straub, 2011), BPM can refine business processes in both manufacturing and services companies and can boost knowledge creation and innovation (Del Giudice and Maggioni, 2014; Lopez-Nicolas and Soto-Acosta, 2010; Kim and Park, 2005; Roth, 2003).

In addition, emerging research on management innovation has hypothesized a combination between novel BPM competencies and organizational ambidexterity (Kohlborn *et al.*, 2014). Indeed, a combination of the exploitative and explorative forces within organizational ambidexterity (Carayannis and Rakhmatullin, 2014; March, 1991; Junni *et al.*, 2013) may open up new horizons in terms of running a business in a changeable context, as well as in terms of BPM (Benner and Tushman, 2003). As present, BPM practices are not sufficiently adapted to the different situations that arise in ambidextrous organizations and are therefore exposed to the risks of disruptive innovation (Carayannis *et al.*, 2003). Ambidextrous organizations may therefore require IT-based tools and processes to translate new technological opportunities into effective business process optimization (Del Giudice *et al.*, 2015; Del Giudice, Carayannis and Maggioni, 2017).

In our research, we focused on the phenomenon of small- and medium-sized family firms (SMFFs) for several reasons. First, they are widespread and common in all economic and social contexts (Vrontis *et al.*, 2016) and our investigation could increase its practical implications. In addition, their competitive context is particularly affected by structural change especially because of globalization and technology (Bresciani *et al.*, 2013; Bresciani, Ferraris and Del Giudice, 2016; Ferraris *et al.*, 2016). Therefore, companies have to pursue new avenues and organizational structures to improve their long-term competitiveness (Paraponaris, 2003; Zellweger *et al.*, 2012) and the familiness factor may impact on the company's attitude to react to external challenges (Carnes and Ireland, 2013; Sirmon and Hitt, 2003). As a good BPM practice could represent a tool for reaching this goal and the familiness factor could be a relevant reaction factor, SMFFs represent an interesting context to observe also in terms of BPM. We decided to focus on SMFFs rather than corporate firms as SMFFs frequently adopt process organization (Brusa, 2011). For this reason, an effective BPM could increase their long-term competitiveness.

Although BPM is a critical issue and SMFFs frequently adopt process organization (Brusa, 2011), very little literature focuses on the processes by which FFs remain distinctive (Chrisman *et al.*, 2016) or on their approach to BPM. The current research aims to fill this gap by analyzing dynamic companies' attitudes to process-driven ability that concern exploitative as well as explorative processes (March, 1991). The purpose of this research is to identify which kinds of dimensions may build an ambidextrous state in BPM in SMFFs, also favored by entrepreneurial IT capabilities and influenced by a stable but changeable context.

Our research is original and the research could contribute to the current knowledge for the following two reasons. First, when FF complexity grows and/or new organizational

issues emerge, FFs are faced with two challenges: an increased number of complex processes to handle, along with a frequent lack of IT-based BPM for organizational ambidexterity. In such a context, this research can suggest a solution. Second, the research is based on dimensions that have been widely characterized in general management models (Pellicelli, 2014). For this reason, FFs may already be familiar with these dimensions. In addition, the model strongly valorizes the familiness impact on BPM development and takes into consideration the context awareness of the company.

The paper is structured as follows. First, the theoretical background outlines the underlying critical success factors (CSFs) for BPM as well as the FF context to which our research applies. The methodology is outlined next. Then, we propose our findings in the Section 4 which have been discussed in the Section 5. Finally, conclusions and theoretical and practical implications are discussed, along with research limitations and future research directions.

2. Theoretical background

BPM has been scientifically investigated since the late 1980s and it has evolved as a relevant research domain (Houy *et al.*, 2010; Lee and Dale, 1998). If starting idea of process orientation conducted to few theoretical and practical potentials (Nordsieck, 1934), following contributions (such as Davenport, 1993; Hammer and Champy, 1993; Scheer, 1994) considerably provide relevant methods which both build the foundation for future challenges in management (vom Brocke *et al.*, 2014) and generate an evolving trend in management science (Houy *et al.*, 2010).

However, the BPM adoption is actually fragmented and, second, there is a little accordance regarding the right purpose of BPM (Rosemann and vom Brocke, 2010). Later on, interesting empirical research contributions and practical applications of BPM and expecting new interests in the future emerged (Ghodeswar and Vaidyanathan, 2008).

According to the scope of our research and the research question, we first focused on which kinds of dimensions may build an ambidextrous state in BPM and, second, we contextualized our review on the context of SMFFs.

