

Effective business model adaptations in family SMEs in response to the COVID-19 crisis

Business
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adaptations in
family SMEs

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Received 13 February 2022
Revised 14 April 2022
Accepted 3 June 2022

Abstract

Purpose – The present paper aims at exploring effective business model adaptations in response to unexpected events such as the COVID-19 pandemic.

Design/methodology/approach – The authors test the effect of two major business model adaptations, namely changes in the value proposition and changes in the target market, on a sample of 96 family SMEs.

Findings – Results show that only changes in the value proposition had a positive and significant impact on performance, helping family SMEs to better confront COVID-19. However, this effect is reduced in the case of target market change.

Originality/value – To the best of the authors' knowledge, this is the first study to investigate how business model adaptations in family SMEs affect performance in crisis situations.

Keywords Family SMEs, COVID-19, Business model adaptation, Adaptive capacity, Resilience, Strategic change

Paper type Research paper

1. Introduction

The unprecedented nature of COVID-19 has affected the worldwide economy (Eggers, 2020) with small and medium-sized enterprises (SMEs [1]) being severely hit (Alonso *et al.*, 2020; Juergensen *et al.*, 2020; Levashenko and Koval, 2020). Recent data on the pandemic reveal that in 2020 about 40% of UK SMEs stopped operations (FSB, 2020), 50% of German SMEs suffered a more than 10% decline in revenues (DIHK, 2020) and more than 70% of Italian SMEs were significantly affected by the crisis (CNA, 2020). In fact, SMEs' peculiarities such as resource constraints, the barriers to accessing capital, and the shorter time frame for coping with the shock, make them particularly vulnerable to crises (European Commission, 2019). As Juergensen *et al.* (2020) argue SMEs are less resilient compared to larger firms and they need more time to establish normal operations after a crisis occurs.

Nevertheless, most SMEs are family firms (Chang *et al.*, 2008; Memili *et al.*, 2015), providing the business with additional resources that are crucial for adopting strategic changes in order to quickly align to a new changing environment. Indeed, Minichilli *et al.* (2016) argue that business families demonstrate a particular readiness to make sacrifices, invest their patient capital in the firm, create customer loyalty and react promptly when the situation requires it (Mzid *et al.*, 2019; Zehrer and Leiß, 2019; Carradus *et al.*, 2020; Calabrò *et al.*, 2021; Żukowska *et al.*, 2021). In the same vein, a recent study by Kraus *et al.* (2020) shows that, in the face of the pandemic, family firms are able to engage in business model adaptations in a comparatively short period of time (Kraus *et al.*, 2020; Soluk *et al.*, 2021).

The authors would like to thank the Guest Editor Marina Dabić and the anonymous reviewers for their valuable comments that improved the quality of the paper. The authors also thank KPMG, Credit Suisse, MCP and Bcentric for their support in data collection. The authors are also indebted to Andrea Calabrò, Mara Brumana and to the participants of the 16th EIASM Workshop on Family Firm Management Research, the 5th PISB workshop and the EuFBC seminar series for their constructive feedback.



However, the literature has ignored to what extent such reactions affect family SMEs performance, i.e. the effectiveness of business model adaptations. Therefore, in order to fill this gap, our research question is: “What are the most effective family SME business model adaptations (BMAs) in response to unexpected events such as the COVID-19 pandemic?”

We address this research question by focusing specifically on two major BMAs, i.e. changes in the value proposition and changes in the target market, as valuable strategies to contrast the drastic decline in product demand and the drop in customer confidence induced by COVID-19 (Juergensen *et al.*, 2020). Leveraging family SMEs adaptive capacity induced by their unique resources and their distinctive behavior, we hypothesize that quickly changing the value proposition by offering, for example, new or different products, can lead to increased performance, while changes in the target market may result in the opposite effect. Indeed, as one of the priorities of family SMEs is to create closer and loyal relationships with customers (Miller *et al.*, 2008), we argue that changing them is not a profitable strategy.

