The key factors of SMEs' resilience based on organisational behaviour theory

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The key factors of SMEs´ Resilience based on Organisational behaviour theory

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Abstract: The global economic crisis and Covid-19 pandemic has increased turbulence and uncertainties in business environment, as a result Small and medium enterprises (SMEs) are facing more challenges. However, there remain open questions, how SMEs cope, survive and develop strategies that orchestrate resilience during these times. Using a sample of 3355 SMEs management configuration systems from European Union, the study explores how SMEs resiliently prevailed during 2008 financial crisis and decade onwards. The study, considered Return on equity (ROE) ratio as a measure of resilience, explore the association of SMEs´ dynamic managerial capabilities, test the significance of management configurations, and propose an innovative framework that aims to improve competitiveness. The research demonstrated that top management configurations coupled with human resource management (HRM) could promote resilient performance during crisis and uncertain business environment. In addition, the study offers choices on management configuration to decision makers, highlights the research limitations and future studies.

Keywords: dynamic capabilities (DC), resilience, small and medium enterprise (SMEs), human resource management (HRM), organisational behaviour (OB), innovation.

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1. Introduction

SMEs are operating in highly competitive and challenging business environment induced by 2008 global economic crisis and 2020 Covid-19 pandemic. In such times, SMEs are hardest affected due to marginal resources which puts them at lower diversification and high risk than large companies (Linnenluecke, 2017). For example, in 2020, the number of SMEs decreased by 1.3%, employment by 1.7%, and valued-added in SMEs fell by 7.6% (Muller and Cannings, 2021). The majority of SMEs either had to close their operations or faced significant decline in revenue (OECD, 2021). In addition, the simplicity of SMEs organisation structure, low limitation of entry, and institutional funding for business entry (Skiadas, 2020) has induced the stiffness of the competition. However, literature on resilience in SMEs has been lagging in the past decade, yet, survivability stakes have never been greater, and the pressure to operate sustainably for SMEs within a turbulent market environment has increased.

In contrast to large firms, there is little literature on HRM in SMEs (Harney and Alkhalaf, 2021) and their organisational resilience. The term organisational resilience is associated with the firms' abilities, means, actions and behaviours in anticipating, dealing, and recovering (Linnenluecke, 2017; Sutcliffe and Vogus, 2003), for example financial adversity. The importance of organisational resilience in a challenging business environment tempts us to find its promotion in certain distinct elements of a company, such as organisational structures, resources, policies, or organisation as a system. Specifically, the increasing uncertainties in business environments lack enough literature on SMEs that spans a decade of resilience through management configuration.

Although this is yet accomplished, scholars such as Meyer et al. (1993) compared and discussed the contingency and configurational theories and suggested that the configurational approach consolidates the past merits of contingency theory. Regarding configurational theories, Fiss (2007) argues that clustering enables examining the organisations' interconnected practices and structures. In other words, it should not be viewed as slackly joined entities or modular because the pattern arrangement of attributes will reflect

distinct features and lead to distinct results. Perrott (2008) suggested that often it is the firms' managerial decisions, and strategy, that support, for example, clustering to orchestrate survival pattern and behaviours in uncertain, challenging, and complex market environments. Chadwick et al. (2016) suggested exploring further, how HRM fosters sustainability and long-term survival of a firm. Among many theoretical approaches, we try to overcome the complexity between reliability and experimentation of the organisational resilience concept through clustering and configurational approach.

Considering the configurational approach in SMEs, HRM is a normal choice to be dropped from management team formation, although Sheehan (2013) study suggested that HRM in SMEs has proven to entail organisational performance. Despite the potential advantage, many SMEs management systems still do not have proper HRM practices or Human Resource Development (HRD) in place, although their existence is constantly threatened and tested by the uncertainties in the business environment, global financial crisis (Demirgüç-Kunt et al., 2020) and pandemics like COVID- 19 (Juergensen et al., 2020). In such a challenging and uncertain environment, the HRM responsibility in SMEs often falls on the top management of the organisation, such as executives and individual managers. To build organisational resilience, top management usually face challenges in understanding the complexity of business environment, risks involved, its dimension, and then how to create the support systems.

HRM practices are resource-based view (RBV) in a firm and crucial in the ever-changing market, and has a big role in improving performance. The dynamic environment and frequent unpredictable events that affect the organisation performance, challenge managements with a need to align the organisation with the ever-changing market environment. In such an environment, top management face challenges to build, integrate, and reconfigure internal and external competencies and develop dynamic managerial capability (DMC). Basing on the RBV Barney (1991) suggested that the fundamental determinants of sustained competitive advantage are the firm-specific capability and assets. We build on this suggestion of RBV capability through the lens of HRM and the economic rationality to cope with a dynamic environment. We focus on inside-out approach and view DMC and RBV of HRM as a source of competitive advantage. HRM traditional practices and policies for performance are mostly activities such as staffing and training (Delaney and Huselid, 1996). Such activities also build on organisational resilience, however, Somers (2009) and Kantur and Say (2015) suggest that resilience performance is a criterion problem. HRM has more to offer on this subject, facilitates dynamic capabilities (DC) in the firm and one

of its roles is to handle linkages and prioritise them for passive and active resilience as required by the business environment. Active resilience is agile and requires strategic management of human resources (Lengnick-Hall et al., 2011), responsible for the identification and development of mechanisms to monitor the external environment. On the other hand, passive resilience relies on already existing response channels such as HRM training programmes.

