LEVERAGING STRATEGIC AGILITY IN THE PANDEMIC ENVIRONMENT

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ABSTRACT

Strategic agility is defined as the firm's capability to dynamically change its plan for achieving competitive advantage. Research on strategic agility has blossomed with over a dozen journal articles published during the last three years. Recent empirical research suggests young firms benefit more than older firms from strategic agility, especially when facing environmental turbulence. That is, firm age and environmental turbulence jointly moderate the relationship between strategic agility and firm performance. If the pandemic climate of 2020 represents a high degree of turbulence, then strategic agility may be highly beneficial for young firms struggling to survive if not prosper during pandemic conditions. This applied research article first reviews theory and prior research on strategic agility and environmental turbulence. It is argued the coronavirus pandemic ranks highly on the five components of the environmental turbulence construct, namely, the complexity, rapidity, novelty, visibility, and frequency of environmental change (Ansoff, 1984, 2019). Doz and Kosonen's (2010) strategic agility framework and Reed's (2020, 2021) empirical findings operationalizing the framework are reviewed, focusing on the unique value of strategic agility for young firms. A sensitivity analysis is conducted to identify six subfactors of the framework which most influence firm performance in high environmental turbulence. These are, in order, multiple business models, flexible organizational structures, probing the future, reflecting on past/future trajectory, modular systems and processes, and leadership empathy. The article concludes with a discussion of how these strategic agility subfactors may be leveraged by entrepreneurs and small firms during pandemic and other turbulent environments, and directions for future research.

Keywords: Strategic agility, environmental turbulence, firm-age, pandemic, sensitivity analysis

INTRODUCTION

The coronavirus-induced economic downturn of 2020 abruptly upended the strategic plans of companies worldwide. From Boeing's cancellation of their diversification and innovation plan through joint venture with Embraer, to the shift by Eclipse International (a small New Jersey manufacturer) from mattress making to medical masks, many companies large and small were forced to adapt their strategies to the pandemic environment to survive (Insider NJ, 2020; Liao, 2020). However, not all companies were negatively affected by the pandemic. Established companies like Clorox and Zoom benefited from new-found demand, scaling their production, and accelerating their growth plans. Entrepreneurs like Phil Libin at mmhmm (remote presentation technology) and Prashant Fuloria at Fundbox (PPP loan origination) saw opportunity in the pandemic and launched new businesses or products to meet new needs (Konrad, 2020; Roll Call, 2020).

Whether positively or negatively impacted, firms capable of changing strategy quickly in turbulent environments appear to have a competitive advantage. In the field of strategic management, this capability is known as *strategic agility*. The term strategic agility was coined by Roth (1996) in an agile manufacturing sense—the ability to create the right products at the right place at the right time at the right price. Long (2000) generalized the construct as the ability to maintain the flexibility to quickly respond to changing circumstances and emerging opportunities while still concentrating on a clear strategic purpose. Research on strategic agility accelerated in 2008 based on the work of Doz and Kosonen (2008a, 2008b) who developed a three-dimensional framework for the construct involving strategic sensitivity, leadership unity, and resource fluidity. Doz and Kosonen (2010) subsequently elaborated their framework by identifying 15 underlying determinants or subfactors.

While their work was qualitative in nature, the Doz and Kosonen (2010) framework has been increasingly used by empirical researchers interested in the relationship between strategic agility and firm performance (Al-Azzam, Irtaimeh, & Khaddam, 2017; Chan & Muthuveloo, 2020; Clauss, Abebe, Tangpong, & Hock, 2019; Debellis, De Massis, Petruzzelli, Frattini, & Giudice, 2020; Junni, Sarala, Tarba, & Weber, 2015; Nurjaman, Rahayu, Wibowo, & Widjajani, 2021; Ofoegbu & Akanbi, 2012; Xing, Liu, Boojihawon, & Tarba, 2020). Unfortunately, the results have been mixed due in part to different operationalizations. Reed (2020) operationalized Doz and Kosonen's (2010) framework using the 15 determinants and tested the relationship between strategic agility and performance under several contingencies. The relationship was found to be jointly moderated by firm-age and environmental turbulence, potentially explaining the earlier mixed results. Specifically, Reed (2020) found that in high turbulence environments, young firms appear to benefit from strategic agility while older firms appear to be harmed by it.

