



**TOP LEADERS' BEHAVIORAL FLEXIBILITY, ORGANIZATIONAL
ADAPTABILITY AND FIRM PERFORMANCE:
AN ANALYSIS OF ITALIAN FAMILY COMPANIES**

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Abstract

Given the increasing uncertainty and complexity that organizations have to face nowadays, top executives of family companies must be prepared to adapt not only their leadership behavior, but also the organizational structures to meet the challenges of an increasing uncertainty. Grounding on Yukl's Flexible Leadership Theory, this study aims to explore the relationship among leaders' behavioral flexibility, organizational adaptability and organizational performance. This research, based on behavioral event interviews (BEI), involved 87 top leaders of family Italian companies. Findings suggest that top leaders' behavioral competencies and organizational adaptability are related to firm results only when these two elements are considered together. Thanks to this research, we contribute to extend previous work on the relationship between top leaders' flexibility and firm performance considering family firms' leadership as a complex process that takes into account the organizational conditions under which top leaders' behavioral flexibility is effective.

1. Introduction

To survive in a dynamic competitive environment, organizations must adapt and change. Also, family firms, which typically leverage their success on their heritage and tradition, need to take this challenge. All organizations may be adaptable and respond promptly to changes in the consumer and competitive markets, changes in technology, and changes in the economy (Lee & Grewal, 2004). Organizational adaptability is “the capability of the firm to enact and respond quickly to changing competitive conditions and thereby develop and/or maintain competitive advantage” (Hitt *et al.*, 1998, p. 27). In this context, effective leaders, such as entrepreneurial leaders, not only drive the organization to adapt to change, but in the face of uncertainty envision possible outcomes and then forge actions that enact new profit models (Gupta *et al.*, 2004). Specifically, top leaders’ flexible behaviors are often invoked as the engine that pushes organizations toward success and change (Yukl, 2008) and are embedded in many contemporary theories of leadership, including works about leadership effectiveness (Boal & Hooijberg, 2000); transformational (Colbert *et al.*, 2008), charismatic (Davis and Gardner, 2012), and entrepreneurial leadership (Cogliser & Brigham, 2004). This large body of literature focuses on flexible behaviors as indicators of how much leaders can easily adapt to changes and inspire change, while scant attention has been given to the fact that a flexible leader is able to respond effectively to diverse situations thanks to a wide behavioral repertoire of different skills which influence the organizational processes and determine a firm’s performance and long-term survival (Yukl, 2008; Boal & Hooijberg, 2000).

Starting from these premises, the present study builds upon the Flexible Leadership Theory (FLT) (Yukl, 2008) and aims to explore the relationship among leaders’ behavioral flexibility - in terms of behavioral competencies - organizational adaptability and performance in family firms. Indeed, the FLT postulates that in order to survive and prosper, organizations need leaders who are flexible and adaptive. Mostly, top executives must be prepared to modify and adapt not only their leadership behavior, but also the organizational structures to meet the challenges of an increasingly turbulent and uncertain environment and reach better performance (Yukl, 2008). This is true also for family companies, which may have less flexible and more conservative organizational structures (Calabrò *et al.*, 2019). Thanks to this research we contribute to extend previous work on the relationship between top leaders’ flexibility and firm performance by answering a call to consider leadership a complex process that takes into account the organizational conditions under which leaders’ behavioral flexibility is effective (Yukl, 2008; 2012). Moreover, this study would answer to the call for a broader systems approach to assess and test the FLT identifying the

mediating processes and complex interactions (Yukl, 2008). To the best of our knowledge, no previous empirical work has attempted to explore the direct, interaction (i.e., moderation), indirect (i.e., mediation) and joint (i.e., suppression) effects of individual and organizational variables on firm results using a multi-level, multi-source and multi-method study. Moreover, this study contributes to the debate that sees on one side, innovation research which points out that SMEs are characterized by quick decision-making, willingness to take risks and flexibility in responding to new market opportunities and on the other side family firms' literature which considers their conservative posture, organizational rigidity, risk aversion, willingness to keep control of the firm and limited propensity to use investment capital to fund innovation projects (Calabrò *et al.*, 2019). Our study supports the notion that the family leaders' characteristics may determine how these firms respond to the emergence of change, by answering to a call for more research into how family firms may successfully deal with organizational change taking into account the role of key contingencies (De Massis, Wang & Chua, 2019).

Based on behavioral interviews (Boyatzis *et al.*, 2000; McClelland, 1998), this study involved 87 top leaders of family Italian companies and suggests that top leaders' behavioral flexibility and organizational adaptability play a role in directly shaping firm results only when these two elements are considered together. Their combination effect, rather than their mediating effect, is what affects firms' performance.

The remainder of this paper is structured as follows. The following section presents the theoretical background inspiring this research. Thereafter the hypotheses are developed, and another section illustrates the research method, variables' operationalization, and the research analyses conducted. The final part presents the results and their implications.

2. Theoretical framework and hypotheses development

2.1 Top leaders' behavioral flexibility and organizational adaptability: The Flexible Leadership Theory

In order to support the theoretical framework of our study, we adopt the *flexible leadership theory* (FLT) (Yukl, 2008). This theory concerns strategic leadership and emphasizes the need to influence key determinants of financial performance for a company: organizational efficiency, adaptability, and human capital. Due to the aim of our study, our focus here will be on adaptability. One form of influence is the use of task, relations, and change-oriented leadership behaviors. Another type of influence concerns strategy, programs, systems, and organizational structure (Yukl, 2008; Yukl & Lep-

singer, 2004). In accord with this theory we will consider top leaders' task, relationship and change-oriented behaviors. The FLT encourages to adopt synergistic ways to understand the influence of leaders' behavior and context on the firm's performance. Indeed, the FLT explains that the effect of leaders' behaviors on firm performance may differ based on whether the organization's level of adaptability is high or low, this theory suggests that top leaders' flexible behaviors and organizational adaptability are likely to interact in predicting firm performance (Yukl, 2008).

Previous research suggests that family involvement in business may give rise to a difficult trade-off between the tradition arising from shared family firm history and values, and the need for organizational and strategic change arising with increasingly dynamic competitive environments (De Massis *et al.*, 2019). To perform well, all organizations, including family companies, must adapt to external threats and opportunities in a timely manner, so we might seek to determine whether organizational adaptability amplifies the relationship between leaders' behavioral flexibility and firms' performance because "more research is needed to learn how leaders adapt their behavior to changing situations" (Yukl, 2012, p. 77). Existing research in family firms does not yet provide a definite explanation of how family businesses deal with organizational change, even if from the literature it can be inferred that flexibility and adaptability can be even more challenging for family firms as their competitive advantage relies on continuity rather than change (Kotlar & Chrisman, 2019).