Loureiro et al. (2021) study on measuring DC revealed HRM as one of the performance dimensions. HRM strategies, policies, and practices contribute to active resilience. In a crisis, SMEs management strategies are mainly to reduce negative financial flow (Thorgren and Williams, 2020), other than improving on HRM activity. Kor and Mesko (2013) suggested that one way of reconfiguring organizational resources is through executive team dynamic capabilities. Helfat and Martin (2014) discussed DMC and the relationship between strategic change, managerial decisions, and organisational performance. DMC refers to capabilities with which managers build, integrate, and reconfigure organisational resources and competencies. In business practice, DMC requires a two-step process before making a decision, first, identify the managerial resources that effect strategic change, and second, define their contribution to firm performance. Considering these requirements, HRM in a management configuration could facilitate the integration of the two steps. In this respect, Hambrick (1995) also suggested that firms with insufficient integrated management face greater challenges to adapt effectively in the external market environment.

Based on the above discussion, the current study can be seen in two folds, first, it explores the set-theoretic method (Fiss, 2007) of clustering and configurations by accentuating that organisation behaviour may contribute to organisation resilience and overall performance. Second, the research attempts to extend the literature on resilience performance through the lens of management configuration with HRM. It examines managerial contingency theory and the influence of HRM on achieving competitive advantage through bundling of capabilities and resources. The contingency theories suggests that there are different levels of the contingency variable depending on the relationship between dependent and independent variables. The influence of the HRM position in an organisational system is strategic and may have an important role in the organisation's performance.

Considering management configuration as a theoretical lens, this study aims to answer the following three research questions (RQ):

RQ1. What are the effects of HRM in SMEs resilience in uncertain market environment?

RQ2. What should SMEs management configuration be in uncertain

market environment?

RQ3. What is SMEs' effective management system in uncertain market environment?

By answering these research questions, this study aims to meet the following objectives:

1. To understand the influence of HRM in SMEs management.
2. To identify management configuration that aims to enhance resilient performance during crisis and uncertain business environment.
3. To identify factors that promote resilient behaviour in SMEs, especially during crisis and uncertain business environment.

By doing this, the study extends the literature on resilience of SMEs, by exploring the influences of management configurations on resilience development and contributes to Teece (2007) micro-foundation of dynamic capabilities. It introduces the relationship of DMC concept and top management configuration. We discuss the integration of organisational resilience and HRM as an avenue to cope with a dynamic environment, thereby enhancing the level of organisational resilience.

2. Literature review

2.1 Organisational behaviour, dynamic capability, and HRM

The behavioural theory of the firm does not have strong prescriptive goals in comparison with Teece (2007) dynamic capability framework. However, several insights from this perspective approach are found in the strategic management of dynamic capability theory of Pisano (2017) and Barney (1991)'s RBV. To affect decisions in organisation, a firms' behaviour revolves around rules, aspirations, adaptability, and set of ideas on how to achieve organisational goals (Cyert and March, 1963). Much of the behaviour can also be considered as resilience behaviour that opens up the positive ability to see, make sense of situations and define the purpose or identify opportunities, such duties also fall on HRM. For example, management systems with HRM can mitigate the dynamism of the business environment, achieve organisations' objectives, and gain competitive advantage by formulating and implementing strategy. Due to the strategic role of HRM in response to market changes, SMEs managements need to embrace the strategic approach of HRM (SHRM). Wright and McMahan (1992:298), define SHRM as "patterns of planned HR deployments and activities intended to enable a firm in achieving its goal". The DMC relates to SHRM, for example, both centres on managerial cognition in decision-making, taking

actions and implementing strategy. Martin and Bachrach (2018) propose a

broader perspective focusing on multi-level relational aspects of DMC. They propose that DMC concept concentrates on managerial impact on strategic change and consists of managerial cognition, social and human capital. In other words, DMC helps to examine the strategies in use and measure the performance. The DMC concept differs, but supplements the DCs perspective of Helfat and Peteraf (2009), Teece (2007), Eisenhardt, and Martin (2000).
Basing on RBV, DCs can be defined as a managerial capability to integrate, build, and reconfigure internal and external competencies. The objective is to develop new resources and capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000). However, it adopts the functional behavioural approach through linking both heterogeneities in managerial capabilities to that of firm performance, which is advantageous in unstable market environment. Dess and Beard (1984) argue that the business environment is dynamic and multi-dimensional, which heightens the environmental challenges. In such challenges, DMCs could be effective through managerial strategic practice and agile in strategic decisions. At the core, HRM is the foundation of organisational behaviour whose abilities can make a significant difference in a firm's dynamic capabilities, sustainable growth, and long-term existence.