This article builds on this research stream by investigating how strategic agility may be leveraged for improved performance in the turbulence of a pandemic environment. In the theory section, both environmental turbulence and strategic agility are examined more closely. The five-factor model of environmental turbulence propounded by Ansoff, Kipley, Lewis, Helm-Stevens, and Ansoff (2019) is used to assess the degree of turbulence represented by the pandemic climate

of 2020. Doz and Kosonen's (2010) 15-subfactor model of strategic agility and Reed's (2020, 2021) empirical findings are used to show young firms are uniquely positioned to benefit from strategic agility in high turbulence. But which of the 15 subfactors matter most? In the methods and results sections, a sensitivity analysis is presented which identifies six subfactors which have the greatest effect on the significance of the agility-performance relationship. The discussion section addresses how these subfactors may be leveraged by entrepreneurs and small firms. The article concludes by summarizing the findings and presenting several avenues for future research on strategic agility during times of crisis.

LITERATURE REVIEW

Environmental Turbulence

Environmental turbulence is a long-standing construct in strategic management research, often utilized as an antecedent or moderator of other constructs and relationships (Ansoff et al., 2019; Jaworski & Kohli, 1993; Khandwalla, 1977; Lichtenthaler, 2009; March, 1991; Mintzberg, 1979). Indeed, strategy itself is widely considered more important in dynamic, hypercompetitive, and high-velocity markets than in times of stability (D'Aveni, 1994; Eisenhardt & Martin, 2000; Teece, 2009). Khandwalla (1977) defines environmental turbulence as follows:

A dynamic, unpredictable, expanding, fluctuating environment is a turbulent environment. It is an environment marked by changes. It is an environment in which the information received by the organization is often contradictory. The best estimates that management can make of the future are only "guestimates" and get obsolete fairly quickly since the environment often takes unpredictable turns. It is an environment in which the ability to take calculated risks in the face of uncertainty is vital. It is an environment that attracts entrepreneurs.

Ansoff et al. (2019) defines environmental turbulence more precisely as a combined measure of the changeability and predictability of the firm's environment and offers a turbulence scale which is based on five factors as shown in Table 1.

TABLE 1
Ansoff 's Environmental Turbulence Scale

Factors	1	2	3	4	5
Complexity of Environment	National competitors		Regional or global competitors with technology effects		Global competitors with social and political effects
Novelty of Change	No change	Change is slow and incremental	Change occurs faster but still incremental	Change is discontinuous but expected	Change is discontinuous and completely unexpected
Rapidity of Change	No change	Change occurs slower than the firm can respond	Change occurs equal to the firm's ability to respond	Change occurs more rapidly than the firm can respond	Change occurs catching the firm completely by surprise
Visibility of Future Events	Complete visibility of future change events	Future change events are easy to extrapolate	Future change events are predictable	Future change events become less predictable	Future change events are completely unpredictable
Frequency of Turbulence Level Shifts	No shifts due to no change	Low	Moderate	High	Multiple shifts per year

Adapted from: Ansoff et al. (2019), Table 6.1, p. 80.

Given the scale's detail at each level of turbulence from 1 (low) to 5 (high), the degree of turbulence created by the coronavirus pandemic is readily assessed. On complexity, the pandemic impacted firms across the globe with technological, social, and political effects, meeting the criteria for level 5 on the scale. On novelty, pandemics may not be new, but they are discontinuous, seemingly appearing randomly everyone to three decades, with the most recent being the "swine flu" (H1N1) in 2009-2010. However, a pandemic as global and severe as COVID-19 has not been seen since the "Spanish flu" of 1918-1919 which killed tens of millions. It is fair to say a pandemic of this magnitude was completely unexpected, ranking level 5 on this factor also. On rapidity, since the onset of the pandemic in early 2020, environmental change was frequent and faster than most firms could respond. Firms were surprised by continually changing infection rates, CDC guidance, medical treatments, levels of economic shutdown, supply chain instability, government loan programs, direct payments to households, and vaccine availability. All these factors support level 5 on rapidity. Likewise, on visibility, future changes due to the pandemic were completely unpredictable. Will the infection rate subside or resurge? Will the lockdown be eased or tightened? Will an effective vaccine be found or not? Visibility therefore ranks a level of 5. Finally, on frequency, the level of turbulence shifted several times during 2020 as each of at least three surges of the virus led to a roller coaster ride between emergency and semi-normalcy. This meets the criteria for level 5 also.