We developed a questionnaire administered online to family SMEs in Italy between January and March 2021. Italy is particularly interesting as it is the European country that was the most severely hit by COVID-19 (OECD, 2020). Moreover, family SMEs in Italy represent the majority of firms: roughly 70% of SME businesses, as reported by Cerved (2020). We tested our hypotheses on a homogeneous group of 96 family SMEs characterized by similar size, the presence of a family leader and having mainly the same geographical origin. Results show that BMAs through changes in the value proposition can be an effective strategy for family SMEs to cope with a crisis, while no effect emerged for changes in the target market. To further corroborate our empirical evidence, we explored possible BMA combinations adopted by family SMEs (i.e. analyzing the effect of combining a change in both value proposition and the target market), finding that changes in the target market negatively moderate the relationship between changes in the value proposition and performance.

This study contributes to three streams of literature. First, we advance the research on business model adaptation by investigating its relevance when companies face external unpredictable shocks, such as the COVID-19 crisis. Second, we contribute to family business literature by providing evidence that not all adaptive strategies can be effective in family SMEs when reacting to crisis situations. Third, we contribute to the literature about environmental crisis, in particular to the emergent stream of research on COVID-19 by providing empirical evidence on how a specific type of firm, i.e. the family SME is coping with the shock.

This paper offers important practical implications for family owners, managers and policymakers. As concerns family owners, our findings provide useful suggestions about the effective adaptive strategies to be implemented in times of impactful external shocks. Managers too should become aware of the right levers that family SMEs should activate in times of crisis in the short term. Similarly, policymakers can design ad hoc programs to help companies to survive the crisis and to transform potential threats into opportunities.

2. Theoretical background and hypothesis development

2.1 BMAs and performance in times of crisis

The Business Model (BM) reflects the firm’s ability to create, deliver and capture value (Saebi, 2014). Although considered as a source of competitive advantage, the BM needs to evolve and change over time. Indeed, when firms experience an organizational decline generated by operational inefficiencies (internal factors) or environmental jolts (external factors) or face impactful crises such as the pandemic, engaging in adjustments in the BM can be crucial for recovery and survival (Arogyaswamy *et al.*, 1995; Trahms *et al.*, 2013). In particular, three types of business model changes have been identified: (1) Business Model Evolution (BME), (2) Business Model Innovation (BMI), and (3) Business Model Adaptation (BMA). While the first two (BME and BMI) refer mainly to intentional changes due to the lifecycle of the firm (Demila

and Lecocq, 2010) or to changes brought about by technologies (Bucherer *et al.*, 2012; Andreini *et al.*, 2021), the latter (BMA) refers to the process of adapting the current BM to changes in the external environment in order to secure the firm's economic sustainability (Saebi *et al.*, 2017).

Indeed, firms' alignment to external shocks, such as COVID-19, by adapting the BM is believed to improve performance (Mintzberg and Waters, 1985; Haveman, 1992; Acs and Amoròs, 2008; Zott and Amit, 2008; Heij *et al.*, 2014). In this regard, Saebi *et al.* (2017) show how firms engaged in BMAs to respond to the 2008 financial crisis. Similarly, Cucculelli and Bettinelli (2016) argue that firms that update, change and/or innovate the BM in response to external stimuli experience positive performance effects. A more recent study by Escamilla-Fajardo *et al.* (2021) shows how adaptations of the BM in Spanish sports clubs increase social performance during COVID-19, helping them to mitigate the crisis impact.

However, these studies suggest that adapting the BM is not an easy task. Adaptations might imply changes in the different dimensions of the BM such as the value proposition, the target market, the value delivery, and the value-capture mechanisms. Thus, while adapting all BM elements can be challenging, as it requires time and resources, neglecting to adapt could increase the likelihood of business failure (Doz and Kosonen, 2010), especially in times of crisis.

2.2 Family SMEs adaptive capacity, BMAs and performance in times of crisis

Family SMEs are the true backbone of the European economy (Botero *et al.*, 2015). The distinctive behavior and the focus on "passing the torch" to future generations indicate the strong need for family firms to develop and maintain adaptive capacity especially in times of crisis (Kraus *et al.*, 2020; Soluk *et al.*, 2021; Calabro *et al.*, 2021). Indeed, the ability to find solutions and resources to cope with challenges in a comparatively short period of time enables family SMEs to adapt promptly to a changing environment, thus becoming more resilient over time (Haynes *et al.*, 2019; Calabrò *et al.*, 2021; Le Breton-Miller and Miller, 2022). In this regard, Soluk *et al.* (2021) argue how behavioral changes in family firms facilitate their adaptive capacity to better cope with exogenous shocks. In a similar vein, Kraus *et al.* (2020), conducting a qualitative study on how family firms respond to COVID-19, show that many of them adapted the BM by offering different products specifically tailored to the crisis to keep the business going. And again, Le Breton-Miller and Miller (2022) claim that in times of crisis family firms can take advantage of their superior relationships with close partners, such as customers, that are crucial to mitigate the effect of COVID-19 and withstand hard times. Notwithstanding these findings, to what extent do BMAs in family SMEs lead to better performance in times of crisis? To address this research question, the next section develops hypotheses on the relationship between BMAs and performance in family SMEs in times of crisis.