2.2. Organisational resilience, dynamic capability, and HRM

There are challenges in conceptualising organisational resilience (Burnard et al., 2018), for example, developing resilience models that recognise and integrate HRM practices. However, the main theme is to detect the drift toward failure and weakness in the system for appropriate decisions that will mitigate the drift. Linnenluecke (2017) observed that, studies on organisational resilience are diverse in developing their own conceptual, measure, and definition. The author further suggested that organisational resilience is the firms' capabilities and actions, which anticipate and deal with recovering from a crisis. Organisational resilience magnitude is heightened when HRM practices are integrated, and affect the systems' actions and ability on how to actively perceive the environment in a "defensive" (reactive), "offensive" (adaptive), or passive way and still there persist resilience capability within the organization (Limnios et al., 2014). Lengnick -Hall and Beck (2005) view organisational resilience as an internal factor for transformation or adaptive fit to organisational routine. HRM practices and DCs have an interplay in developing the magnitude of organisational resilience. For example, weak DCs will produce passive resilience and strong DCs will produce active resilience. This further suggests that HRM lies at the forefront as a mediator in developing DCs and dealing with environmental uncertainty.

DCs diversifies the resilience concept and plays an important role in developing resilience in organisations. Burnard et al. (2018) suggest that resilience consists of active (adaptive) and passive (preparative) forms. These two forms contribute to reinvention of the organisations business models and strategies with respect to the business environment. According to Burnard et al. (2018), organisation resilience is either, top management planning to absorb the predicted uncertainties, or adaptive and proposed that it is an ongoing process. According to Lengnick-Hall et al. (2011), this is achievable when managements aggregate HRM to the organisational level to create competencies.

It is conceivable to suggest that resilience is an antecedent to strategic agility and moderates the relationship between a firm's dynamic activities and performance (Lengnick –Hall and Beck, 2009). When we put Teece et al. (2016) suggestion on DC, the author proposes that organisational agility (OA) is a required subset of dynamic capabilities in highly uncertain environment. Doz and Kosonen (2010) proposes that strategic OA is the top leadership practice of coordinating resource fluidity and strategic development. In such process, HRM is influential in facilitating and overseeing the smooth running of an organisation. Both resilience capacity and strategic agility enable firms to prepare for uncertain dynamic conditions. To achieve this, firms' managements, through HRM, should deeply understand different drivers, such as, organisational culture, operating models, and organisational constructs necessary for re-examining their internal and external environment. This highlights the strategic importance of HRM in developing resilience capacity by defining interactions and relationship stages between drivers.

2.3 Organisational resilience performance and management configuration

Organisational performance has differences across firms and can be defined in several ways (Lebas and Euske, 2002). For example, organisational performance as resilience focuses on organisation development to resist and stay afloat in an uncertain environment. Such performance may require multi-dimensional indicators from both financial and managerial aspects. However, in organisational behaviour, resilience is criticised for being fuzzy due to the inconsistency in definitions (Hillmann and Guenther, 2021), for example, resilience is characterised as performance in terms of a system's ability to endure a major disruption, recover from shocks and its capacity to bounce back. In addition, Kantur and Say (2015) argues that organisational resilience is yet to have a common scale. Seville et al. (2008) view of resilience suggests that surviving requires communicating with other organisation towards

greater system resilience. This characteristic of resilience is viable with SMEs management systems that are well prepared with HRM in dealing with external environment.

Some scholars have analysed behaviour of small and large firms during financial crises, for example, Latham and Braun (2011) study spanned 20 years, between 1991 and 2010. Their study on performance revolves around accounting-based financial ratios and firms' behaviours of management response action in times of economic recessions. Lai et al. (2016), investigated recession and workers' job experience response in SMEs either with or without HR practices and how they influence on SMEs. The authors found that in a financial crisis, SMEs are vulnerable and were heavily challenged to manage through the recession, but those with HR practices showed more resilience to the recession. Conversely, Meyer et al. (1995) insight on organisations reaction to hyper-turbulence market environments suggest that organisations adopt radically new strategies and continuously improve for survival. In a recession, decision-making processes become challenging for the management either to develop custom or ready-made solutions. However, in a holistic manner, organisational leaders prefer the idea-imposition process during an economic crisis (Stefaniak et al., 2012) to fit in the uncertain environment.