Overall, it appears the coronavirus pandemic of 2020-2021 qualifies at the highest level of Ansoff et al.'s (2019) environmental turbulence scale. Note, however, environmental

turbulence is not inherently bad. None of the five factors presume a negative impact to financial performance or other firm outcomes. Change from equilibrium provides both hazard and opportunity, a condition well appreciated by entrepreneurs (Kirzner, 1997). This observation is important for understanding the complex interaction between environmental turbulence and strategic agility.

Strategic Agility

Doz and Kosonen (2010) and their colleagues have developed a substantial body of research on strategic agility (Doz & Kosonen, 2020; Doz & Kosonen, 2007, 2008a, 2008b, 2010, 2011; Hamalainen, Kosonen, & Doz, 2012). Originally based on a longitudinal case study of Nokia and then applied to other companies, the researchers identified three dimensions of the construct of strategic agility as follows.

- *Strategic sensitivity*—An intense awareness of external trends combined with an open and participative strategy process.
- *Leadership unity* (also called collective commitment)—Alignment and transparency within the top leadership team, enabling bold decisions to be made fast.
- *Resource fluidity*—The capability to reconfigure business systems and redeploy resources rapidly.

According to Doz and Kosonen (2008b), all three dimensions are required for a firm to be strategically agile, as explicated below:

> The three meta-capabilities underlying strategic agility operate in a multiplicative interaction over time. If leadership unity is not fully in place - as at Nokia in the early 2000s—the full benefits of agility cannot be achieved even if the other two are present to a relatively strong extent. In short, the formulation is: Agility = Sensitivity x Unity x Fluidity (p. 111).

Doz and Kosonen (2010) identified five underlying determinants for each dimension representing leadership actions that can be taken to enable the dimension. For example, *experimenting*, described as gaining insight by probing the future through experiments and in-market tests, underlies the strategic sensitivity dimension. *Revealing*, making personal motives and aspirations explicit, underlies leadership unity. And *dissociating*, separating resource use from resource ownership to allow for resource access and allocation, underlies resource fluidity. Doz and Kosonen's (2010) most recent work explored strategic agility in the public policy and human resources domains (Doz & Kosonen, 2020; Hamalainen, Kosonen, & Doz, 2012).

Based on Doz and Kosonen's (2010) framework, Reed (2020) defines strategic agility as the firm's capability to dynamically change its plan for achieving competitive advantage through its strategic sensitivity, leadership unity, and resource fluidity. Using the 15 determinants as subfactors, he operationalized strategic agility as shown in Table 2. All items were rated from 1 (strongly disagree) to 7 (strongly agree) and strategic agility was computed as the product of the means of the three dimensions (SENSE x UNITY x FLUID) following Doz and Kosonen's

(2010) prescription. Using this scale, Reed (2021) found the strategic agility construct to be valid through factor analysis and convergence with similar constructs. Using multiple regression, he tested the relationship between strategic agility and firm performance and found it to be jointly moderated by firm-age and environmental turbulence. That is, age and turbulence independently interact with strategic agility, but when both interactions are introduced to the regression, it can be seen that the combined effect is greater than the sum of the individual effects (Cohen, Cohen, West, & Aiken, 2015).