2.3 Hypothesis development

We developed hypotheses on two main BMAs, namely adjustments in the value proposition, i.e. changing the product and/or mix of products to contribute to keeping family SMEs' revenue streams going during hard times and adjustments in the target market. The idea is that adapting all dimensions of the BM involves substantial redeployment of resources (Doz and Kosonen, 2010) and usually is the consequence of a long-term strategy defined by the firm (Casadesus-Masanell and Ricart, 2010), while improvisation, pivoting and partial adaptation strategies seem more likely to occur in times of shocks such as COVID-19 (Morgan *et al.*, 2020).

2.3.1 BMAs in family SMEs: changes in the value proposition. Although family firms are acknowledged to be quite able to respond to routine disruptions (Olson *et al.*, 2003), the unprecedented nature and magnitude of effects caused by COVID-19 pose great challenges to family firm continuity. Yet the distinctive behavior and the goal of preserving the company in the long term induce family SMEs to engage in adaptive strategies to sustain performance (Gomez-Mejia *et al.*, 2007; Berrone *et al.*, 2012; Razzak *et al.*, 2019; Diaz-Moriana, 2020).

Indeed, as [Kraus et al. \(2020\)](#) argue, business model adjustments play a crucial role for companies in times of crisis. They show that family firms that introduced changes in the value proposition by offering new products or changing the mix of products mitigated the effect of the pandemic (e.g. a clothing company that identified mask production as an opportunity and changed production accordingly). Similarly, [Ferrigno and Cucino \(2021\)](#) find that many family firms converted their manufacturing activities to produce ventilators, valves, and gel sanitizers to overcome the crisis. [Marjański and Sułkowski \(2021\)](#) also provide evidence of how family firms reacted to COVID-19 by offering products that were not part of their normal offering, thus avoiding shutting down.

In sum, family firms' higher adaptive capacity is assumed to have a positive effect, thus increasing their chances of overcoming the crisis. Therefore, we state that:

- H1.* Business model adaptations by changing the value proposition (changing the product and/or the product mix) positively affect family SMEs' performance in times of crisis.

2.3.2 BMAs in family SMEs: changes in the target market. As outlined above, in turbulent environments, firms need to dynamically adapt and to re-configure their business model to have higher chances of success ([Andries and Debackere, 2007](#); [Cuculleli and Peruzzi, 2020](#); [Katare et al., 2021](#); [Kraus et al., 2020](#); [Soluk et al., 2021](#); [Le Breton-Miller and Miller, 2022](#)). For example, in capital-intensive and high-velocity industries [Andries and Debackere \(2007\)](#) find that the firms' chances of survival increase when they apply changes in target markets. Similarly, [Cuculleli and Peruzzi \(2020\)](#) and [Katare et al. \(2021\)](#) argue that different adaptive strategies can lead to different business outcomes, yet with the main belief that changes and/or adjustments in the business model are beneficial for firms that reposition themselves to survive. Thus, as in the case of the value proposition interventions, changes in the target market to which the offer is oriented (for example, by providing the same product or service to an entirely new segment of customers) can represent another strategic approach in response to COVID-19. However, the specific focus on family SMEs merits further consideration. Indeed, [Miller and Le Breton-Miller \(2005\)](#) argue that family firms "relationships with customers vastly exceed the time span, scope, and potential of episodic market or contractual transaction" (p. 35). The long-term perspective and the family firm's desire for longevity create an "extended family", so that customers may share the same principles, values and norms with the family, thus building enduring relationships ([Zellweger, 2007](#)). Moreover, family members' involvement in the business, and their personal and informal relations with customers create solid connections, increase mutual understanding and boost loyalty ([Das and Teng, 1998](#); [Gomez-Mejia et al., 2001](#); [Miller et al., 2008](#)). In other words, family firms display greater stewardship over their connections, which in times of crisis become crucial for sustaining firm prosperity and survivability.