2.1 *Kinds of dimensions for an ambidextrous state in BPM*

To reach this first goal, we first analyzed the CSFs for a good BPM, as they have been observed in the past and they could impact on the dimensions we are looking for. In particular, a series of general CSFs have been identified (such as communication, top management support, support for the top management) without further practical implications (King and Burgess, 2006). In addition, a more detailed suggestion for the CSFs utilization has been debated, focusing on whether critical training positively affects BPM (Skrinjar and Trkman, 2013).

In addition, considering the specificity of each context, some studies based on the principles of good BPM (Armistead, 1996; vom Brocke *et al.*, 2014), enriching theoretical concepts and guiding for practical initiatives. In particular, in the early days of BPM, Armistead (1996) identified a set of guiding principles, and Burlton (2001) subsequently advanced principles relating to business change and process renewal. Subsequently, Vom Brocke *et al.* (2014) offered a comprehensive simple overview on BPM: in particular, it identified ten simple principles of good BPM strengthening the BPM core in SMFFs. The comprehensive BPM overview proposed by vom Brocke *et al.* (2014) is useful for our research, as its context is characterized by a non-widespread culture for BPM (Brusa, 2011). Therefore, simple guidelines for effective and flexible BPM may permit “moving ambidextrous BPM out of disillusionment in the actual era of IT-based process thinking and corporate change” (Del Giudice, Soto-Acosta, Carayannis and Scuotto, 2017).

2.2 *The BPM in the context of family firms*

To reach the second goal, we contextualized our literature review on BPM in family businesses. Then, focusing on family business context, family firms are a worldwide phenomenon and they have attracted research on the definitive essence and nature of FFs (Astrachan and Shanker, 2003; Del Giudice, 2011). There is an evolving consensus that FFs are characterized by different values, motivations, intentions, cognitive aspects and capacities from non-family firms due to differences in goals, governance and resources (Chrisman *et al.* 2013; De Massis *et al.*, 2014). It leads to a balance between the family and the business in the management (Carayannis, 2011; Della Peruta, 2011). Within this context, there is not an unanimous tendency among FFs to innovate, and FFs may be more or less attracted by innovative strategies than non-family firms due to several factors, such as limited financial resources (Giacosa *et al.*, 2016), risk aversion (Kellermanns *et al.*, 2012), attractive leadership imperative (Miller and Le-Breton Miller, 2006), flexible organizational structure (Craig and Moores, 2006) or familiness factor (Carnes and Ireland, 2013; Sirmon and Hitt, 2003).

As innovation may also concern the business processes management, it is interesting to observe the FFs tendency within this context. With particular reference to process management, very little literature has focused on the decision-making process and the processes by which FFs produce their distinctiveness (Chrisman *et al.*, 2016). In particular, Chrisman *et al.* (2016) examined how the interaction between the family and the business impacts management processes, presenting a framework on the “how” of FF behavior. By simplifying the management process as a decision process with five components, they adopted the dimensions of family involvement, behavioral inclination of the controlling family, strategic drivers, execution and company’s outcomes.

Within this context, the familiness factor may impact on the company’s attitude to react to external challenges (Carnes and Ireland, 2013; Sirmon and Hitt, 2003). As a good BPM practice could represent a tool for increasing the company’s competitiveness, and the familiness factor could be a relevant reaction factor, family firms represent an interesting context to observe also in terms of BPM.

Despite the introduction or improvement of BPM can be considered a sort of innovation in technological, organizational, administrative and management terms (Giacosa, 2011)—especially when IT-based BPM is applied—issues on good BPM in SMFFs are absent from previous research works. Also the connection between an ambidextrous state in business process activities and entrepreneurial IT capabilities in family firms has not been debated, despite recent studies on the topic required additional BPM capabilities as a result of the IT-based atmosphere (Del Giudice and Straub, 2011). Last, also the combination between novel BPM competencies and organizational ambidexterity (Kohlborn *et al.*, 2014) has not been investigated in the context of FFs, despite they may open up new horizons in terms of BPM.

BPM is considered as a critical issue and family businesses are commonly used the process organization (Brusa, 2011). Nevertheless, a relevant research gap emerged as a very little literature focuses on their approach to BPM in SMFFs. The current research aims to fill this gap by identifying which kinds of dimensions may build an ambidextrous state in BPM in SMFFs (which represents our research question), also favored by entrepreneurial IT capabilities and influenced by a stable but changeable context.