2.2 Top leaders' behavioral flexibility: the relationship with organizational adaptability and performance

Based on FLT, research on strategic leadership focuses on executives who have overall responsibility for an organization and who are ultimately responsible for what happens in the organization (Hambrick & Mason, 1984), so organizational performance is highly dependent on top managers' behavior. As Hambrick (2007, p. 335) states, "the use of demographic indicators leaves us at a loss as to the real psychological and social processes that are driving executive behavior, which is the well-known 'black box problem'." To respond to this "loss," scholars have begun to focus on the influence of leaders' behavior on firm performance (Colbert *et al.*, 2008). Wang and coauthors (2011) show that leaders' behaviors impact firm performance and middle-managers' attitudinal responses, while Waldman *et al.* (2004) find evidence of a relationship between top leaders' charisma and strategic change. This stream of research also advanced the notation that, in less complex organizational contexts (i.e., small firms), senior executives have greater latitude in making strategic choices, so they are more likely to wield greater influence on firm performance than are CEOs of larger firms

(Ling *et al.*, 2008). Similarly, family firms' top leaders are recognized for being fundamental for organizational change and firm performance (Kammerlander & Ganter, 2014).

Contingency approaches, particularly the FLT, clarify the role of the determinants of an organization's effectiveness (Yukl, 2008). Adding to the behavioral approach, the FLT establishes three types of leadership flexible behaviors that have implications for overall organizational effectiveness: task-oriented behaviors, change-oriented behaviors, and relationship-oriented behaviors (Yukl, 2008; Yukl *et al.*, 2002). Task-oriented behaviors prevalently influence organizational efficiency, relationship-oriented behaviors are related primarily to the business's human capital, and change-oriented behaviors are key drivers of the firm's adaptability to the external environment. These behaviors impact overall performance by influencing organization-level variables (i.e., the performance determinants) (Yukl, 2008). Moreover, the leaders' flexible behaviors have an impact on the organizational adaptability due to these behaviors include the leaders' ability to understand how the various parts of the organization relate to each other, how changes in one part of the system will eventually affect the other parts, and how changes in the external environment will affect the organization. A leader with a high level of these skills is able to develop a better mental model for understanding complex, causal relationships within the organization and adapt to them (Yukl & Mahsud, 2010; Mumford *et al.*, 2007). According to the main arguments discussed, we may postulate the following hypotheses:

Hypothesis 1. In family firms, top leaders' flexible behaviors are positively related to firm performance.

Hypothesis 2. In family firms, top leaders' flexible behaviors are positively related to organizational adaptability.

2.3 Leaders' flexible behaviors and firm performance: the moderation and mediation effect of organizational adaptability

Research in leadership and strategic management suggest that the interaction of leaders' flexible behaviors and organizational adaptability could be related to firm performance such that, when organizational adaptability is low, top leaders' flexible behaviors may be needed in order to facilitate firm performance, while they are not as necessary when organizational adaptability is high (Yukl, 2008). Traditional research in the substitutes for leadership has posited that particular individual, task, and organizational variables could substitute for or neutralize leadership effects, so substitutes "not only tend to affect which leader behaviors (if any) are influential, but will also tend to impact upon the criterion variable" (Kerr & Jermier, 1978,

p. 395). Moreover, strategic management theories also recognize that top executives face considerable constraints to their actions, so results might be due to contextual conditions, rather than to leader actions (Hambrick *et al.*, 2015; Hambrick & Quigley, 2014). In line with this idea, in family business research the relationship between family firm leadership and performance is context-dependent (De Massis *et al.*, 2019).

Consequently, organizational adaptability may amplify the effect of family leaders' behaviors on firm-level outcomes: flexible behaviors and firm performance are more closely associated when the level of one organization's adaptability is high. In this regard, Pawar and Eastman (1997) surmise that, when the organization adapts to the external environment, the leaders' job is to be more flexible. In adaptable organizations, which seek to shape the environment rather than just reacting to changes, leaders must build new frames of reference for members of the organization, create a challenging vision for the organization and inspire for adaptability and flexibility. Based on these theoretical arguments, we present the moderation hypothesis:

Hypothesis 3. In family firms, top leaders' flexible behaviors and firm performance are more closely associated when the level of organization's adaptability is high.

As discussed, an organization effectiveness, specifically its performance, is determined by how well it adapts to changes in the external environment (Yukl, 2008). Leader's flexible behaviors have often been considered in leadership and management studies, and scholars have often linked them to positive outcomes like innovation and learning (Jung *et al.*, 2008; Vera & Crossan, 2004).

Despite the abundance of positive findings related to the effectiveness of leaders' flexible behaviors, there are reasons to question whether overall firm performance is enhanced by a firm's attitude toward change. For instance, Yukl (2002) suggests that leaders' flexible behaviors imply a need for changes in the strategy and culture of an organization that may not be appropriate, this means that leadership, considered as a multilevel phenomenon, plays a role at multiple levels (DeChurch *et al.*, 2010). Moreover, it is important to remember that individual-level variables and firm performance are more distal than organizational-level attributes and firm outcomes while organizational-level postures and orientations are more likely to be related to firm outcomes (Friedrich *et al.*, 2009).

Based on these theoretical premises, then, we can suppose that organizational adaptability mediates the relationship between leaders' flexible behaviors and firm performance.

Hypothesis 4. In family firms, the relationship between top leaders' flexible behaviors and firm performance is mediated by a high level of organization's adaptability.

2.4 The mutual suppressor effect of leaders' flexible behaviors and organizational adaptability

The long-standing conceptualization of leadership among both researchers and the general public is that it is a leader-centric, or individual-level, phenomenon. When asked to define leadership, one usually thinks of a single individual providing direction and inspiration to a group of followers. Among the three main ways of defining leadership, as a person, a role, or a process (Yukl, 2008), leadership is most often studied in terms of the person (Bolden *et al.*, 2011). In reality, however, leadership rarely plays out at only the individual level but is a complex, dynamic process strictly linked to the organization (Kollenscher *et al.*, 2017).

In line with this argument, the FLT sustains that leaders' flexible behaviors affect organizational performance more if they influence the organization's ability to adapt (Yukl, 2008). In other words, to be meaningful for overall organizational effectiveness, flexible behaviors require that organizational processes be adaptive and vice versa.

Although leadership in organizations is an inherently multi-level phenomenon (DeChurch *et al.*, 2010), organizational effectiveness hinges on leadership being enacted by leaders and on the organization as a complex system. If we consider an organization as a complex network of agents, then individual behaviors and organizational-level phenomena happen jointly. In fact, some scholars contend that both top-down and bottom-up dynamics are at play (Uhl-Bien *et al.*, 2007).