Hence, even though adjustments in the business model are necessary during shocks, not all adaptations may be effective in family SMEs. The underlying rationale is that family SMEs in difficult times should leverage their unique resources to survive; among such "resources", high-quality relationships with close partners such as customers are crucial. Moreover, social distancing restrictions applied during the pandemic make the creation of strong new connections more difficult. It is reasonable to suppose that changing the target market to search for a new segment of customers is not a good strategy for family SMEs in times of crisis. Thus, we claim that family SMEs should not change their target customer, rather they should nurture connections with them. We, thus, hypothesize that:

- H2.* Business model adaptations by changing the target market (changing the target customer and/or customer mix) negatively affect family SMEs' performance in times of crisis.

3. Study design and methodology

3.1 The context

The current COVID-19 crisis creates the urgency to investigate how adaptations of the business model in the particular context of family SMEs may affect performance and thus also the firm's capacity to recover from impactful events. In particular, we draw attention to the Italian context of family SMEs mainly for two reasons. First, Italy represents a unique setting to investigate family SMEs behavior because of some peculiarities of its economy. Specifically, Italy has a large base of family-held firms. According to Istat ([Istituto Nazionale di Statistica – Italia, Central Statistics Institute, 2021](#)), the Italian production system is characterized by a considerable number of firms controlled by an individual or family: for the year 2018, 66% of these firms represent companies with between 10 and 49 employees, and 49% those with more than 50 employees. Thus, it is of utmost importance to understand the challenges family SMEs have been confronted with during the pandemic and the main effective adaptive strategies they put in place ([Kraus et al., 2020](#); [Wenzel et al., 2020](#)) to cope with the ongoing crisis. Second, the focus on the Italian context, due to the rigid restriction measures implemented, creates a unique business environment to analyze business model adaptations. Indeed, Italy has been hit very hard compared to other countries ([OECD, 2020](#)). It was the first European country to cope with the rapid spread of the coronavirus and its consequences due to the lockdowns taking place between 2020 and 2021, leading to an immediate and drastic decline in demand and/or production ([CNA, 2020](#)). Furthermore, only a few academic studies have so far researched how and with what measures family firms are responding to the COVID-19 crisis ([Kraus et al., 2020](#); [Zajkowski and Żukowska, 2020](#); [Calabrò et al., 2021](#); [Soluk et al., 2021](#)), leaving unexplored the effect that such responses can have on performance.

3.2 Data collection

We developed a survey by reviewing the available literature on the COVID-19 pandemic including research papers, policy documents and reports. Then we designed a questionnaire administered online to family SMEs located in Italy. This was one of the first Western countries that faced the impact of COVID-19 contagion with two severe lockdowns during 2020 and 2021.

Hence, due to the urgency of the study and to gather a real-time picture of the current and the expected impact of the ongoing pandemic, we circulated the questionnaire through the main communication channels of our University (e.g. LinkedIn, Facebook etc.) from January to March 2021, still under epidemic lockdown conditions. This approach, although hindering the generalizability of results, has been used in previous family business studies (e.g. [Venter et al., 2005](#)) since it helps to increase the response rate and to reduce costs and time for collecting data ([Sue and Ritter, 2012](#); [Hong-Bo et al., 2014](#)). In fact, we were able to gather data randomly and quickly, obtaining 100 valid observations of family SMEs. Moreover, as we noted that the majority of respondents were both family owners and managers, we checked for the presence of a family leader. Indeed, the latter can increase flexibility in decision-making ([Kets de Vries, 1993](#); [Lins et al., 2013](#)), enabling family SMEs to better adapt to external shocks. We found that 4 family SMEs have no family leadership and we excluded them from the study. Hence, the final sample included a homogeneous group of 96 family SMEs, with 22% of respondent being family managers and 78% being both managers and owners. The northern region is the most represented as it accounts for 77% of the respondents included in the sample. [Table 1](#) shows the distribution of respondents by region distinguishing between manufacturing and service companies.

Our data are all from the same survey, based on self-reports by the same respondent, collected at the same point in time. This means that common method variance (CMV) may potentially bias our data and our coefficient estimates ([Williams and Brown, 1994](#)). We use

Harman's one-factor test to examine whether our data seem materially influenced by CMV. The single factor model explained 12.5%, well below the 50% threshold revealing no serious concerns of same source bias.