As Branco et al. (2019) proposed conceptualising resilience involves understanding and identifying determinants and their respective relationships with the task environment (Dess and Beard, 1984). Usually, the task environments are dynamic, unpredictable, complex, and full of uncertainty. Under such environment, organisations´ managers face greater challenges and need to work smarter (Perrott, 2008). They need to make dynamic decisions or make decisions in a dynamic manner of resilience and make positive adjustments to recover or bounce back to a stable position. Horne and Orr (1997) discuss the streams of resilience behaviour that can be holistic. They propose that the fundamental quality of resilience can be understood at different levels, for example as systems, groups, individuals, and organisations as a whole. Lengnick –Hall and Beck (2009) suggested that organisational resilience considers different dimensions, such as cognitive dimension, contextual, and behavioural dimensions. All these factors are the basic constituents of a firm’s dynamic activities and subsequent performance.

Sutcliffe and Vogus (2003) discuss how to organise for resilience behaviour, and proposes organisations management should put continuous effort to adapt to the business environment or develop amidst adversity. One way of improving resilience behaviour could be by sharing strategic decisions and strategic shared leadership (SSL). Pitelis and Wagner (2019), suggested

propositions for organisations' processes, where, strategic decision-making is

shared as a team. As Pisano (2017) suggested DC should be reorganised around the firms' strategic fundamentals through identifying and selecting capabilities directed to competitive advantages, such as SSL. Management configuration with organisational SSL behaviour can achieve resilience performance. Here, decisions subparts are decentralised in contrast to strategic leadership, which refers to organisation leadership as a whole. SSL involves developing, sharing and deploying strategic decisions for implementation, and HRM would be valuable in this process.

Davis et al. (2009) discussed on organisational structure and suggested that a less structured organisation is flexible and this can, for example, allows for decentralised decision-making, necessary in dynamic markets. However, the authors also suggest that firms should quickly adjust their existing structure according to the nature of the business environment. Flexibility and decentralisation facilitate HRM practices for improving process, agility, and speed of decision-making, which become an important ability to handle uncertain situations. Nold and Michel (2016) propose that management configuration, leadership system, and organisation culture should work with HRM towards a common goal. Lengnick –Hall and Beck (2009) talk about contextual resilience and suggested that deep social capital benefits from tacit information share and this can normally be facilitated by HRM practices in an organization.

2.4 Organisational resilience and top management

For organisations to survive in crises and uncertain economic environments, it is necessary for the top management to have an organisational resilience strategy. This may also include developing competencies and capabilities from knowledge at an individual level and other attributes of the organisation. There are well-established SHRM models on business management strategy and HRM relationship in understanding their impact on organisational performance. The most common SHRM models are RBV model "best fit' and "best practice", yet, each approach can vary the outcome according to the environment it is subjected to mitigate. The strategic SMEs´ managements have the challenge of choosing an SHRM model for the uncertain business environment. In such times, the vulnerability of SMEs need a management system with skills and competence to handle the arising interruptions. Delery and Doty (1996) analysed three SHRM perspectives: configurational, universalistic, and contingency. The authors suggest that each can be used to structure theoretical arguments to explain variance in performance. Usually, SMEs managements face challenges in determining which perspective would be an appropriate approach for the uncertain business environment. The

universalistic perspective suggests that using much of HR specific practices will consistently lead to "better" or "low" organisational performance, whereas the contingency approach rests more on effectiveness consistent with

other aspects of the organisation. The principle of configurational perspective is holistic, which differs from the universalistic and contingency approaches. Its' main concern is about the relationship of pattern in multiple dependent and independent variable.

Although the contingency approach, “best fit”, is challengingly complex, it is appropriate for uncertain business environments since it analyses its “internal fit” and environment for alignment before implementation. In challenging business environments, the DMC approach would have a competitive advantage of shared values and beliefs related to strategic change, decisions, and performance. The existing organisations resilience theories provide the primary factors for exploring the verity of passiveness and activeness of resilience. In addition, they explain how organisation management is designed, and why strategic-HRM policies and practices are aligned with the business environment and organisational performance. While others talks about agility and responsiveness in the identification and development of mechanisms to monitor the external environment. However, the theory does not support the magnitude of HRM in SMEs' top management, and its ability on how to actively perceive the environment passively, “defensively” (reactive), or “offensively” (adaptive) in a crisis and unstable or uncertain market environment. In other words, there is still a need on advancing the SMEs management system's ability and its capacity to bounce back with better or consistent performance. One way to advance is to combine contingency and configurational approaches.