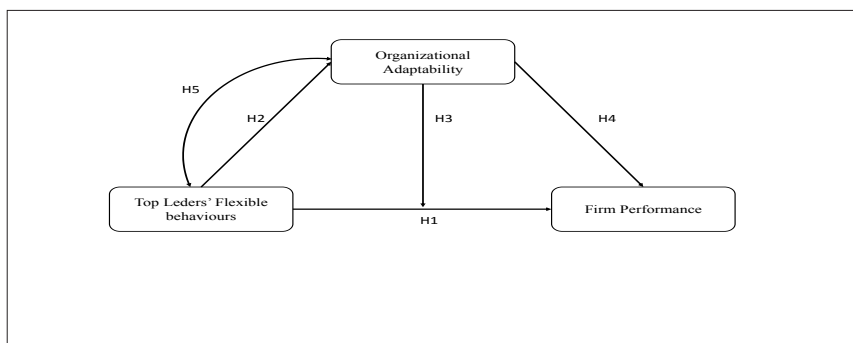
This approach seeks to go beyond the individual position-holder's direct interpersonal influence attempts to the indirect influence of a system's top position-holders individually and collectively, emphasizing the dynamics of their collective influence, which is largely overlooked in family firms' research. In this view, leadership is embedded in context, and its effectiveness is not universal but depends on a wide variety of environmental and organizational conditions (Osborn & Hunt, 2007; Osborn *et al.*, 2002; Osborn & Marion, 2009): leadership is socially constructed and organizational change patterns can emerge from the dynamic interplay among individual and organizational capabilities (Hunt & Ropo, 1995; Osborn *et al.*, 2002). The context alters leadership, just as leadership alters the context, to the point that, over time, it is not just a leader standing above subordinates but leaders involved in collective influence that shapes the context—and vice versa.

In short, we predict that leaders' flexible behaviors do not affect performance directly but only through organizational adaptability. In statistical terms, organizational adaptability acts as a suppressor variable. As defined by Pandey and Elliott (2010, p. 28) "a variable may act as a *suppressor* or *enhancer*—even when the suppressor has a significant zero-order correlation with an outcome variable—by improving the relationship of other independent variables with an outcome variable." This kind of effect might be overlooked in leadership research since researchers may tend to exclude independent variables that are not significantly correlated with the dependent variable. Here we propose that leaders' flexible behaviors and organizational adaptability are correlated and that organizational adaptability, as a suppressor variable, accounts for and discards variances that are irrelevant to the dependent variable, giving leaders' flexible behaviors a stronger relationship with firm performance (i.e., they improve the overall predictive power of the model). As an alternative explanation to the mediation effect, we predict that:

Hypothesis 5. In family firms, organizational adaptability suppresses (i.e., enhances) the relationship between top leaders' flexible behaviors and performance. The relationship between top leaders' flexible behaviors and firm performance is enhanced by a high level of organization's adaptability.

The entire research framework and the related hypotheses are shown in Figure 1.

Fig. 1 Theoretical framework



Source: Authors' elaboration

3. Method and Procedures

Our research framework considers all of the main elements of FLT (Yukl, 1999, 2008, 2012; Yukl *et al.*, 2002; Yukl & Lepsinger, 2004): firm performance, organizational adaptability, and top leaders' flexible behaviors, where the organization is considered as a *unique whole* of people and structure between the leader and firm outcomes (Kollenscher *et al.*, 2017). Based on previous studies (Gerli, Bonesso & Pizzi, 2015; Bonesso *et al.*, 2020; Tognazzo *et al.*, 2017), in order to collect data, this research applies the Behavioral Event Interview (BEI) that allowed us also to include complex information that is difficult to assess objectively. In the following paragraphs, the sample and the measurements adopted are discussed in depth.

3.1 Participants

Eighty-seven Italian leaders in an executive MBA program (editions from 2006 to 2010) at an Italian Business School took part in the study. The average age of participants was 36 years, with ages ranging from 26 to 53 years (s.d. = 7.55). Seventy-six percent of the sample was male. More than third (35%) of the respondents held a university degree. On average, the participants had been working for approximately fourteen years (s.d. = 8.21; range: 2–34 years).

Executives were all at the top level of their organizations (e.g., CEO, CFO, COO, CIO, or president), so they were C-level leaders and also majority owners of the companies. All the participants involved in the analysis, aside of their job title, are the main decision-maker of the firms. Moreover, it is important to specify that the context we are considering is made of family firms that mainly operate in mature sectors in the period of the financial crisis. We believe that no previous research has tried to test these kinds of effects on a group of top leaders of family Italian companies. Most research about competencies includes managers of managerial companies while less research works of this kind is based on European family companies. That's why we decided to put so more emphasis on the context we are analyzing.

In addition, firms had an average size of 79 employees (range: 0–812; all firms are small and medium, only one is an outlier, which corresponds to 812 was a small firm that experienced a huge growth in a very few years). All of the participants' firms were located in northeast Italy, which allowed us to control for possible situational-cultural effects, although they operated in a variety of sectors (65% in the manufacturing industry, 11% in service activities, 12% in retailing activities, and 10% in construction and building activities), which provided us with sufficient variability in the sample.

3.2 Measurements

3.2.1 Independent variable: Assessment of leaders' flexible behaviors

To collect the behavioral data, we modified the critical incident interview (Flanagan, 1954), which has often been used in leadership research (Wolff *et al.*, 2002), using the inquiry sequence from the Thematic Apperception Test and the focus on specific events in one's life from the bio-data method (Dailey, 1971). The method, called the Behavioral Event Interview (BEI), reducing the chance of retrospective biases and ensures more reliability than self-reported data, which would be more likely to measure espoused theories about how one tends to or likes to behave than to measure actual behavior (Boyatzis *et al.*, 2000; McClelland, 1998).

Following previous research (Bonesso *et al.*, 2020; Cortellazzo *et al.*, 2020; Gerli, Bonesso & Pizzi, 2015), the BEI interviews were one-hour audiotaped semi-structured individual interviews in which participants were asked to recall recent, specific events in which they felt effective. Once they recalled an event, they were guided through telling the story of the event with a set of five questions: (1) What led up to the situation? (2) Who said or did what to whom? (3) What did you say or do next? (4) What were you thinking and feeling? (5) What was the outcome or result of the event? This technique, developed by McClelland and colleagues (1998), Boyatzis and co-authors (2000), and Spencer and Spencer (2008), is especially useful when one is examining defined situations and situationally relevant aspects of managerial behaviors, a fundamental element of Yukl's (2008) theory.