3. Methodology

Our review of BPM and family firms literatures shows some limitations that call for additional research. In particular, more research is due to identify the most relevant dimensions impacting good BPM in FFs, taking into consideration the balance between the

family and the business (Classen *et al.*, 2012) in building an ambidextrous state in business process activities. Therefore, our research question was framed as follows:

RQ. Which kinds of dimensions may build an ambidextrous state in BPM in SMFFs?

We then identified our framework and research design.

3.1 Research design

We referred to vom Brocke *et al.*'s (2014) study—already illustrated in the Literature review section—as it allows a focus on BPM research in the context of SMFFs for the following reasons. First, it offers a comprehensive simple overview of BPM and serves as a reference for further research development in the field of FFs. Second, the comprehensive BPM overview proposed by the framework is applicable to SMFFs. Indeed, this context is characterized by a non-widespread culture for BPM (Brusa, 2011), and simple guidelines for effective and flexible BPM may permit “moving ambidextrous BPM out of disillusionment in the actual era of IT-based process thinking and corporate change” (Del Giudice, Soto-Acosta, Carayannis and Scuotto, 2017). In particular, the framework's principles on effective BPM requirements permit to strengthen the BPM core and guide practical initiatives.

Then, we adapted the framework to the context of SMFFs, as they are characterized by different values, motivations, intentions, cognitive aspects and capacities than non-family firms in terms of goals, governance and resources (Chrisman *et al.*, 2013; De Massis *et al.*, 2014). These specificities also impact on the FFs tendency of innovation (Giacosa *et al.*, 2016) and, consequently, on the innovation strategy also in terms of BPM.

In addition, an empirical analysis has been made for applying the framework's principles on effective BPM requirements to SMFFs. In particular, we sought expert opinions in the company sample, which included 60 owners, 20 CEO and 7 top managers of SMFFs as illustrated in the sample section. Each semi-structured interview ranged from 60 to 120 min and it has been made face to face or by telephone in 2016 and 2017 during two rounds, for a total of 174 interviews. Interviews have been conducted by two of the authors, permitting a careful track of every aspect, idea and witness in respect of an interview protocol.

The interviews have been organized in two following rounds. A first round of interviews (for a total of 87 interviews with 87 respondents) has been conducted in 2016 respecting the following interview protocol. First, we asked respondents to analyze the framework independently before the interview. Second, we discussed the framework's principles in order to understand their usefulness and applicability in their context and to identify new principles more appropriate for it. In particular, in this round, the protocol includes general open-ended questions about each BPM practice proposed by our framework (in order to obtain a complete range of individual viewpoints on what was considered relevant for successful BPM). We then discussed how to categorize the above principles. To reach this purpose, we proposed a cluster of three specific categories of BPM principles: the first category—called “general concepts of BPM”—refers to the general concepts of BPM, in order to view the company with a holistic approach and allow the creation of a “shared understanding that allows process improvement opportunities to be revealed” in terms of the entire company (vom Brocke *et al.*, 2014); the second category—called “stakeholders' role”—refers to the stakeholders' perception in terms of BPM project and how internal human resources handle business processes; the third category—called “how to make BPM”—refers to the method for making BPM in terms of communication language and tools in order to fit FF's needs and requirements. This step also permits to discuss and solve conflicting patterns. Our proposal for clustering categories has been accepted during the interviews.

Then, after the interviews, for each of the above categories we formulated new principles of BPM contextualized to SMFFs. To do so and for also estimate the responses, we defined a linguistic reference model that allowed us to identify how each principle should be formulated.

For a complete investigation, the meaning of each principle has been specified in terms of both negative and positive statements, allowing us to analyze each principle in terms of positive manifestation (how each principle could be realized) or negative one. In addition, the formulation of each principle—clustered into the above categories—permitted us to create a series of temporary issues on good BPM practice for SMFFs.

A second round of interviews conducted in 2017 (for a total of 87 interviews with the same 87 respondents) had the purpose to validate our temporary issues. In particular, we illustrated them to the respondents, asking for feedbacks and reflections. The feedback process was very positive.

We then reached our final issues, in which each identified principle has been presented in alphabetical order and clustered into the above three categories (general concepts of BPM, stakeholders' role and how to make BPM).

In our research, we applied grounded theory (Glaser and Strauss, 1967), according to which observation and theorization are linked by circularity, as they represent moments being managed simultaneously. The theorization emerged in different moments of the empirical surveys, influencing the next data gathering. The data gathering was the object of a de-structured matching and analysis process.