3. Methodology

3.1. Measurement and Variables

Sample Population and Data Collection

The data for this study comes from Bureau van Dijk (BvD), a major publisher of business information, mainly for private company data, and represents over 400 million companies worldwide (Orbis Bureau van Dijk, 2022). The collected data represents active SMEs in the period 2008 to 2017, from the EU block. Year-over-year (YOY) is an effective and popular approach to evaluate and compare the performance of multiple events of a firm that occurs annually or a comparable period. In addition, we want to examine SMEs progress YOY and understand how management configuration leads to organisational resilience and survivability of SMEs, regarding the global financial recession. To achieve this, the study examines the primary decision-

makers i.e. management configuration/team (see Table 2) of SMEs from different sectors (see Table 3). To minimise the potentiality of bias associated with data collection, the study excluded and disqualified SMEs with

insufficient and undefined criteria, for example, no recent financial data, unclear information about directors and managers, and team members. The different criteria considered for management configuration are shown in Table 1 below:

Table 1. Top management team configuration.

Board of Director (BOD) (BOD no EXE no HR)	Executive Director with Human resource (HR)i.e.(EXE + HR no BOD)	Executive Director without Human resourc (HR) i.e.(EXE no HR no BOD)
Boards and Committees	Human Resources (HR)	Executive departments
Board of Directors	Executive departments	Senior management
Supervisory Board	Senior management	Finance & Accounting
Executive Board	Finance and Accounting	Administration department
Executive Committee	Administration department	Sales & Retail
Advisory Board	Sales & Retail	Marketing & Advertising
Proxyholders	Marketing & Advertising	Customer Service
Audit Committee	Customer Service	legal department
Remuneration Committee	Legal department	Research & Development / Engineering
Nomination Committee	Research And Development / Engineering	Product/Project/Market Management
Corporate Governance Committee	Product/Project/Market Management	Operations & Production & Manufacturing
Other Board or Committee	Operations & Production & Manufacturing	Quality Assurance
	Quality Assurance	Purchasing & Procurement
	Purchasing & Procurement	

The resulting sample is of a top management team (TMT) configuration that includes a board of directors (BOD) and executive directors with human resources (EXE+HR). The TMT is categorised as an individual or combination of either BOD or EXE with HR (see Table 1) that helps to identify the significance of HRM in a management system. To capture the significance and decisions taken by the top management, in direct response to the crisis, we used different team members for each configuration (See Table 1). For example, the category team of BOD consists of a board of directors, supervisory, advisory, and executive officers, and few more. The EXE may include, senior managers in accounts, administration, operations, project, process, sales marketing, and customer service, just to mention a few. Table 2, below, summarises the actual sample population considered in this study.

Table 2. Number of companies regarding management combination

Management		
Configuration	**Construct**	**Number of companies (N)**
BOD no EXE no HR	Exclusively BOD	1067
BOD+EXE no HR	Without HRM	833
BOD+EXE+HR	Full TMT	149
EXE+HR no BOD	Executives with HRM	170
EXE no BOD no HR	Exclusively Executives	1136

The data is YOY comparisons from a database of the 28-country EU block of over 25000 registered active SMEs which generates total samples of N=3355

(see Table 2), following the defined criteria (see Table 1) and represents 18 countries (see Table 4) from the BvD database. According to the EU standards, SMEs should have a turnover of up to €50 million in sales and/or employs up to 249 employees. The data was collected from BvD database

following consecutive years accumulating to a decade from the 2008 world financial recession to 2017. The purpose is to identify the performance of different industrial sectors (see Table 3) during the period 2008 - 2017.

Table 3. BvD industrial sector list

10-	Agriculture, Horticulture & Livestock,	21-	Industrial, Electric & Electronic Machinery,	32-	Banking, Insurance & Financial Services,
11-	Mining & Extraction	22-	Computer Hardware, 23 -	33-	Property Services,
12-	Utilities,	23-	Communications,	34-	Business Services,
13-	Construction,	24-	Transport Manufacturing,	35-	Biotechnology and Life Sciences,
14-	Food & Tobacco Manufacturing,	25-	Miscellaneous Manufacturing,		
15-	Textiles & Clothing Manufacturing,	26-	Wholesale		
16-	Wood, Furniture & Paper Manufacturing,	27-	Retail,		
17-	Printing & Publishing,	28-	Transport, Freight & Storage,		
18-	Chemicals, Petroleum, Rubber & Plastic,	29-	Travel, Personal & Leisure,		
19-	Leather, Stone, Clay & Glass products,	30-	Computer Software		
20-	Metals & Metal Products	31-	Media & Broadcasting,		

Table 4. The EU block represented countries.