After each interview, the responses were transcribed and interpreted using a thematic analysis process (Boyatzis, 1998), a process for coding raw, qualitative information. Through the use of a "codebook" that articulates specific themes and how to identify them, the researcher converted open-ended responses or unstructured responses into a set of quantified variables for analysis. We used Boyatzis' codebook as an initial primary reference for the coding (Boyatzis, 1995), as it has been used in numerous studies and has shown predictive validity of the measures obtained (Tognazzo *et al.*, 2017; Boyatzis, 2009; Camuffo *et al.*, 2012). We then classified the Boyatzis' competencies following the Yukl's leaders' flexible behaviors (task, change and relationship oriented behaviors) clusters (In the Appendix, Table A presents a detailed description of each behavior and Table B presents the distributions of the behaviors). The coders typically asked for five or six events in which leaders believed they had been effective. Frequency measures how often someone shows a certain behavior. (It is the number of times a behavior is detected out of the maximum possible number of times it can be detected. For example, a 50 percent frequency means that a behavior appears in three behavioral events out of six.) Two coders

independently coded all the interviews. Inter-rater reliability was always greater than 90 percent. To avoid the influence of MBA education on our data, we interviewed the leaders as soon as they enrolled in the MBA program (before starting the classes).

We performed a factor analysis to reduce the number of variables used in our further analyses. First, to avoid altering the regression's betas in the factor analysis as a consequence of our data's non-normality, we computed the IHS transformation of each variable (i.e., behavior), as it is an alternative to the logarithmic transformation when the distribution of the variables is skewed and some of the variables take on zero or negative values (Burdidge *et al.*, 1988)

Since our three sets of behaviors derived from the FLT (i.e., task-oriented, relationship-oriented, and change-oriented behaviors) were theoretically distinct, we performed three separate exploratory factor analyses (EFA), one for each set of behaviors, to ensure that all component loadings were acceptable (>.5) and explained enough variance in the latent factor. Then, we conducted a confirmatory factor analysis (CFA) to verify the fit of the hypothesized three-factor model. Results showed that the hypothesized three-factor model fit the data, supporting the association of Yukl's flexible behaviors taxonomy to the competencies proposed by Boyatzis' codebook. Factor analysis was used here to reduce the number of variables. Indicators of internal consistencies (like Cronbach's alpha) are not applicable to our three factors, as the factors aim to include a number of behaviors that represent, in a theoretical sense, three unique constructs. However, that may empirically include behaviors that are distinct and not necessarily correlated. One could think of our three factors as "indexes" of certain kind of behaviors rather than as "sub-scales" made of items of one theoretically correlated dimension. Then we conducted a confirmatory factor analysis (CFA) to verify the fit of the hypothesized three-factor model. Results showed that the hypothesized three-factor model fit the data reasonably well ($\chi^2 = 56.43$ (df = 51; $p = 0.2793$), RMSEA= .03, CFI= .92, TLI= .90, and SRMR=.07). These results indicated a reasonable model fit considering the limited sample size and the structure of our data.

3.2.2 The moderator, mediator and suppressor variable: organizational adaptability to the external environment

To assess the organization's ability to adapt to its external environment, we used subject matter experts' evaluations, which also consider firm-specific situational variables. Subject-matter experts are those who, by virtue of position, education, or experience, have significant expertise or insight in a particular discipline. The subject matter experts' role is to observe, judge, and evaluate, so they are typically used when data are limited, lacking,

or too complex, as in our case. The use of these experts' evaluations in business literature is common in job analysis research and practice (Lievens *et al.*, 2004), in competency modeling processes (Shippmann *et al.*, 2000), and as a way to validate items' scales (Sireci & Geisinger, 1995).

Using a procedure similar to that Vessey, Barrett and Mumford (2011) used, each participant was asked to describe in written form his or her firm's strategy in relation to its external environment. In particular, each participant reported (with reference to the last five years) 1) his or her firm's industry description and a sector analysis using Porter's 5-forces model; 2) his or her firm's key strategic resources, core competencies, and strategy, along with a SWOT analysis based on environmental resource availability and the pace of technological change; and 3) a detailed description of the main competitors with a benchmarking analysis. We asked two experts (two professors in management disciplines) whom we selected for this task based on their knowledge of the firms (and leaders) that took part in the study, to rate separately all of the businesses' levels of adaptability, considering the combination of three abilities: market positioning, learning, and innovation. The two experts were informed about the use of collected data for the purpose of this research and about the definition of "organizational adaptability" before they rated the firms. (Table C in the Appendix shows the comparative evaluation method the two subject matter experts). Each of the experts rated all of the organizations comparatively, ranking higher those organizations that better adjusted to the external environment, based on the three behaviors that we identified on the basis of FLT (Yukl, 2008, 2012; Yukl & Lepsinger, 2004). We could not rely on an evaluation based on a non-comparative scale (e.g., a Likert-type scale) because of our measure's complexity. In fact, in an assessment that uses a Likert-type scale, all items are deemed to be of equal value. Here, we are analyzing organizations that are comparable with respect to size and cultural-institutional environment but that operate in different sectors. Therefore, for example, for some firms' market positioning ability might have a meaning that differs from that of other firms, and might be more meaningful for organizational adaptability than innovation is because of an infinite set of conditions, and such differences are difficult, if not impossible, to capture in a questionnaire.

We ensured the inter-rater reliability ($> .84$) of the two experts. In addition, the correlation between the ranking obtained and average income in the corresponding five years was 0.43 ($p < 0.01$), which validates our measure. This variable consists of an ordinal ranking from 1 to 19.

3.2.3 Dependent and Control Variables

We asked the participants to answer questions related to their demographics, such as *age*. We used dummy variables for *gender* and *education level* (1 = tertiary education; 0 = less than tertiary education). We integrated information from the AIDA database (the Italian branch of the *Bureau van Dijk* European Databases), measuring our dependent variable *firm performance* as firm return on asset (ROA) in 2009. Previous studies on top leaders have also used ROA as performance indicator (e.g., Wiengarten *et al.*, 2017; Furtado and Karan 1994; Firth *et al.*, 2006). ROA indicates the long-term annual changes in financial performance, and it differs from other traditional measure of long-term performance, such as return on equity, that does not provide information on the level of risk to which a company is exposed to or the overall efficiency with which a firm's total assets are employed (Wiengarten *et al.*, 2017; Hsu and Boggs 2003). Subsequently, we use ROA as the financial performance indicator to obtain a more comprehensive understanding about performance in a critical financial time like the 2009 was. Indeed, the Great Recession lasted from December of 2008 until June of 2009 and was often referred to as the worst economic crisis since the Great Depression (Walker *et al.*, 2013; National Bureau of Economic Research, 2012). In Italy, the huge effects of Lehman Brothers bankruptcy arrived in 2009. In this context, leaders' responses to organizational crisis differed, yielding both effective and ineffective actions, having important consequences on firm performance. We decided to focus our analysis on this year, in order to better understand how the leader's flexible behavior was crucial to deal with such a critical economic uncertainty.