In particular, we built a grounded theory based on a coding process which permits to identify themes and patterns constituting the basis for our research. Data from interviews have been arrayed using a threefold coding process, which involves open coding, axial coding and selective coding (Miles and Huberman, 1994). The open coding step has been conducted by two authors and it generates a comprehensive list of descriptive codes from the interviews. The initial codes have been based on informants' viewpoint in terms of the dimensions proposed by our framework. Then, initial first-order concepts have been condensed by all three authors by sorting codes, with the purpose to create more analytical categories of dimensions (axial coding), which serve as underlying BPM in SMFFs. In particular, thanks to the actions of all the authors, we categorized dimensions according to the phase of BPM development that they impact, as illustrated above: the first category refers to the general concepts of BPM; the second category refers to the stakeholders' perception in terms of BPM project and how internal human resources handle business processes; and the third category refers to the method for making BPM in terms of communication language and tools. This step also permits to discuss and solve conflicting patterns. Last, thanks to our second round of interviews, we further confirmed BPM dimensions at three levels, as illustrated above.

3.2 *The sample*

As stated in the Introduction section, our research is focused on the phenomenon of SMFFs.

The sample population was composed of 4,756 manufacturing companies belonging to the several economic sectors (ATECO, 2007 classification). The companies belonged to the Brescia region in the north-east of Italy. This is relevant for our investigation as it represents 4 percent of Italian manufacturing companies, and 90.11 percent of its manufacturing companies are family firms. All the companies were active.

The criteria used for creating our sample are suitable for reaching the research scope, whose goal is to support SMFFs in a good BPM. For this reason, we considered small and medium-sized enterprises (SMEs) as they are most representative of the European entrepreneurial context (European Commission, 2016; Del Giudice, Khan, De Silva, Scutto, Caputo and Carayannis, 2017). To identify SMEs, we adopted a widely used criterion, suggested by a European classification, based both on company revenues (2–50m euros) and employees (10–250 employees). We thus identified 937 SMEs. We decided to remove listed companies as they are characterized by different features than unlisted companies, and this impacts the present research (Giacosa *et al.*, 2012). We identified 936 unlisted SMEs.

From this sample, we identified FFs using a criterion proposed by Chua *et al.* (1999). We thus identified 834 unlisted SMFFs. A smaller sample was selected using a random, causal process applied by the software in order to choose 100 companies. In total, 87 of these companies (87 percent) accepted to be investigated, with a response rate of 87 percent which is very representative given the average survey-response rates (Menon *et al.*, 1999). They constitute the final sample from the following economic sectors: food and beverage (5 percent), automotive (8.75 percent), ICT (3.75 percent), textile (6.25 percent), machinery (10 percent), other manufacturing (5 percent), electronic (1.25 percent), chemical (6.25 percent), iron and steel industry (8.75 percent), energy (1.25 percent), rubber-plastic (6.25 percent), metallurgical (10 percent), and engineering (27.5 percent). We obtained a generalization of data with a confidence interval of 85 percent and a margin of error of 7–10 percent, which have been considered satisfactory (Menon *et al.*, 1999). No sample companies had a specific area or project focused on BPM, demonstrating that BPM culture was not widespread in our sample.

As illustrated in the Research design section, interviews were conducted face to face or by telephone during 2016 and 2017 with a focus group of 60 owners, 20 CEOs and 7 top managers. We selected them for the following reasons: they are directly involved in business processes management and they are in strict contact with the topic; they have the decision-making power for adopt BPM practices and systems within the company. As shown in the Research design section, we conducted two rounds of interviews, for a total of 174 interviews, according to an interview protocol illustrated in the Research design section.

4. The dimensions of a good BPM for SMFFs

We identified ten principles of good BPM for unlisted SMFFs. Each principle is described below in alphabetical order.

4.1 Context awareness

As this principle is rooted in contingency theory (Donaldson, 2001), its effectiveness depends on the fit between organizational features and the referred context. This principle is suitable for SMFFs, which are often characterized by specific organizational and business model features (Dyer, 2006). In particular, FFs have different processes as well as a given organizational setting that is typically structured by processes.

The BPM approach has to be taken into consideration in the specific context (Günther *et al.*, 2008), considering goals, strategy and entrepreneurial behavior, sectors and markets and company size and age (Romano *et al.*, 2000; Zahra *et al.*, 2004). Resource availability is also a relevant factor, as each investment policy, including BPM, may be influenced by lack of capital, which is typical for small-sized FFs (Mahéroul, 2000).