BvD sectors / Country	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Total sector per Country
Belgium (BE)												A												A	A		3
Bulgaria (BG)						A												A						A			3
Croatia (HR)		A					A													A							3
Czech Republic (CZ)									A			A											A		A		4
Finland (FI)						A					A	A					A						A		A		6
France (FR)			A	A		A			A					A			A	A	A	A	A	A	A	A	A	A	15
Germany (DE)																							A				1
Greece (GR)				A																A			A	A	A		5
Ireland (IE)	A																						A		A		3
Italy (IT)		A	A	A	A	A	A	A	A	A	A	A			A		A	A	A	A	A	A	A	A	A		21
Latvia (LV)																				A							1
Lithuania (LT)																	A							A			2
Malta (MT)	A																								A		2
Portugal (PT)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		A	A	A	A	25
Romania (RO)	A			A	A				A			A			A		A	A	A	A	A		A	A	A		14
Spain (ES)	A	A	A	A	A	A	A	A	A	A	A	A			A		A	A	A	A	A	A	A	A	A	A	23
Sweden (SE)	A		A	A	A		A	A		A	A	A		A	A		A	A	A	A	A	A	A	A	A	A	21
United Kingdom (GB)				A					A							A	A		A				A	A	A	A	9

Table 4 represents the business sector population of the EU countries that provided the study's sample data. The symbol "A" denotes the applicable industrial sector in the data. For example, in the case of Belgium, there are 3 SMEs sectors represented and denoted by the letter "A", which corresponds to the number of samples per industry code presented in Table 3. The goal is to select SMEs to collect data and study performance through random sampling to identify management configurations and the relationships to organisational resilience. The primary objective seeks to explore SMEs management configurations and TMT with survival or resilience capacity and measures required for resilience in organisations.

Measure

Profitability ratios as resilience indicator

The survivability of a firm is one way of its adaptability to the business environment and can be viewed as a resilience indicator or key performing

indicator (KPIs). Authors like Somers (2009) and Kantur and Say (2015) have proposed a scale for measuring organisational resilience, yet the question of whether the model fits a wider group of the organisation remains open. This challenge extends to allocating and prioritising resources responsible for organisational resilience (Lee et al., 2013). Some scholars define resilience as a system's capacity to bounce back, or its ability to endure a major disruption. This study adopts these definitions as organisational resilience, and, Horne and Orr (1997) streams of resilience behaviour and positive adjustment for performance. For this study, ROE is a measure of organisational resilience to capture the firm's capacity for recovery, during the period.

ROE represents the firms' composite returns for all of its assets - cash and operations (Damodaran, 2007). This means that ROE constitutes all the firms' returns, and it is affected by uncertain business environment. Compared to return on asset (ROA) and return on investment (ROI), Murphy et al. (1996) suggested these two ratios are more conservative, while, Damodaran (2007) identified issues in their computation. The preferred predictor variable of ROE, measures, over ROA, or ROI, helps to account for risk or "unpredictable variability" of the business environment. Using ROE, the study examines organisational resilience driven by management configuration in promoting organisational performance. To standardise ROE, a regression analysis is performed and the coefficient of determination (R^2) (Johnson and LeBreton, 2004) is used to explain the meanings and variance of ROE. Table 5 explains the significance of the analysis of ROE ratio, and the indicators, R^2, slope (X), and Y-intercept regarding management configurations (see Table 6), organisational performance, and resilience.

Table 5. Managerial interpretation of ROE regression

Indicators	Indicators interpretation	
	Organisational performcae	Reference to organisational resilience
Return on Equity (ROE)	Efficiency in resource management	Higher ratio percentage, means efficient management
R^2 (R-squared) (%)	Effectiveness in management decision-making	Ability to endure market disruption
Slope (x)	Positive or negative progress	Rate of Capacity to bounce back
Y-intercept (ROE %)	Resource effectiveness capacity	Survivability capacity

According to Johnson and LeBreton, 2004, there are different meanings of variable importance as regards to regression, for example, theoretical importance, level importance, and dispersion importance. This study refers to

dispersion importance, where, the regression equation explains the criterion variance attributable to the predictor variables. R^2 is used as a tool to explain the trend or how good the model is, and can be represented in a percentage scaled 0 – 100% or, an element of [0, 1], in our case, low is "0" and high is "1" (Nimon and Oswald, 2013). The ROE financial ratio is standardised by performing a regression analysis to identify the R^2 trends. To indicate

adaptation to the business environment, with respect to ROE, the closer R^2 trend is to "1" indicates "best practice" and "best fit", and, reflects effectiveness in the past management decision-making that results into consistency in performance, thus ability to endure market disruption, whereas, "0" represents the opposite, i.e. no response to the business environment. The slope (x) of the regression line, indicates the rate of change in the dependent variable and the direction either positive or negative (Schroeder et al., 2016; Golberg and Cho, 2004; Johnson and LeBreton, 2004). Here, the values close to 1 are more desirable and reflects resilience; ability to endure market disruption. The variable Y-intercept is the control variable and represents the firms´ ROE performance just before the recession. In other words, the Y-intercept is independent of the recession period and demarcates the analysis starting point.

4. Results and analysis

The collected data were analysed using the IBM SPSS modeler and the obtained results from regression analysis are shown in Table 6, and Graph 1 below. The results, presented in Table 6 and Graph 1, complement the research question and the analysis.