Firm size was measured as the number of employees reported in AIDA. We used the number of employees rather than turnover, as number of employees is less subject to economic change, especially in the Italian context, where the job market has few exit strategies. Moreover, we applied the firm size criteria as number of employees following previous studies which considered the relationship between leader's behavior and different aspects of firm performance (Wu *et al.*, 2015; Wang *et al.*, 2011; Czarnitzki and Krafczyk, 2004). We used the first two digits of the ATECO code to codify the sector of activity and controlled for the dummy variable *firm sector* (1 = manufacturing; 0 = other sectors).

Table 1 summarizes the variables included in the model, the technique applied to collect data and the reliability tests used.

Table 1 Variables' name, data collection technique reliability tests used.

Variable name	Data collection technique	Measure reliability test
Leaders' flexible behaviors (Independent variable)	1) BEI; 2) Thematic Analysis process; 3) Classification of Boyatzis' competences following Yukul's Scheme	Inter-rater reliability of two independent coders EFA and CFA
Organizational adaptability (moderator, mediator and suppressor variable)	1) Two experts' evaluations about participants' strategy to deal with external environment; 2) Rate the participants' level of adaptability based on the behaviors indicated by FLT scheme; 3) Participants' ranking.	Inter-rate reliability of the two experts.
Firm performance (Dependent variable)	Firm ROA from the AIDA database	

4. Results

A post-hoc estimated power for the present investigation, calculated using G*Power3 software (Faul *et al.*, 2007), is 0.93, considering an alpha error probability of 0.05, an R^2 of 0.22 a sample size of 87 and 9 predictors, which is a higher than the commonly used threshold of 0.80 (it corresponds to the probability of detecting the effect). The corresponding effect size is 0.28; according to Cohen f-squared values of 0.02, 0.15 and 0.35 can be considered "small", "medium and "large" effects, respectively, so 0.28 can be considered a medium-large effect. It is also worth noticing that even if our sample size is limited some other studies that use the critical incident methodology report similar sample sizes (Camuffo *et al.*, 2012; Ryan *et al.*, 2009).

As Table 2 and 3 show, we tested our hypotheses using different regression models. Specifically, we performed an OLS regression to test Hypothesis 1, an ordered logit analysis to test Hypothesis 2 and a moderation analysis to test Hypothesis 3. Finally, we then tested our fourth and fifth hypotheses using the usual steps in mediation analysis (Baron & Kenny, 1986).

Tab. 2 Regression analyses: testing direct and moderation effects

Models	OLS with robust SE (1)	OLS with robust SE (2)	OLS with robust SE (3)	OLS with robust SE (4a)	OLS with bootstrapped SE (4b)
Variables	Firm Perfor.	Firm Perfor.	Firm Perfor.	Firm Perfor.	Firm Perfor.
Gender	3.37**	2.68	2.28	2.33	2.33
Age	0.30**	0.32**	0.24*	0.25*	0.25*
Education	-0.24	-1.23	-3.52	-4.09*	-4.09
Firm sector	-1.80	-1.42	-0.91	-0.89	-0.89
Firm size	0.00	0.00	-0.00	-0.00	-0.00
Task-oriented behav.		0.60	0.62	0.50	0.50
Relationship-oriented behav.		1.10	0.82	0.73	0.73
Change-oriented behav.		-1.42	-1.94*	-1.97**	-1.97*
Org. adaptability			0.49**	0.50**	0.50**
Organizational Adaptability * Change-oriented behav.				-0.22*	-0.22
Constant	4.81***	4.81***	4.81***	5.06***	5.06***
F or Wald χ^2	2.52*	1.81*	2.01*	1.89*	24.70***
R ² /Pseudo R ²	0.118	0.156	0.217	0.232	0.232

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Tab. 3 Regression analyses: testing mediation and suppression effects

Models	Ordered-logit with robust SE (5a)	OLS with robust SE (5b)	OLS with robust SE (6)	OLS with robust SE (7)	OLS with robust SE (8)
Variables	Org. Adaptability	Change Behav	Firm Perfor	Firm Perfor	Firm Perfor
Gender	0.63	-0.04	2.68	2.91*	2.28
Age	0.07**	0.02	0.32**	0.22*	0.24*
Education	1.98***	-0.74***	-1.23	-2.02	-3.52
Firm Sector	-0.79	-0.01	-1.42	-1.31	-0.91
Firm Size	0.01***	0.00	0.00	-0.01	-0.00
Task-oriented behav.	-0.05	-0.10	0.60		0.62
Relationship-oriented behav.	0.16	0.18*	1.10		0.82
Change-oriented behav.	0.41*		-1.42		-1.94*
Organizational adaptability		0.04*		0.43**	0.49**
Constant	7.09***	-0.90*	-7.73	-7.79	-8.64*
F or Wald χ^2	41.95***		1.81*	2.44**	2.01**
R ² /Pseudo R ²	0.08	0.24	0.16	0.17	0.22

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In the following paragraphs, we show the results for each hypothesis postulated.

a. Direct effects

We tested our first and second hypotheses by regressing firm performance (Models 2 and 6) and organizational adaptability (Model 5a) on top leaders' flexible behaviors. Model 1 reports the regressions with control variables, we can see that age and gender are significant. We used all OLS models except one ordered-logit (Model 5a), which was required for the ordinal categorical dependent variable. We reported heteroskedasticity-adjusted (i.e., robust) standard errors because the distribution of the final model's residuals was not normal (Shapiro-Wilk $W = .85$; $p < .0001$) and because there is some evidence of homoskedasticity in the distribution of residuals (Breusch-Pagan test: $\chi^2(1) = 22.41$; $p < .0001$). We obtained similar results in the other models. We also calculated variance inflation factors (VIFs) for our final regression model. The VIF was less than 2 (VIF = 1.28), which is lower than the critical value of 10, indicating no serious omitted variables bias.