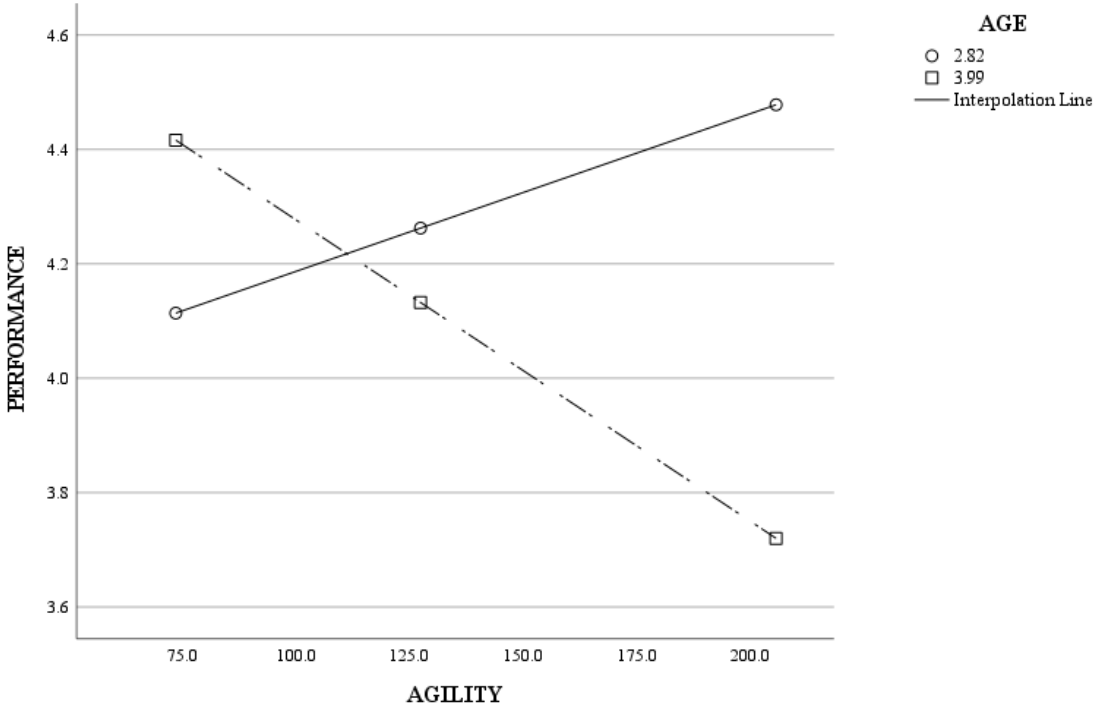
TABLE 2
Reed's Strategic Agility Scale

Variable	Subfactor	Survey Item
Strategic Sensitivity (SENSE)		
Sense1	Anticipating	My organization anticipates future customer needs.
Sense2	Experimenting	My organization uses experimenting (e.g., prototypes, pilots, in-market tests) to probe the future.
Sense3	Distancing	My organization reflects on the company's past evolution and future trajectory.
Sense4	Abstracting	My organization considers a wide range of potential products and services by viewing our business in abstract terms.
Sense5	Reframing	My organization recognizes the need to try new business models.
Sense6	Grafting	My organization adopts new ways of doing business from other companies.
Leadership Unity (UNITY)		
Unity1	Dialoguing	The leaders of my organization engage in open dialogue and welcome differences of opinion.
Unity2	Revealing	The leaders of my organization reveal their underlying motives including aspirations, biases, and fears.
Unity3	Integrating	The leaders of my organization operate as an integrated, interdependent, value-creating team.
Unity4	Aligning	The leaders of my organization are aligned around a common interest through a compelling mission, aspirational vision, shared values, and emotion.
Unity5	Caring	The leaders of my organization are caring and demonstrate empathy and compassion for others.
Resource Fluidity (FLUID)		
Fluid1	Decoupling	The elements of my organization (e.g., departments, lines of business) are loosely coupled and flexible.
Fluid2	Modularizing	My organization's underlying business systems and processes are modular and easily changed.
Fluid3	Dissociating	Resources in my organization are easily accessed across organizational boundaries.
Fluid4	Switching	My organization uses multiple business models for different market segments or products.

Adapted from: Reed (2021), Appendix 1.

Figure 1 graphically depicts the joint interaction when environmental turbulence is high (4.0 on Ansoff 's scale). In this case, strategic agility is positively related to performance for young firms (average age 2.82 or 16.8 years) while negatively related to performance for older firms (average age 3.99 or 54.0 years).

FIGURE 1
Interaction of Age and Agility in High Turbulence



This crossed or disordinal interaction is striking in the context of the pandemic. It suggests strategic agility is not just more beneficial for young firms than older firms, but that older firm performance actually decreases with strategic agility in high turbulence. Reed (2021) interpreted this paradoxical finding as a "dithering effect" in which older firms may dither between strategies too much, incurring greater change costs than young firms due to their greater asset stocks and path dependencies (Ermoliev, Arthur, & Kaniovski, 1987; Dierickx & Cool, 1989). In this case, older firms may perform better by staying the course and riding out the inevitable uncertainties of the turbulence.

Doz and Kosonen's (2010) theory coupled with Reed's (2020, 2021) empirical findings suggest young firms are uniquely positioned to leverage strategic agility to limit the impact or even improve performance in the pandemic environment. But how? All 15 items in the strategic agility scale are candidates for leadership action to improve strategic agility. Which subfactors should the entrepreneur or small business address? Sensitivity analysis is needed to answer this.