4.2 Continuity

This principle is appropriate for SMFFs, as their investments policy is generally characterized by a long-term vision (Chua *et al.*, 2009) in order to preserve family goals along with company growth and development (Cassia *et al.*, 2012). Within the BPM context, the short-term projects approach, which aims to solve specific problems, is not efficient and effective in terms of gains, as quick wins are not productive in the long term. Therefore, the principle of continuity has to be applied to BPM, permitting the leverage of values and BPM potential. We observed that the processes approach is more effective when used according to the continuity approach or when it is shared and implemented in the medium or long term and extended to the entire organizational structure.

Within BPM and in respect to the continuity principle, FFs can follow either an improvement or a radical approach: improvement within the organization is more than welcome (Trkman, 2010), and a radical redesign of organizations may be an opportunity

(Hammer and Champy, 1993) especially in a changeable context. Independently, from the incremental or the radical approach, FFs need a new organizational process approach for creating BPM culture in a long-term vision (Schmiedel *et al.*, 2013), and exploitation and exploration efforts can favor both effectiveness and flexibility. A rooted BPM culture facilitates daily work in terms of BPM. To reach this goal, leadership behaviors, reward structures and governance need to be adapted to the context in respect of context awareness (vom Brocke *et al.*, 2014).

4.3 Enablement

This principle is suitable for SMFFs as the choice between personnel capabilities, external consultants and a mixed solution is frequently based on limited financial resources or their specific context (Ferraris *et al.*, 2017; Bresciani, Culasso, Giacosa and Broccardo, 2016). Personnel competencies are crucial in FFs as they develop organizational BPM attitudes within the company (Giacosa *et al.*, 2016) and improve the company's sensitivity toward the role of business processes as well as the attitude on how to manage these processes. Especially when there are different processes to handle, an internal process management culture may provide the right solution. Such resolutions should take into consideration the company's maturity (Rosemann *et al.*, 2006) in terms of both age and tendency (vom Brocke *et al.*, 2014).

Recourse to BPM consultants, on the other hand, can be risky, as these consultants may not be aligned to the company context and may not understand its particular features. Wrong assimilation of the context in such a case may negatively impact processes management (Cohen and Levinthal, 1990), and external recourse may therefore be supported and checked by the management. Investing in internal BPM capabilities, such as staff key BPM positions or a BPM owner, permits limitations to *ad hoc* and isolated interventions (which are typically handled by external consultants), which tend to be risky and counterproductive in the long term (Teece, 2009). Generally, this is not the case for ICT-based processes, as SMFFs do not have the skills and financial resources necessary to handle them internally and require the use of external parties. In such cases, defense from internal parties becomes even more important.

4.4 Holism

FFs are typically characterized by more developed processes due to cultural and traditions reasons (i.e. marketing, R&D and production). Managerial processes, however, are less developed, as these are often handled by the entrepreneur. A sort of processes map (Brusa, 2011) is therefore necessary to embrace the entire value chain and support BPM, following a holistic approach (Hammer, 2010) and a certain maturity model (Rosemann and de Bruin, 2005). It prevents an isolated focus on specific issues and leads to strategic, methodological, technical and social benefits. An environmental approach is also necessary for considering external impact on BPM initiatives—in terms of both opportunities and limitations (Giacosa *et al.*, 2012)—and practical implications.

4.5 Institutionalization

Only the institutionalization of BPM in the organizational structure favors the internalization of a new mind-set in the company (Brusa, 2011). In particular, FFs have to find the right balance between personal and impersonal business process governance in terms of formal rules, roles and accountability structures (Markus and Jacobson, 2010) while also considering specific features and needs.

This principle is fully applied to SMFFs, which are typically characterized by a processes organizational approach. In this context, a new culture based on BPM can prevent disruptive innovation. Then, moving ambidextrous BPM out of the disillusionment would be a key challenge.

4.6 Involvement

Regardless of FF dimensions, different stakeholders may be involved (Donaldson and Preston, 1995) whose perceptions of culture and management practices (Poza *et al.*, 1997) influence BPM. In this context, BPM affects roles and people at various levels and in different contexts whose commitment to change is a critical factor of BPM success. That is, a collaborative effort by different stakeholders acting as change agents could positively affect the achievement of BPM goals. Different methods of involvement (such as idea boxes and interactive feedback sessions) can create company feeling.

BPM in FFs requires deep involvement by all human resources (Culasso, 1999). Ownership and top management as well as lower-level employees need to do their jobs in a less standardized manner and become more interconnected with downstream and upstream activities (Giacosa *et al.*, 2016). Employees, management and ownership will have to be involved in the new culture in the redesign process, enjoying their strong involvement and sharing in business goals (Brusa, 2011). Therefore, a BPM mind-set is necessary for the involvement of internal parties in the value chain, which ambidextrous organizations have to take into consideration.