3.3 Variables

Independent variables: We measure the two major BMAs as in [Saebi et al. \(2017\)](#), that is, for the value proposition we asked respondents if they had introduced changes in the product and/or product mix since the beginning of the year when lockdowns and restrictions began in Italy. Similarly, for the change in the target market we asked respondents if they had introduced changes in the target customer and/or customer mix thereby creating new markets during the crisis.

Dependent variable: Performance is the turnover change, referring to the extent to which the 2020 turnover, calculated at the end of 2020, is different from that of 2019.

Control variables: The study also includes several control variables. Four of them controlled for demographic aspects: Size of the firms (calculated as the natural logarithm of sales), Age (number of years since the foundation of the firm), Industry type (manufacturing vs services), Industry hostility (i.e. reduction in the demand for product and services caused by the first lockdown in March in Italy). The remaining three control variables refer mainly to financial and governance changes that family SMEs may have introduced in order to respond more quickly to the crisis: a higher involvement of non-family managers to support the family SME with more competent knowledge to manage a crisis; possible changes in the ownership structure and capital increase to face liquidity problems during the crisis. We also asked respondents if they had changed their types of relationships with suppliers in terms of payment conditions to be better able to face liquidity problems.

4. Analysis and results

[Table 2](#) shows the results of the bivariate correlations among the variables providing information also on means and standard deviations. Results on actions taken during 2020 starting from the beginning of the year (when lockdowns and restrictions began in Italy) show that 47% of firms introduced changes in the customer target and/or customer mix; 47% introduced changes in the product and/or in the product mix; only 33% introduced changes in both dimensions of the BMA.

Thus, firms seem to have reacted promptly to the crisis by introducing rapid changes and/or quickly adapting the business model in response to the crisis.

In terms of performance, about 57% of the respondents declared a turnover reduction in 2020 with respect to the previous year (2019): the turnover change among those who registered a reduction is -18% , while the average turnover change for the entire sample is close to 0% .

[Table 3](#) summarizes the results with the first Model that includes only the control variables and the second Model that tests [hypotheses 1](#) and [2](#). The latter are tested by means of a hierarchical regression with the two major BMAs under study aimed at explaining variations in turnover changes ([Payne et al., 2017](#)).

Table 1.
Distribution of the sample by region and by industry

		Services	Manufacturing
Northern Italy	77%	70%	80%
Rest of Italy	23%	30%	20%
Total	100%	100%	100%

Variable	Mean	Std dev	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Turnover changes (2020 compared to 2019) (%)	0.002	0.405	1.000										
Size (sales in mil)	18.22	13.59	-0.1849	1.000									
Industry hostility	0.57	0.497	-0.43**	0.072	1.000								
Industry type	0.72	0.452	-0.1719	0.154	0.116	1.000							
Age	58.54	31.41	-0.0053	0.103	0.109	0.345**	1.000						
Increased involvement of non-family managers	0.34	0.477	-0.088	0.263**	0.048	-0.133	-0.138	1.000					
Capital increases	0.07	0.261	0.247*	-0.065	-0.001	-0.181	-0.272**	0.134*	1.000				
Changes in the relationship with suppliers	0.34	0.477	0.096	0.203*	0.093	0.111	0.132	0.215	0.134	1.000			
Changes in ownership structure	0.05	0.223	-0.031	0.149	-0.082	-0.062	-0.066	0.028	0.295**	0.126	1.000		
Changes in the product and/or in the product mix	0.47	0.502	0.1695	0.119	0.009	0.03	-0.115	0.287**	0.058	0.023	-0.032	1.000	
Changes in the customer target and/or customer mix	0.47	0.502	-0.083	0.055	0.22*	-0.016	-0.084	-0.021	-0.103	0.023	-0.032	0.456**	1.000

Note(s): *, **, and ***, respectively, denote statistical significance at the 10, 5, and 1% confidence levels