METHODOLOGY

Sensitivity analysis is a statistical technique used to determine how uncertainty in the output of a model can be apportioned to different sources of uncertainty in the model input (Saltelli, Ratto, Andres, Campolongo, Cariboni, Gatelli, Saisana, & Tarantola, 2008). With respect to regression models, we may examine how changing the values of specific independent variables affects a dependent variable under a given set of circumstances (Maddala & Lahiri, 2009). By independently increasing and decreasing (or alternatively, omitting and including) each independent variable, the difference between the revised model and a baseline model may be measured to determine the degree to which the model is sensitive to the variable.

This study uses an existing data set and regression model as the baseline (Reed, 2020). The data set consists of 73 for-profit companies randomly sampled in the State of Florida. Florida was originally selected due to its large economy (GDP) and high industry diversity but represents a convenience sample here. The companies are in the manufacturing, professional services, and construction industry sectors, and range widely in age (2 to 124 years), size (5 to 21,000 employees), and revenue (less than $1 million to over $1 billion annually).

The data was collected from CEO-level leaders in mid-2019 prior to the coronavirus pandemic. The regression model of interest is the joint interaction model previously described, wherein it was found that the relationship between strategic agility and firm performance was jointly moderated by firm-age and environmental turbulence. The strategic agility and environmental turbulence constructs were measured as discussed in the prior section. Firm-age was taken as the natural logarithm of the number of years since founding. Firm performance was operationalized as a combined measure of revenue growth, profitability, and meeting of company objectives following Powell (1992). Industry sector and business entity type (e.g., C-corporation) were used as controls. The regression model reported a multiple correlation coefficient (R) of .4859, proportion of variance explained (R^2) of .2361, and significance (p) of .0367. These are the baseline values of interest.

The sensitivity analysis is conducted by increasing and decreasing the values of each of the 15 strategic agility subfactors in the data set by 50% while holding all other values the same. Each adjustment produces a slightly modified data set to which the same regression model is applied. The new R, R^2, and p values for each model are then compared to the baseline values to determine sensitivity. For R and R^2, the comparison consists of subtracting the baseline values from the new model values, as a higher R is considered favorable (greater correlation) and results in a positive number. For p, the new model value is subtracted from the baseline value as a lower p is considered favorable (greater statistical significance) resulting in a positive number.

RESULTS

Table 3 provides the results of the sensitivity analysis. For each strategic agility subfactor, the new R, R^2, and p values are shown for the –50% and +50% adjustments. These values are compared to the baseline regression model to find the ΔR^2 and Δp. The range of variation from the -50% level to the +50% level of either ΔR^2 or Δp may be considered to

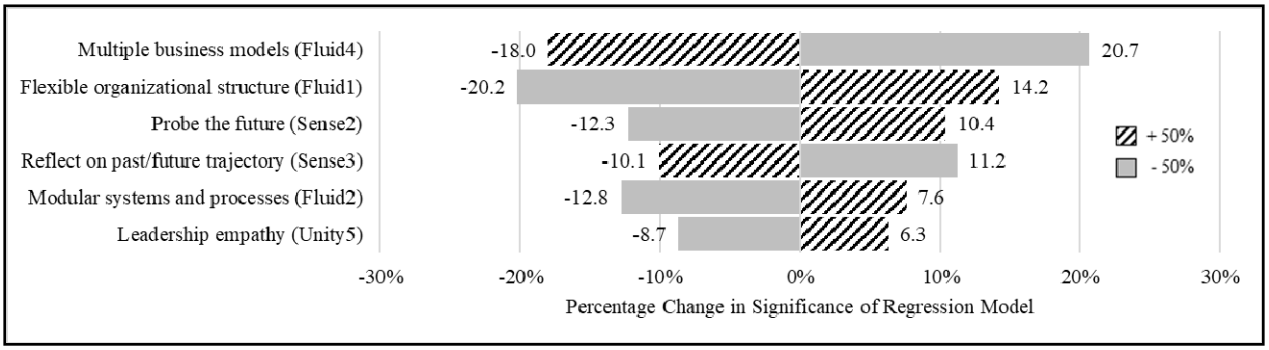
represent the sensitivity of the model to the subfactor. For example, when Unity1 is changed +/- 50%, the resulting percentage change in R^2 is -0.7% to +0.5% (a 1.2% range) and the percentage change in p is -4.6% to +3.3% (a 7.9% range). In general, the sensitivity column of Table 3 indicates the model is more sensitive to subfactor values in statistical significance (p) than in coefficient of determination (R^2). However, the ranges of the two measures track closely together as can be seen in Table 3 below.