4.7 Joint understanding

As the involvement principle requires the participation of all stakeholders, a BPM project needs to reflect an organizational culture inspired by processes. Therefore, there needs to be a common language. For processes to become part of all conversations and reflect a shared understanding, process models may be adapted (Curtis *et al.*, 1992) as they use a common language based on actors, events and tasks for the communication and analysis of process architecture. Process models need to avoid becoming complex (Cohen and Levinthal, 1990) and need to remain simple and intuitive.

Such models create a common understanding across all stakeholders, without any distinction of expertise. Based on certain guidelines (Becker *et al.*, 2000), FFs can apply process models in simple and understandable ways. In particular, they may refer to a reduction in complexity (Recker, 2013), modularization, labeling and other mechanisms available in the literature (Reijers *et al.*, 2011). Depending on their maturity and process culture levels, FFs have to graduate to sophisticated process models, which need to be contextualized to the company. For instance, talking in terms of storyboards or cartoons (Recker *et al.*, 2012) may not be the best solution.

4.8 Purpose

As SMFFs are frequently organized by processes, BPM may internally be considered as a management method that favors general company goals without focusing only on specific ones. Fulfilling the broad aims of BPM helps create a sense of purpose and prevent dissatisfaction with or discontinuance of BPM (Nwabueze, 2012).

Respecting the principles of context awareness and institutionalization described above, different mechanisms of BPM may be adopted and aligned with strategic general purposes without being influenced by specific goals. In particular, efficiency improvements, networking with partners, integration and agility and compliance enforcement (Scuotto, Santoro, Bresciani, and Del Giudice, 2017) have to be taken into consideration, favoring the internalization of a new mind-set in the company. In this context, ambidextrous organizations need exploration as well as exploitation solutions for successful new process design, business corporate change and process optimization (Brusa, 2011).

4.9 Simplicity

SMFFs are typically characterized by limited financial resources and a high degree of attention to their use (Coleman and Carsky, 1999) due to limited bargaining power with

lenders and the current financial crisis (Bresciani, Culasso, Giacosa and Broccardo, 2016). This should not restrict application of the BPM approach, however, as BPM requires simplicity and is inexpensive. In particular, respecting holism and purpose principles, limited effort, time and money may require the selection of relevant strategic, technical and staffing processes and the omission of less important ones.

Although the literature mentions the complex array of methodologies and practices, characterized by the IT and business perspective, BPM for SMFFs needs to be simple and economical to favor the achievement of various goals.

4.10 Technology appropriation

Technological innovation aims to introduce new processes or modify existing ones also thanks to IT (Bresciani *et al.*, 2013). As a driver of organizational adaptation, IT improves BPM (Davenport, 1993) and the literature suggests that business and IT find a better way to work together (Carayannis *et al.*, 2012). BPM systems with an evolved architecture have been adopted to fulfill the evolving needs of companies (Pourmirza *et al.*, 2017). Countless new IT and business intelligence solutions (Del Giudice *et al.*, 2016) are available for fostering the efficiency and effectiveness of business processes (i.e. cloud, mobile, social, big data and analytics technologies) and for FFs that can benefit from process re-engineering projects. While the process approach some years ago was exclusive to large companies that could afford expensive consulting and information tools, the situation today allows smaller companies to make these investments as well.

5. Discussion

Each dimension has been explained in the previous section, showing how features of the FFs business model can impact on an effective BPM. We then categorized dimensions in three different clusters according to the phase of BPM development that they impact:

- (1) The first category—called “general concepts of BPM”—refers to the general concepts of BPM, in order to view the company with a holistic approach and allow the creation of a “shared understanding that allows process improvement opportunities to be revealed” in terms of the entire company (vom Brocke *et al.*, 2014).
- (2) The second category—called “stakeholders’ role”—refers to the stakeholders’ perception in terms of BPM project and how internal human resources handle business processes.
- (3) The third category—called “how to make BPM”—refers to the method for making BPM in terms of communication language and tools in order to fit FF’s needs and requirements.

First, general concepts have to be identified in order to view the company with a holistic approach and allow the creation of a “shared understanding that allows process improvement opportunities to be revealed” in terms of the entire company (vom Brocke *et al.*, 2014). Second, how FF stakeholders perceive a BPM project and how internal human resources handle business processes should be considered. Third, we considered how BPM has to be made in terms of communication language and tools in order to fit FF needs and requirements. Last, each BPM mechanism has to fit the company’s context.