Table 2.
Descriptive statistics
and correlations

DV: Turnover changes (2020 with respect to 2019)				
Variable	Model 1	St.dev	Model 2	St.dev
Size (in sales)	-0.047	(0.276)	-0.053	(0.214)
Industry hostility	-0.357***	(0.000)	-0.336***	(0.000)
Industry type	-0.111	(0.202)	-0.14	(0.102)
Age	0.056	(0.448)	0.066	(0.357)
Increased involvement of non-family managers	-0.097	(0.240)	-0.167*	(0.050)
Capital increases	0.426***	(0.006)	0.388***	(0.011)
Changes in the relationship with suppliers	0.143*	0.078	0.157*	(0.048)
Changes in ownership structure	-0.277	-0.111	-0.248	(0.142)
Changes in the product and/or in the product mix			0.225**	(0.009)
Changes in the customer target and/or customer mix			-0.077	(0.361)
Constant	0.881	(0.269)	0.816	(0.253)
No_obs	96		96	
R^2 (%)	32.4		37.8	
R^2 (%) adjusted	26.2		30.4	

Note(s): * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3.
Business model
adaptations and
performance

In line with our first hypothesis, the coefficient associated with the change in the product and/or product mix is positive and significant. On the contrary, the second hypothesis is not confirmed. Indeed, the coefficient is negative (-0.077) but not statistically significant.

Among control variables, interesting results emerged too. For instance, changes in the relationships with suppliers show a significant and positive relationship with performance (coeff. = 0.157 ; $p < 0.05$) revealing that modifying payment conditions with suppliers can help family firms to face the liquidity problems caused by the pandemic in the short term. A similar effect emerges also from the family SMEs' capital increase (coeff. = 0.39 ; $p < 0.05$). On the contrary, increasing the involvement of non-family managers does not seem to enhance performance (coeff. = -0.167 ; $p < 0.05$).

Regarding industry hostility, the drastic decline in demand provoked a significant decrease in performance, while not significant results emerged for the other control variables such as size, industry type, age and change in the ownership structure.

Moreover, motivated by the fact that 33% of the sampled firms engaged both in value proposition and target market changes, we performed further analysis to investigate this aspect.

In [Table 4](#), we test whether a moderation effect of the target market on the value proposition-performance relationship exists. The coefficient of the interaction term, calculated as the product between the two BMAs, is negative and significant at the 5% confidence level (p -value = 0.014). Accordingly, the positive effect of a change in the value proposition on performance seems to be reduced in the case of target market change. This evidence is clear as the sum of the coefficients referred to the changes in the product and/or product mix and to the interaction is positive ($0.414 - 0.386 = 0.028$).

Moreover, adding the interaction term to the model increased our R -squared and adjusted R -squared from 0.38 to 0.42 and from 0.30 to 0.35 , respectively (see [Table 4](#), model 3).

Lastly, although we built our models on the basis of insights offered by the literature, in our regression models there might also be a potential problem of endogeneity. In this regard, our sampled data prevents us from adopting an instrumental variable method as we lack an appropriate instrument to model for the endogenous variable (i.e. changes in product and/or product mix). However, [Zhang et al. \(2021\)](#) argued that other methods, although less used in family business research, may be appropriate in certain situations to check for endogeneity. Thus, relying on the methodology developed by [Altonji et al. \(2005\)](#) and [Schmalz et al. \(2017\)](#),

Variable	DV: Turnover changes (2020 with respect to 2019)					
	Model 1	St.dev	Model 2	St.dev	Model 3	St.dev
Size (in sales)	-0.047	(0.276)	-0.053	(0.214)	-0.045	(0.272)
Industry hostility	-0.357	(0.000)	-0.336***	(0.000)	-0.338***	(0.000)
Industry type	-0.111	(0.202)	-0.14	(0.102)	-0.129	(0.122)
Age	0.056	(0.448)	0.066	(0.357)	0.076	(0.277)
Increased involvement of non-family managers	-0.097	(0.240)	-0.167**	(0.050)	-0.167**	(0.043)
Capital increases	0.426***	(0.006)	0.388***	(0.011)	0.382**	(0.010)
Changes in the relationship with suppliers	0.143*	0.078	0.157**	0.048	0.157*	(0.041)
Changes in ownership structure	-0.277	-0.111	-0.248	0.142	-0.193	(0.242)
Changes in the product and/or in the product mix			0.225**	0.009	0.414***	(0.000)
Changes in the customer target and/or customer mix			-0.077	0.361	0.113	(0.312)
Product*customer target					-0.386**	(0.014)
Constant	0.881	0.269	0.816	0.253	0.597	(0.391)
No. obs	96		96		96	
R ² (%)	32.4		37.8		42.1	
R ² (%) adjusted	26.2		30.4		34.5	

Table 4.
Business model
adaptations
(combinations) and
performance

Note(s): * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

we checked how much greater the effects of unobserved variables should be to explain away the estimated effects. The results prove to be in line with previous findings and confirm the validity of our evidence. Data are readily available upon request.