The first hypothesis was not supported because the coefficients were not statistically significant. None of the leaders' flexible behaviors, in terms of task, relationship and change oriented behaviors are statistically significant, they do are not directly related to firm performance ($\beta = -1.42$; $p > 0.1$) (Model 2). We have the same results considering the relationship between leaders' flexible behaviors and organizational adaptability with the exception that change-oriented behaviors have a positive significant effect on organizational adaptability (Model 5a) ($\beta = 0.41$; $p < 0.1$). For this reason, Hypothesis 2 is partially supported.

b. Moderation effect

Hypothesis 3 predicted that the relationship between leaders' flexible behaviors and firm performance is stronger when organizational adaptability is high. We mean-centered the independent variables (Aiken *et al.*, 1991) and, as shown in Table 2 (Models 4a and 4b), we found a weakly significant relation between flexible behaviors and organizational adaptability in predicting firm performance using robust standard errors, but no significant effect using bootstrapped standard errors ($\beta = -0.22$; $p = 0.091$ with robust SE and $p > 0.1$ with bootstrapped SE), thus Hypothesis 3 is not supported.

c. Mediation and suppression effects

Applying the mediation analysis (Baron & Kenny, 1986), we first regressed organizational adaptability on flexible leaders' behaviors (Eq. 0, Model 5a). Among the three flexible leaders' behaviors, we report here the results only for the significant one, i.e. change-oriented behaviors. We regressed firm performance on change-oriented behaviors (Eq. 1, Model 6) and then on change-oriented behaviors and organizational adaptability jointly (Eq. 2, Model 8). Table 3 shows the suppressor pattern clearly. The coefficient of change behaviors becomes more significant when Model 6 ($\beta = -1.42$; $p > 0.1$) is compared to Model 8 ($\beta = -1.94$; $p = 0.052$). Moreover, the R^2 increases (from 0.16 and 0.17 in Models 6 and 7 to 0.22 in Model 8). This did not hold for the other flexible leaders' behaviors, i.e. task and relationship behaviors. In short, Hypothesis 4 is not supported, while Hypothesis 5 is partially supported.

There can be different kinds of suppression effects, one of them is the case in which two predictors are *mutual* suppressors, thereby muddying the distinction between X and S (Pandey and Elliott, 2010). To assess this possibility, we followed these steps:

$$X = a + \beta_0 S + e \quad (\text{Eq. 0b - Model 5b})$$

$$Y = a + \beta_1 S + e \quad (\text{Eq. 1 - Model 7})$$

$$Y = a + \beta_2 X + \beta_3 S + e \quad (\text{Eq. 2 - Model 8}),$$

where S is organizational adaptability, X is change behaviors, and Y is firm performance. If β_3 is absolutely larger (i.e., farther from zero) than β_1 , we have a mutual suppressor effect. To establish a mutual suppression effect, must determine whether change-oriented behavioral competencies are suppressors in the relationship between organizational adaptability and firm performance. The coefficient associated with organizational adaptability increases from 0.43 in Model 7 to 0.49 in Model 8 ($p < 0.05$ in both cases).

Suppression can also be found when the direct and indirect effects are opposite in sign. In our case, when we consider organizational adaptability as a suppressor, the direct effect = -1.94 and the indirect effect = $(0.40 * 0.43) = 0.17$. When we considered change behaviors as a suppressor, the direct effect = 0.49 and the indirect effect = $(0.04 * -1.42) = -0.05$.

We also ran regressions with the non-transformed values of behaviors and the standardized measures of organizational adaptability, and results do not change significantly.

Moreover, we used the Sobel test to evaluate the significance of these suppressor effects, as MacKinnon, Fairchild, and Fritz (2007) suggest. We used a procedure based on bootstrap methods that is suggested for small to moderate-sized samples (Shrout & Bolger, 2002). We computed each of the proposed indirect effects by relying on bootstrap samples and constructing a bias-corrected confidence interval. We created bootstrap samples by drawing two 1000-firm random samples, replacing the firms into the full sample each time; the results show significant indirect effects in both cases (organizational adaptability as a suppressor variable: observed coefficient $t = 0.5$; 95% confidence interval lower bound = .06, upper bound = 1.58; change behaviors as a suppressor variable: observed coefficient = -.07; 95% confidence interval: lower bound = -.29, upper bound = -.00.)

In short, our results show that top leader change behaviors and organizational adaptability have a mutual reciprocal or cooperative suppression effect (Conger, 1974) in predicting firm performance. The coefficients of the two predictors have opposite signs, but since they are positively correlated, including them together in the regression equation controls for the overlap, and their mutual suppression is revealed by increases in both regression weights.

5. Discussion

Top executives must be prepared to modify and adapt not only their leadership behavior but also the organizational structures to meet the challenges of an increasingly turbulent and uncertain environment and reach better performance (Yukl, 2008) and this may become very challenging for family companies whose competitive advantage typically relies on traditions and long-lasting values (Kotlar & Chrisman, 2019). The present study builds upon the FLT (Yukl, 2008) and aims to explore the relationship among leaders' behavioral flexibility - in terms of behavioral competencies - organizational adaptability and organizational performance in a sample of family Italian companies.

Thanks to this research we contribute to extend previous work on the relationship between top leaders' flexibility and firm performance by answering a call to consider leadership a complex process that takes into account the organizational conditions under which leaders' behavioral flexibility is effective (Yukl, 2008; 2012). Moreover, we answer to the call for a broader systems approach to assess and test the FLT identifying the mediating processes and complex interactions (Yukl, 2008). To the best of our knowledge, no previous empirical work has attempted to explore the direct, interaction (i.e., moderation), indirect (i.e., mediation) and joint (i.e., suppression) effects of individual and organizational variables on firm results using a multi-level, multi-source and multi-method study.

Our results, analyzing 87 Italian companies' top leaders, suggest that first, because top leader change-oriented behaviors and organizational adaptability are correlated, the negative relationship of the former with firm performance is counterbalanced by the positive link of the latter (i.e., suppression effect). Thus, even when leaders' behaviors impact firm results negatively, the organization might counterbalance their impact. In other words, the relationship between leaders' flexible behaviors and firm performance could be better understood if individual and organizational aspects are jointly taken into consideration (Yukl, 2008).

Moreover, our study has considered all the three categories of leaders' flexible behaviors – task, relationship and change oriented behaviors – and the results showed that just change behaviors, jointly with organizational adaptability, are linked to positive and better firm's performance. Therefore, to survive in a dynamic competitive environment, organizations should adapt and change, but they need leaders who have developed change-behaviors, which allow not only to drive the organization into new processes, but in the face of uncertainty, envision possible outcomes and then forge actions that enact new profit models. This evidence confirms the necessi-

ty to investigate specific leaders' flexible behaviors and analyze which of them interact with organization-level variables. This also suggests that in family companies, top leaders should pay attention to being persuasive and negotiating, visioning and sharing best practices.