Table 6. Equation analysis and management configuration ranking regarding ROE ratio.

	Management configuration				
	BOD+ EXE+ HR	**EXE + HR no BOD**	**BOD no EXE no HR**	**BOD+ EXE no HR**	**EXE no HR no BOD**
ROE (y- trend)	y = 0.9978x + 20.993	y = 0.9069x + 19.78	y = 0.4218x + 14.174	y = 0.37x + 13.748	y = 0.0931x + 12.17
R^2(R-squared) (%)	0.2191	0.2078	0.2408	0.1666	0.018
Slope (x)	0.9978	0.9069	0.4218	0.37	0.0931
y-intercept (ROE %)	20.993	19.78	14.174	13.748	12.17
Number of companies (N)	**149**	**170**	**1067**	**833**	**1136**
Performance ranking	**1**	**2**	**3**	**4**	**5**

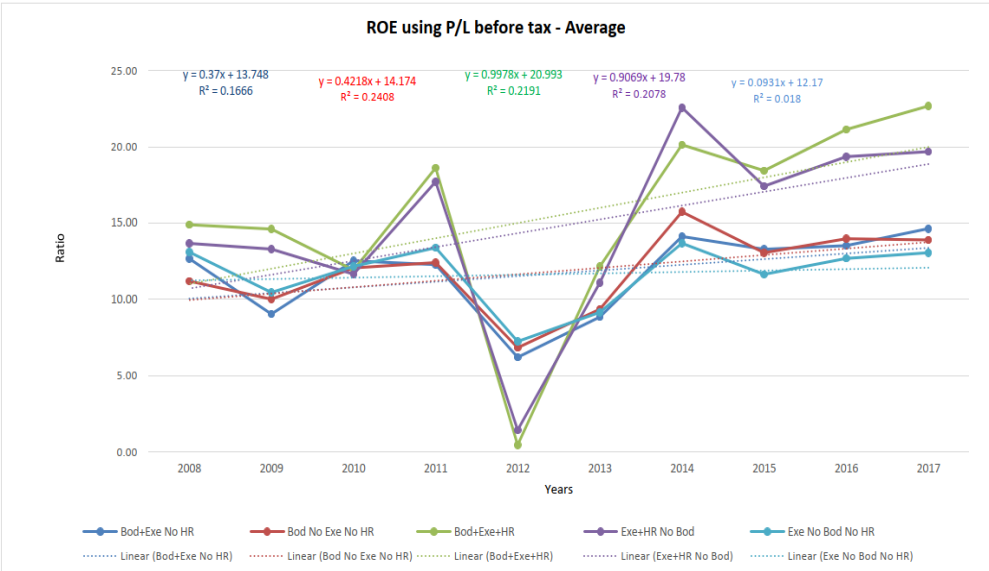
To understand better the regression analysis result, Table 5 is used to facilitate the ease in interpreting the analysis result in Table 6 following different configurations considering the criteria defined in Table 1 and Tables 2. Table 6 shows the standardised performance regression analysis ranking results of the ROE ratio as a resilience performance measure divided into 5 parts. The ranking ranges from 1, as the best, to 5 as the least performer in terms of management configuration. The ranking is done following the results in Table 6, for example, if we look at the slope of management configuration BOD+

EXE+ HR scored highest (0.9978) and ranked as 1 compared to management configuration EXE no HR no BOD scored least (0.0931) and ranked as 5. The regression equations of the different management configurations (ROE y-trend), explain the criterion variance attributable to the predictor variables, i.e. management configurations´ efficiency and effectiveness in managing the firms' resources.

In Tables 5 and 6, R-squired (R^2) represents effectiveness in management decision-making that represents a firm's ability to endure market disruption, in other words organisation's resilience capability. R^2 much more close to zero represents marginal consistency in performance, implying minor resistance to unstable market environment. A high R^2 positively close to 1, implies consistency and points to managements´ effective decision-making, and responds resiliently to the market environment. The effectiveness in decision-making, is seen in configurations with HR for example, $R^2 = 0.2191$ (BOD+ EXE+ HR) and $R^2 = 0.2078$ (EXE + HR no BOD), compared to the least performer EXE no HR no BOD with $R^2 = 0.018$. The ironic result comes from the BOD no EXE no HR configuration with the highest $R^2 = 0.2408$. This maybe associated with effectiveness in management decision-making, since, the configuration is composed of only high representatives of the TMT.