In terms of general concepts, FFs have to adopt a holistic approach to BPM. Such an approach allows the institutionalization of BPM in the company, which, in turn, helps create a new mind-set for good BPM practice and a new culture based on process organization. When BPM is handled in a holistic way and is institutionalized, it can act as a management method for achieving general and non-specific company goals. This prevents dissatisfaction and discontinuance of BPM and favors value creation within the company. For this purpose,

however, a continuity approach has to be maintained in the long term. In conclusion, general concepts combine various principles of good BPM practice and foster process improvement.

We then considered a series of principles involving different company stakeholders, in particular, internal human resources, as they have to fit into the BPM approach. The strong involvement of stakeholders is necessary in addition to the enabling of personnel. In regard to human resources, a careful choice should be made between the use of internal and external resources for effective BPM, although investment in internal human resources is typically the best solution for increasing company sensitivity toward business processes.

Then, we analyzed the combinations of the above dimensions to understand how BPM can be effectively developed. Following general concepts and stakeholder interests, it is important to consider how to make BPM in order to increase its operation in FFs. As the participation of all stakeholders favors an organizational culture inspired by processes, a common language is required so that process models and processes become a part of all conversations. In addition, considering the limited financial resources typical of SMFFs, BPM has to be simple and economical. Finally, technology innovation supports BPM operations and fosters the efficiency and effectiveness of business processes, which, in turn, can benefit process re-engineering. The combination of the above dimensions is effective only if it fits the company, as FFs have specific organizational, management and business model features that affect existing processes. The combination of dimensions and their clustering into three categories are illustrated in Figure 1.

6. Conclusions, implications and limitations

Specific cultural and cognitive aspects, values and abilities affect the company behavior of SMFFs in terms of BPM, and this is influenced by the connection between the family and the business (Lansberg, 1983; Dunn, 1999). Therefore, it confirms that the family is a missing variable in organizational research (Dyer, 2006) also in BPM.

Given that dynamic capabilities are process-driven competences for FFs and that these skills are rooted in exploitative and explorative processes, investing in ambidextrous BPM is a key challenge in simultaneously emphasizing process efficiency and flexibility. Then, FFs have to be encouraged into this culture.

A good BPM permits the definition of business abilities of running the current processes, along with of acclimatizing the company to a changeable context. In regard to the

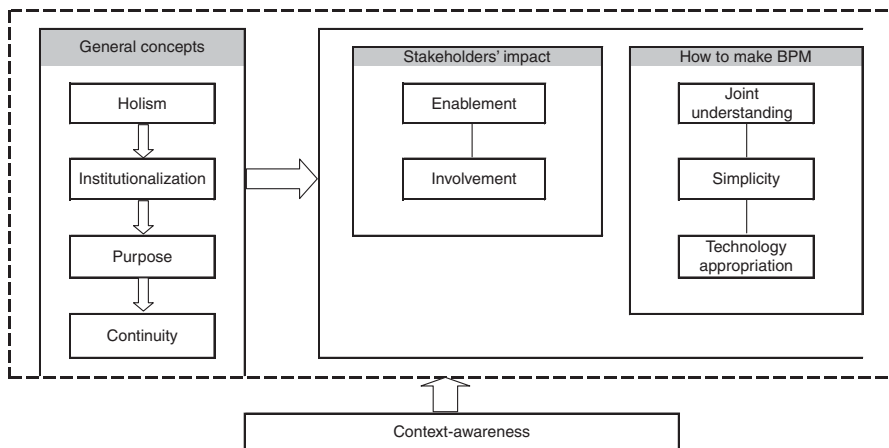


Figure 1.
The combination
of dimensions

Source: Personal elaboration

exploitative and explorative strengths typical of organizational ambidexterity, our research favors transactional excellence with a focus on net cost reduction and transformational excellence based on net revenue generation (O'Reilly and Tushman, 2013). This approach requires consideration of the difference between external and internal contingencies (Ploesser and Recker, 2011) as well as of the different processes to manage.

A set of techniques, methods and software tools support the design, promulgation, analysis and control of the operational businesses processes. SMFFs have to find a balance between the overlapping systems of the family, an effective business (Classen *et al.*, 2012) and new technology opportunities. Combining organizational ambidexterity strengths and IT-based tools and processes within the BPM approach will be a key challenge in translating technological opportunities into business process optimization.