Furthermore, this study contributes to the debate that sees on one side, innovation research which points out that SMEs are characterized by quick decision-making, willingness to take risks and flexibility in responding to new market opportunities and, on the other side, family firms' literature which considers their conservative posture, organizational rigidity, risk aversion, willingness to keep control of the firm and limited propensity to use investment capital to fund innovation projects. Our study supports the notion that the family leaders' characteristics may determine how these firms respond to the emergence of change.

Together with its theoretical relevance, our study offers interesting practical implications. Usually, top leaders are described as people with a great *ego* who tend to ascribe organizational results to their own results, especially in family companies where family members' sense of identity largely overlaps with the company's one. Based on our results, top leaders should be aware that the behaviors oriented toward change they possess, and use are related not only to a single person or multiple people inside the organization, but also to an organization-level orientation itself. Our results suggest that it is not only the individual leader that matters for firm results, but the organization itself matters for firm performance. Consequently, if both flexible leadership and organizational adaptability work together, they can create strong business capabilities such as adaptability which determines how well the firm will respond to the competition, customer demand and all other market pressures and in general reach higher firm performance, creating competitive advantage.

This implies also that management consulting and intervention aimed at improving family firm performance should not only focus on leader's professional competencies, but take a more holistic approach by also considering the organizational context itself. For example, top leaders that invest in coaching should also consider investing in their collaborators' education, in the structure and processes of the organization. For example, top leaders' and their organizations could create leadership development programs, aimed at building out a mindset oriented to flexibility and adaptability. They could introduce human resources initiatives to gather new information from various sources, create meaning acceptable to all, coordinate with others to implement required changes and build an adaptable workforce. Moreover, while hiring new employees, top leaders can assess candidates' willingness to adapt and act in a flexible way. Specifically, during the selection procedures they could assess whether candidates for le-

adership roles have the attributes such as openness to adaptability, flexible behaviors in managing people and unexpected situations.

In addition, flexible leadership and adaptive organizations are important during times of crisis, that is when unusual events disrupt the work or create an immediate problem that requires the leader's attention and an organizational change. How well a leader handles immediate crises, like the one of 2009 in Italy, is an indicator of flexible and adaptive leadership (Yukul & Mahsud, 2010). Our results showed that the leaders' flexible behaviors alone are not enough in time of crises, but a more overarching approach in terms of organizational adaptability is required. Indeed, considering the major changes in the external environment because of immediate problems to solve, create emerging threats or opportunities for the organization. Therefore, changes in strategies or tactics are often needed to ensure effective performance and continued survival for the organization.

In short, this research shows that in order to reach better family firms' performance, investing on the development of top leaders' flexibility is not enough, instead it appears to be crucial to create an organizational orientation focused on adaptability.

6. Limitations and directions for future research

Despite the strengths of this study, some limitations need to be addressed. First, a longitudinal or time-lagged design would provide stronger results. Indeed, longitudinal research is also useful to deal with overlapping constructs that may involve reciprocal causality over time. Moreover, as it is widely adopted in the literature, we adopted ROA as a measure of firm performance, nevertheless future researches would also use other performance indicators such as multi-years sales and profit margins. In addition, because the level of organizational adaptability might be similar in firms of comparable size that operate in the same industry, research should consider industry differences, in which case a Likert-scale can be used to assess organizational adaptability. Similarly, future studies may be enriched by considering a wider array of contextual conditions beyond organizational adaptability which may affect leadership effectiveness. For example, extending the time frame of performance and behavioral data may provide different results. Moreover, we assessed organizational adaptability asking to the participants many information about their competitive environment, for future research would be useful to assess and investigate also what kind of leaders' decisions and actions they usually apply to adapt to the environmental change in terms of, for example, innovative marketing strategies, innovative products, and learning about new market opportunities. Additionally, due to the aim of this study, we focused just on organizatio-

nal adaptability as performance determinant not considering the other two elements mentioned by the FLT: efficiency and human capital. Future researches should understand the role of these two important organizational variables and test how them interface with the leaders' flexible behaviors.

Second, our research focuses on top leaders, which is valuable also for strategic management theory, although in larger firms the same approach could be applied to other levels (e.g., business unit) to identify which contextual conditions are necessary or sufficient to sustain our theory. Moreover, the present research gives scant attention to the role of followers, although followers' behaviors and attitudes may affect multi-level processes. It would be interesting to replicate the research on a sample of non-family companies.

Third, the extent to which these findings generalize to more random samples is unclear and more generalizable methods could be used (e.g. survey). Moreover, even if all participant attended an MBA, we cannot rule out the possibility of a potential bias when describing their firms.

Finally, our study was conducted in an Italian sample. Extending our results to other parts of the world could increase our findings' validity. Replicating this study in other national contexts (e.g., with firms that operate in rapidly changing environments) could yield different results. For instance, we would expect change behaviors to be more frequent than result- and task-oriented behaviors in dynamic environments, so we suspect top leaders' behaviors and firm proactiveness would play a different role.

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APPENDIX

Table A Definitions of behaviors according to FLT theory and our measurement

FLT definitions (Yukl et al., 2002; Yukl, 2008, 2012)	Assessed EI behavioral competencies (Boyatzis, 1982, 1995)	
<p>Task-oriented behaviors</p> <p>Task-oriented behaviors include short-term planning and scheduling of work activities, determining resource and staffing requirements, assigning tasks, clarifying objectives and priorities, emphasizing the importance of efficiency and reliability, directing and coordinating activities, monitoring operations, and dealing with day-to-day operational problems.</p> <p>They are used to improve productivity and reduce costs by eliminating unnecessary activities, duplication of effort, wasted resources, errors, and accidents.</p>	<p><i>Result orientation*</i></p> <hr/> <p><i>Customer orientation</i></p> <hr/> <p><i>Leadership*</i></p> <hr/> <p><i>Pattern recognition</i></p>	<p><i>Setting goals, improving and achieving the objectives and measuring performance.</i></p> <p>People show this behavior when they persist in efforts to reach objectives without being discouraged in the face of obstacles, aim to improve organizational performance in their everyday jobs, try to do something newer than others do, and try to reach challenging objectives.</p> <hr/> <p><i>Understanding and satisfying the needs of internal and external customers.</i></p> <p>People show this behavior when they care about customers' satisfaction; offer their clients excellent service, care about their future needs, and keep them informed; and try to solve customers' everyday problems with long-term vision.</p> <hr/> <p><i>Creating shared goals, managing human resources in the best interest of the organization, and leading people in the desired direction.</i></p> <p>People show this behavior when they put effort into scheduling and planning meetings and assigning jobs, tasks, and responsibilities; use their formal power to lead the group toward achieving the set objectives; and create shared objectives for the group.</p> <hr/> <p><i>Identifying logical patterns from a disorganized set of information or data that seems random.</i></p> <p>People show this behavior when they identify patterns of events/information that other people don't see and use these patterns to interpret events/information, use new conceptualizations to organize complex information, see similarities between past and present events, and use original concepts, metaphors, and analogies to explain the meaning of the data and information.</p>

Relationship-oriented behaviors*Empathy**Understanding others.*

Relationship-oriented behaviors include showing support and positive regard, providing recognition for achievements and contributions, providing coaching and mentoring, consulting with people about decisions that will affect them, delegating and empowering subordinates, encouraging cooperation and teamwork, and building a network of information sources inside and outside the organization.