TABLE 3
Sensitivity of Model to Changes in Subfactors

		Regression Model			Sensitivity	
Subfactor		R	R^2	p	ΔR^2	Δp
Unity1	- 50%	.4870	.2372	.0355	0.5%	3.3%
	+ 50%	.4842	.2345	.0384	-0.7%	-4.6%
Unity2	- 50%	.4883	.2385	.0342	1.0%	6.8%
	+ 50%	.4838	.2340	.0388	-0.9%	-5.7%
Unity3	- 50%	.4849	.2351	.0377	-0.4%	-2.7%
	+ 50%	.4867	.2368	.0359	0.3%	2.2%
Unity4	- 50%	.4855	.2358	.0370	-0.1%	-0.8%
	+ 50%	.4860	.2362	.0366	0.0%	0.3%
Unity5	- 50%	.4828	.2331	.0399	-1.3%	-8.7%
	+ 50%	.4882	.2383	.0344	0.9%	6.3%
Sense1	- 50%	.4856	.2358	.0369	-0.1%	-0.5%
	+ 50%	.4860	.2362	.0365	0.0%	0.5%
Sense2	- 50%	.4816	.2320	.0412	-1.7%	-12.3%
	+ 50%	.4897	.2398	.0329	1.6%	10.4%
Sense3	- 50%	.4901	.2402	.0326	1.7%	11.2%
	+ 50%	.4824	.2327	.0404	-1.4%	-10.1%
Sense4	- 50%	.4869	.2371	.0357	0.4%	2.7%
	+ 50%	.4849	.2351	.0377	-0.4%	-2.7%
Sense5	- 50%	.4853	.2355	.0373	-0.3%	-1.6%
	+ 50%	.4863	.2365	.0362	0.2%	1.4%
Sense6	- 50%	.4857	.2359	.0368	-0.1%	-0.3%
	+ 50%	.4860	.2362	.0366	0.0%	0.3%
Fluid1	- 50%	.4791	.2295	.0441	-2.8%	-20.2%
	+ 50%	.4912	.2413	.0315	2.2%	14.2%
Fluid2	- 50%	.4814	.2318	.0414	-1.8%	-12.8%
	+ 50%	.4887	.2388	.0339	1.1%	7.6%
Fluid3	- 50%	.4886	.2387	.0340	1.1%	7.4%
	+ 50%	.4835	.2338	.0391	-1.0%	-6.5%
Fluid4	- 50%	.4940	.2440	.0291	3.3%	20.7%
	+ 50%	.4798	.2302	.0433	-2.5%	-18.0%

Figure 2 depicts the results of the sensitivity analysis (based on Δp) in the form of a tornado diagram. The six subfactors with an influence range of 15% or more on the regression model are shown in rank order. For example, the model is most sensitive to Fluid4 where the 50% changes in value led to a -18.0% to +20.7% change in statistical significance of the model. It is also evident that increasing a subfactor value does not always increase model significance. For example, the +50% change in Fluid4 leads to a -18.0% change in statistical significance while the +50% change in Fluid1 leads to a +14.2% change in statistical significance. The direction of the influence of a subfactor on the model is discussed in the following section.

FIGURE 2
Top 6 Subfactors Influencing Regression Model



A final regression was calculated using the top six subfactors together. That is, all six of Fluid4, Fluid1, Sense2, Sense3, Fluid2, and Unity5 were adjusted by 50% in whichever direction provided the positive impact on R^2 and p (the cross-hatched bars in Figure 2). This grouped sensitivity analysis represents the model gain if companies were to improve by 50% on all six subfactors. The regression results in an R of .5101, R^2 of .2602, and p of .0179, improving the proportion of variance explained by 10% (.2361 to .2602) and the statistical significance further explained by 51% (.0367 to .0179).

DISCUSSION

Using Reed's (2021) baseline regression model, the sensitivity analysis identified six subfactors from Doz and Kosonen's (2010) framework which appear to most influence the relationship between strategic agility and firm performance. However, it is important to note this does not necessarily mean a firm's improvement on these input subfactors leads to improved output performance. The sensitivity analysis measured the effect of the subfactors on the strength of the model (R^2 and p) and not the dependent variable. This means the model is more reliable and likely to apply when the identified subfactors are improved. Next, the six subfactors are considered individually to determine how they might be leveraged effectively and efficiently in the turbulent, pandemic environment.

