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“Strategic agility, intangible capital and firms’ performance in the covid-19 crisis”

Ahmed BOUNFOUR and Alberto NONNIS
European chair on Intangibles
Université Paris-Saclay

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Introduction

- Developing business models in the connected age relies on embedding the capability of a firm to change directions near-promptly as market entrants introduce substitutes and direct competition
- Those firms that have not built in the capacity for strategic agility (SA), in advance, will face difficult times
- “Strategic” implies forward planning, but in the case of SA, it implies building, nurturing, and monitoring organic corporate rapid response capabilities (-> DC)
- It is important to understand a company’s capacity for being strategically agile given the fact that company leadership is not in control of the external forces that change company momentum and market position

Introduction (2)

- Intangible capital (IC) is a company's most critical capability in fostering SA and that successful business models will nurture and grow this capability.
- The capacity of a company to be strategically agile depends strongly on intangible investment
- For example, Bounfour et al. (2017) model strategic agility as a function of intellectual capital conversion rate. In this perspective, SA can be realistically achieved through an efficient management of converting creative potential IC into realized IC that generates a positive yield

Strategic agility

- Many in corporate leadership positions continue to be rooted in outdated business models that presume a more stable, predictable, controllable environment where the overriding goal is to maintain equilibrium. Traditional economy theory portrays economic systems as closed, static systems
- Over recent years, as traditional economic models have failed to predict, let alone understand the basis for, technology booms and busts, scholars and business leaders have begun to search for a new lens through which to view the emerging hype volatile market sectors, such as the internet services sector
- SA needs to be conceptualized as a function of the most critical assets a company has in today's economy.
- SA in hyper competitive internet based markets is largely dependent on how well management capitalizes on its employees ability to convert innovative ideas into real outputs that lead to higher value yields than competitors.

Strategic agility definitions

Enterprise Agility	Ability of a firm to sense environmental change and react accordingly based on components of sensing and reacting to change
Dynamic Capabilities	“A firms building, integration, and reconfiguration of internal and external competencies to address rapidly changing environments ” Extenuation of the Resource Based View into high velocity markets
Strategic Flexibility	Defined as the organizational ability to manage economic and political risks by promptly responding in a proactive or reactive manner to market threats and opportunities (Grewal & Tansuhaj, 2001)
Business Agility	Exemplified by organizations that are resourceful, quick to respond to changes , and highly adaptable. (Mathiessen and Pries-Heje, 2006)
Operational Agility	“A company’s capacity, within a focused business model, to find and seize opportunities to improve operations and processes. ” (Sull 2009)
Portfolio Agility	“the ability to quickly and effectively shift resources, including cash, talent, and managerial attention, out of less-promising units and into more-attractive ones.”(Sull 2009)

In the literature, an unique definition does not exist. However, there are many studies that refer to the concepts in a variety of ways. The essential element is the responsiveness of firms to variations in many aspects, such as changes in customer preferences, competitors’ strategies, political and environment shifts, and other market changes in general.

Strategic agility in the GlobalInto survey

Q.36 Please indicate to what extent you agree or disagree with the following statements regarding the sensing and seizing of opportunities by your enterprise. (answer on a 5-point scale, where 1 is strongly disagree and 5 is strongly agree)

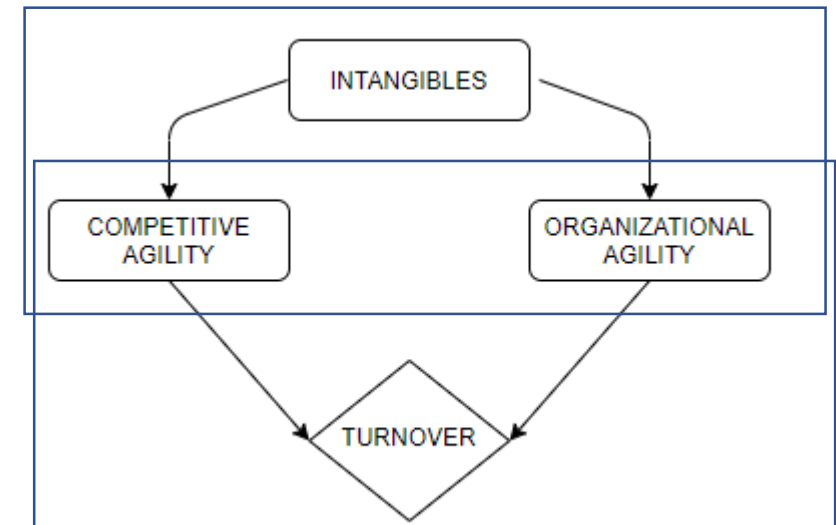
	(DIS)AGREEMENT				
	1	2	3	4	5
a) Our enterprise actively scans for the best practices in our sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Our enterprise responds rapidly to moves by competitors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) We change our practices based on customer feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Our enterprise regularly considers the consequences of changing market demand for its new products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Our enterprise is quick to recognise changes in its market (e.g. competition, regulation, demography)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) We quickly identify new opportunities to better serve our customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Design activity is important in introducing new products/services to the market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) We implement internal and external personnel training on a regular basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Employees share practical experiences with each other on a frequent basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

We build two indicators:

- **Competitive agility.** This is a narrower indicator that includes questions b, e and f, which specifically refer to the speed in adjusting to market conditions and therefore is meant to capture how reactive a firm is to adjust to competitors, customers and market conditions
- **Organizational agility.** This is a broader measure, which includes all 9 questions, and therefore considers a wide variety of organisational aspects that cover the strategies of a firm

Econometric modelling

- Have more agile firms been more able to adapt to the covid crisis and therefore suffer less from it?
- We use generalised structural equation modelling (SEM) to evaluate the impact of intangible investment on strategic agility and in turn on turnover change during the covid crisis.
- We consider 6 types of intangibles in the GlobalInto survey (R&D, training, organisational capital ,software, design, brand), either aggregated into one single indicator or considered separately.
- Ordered logit regressions are used to estimate the single equations.
- We estimate both the effects on **pre-covid** turnover and on its change **post covid**.