People show this behavior when they understand other people's weaknesses and strengths; understand the reasons for their behaviors (e.g., they know what motivates or demotivates collaborators); read and interpret others' feelings, sensations, and non-verbal behaviors precisely; and listen to others, ask questions, and wait for answers, giving the other person the time to express his or her point of view at the pace and in the manner he or she prefers.

*Networking**Building relationships at an individual level and at a group level (coalitions and alliances).*

People show this behavior when they act in a way that builds relationships that can be helpful in their jobs now or in the future, uphold personal relationships that are or might become useful in the work realm, and use informal networks.

*Teamwork***Stimulating the members of a group to work together effectively.*

People show this behavior when they generate symbols of the group identity, have pride in belonging to the group, share effort, generate trust or shared goals in a group using friendly and personal contact, involve all the relevant people in finding solutions to conflicts in the group, let the group take the responsibility to reach specific objectives without taking the outcome personally, and communicate to other people the need for collaboration or team work.

*Social objectivity**Perceiving other people's beliefs, emotions, and points of view, even when they differ from one's own.*

People show this behavior when they perceive multiple perspectives or differing points of view of the same situation or problem; see the value in multiple perspectives, especially when they differ from their own; and describe other people's thoughts, feelings, or values as specific characteristics of one individual, even in a context that tends to stereotype people because of their membership in a group or category.

<p><i>Change-oriented behaviors</i></p> <p>Change-oriented behaviors include monitoring the environment to identify threats and opportunities, interpreting events and explaining why major change is needed, articulating an inspiring vision, taking risks to promote change, building a coalition of supporters for a major change, and determining how to implement a new initiative or major change.</p>	<p><i>Persuasiveness</i> <i>Inducing a course of action or a point of view by means of argument or entreaty (making other people think or do what they want them to think or do).</i></p> <p>People show this behavior when they give orders or directions based on rules, procedures, regulations or organizational authoritarian roles without soliciting others' contributions; express the desire or need to persuade others; try to convince others by leveraging their interests (e.g., emphasizing what each person can personally gain); try to convince others by anticipating their reaction to an argument, a request, or a specific situation and communicating considering the listeners' level of comprehension and emotional state; ask questions or consciously use techniques that aim to gain emotional and rational consensus from listeners about specific ideas, projects, or activities; and express preference for their own images or reputations over those of the organization and its products or services.</p>
	<p><i>Negotiating</i> <i>Reaching favorable agreements when closing negotiations, mediating among various positions, or finding compromises among the various positions, even when one is not directly involved in the agreement.</i></p> <p>People show this behavior when they make their positions known in a negotiation; identify the common areas of interests or objectives; and present appealing arguments to obtain profitable conditions.</p>
	<p><i>Visioning*</i> <i>Conceiving a new vision for a group and reinterpreting the organization's mission by creating a new understanding of it.</i></p> <p>People show this behavior when they think about new strategic objectives for their organizations and can reinterpret the organization's mission.</p>
	<p><i>Benchmarking*</i> <i>Knowing and referring to the best practices in the activity.</i></p> <p>People show this behavior when they compare their activity with objective standards to identify areas of possible improvement (e.g., comparing their firm's performance with that of their competitors).</p>

* These behaviors were added using thematic analysis, since they were not present in Boyazis' codebook (1982, 1995).

Table B Descriptive statistics of behavioral variables before its transformation

	Mean	S.D.	Skewness	Kurtosis	Number of observations with frequency equal to zero (N=87)	Min	Max
Task-oriented behaviors							
Result orientation	59.56	18.05	-0.70	4.49	2	0	100
Customer orientation	21.05	24.26	1.08	3.57	38	0	100
Leadership	12.85	15.84	0.72	2.02	48	0	50
Pattern recognition	23.01	22.98	0.85	2.84	30	0	80
Relationship-oriented behaviors							
Empathy	34.67	25.61	0.10	2.00	21	0	80
Networking	29.34	23.29	0.32	2.20	22	0	83.33
Teamwork	27.01	25.93	.43	1.87	32	0	80
Social objectivity	3.40	10.15	3.46	15.95	76	0	60
Change-oriented behaviors							
Persuasiveness	35.56	23.84	-0.18	1.92	18	0	80
Negotiating	13.33	17.71	0.98	2.67	50	0	60
Visioning	6.36	13.19	1.95	5.58	68	0	50
Benchmarking	5.40	12.12	2.62	10.63	69	0	66.67

Table C Comparative evaluation method used by subject matter experts to rate the organization's ability to adapt to its external environment

Organizational adaptability

Each report includes:

- 1) a firm's industry description and a sector analysis using Porter's 5-forces model;
- 2) a description of the firm's key strategic resources, core competencies, and strategy, along with a SWOT analysis based on the availability of environmental resources and the pace of technological change;
- 3) a detailed description of the firm's main competitors and a benchmarking analysis.

Please rank each report based on the following question:

Compared to the other firms, how well has the organization adapted to changes in the external environment in the last 5 years?

Assign to each firm

- a higher score if your answer is "better,"
- the same score if your answer is "equally,"
- a lower score if your answer is "worse."

For instance,

if you think that Report 1 adapts more proactively (better) to the environment than Report 2, assign:

2 to Report 1

1 to Report 2.

In your evaluation, please consider the following firm characteristics.

Market positioning ability

- level of pressure to improve company reputation, customer loyalty, and sales volumes
- competitive and industry positioning
- objective evaluation of market risks and opportunities

Learning ability

- gathering information about the environmental conditions to respond in a timely way to external threats and opportunities; using slack resources accumulated
- experience in dealing with threats and opportunities
- ability to identify effective ways to leverage core competencies

Innovation ability

- organizational flexibility (with regard to operational processes and the types of products and services provided)
 - cultural flexibility (cultural values of creativity, flexibility, tolerance of mistakes, product quality, and customer service)
 - focus on enhancing product quality and introducing innovative changes
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