Fluid4 (*switching*) was defined as using multiple business models for different market segments and products. At first blush, multiple business models might be considered beneficial

during the pandemic by providing more flexibility and resiliency to impacts in one segment (e.g., sit-down restaurants) than another (e.g., home meal delivery). However, increasing this subfactor was found to decrease the strength of the regression model. Why would this be the case? One possible explanation is cash flow and margins may be preserved by "hunkering down" during the pandemic to fewer core markets and products. Another explanation is that it is older firms which are more likely to operate multiple business models, and as we know from Figure 1 above, their performance decreases with strategic agility in high turbulence. The negative effect of this subfactor may therefore be limited to older firms.

Fluid1 (*decoupling*), defined as loosely coupled and flexible organizational elements, was positively related to improvement to the baseline model. This ability to adapt organizational structures to the pandemic environment, whether through downsizing, reconfiguration, or expansion, would seem to make sense for all aged firms whether struggling to survive or seeking to exploit new opportunities.

Sense2 (*experimenting*) was defined as probing the future through prototyping, pilots, and in-market tests. While this subfactor is aimed at foreseeing market trends and product needs, any attempts to peer into the future may increase the likelihood of recognizing turbulent events early and dealing with their effects proactively. The subfactor could be leveraged by seeking out relevant news and other media, testing potential pandemic responses with customers (e.g., mask wearing, seating capacity, vaccinations), and proactively developing pandemic (and other similar disaster) response plans.

Sense3 (*distancing*), defined as reflecting on the company' past evolution and future trajectory, was also found to be better reduced than increased in a turbulent environment. This finding may be explained by recognizing pandemics as discontinuous and unforeseen events. Past evolution may provide little insight and no bearing on future trajectory. It may therefore be better to "live in the moment" in terms of firm survival.

Fluid2 (*modularizing*) was defined as having modular and easily changed underlying business systems and processes. Increasing this capability makes sense as the ability to adapt systems and processes to the impacts and opportunities of the pandemic would likely improve performance. This could be accomplished by streamlining processes, prioritizing business system deployments and upgrades, and other operational improvement activities.

Unity5 (*caring*), the only subfactor drawn from the leadership unity dimension of strategic agility, was defined as caring, empathy, and compassion for others by the leadership team. This leadership quality seems beneficial considering the hardships of the pandemic on clients, employees, and communities. Empathy may lead to improved customer retention, employee morale and motivation, and community support, all contributing to firm performance.

Note three of the six subfactors are components of the resource fluidity dimension of strategic agility. This suggests the ability to adapt resources quickly during the rapid change and unpredictability of the pandemic is the most important overall capability to have or improve on.

FUTURE RESEARCH

Several avenues for future research are recommended. First, the existing data set was taken in mid-2019 prior to the pandemic. New data collection during the pandemic may provide a better window into the effects of strategic agility under high turbulence. Better yet, a longitudinal study of firms before, during, and after a pandemic event may provide better insight into how strategic agility is leveraged and causally related to firm performance. Third, the characterization of the pandemic as high turbulence could be examined empirically rather than conceptually through survey or analysis of archival economic data. This may strengthen the findings and recommendations. Finally, much work remains to be done on strategic agility in general. Reed's (2021) operationalization of the Doz and Kosonen (2010) framework calls for further testing in other contexts including other regions and nations. The relationship between strategic agility and similar constructs such as organizational ambidexterity (Raisch & Birkinshaw, 2008), organizational agility (Harraf, Wanasika, Tate, & Talbott, 2015), and strategic responsiveness (Andersen, Torp, & Linder, 2019) should also be further explored.[4]

CONCLUSION

This research applied strategic agility theory to the high-turbulence environment of the coronavirus pandemic. It was conceptually shown that the pandemic represents a high level of turbulence. It was empirically shown that under high turbulence, young firms appear to benefit from strategic agility while older firms appear to be harmed by it. While the relationship is not causal, it suggests that on the continuum of age, young firms are uniquely positioned to leverage strategic agility not only for survival but for entrepreneurial opportunity in the pandemic environment. A sensitivity analysis was conducted using an existing data set to determine which strategic agility subfactors have the greatest influence on the agility-performance relationship. Six subfactors were found and recommendations were provided for their leverage by both younger and smaller firms.

[4] Reed (2020) noted similarities and differences between these constructs, but only tested the correlation between strategic agility and organizational alignment.

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