Descriptive statistics

	N	Mean	Standard Deviation	min	max
Turnover 2019	1357	50154	233660	8	7400000
Turnover change 2020	1346	-7.631	24.056	-100.000	300.000
Competitive agility	1360	3.716	0.762	1.000	5.667
Organizational agility	1360	3.647	0.614	1.556	5.111
Intangibles investment as turnover %	1360	8.836	12.974	0.000	100.000
Firm size	1360	196	565	20	11696

Notes:

Turnover in 2019 is in thousand euros.

Observations with intangible investment higher than 100 (~400 obs.) have been cut.

Size indicates the number of employees.

Intangible investment is the sum of R&D, training, organisational capital ,software, design, brand, all considered as % of turnover.

Results (post covid)

Model 1

Dep. Var. : post covid-19 turnover change	
Competitive agility	0.293*** (0.0637)
Firm size	0.0000648 (0.0000796)
Dep. Var. : Competitive agility	
Intangibles	0.0115*** (0.00363)
Firm size	0.000114 (0.0000901)
Observations	1360

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Model 2

Dep. Var. : post covid-19 turnover change	
Organizational agility	0.295*** (0.0785)
Firm size	0.0000637 (0.0000794)
Dep. Var. : Organizational agility	
Intangibles	0.0225*** (0.00373)
Firm size	0.000173** (0.0000829)
Observations	1360

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

The first model uses the narrower agility measure (competitive agility), while the second uses the broader (organizational agility)

The top part of the table shows the effect of agility on post covid turnover, the bottom part shows the effect of intangible investment on agility

Results (single components)

Dependent variable: Competitive agility

	(1)	(2)	(3)	(4)	(5)	(6)
R&D	0.00928*					
	(0.00544)					
Training		0.0325**				
		(0.0136)				
Organizational capital			0.0200			
			(0.0170)			
Software and Database				0.0125		
				(0.0119)		
Design					-0.00649	
					(0.00647)	
Brand						0.0756***
						(0.0185)
Firm size	0.000109	0.000109	0.000107	0.000106	0.0000964	0.0000895
	(0.0000914)	(0.0000919)	(0.0000917)	(0.0000920)	(0.0000930)	(0.0000894)
Observations	1340	1340	1340	1340	1340	1340

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Dependent variable: Organizational agility

	(1)	(2)	(3)	(4)	(5)	(6)
R&D	0.0250***					
	(0.00598)					
Training		0.0519***				
		(0.0142)				
Organizational capital			0.0510***			
			(0.0169)			
Software and Database				0.0248**		
				(0.0116)		
Design					0.00347	
					(0.00679)	
Brand						0.0866***
						(0.0181)
Firm size	0.000171**	0.000169*	0.000167*	0.000165*	0.000159*	0.000127
	(0.0000855)	(0.0000869)	(0.0000865)	(0.0000870)	(0.0000878)	(0.0000824)
Observations	1340	1340	1340	1340	1340	1340

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Here the second part of the model (effect of intangibles on agility) is estimated for each component
R&D, training and brand are found to positively affect competitive agility, while design, software and org. capital are not
Organisational agility (right table) is instead affected by all types of intangibles except design

Results (pre covid)

Model 1

Dep. Var. : 2019 turnover	
Competitive agility	0.0185 (0.0603)
Firm size	0.00338*** (0.000218)
Dep. Var. : Competitive agility	
Intangibles	0.0115*** (0.00363)
Firm size	0.000114 (0.0000901)
Observations	1360

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Model 2

Dep. Var. : 2019 turnover	
Organizational agility	0.00157 (0.0748)
Firm size	0.00338*** (0.000218)
Dep. Var. : Organizational agility	
Intangibles	0.0225*** (0.00373)
Firm size	0.000173** (0.0000829)
Observations	1360

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.01

These instead use pre covid turnover. No significant effect of agility is detected this time
Single component results (not reported) are confirmed

Conclusions and implications

- The results of the estimation highlights that **investment in intangibles are associated with a higher level of agility**, measured with both our indicators (competitive and organizational agility).
- On the other side, results show that **strategic agility is particularly important in times of stress**, as its effect on turnover are significant only when considering post-covid turnover change.
- Intangibles drive strategic agility unevenly:
 - R&D, training and brand affect competitive agility,
 - while organizational agility is affected by all types considered except design
- Firms that are able to quickly adapt to market changes are those that are more capable of tackling shocks and therefore manage to survive in periods of stress such as the covid-19 crisis.

Thank you for your attention

Ahmed.bounfour@universite-paris-saclay.fr

www.chairedelimmateriel.universite-paris-saclay.fr