5. Discussion

Business model adaptation has been identified by scholars as an effective strategy to respond to external environmental changes (Heij *et al.*, 2014; Saebi *et al.*, 2017; Escamilla-Fajardo *et al.*, 2021). As a matter of fact, adjusting a formerly working business model to better fit the new context increases the likelihood of firms surviving the ongoing pandemic crisis (Kraus *et al.*, 2020; Soluk *et al.*, 2021; Chanyasak *et al.*, 2021). In this study, we take a step forward and we investigate the effectiveness of two major BMAs, i.e. changes in the value proposition and changes in the target market, in a very particular context: that of family SMEs during the COVID-19 crisis.

In line with previous studies and our first hypothesis (Kraus *et al.*, 2020; Ferrigno and Cucino, 2021; Marjański and Sułkowski, 2021) results show that family SMEs that introduced changes in the product and/or product mix improved their ongoing performance during the pandemic. This is clearly a result of actions taken during 2020, starting from the beginning of the year when lockdowns and restrictions began in Italy. Indeed, the series of actions and/or changes introduced to rapidly react reveal a peculiar adaptive capacity of family SMEs to resist the shock and to emerge from it stronger (Kraus *et al.*, 2020; Marjański and Sułkowski, 2021; Soluk *et al.*, 2021).

Turning to the second hypothesis, as far as changes in the target market are concerned, the data do not confirm the hypothesized relationship. To further deepen this aspect, we investigate whether a moderation effect exists. In doing so, we show that the positive effect of changes in the value proposition on performance is reduced in the case of target market changes. The latter sustains our line of reasoning, i.e. family SMEs in times of crisis should change their products but not the target customers.

The following main explanations support our argument.

First, family firms are more integrated with their customers. They develop close, enduring one-to-one links which allow them to define a more focused target market that family firms can understand and cater better (Miller *et al.*, 2008). So, it is preferable for them not to change the target customers.

Second, the specific traits (e.g. patient capital, desire for continuity, the higher commitment) that facilitate family firms' development of higher adaptive capacity, enable them to further enforce their customer loyalty, becoming preferred sellers (Le Breton-Miller and Miller, 2022). In the face of the pandemic, these characteristics advantage the family firm because they may even offer the changing products to the same target customer, further helping the firm to recover from the crisis.

Third, the social distancing and restrictions, applied during the pandemic, make it more difficult to develop close and strong new connections. Indeed, searching for new customers under pandemic conditions may require too much effort that family SMEs lack the resources for. So, it is better for them to concentrate on how to deal with the shock with the current customers.

Lastly, also the time horizon needed for implementing adaptations of the BM can play a role. While in a really short period of time some adjustments in the BM may be vital to keep revenue streams going, other actions (e.g. changing the target market) require time and planning to effectively turn into a good strategy (Juergensen *et al.*, 2020; Kraus *et al.*, 2020).

In conclusion, in times of crisis, family SMEs adjustments in the BM to align to a changing environment are crucial to quickly react, absorb, and recover from unpredictable events (Calabrò *et al.*, 2021). However, not all adaptive strategies are effective. Indeed, while changes introduced in the value proposition increase performance, this effect is reduced if the target market also changes. Therefore, in times of impactful events such as the COVID-19 pandemic, family SMEs strategic changes should focus on products offered while they should nurture connections with the target customer (Das and Teng, 1998; Gomez-Mejia *et al.*, 2001; Miller *et al.*, 2008) to better react to the crisis and ensure family firm continuance.

6. Contributions and implications

Our research contributes to different streams of literature.

First, we contribute to the business model adaptation literature by investigating its relevance when companies face external shocks, such as COVID-19. Indeed, given the unprecedented nature of the COVID-19 pandemic, this provides a new context to study business model adaptation and thus it allows to extend the understanding on how adaptations can be carried out. Overall, we find that BMAs can represent an effective strategy for companies to survive the ongoing crisis and to build the premise for continuity.