Technology appropriation is a relevant identified dimension. We considered technology as an instrument that can generate experimentation and prototyping (Del Giudice, Carayannis and Maggioni, 2017) in the design, development and process management of BPM (Mazzoleni, 2004). The technology factor emerges with the massive introduction of IT into internal data and information processing activities and with the acquisition and use of communication technologies to support information technology integration in both internal and external activities (Scuotto, Del Giudice and Carayannis, 2017). This last activity represents a leap in BPM quality, enabling internal and external process innovation, redesigning and rationalizing the value chain and permitting significant management benefits. IT-based tools may support this process as they favor the mapping of the different processes to handle and the creation of useful information for the decision-making process. However, despite IT-based BPM tools and the new era of IT-based process thinking, technology appropriation is only one of our dimensions, and each dimension plays a role in good BPM behavior; only a combination of dimensions favors effective and flexible BPM.

The research contributes to the literature on BPM through theoretical implications, in particular two main implications. First, our research emphasizes the impact of familiness on good BPM practice. Family appears to be a missing variable in organizational research on BPM, even though familiness affects process specificity and mechanisms. Second, it is based on certain category dimensions that characterize management models common in the literature (Pellicelli, 2014), allowing the application of BPM in FFs by taking advantage of their confidence and adaptability.

The research has two main practical implications, representing managerial potential, that improve the significance and originality of our research in internal and external contexts. In the internal context, this permits a new BPM mind-set. More specifically, management and/or ownership can formulate more conscious and rational strategic plans and initiatives in terms of BPM, and employees are more involved into the business processes. In the external context, external consultants may fit more to the company's context, and their activity can be checked by internal parties. In addition, investors' decision-making processes may be guided by BPM investment policy.

As with all studies, our work presents some limitations, which also suggest future areas of investigation. Limitations are related to different points of view on the model's scope and design, the recipient and the research method. Regarding the first, our research does not weigh each identified dimension according to its role in creating good BPM in FFs, as our research does not focus on the effectiveness measurement of the dimensions. In particular, the model does not create different simulations based on company variables such as product range, markets, employees, age and life cycle, or more or less changeable context. In addition, different process typologies identified in the literature (Earl and Khan, 1994) have not been differentiated as model dimensions or in their role in good BPM. Regarding the model's recipient, we did not distinguish between FFs according to their size, age, life cycle or economic sector, which could influence the company's needs in terms of BPM (Mazzoleni, 2012).

In addition, our model does not distinguish between SMFFs, which can be characterized as having different specificities and complexities. Finally, regarding the research method, the model has not been empirically tested in a sample of companies from countries with different economic statuses from Italy.

Our research stimulates reflection on past and current BPM research. Each identified dimension can attract more in-depth insights into how existing methods and tools can be chosen, extended or revised (vom Brocke *et al.*, 2014) to explore and exploit BPM. Indeed, topics such as how to identify the performance effects of BPM in FFs (Blasini and Leist, 2013) or the identification of potential for sustainability improvement in business process models (Recker *et al.*, 2012) have been widely neglected in previous studies. In addition, supplementary dimensions permit a comprehensive view of the combination of family and business processes (Bresciani, Culasso, Giacosa and Broccardo, 2016), such as listed and unlisted FFs, different economic sectors or varying age and size.

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About the authors

Elisa Giacosa received the PhD Degree in Business Administration in 2003. She is currently Assistant Professor in Business Administration at the Department of Management, University of Turin, Italy. She teaches the Financial Accounting (Italian undergraduate) and International Financial Accounting courses (Italian graduate) in the University of Turin, Italy. She was Erasmus Visiting Professor in some Foreign Universities. Her research interests are in business process management, crisis management, family businesses, fashion firms, financial analysis and financial leverage in medium-sized companies, on which several international publications were focused. She's Associate Fellow of the EuroMed Academy of Business. Elisa Giacosa is the corresponding author and can be contacted at: elisa.giacosa@unito.it

Alberto Mazzoleni received the PhD Degree in Business Administration in 2001. He is currently Assistant Professor in Business Administration at the Department of Economics and Management, University of Brescia, Italy. He teaches the Financial Accounting (Italian undergraduate) in the University of Brescia, Italy. His research interests are in business process management, crisis management, financial analysis and financial leverage in medium-sized companies, on which several international publications were focused. He's Associate Fellow of the EuroMed Academy of Business.

Antonio Usai is Senior Researcher of Economics and Business Management, Professor of Strategic Marketing for Tourism and Digital Marketing and Revenue Management at the Department of Economics and Business, University of Sassari. His major interests include tourism product development and tourism marketing, analysis of domestic and international tourist demand (with particular reference to China), customer satisfaction and consumer behaviour in tourist systems, innovation management and knowledge management, international marketing for SMEs.

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