Second, we contribute to the family business literature by enriching the knowledge and the evidence about the adaptive capacity and the promptness of family firms to engage in BMAs in crisis situations. Family firms' unique endowment, that has received a prominent role in family business research (Salvato and Aldrich, 2012), facilitates adaptive capacity as it allows family SMEs to promptly react to shocks (Cucculelli and Bettinelli, 2016; Calabrò *et al.*, 2021; Kraus *et al.*, 2020; Soluk *et al.*, 2021). Indeed, by addressing the "what" question (Reay and Whetten, 2011), we show that not all BMAs put in place are effective. Thus, we provide a more nuanced picture of the BMA-performance relationships in the family firm context (Neubaum and Micelotta, 2021). In particular, our study unveils that value proposition adjustments are crucial during external shocks while those in the target market should be considered with caution.

Third, we contribute more in general to the literature about environmental crises, specifically to the emergent stream of research on the COVID-19 shock. Although our

evidence is focused on a specific type of firm, i.e. family SME, useful suggestions can be drawn on what it is possible to do in the short term to better cope with the crisis, and what instead remains an option to be pursued in a longer-term perspective.

The study provides important implications for family owners, managers and policymakers.

As concerns family owners, our findings provide useful suggestions about the effective adaptive strategies to be implemented in times of impactful external shocks. This evidence should increase the awareness of family firms on their weaknesses and strengths in the face of emergencies.

Family and non-family managers too should become aware of the right levers that family SMEs should activate in times of crisis in the short term (e.g. introducing changes in the value proposition is an effective action, while connections with the target customers must be maintained).

Lastly, given the relevance of family firms in the worldwide economy (De Massis *et al.*, 2018), our insights can also benefit policymakers, who are invited to design ad hoc programs (e.g. to allocate funds to promote innovation and/or to develop networking to build social connections) aimed at supporting family SMEs against crises in the short, medium and long term (Brautzsch *et al.*, 2015). In addition, policymakers can also reduce the fiscal pressure to help family SMEs to better face the drastic decline in demand and the liquidity problems that occur during the crisis. In other words, these initiatives will help family firms not only to survive the crisis but also to minimize its negative effect and to transform it into opportunities, thus becoming more resilient over time (Campopiano *et al.*, 2019).

7. Limitations and future research directions

Our research is not exempt from limitations.

First, due to the urgency of gaining a real-time picture of the phenomenon, we used a convenience sample (Venter *et al.*, 2005), which increases the response rate in the collection of data in a quick time, but it limits the generalizability of results. It would be interesting to enlarge the sample, for example, to other types of firms, that are not family SMEs, in order to better understand how BMAs affect firms' performance during extreme external shocks such as the COVID-19 pandemic (Chirico *et al.*, 2019; Soluk *et al.*, 2021). Therefore, we strongly encourage scholars to engage in large-scale quantitative studies, cross-country studies and to investigate whether and how our findings might be statistically generalized.

Second, the research design and the cross-sectional nature of the sample do not allow to completely exclude the reverse causality problem: a panel sample could add further evidence on causality. Moreover, future research should explore to what extent a growing turnover could increase the likelihood of developing business model adaptations, due to a higher resource availability.

Third, we treated family SMEs as a homogeneous group, while they may differ in many terms, including their willingness to preserve SEW (Firfray and Gomez-Mejia, 2021; Razzak and Jassem, 2019). Indeed, because of their specific characteristics, family firms may gravitate toward unusual and opposite extremes in their strategic choice (Miller and Le Breton-Miller, 2021; Le Breton-Miller and Miller, 2022). Thus, we encourage future research in this direction to better assess how heterogeneity in family firms (i.e. in terms of family leadership, family generation and/or level of involvement of family and non-family managers) may affect crisis management and prepare family firms to better deal with external shocks.

Fourth, we focus only on two major forms of BMAs: changes in the value proposition and changes in the target market. Again, future research may study how adaptations of all the dimensions of the BM (value proposition, target market, structure of the value delivery and value capture mechanisms) could affect performance in the subsequent waves of the pandemic.

Lastly, our study reveals effects of some BMA changes on family SMEs' performance in the short term. Future studies may consequently investigate the effects of BMAs in longer periods.

In conclusion, we hope that our study will stimulate future work to further examine how family SMEs may navigate and overcome impactful crises such as COVID-19 to better understand the determinants of their resilience across future generations.

Note

1. SMEs are defined according to EU recommendation 2003/361, i.e. enterprises which employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.

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