The slope (x) of regression in Table 6 and Graph 1 indicates the rate of progress, which can be attributed to the rate of capacity to bounce back (see Table 5), in other words, slope (x) represents the capacity rate to recover regarding the market environment. A slope (x) with values closest to positive 1 indicates a positive high recovery rate and they are desirable because they reflect the resilience capacity. As shown in Table 6, the slope (x) of configuration "BOD + EXE + HR" and "EXE + HR no BOD" are 0.9978 and 0.9069 respectively, representing outstanding performance, while configuration EXE no HR no BOD are the least performer with slope (x) 0.0931. Likewise, configuration BOD no EXE no HR is the closest in performance to the outstanding performer with the slope (x) of 0.4218. The higher slope (x) of configuration "BOD+ EXE+ HR" and "EXE + HR no BOD" shows they are consistent as superior performers compared to the groups without HR. A graphical illustration in Graph 1 below summaries the instantaneous performance of the ROE (y- trend) of the regression analysis.

Graph 1. Equation analysis and configuration performance trend.



Graph 1 is a summary of the ROE regression analysis. It helps to explain a direct comparison of each management configuration at a given time. It is interesting to see how each management was performing at an instance in comparison with the other configurations. For example, in 2010 all configurations were at "equal" performance but "BOD + EXE + HR" and "EXE + HR no BOD" outperformed the other configurations within one year. In addition, it is interesting to see how close the trend is contained similarly to both configuration groups with and without HR. However, in 2012, we can see that although "BOD + EXE + HR" and "EXE + HR no BOD" configuration performance dropped significantly, again within one year, they had surpassed the other configurations. Their capacity to bounce back is significant in comparison with the other configurations. In addition, their marginal difference in the ROE ratio is so significantly bigger in comparison to the other configurations without HR. Configurations with human resource (+ HR) produces promising results with BOD + EXE + HR as the most resilient, followed by "EXE + HR no BOD" and "EXE no HR no BOD" as the least resilient.

5. Discussion and conclusion

Our study analysed SMEs' management configuration and the effect of HRM. It is a common practice for large firms to have a dedicated HRM team to harness DCs through their policies and practices. In contrast, SMEs have unique ways, for example choosing a specific management configuration for operation due to limited resources. Bloom and Van Reenen (2010) literature is one side of reasoning why firms have differences in management systems. The authors suggested differences such as, "a combination of imperfectly

competitive markets, family ownership of firms, regulations restricting management practices and informational barriers allow bad management to persist" (Bloom and Van Reenen, 2010:204). Although such differences may affect management systems, for SMEs, HRM is a "luxury", despite its competitive advantage (Barney and Wright, 1998) and importance. We have examined the management configuration performance of SMEs with respect to the management configuration of BOD, EXE and HRM, to underpin which management resource is accountable for DMC and resilience. For SMEs faced with adversity, they need to make effective decisions, this study is likely to hold particular importance.

Haleblian and Finkelstein (1993) findings suggested that in a turbulent market environment, large teams performed better, and CEO dominant firms performed worse in comparison to stable market environment. Hambrick and Mason (1984) suggested that organisational strategic choices and performance levels are partially predicted by top managerial background

characteristics such as financial position, age, and other career experience, to mention a few. In this study, we attempted to extend on the literature by examining TMT configuration and extending prior studies from Hambrick and Mason (1984) and Haleblian and Finkelstein (1993) on management outcomes, strategic choices, and performance in a turbulent market environment in three important ways as outlined in the research questions.

A study from Rovelli et al. (2020) on performance of TMT organisational configurations such as integrated TMT, CEO-centric TMT, and incentive-based TMT proposed that CEO-centric TMT was the configuration positively related to organisational change opportunities. These findings are similar to the findings from this study, for example, we found that BOD no EXE no HR with the highest $R^2 = 0.2408$, representing consistency in performance, and points to managements´ effective decision-making (see Table 6). Following the comparison in performance ranking from Table 6, BOD + EXE + HR (Full TMT), outperformed the other configurations with a slope of 0.9978, although it is the least popular and followed by EXE+HR no BOD (Executives with HRM) with a slope of 0.9069 in second place. These results answer RQ1, and reflect on Eisenhardt (1999 and 2013) suggestion that in similar environments the performance of a firm is often influenced by the difference in top management configuration, where strategy and decision makes a difference. On the diversity of differences in top management, the results also reflect Harris and Helfat (2007) suggestions on top management, intra-board relationships among directors, and social networks. For example, a relationship between BOD, EXE, and HR, should be viewed without being limited to just two parties. From the analysis of the results, such a relationship is minimal in the SMEs' management choices and affects their performance as seen in the results (see Table 6).

Excluding HRM limits competitiveness in unstable market environment (Sheehan, 2013), and puts SMEs in a vulnerable position of moderate performance as reflected in the ranking results of the slopes(x) seen in Table 6. However, from this management group without HR, BOD no EXE no HR, registers the highest R^2 of 0.2408 (see Table 6) corresponding to good managerial decision-making despite the average ranking and also reflects on Hambrick and Mason (1984) suggestion on other career experience. The exclusively BOD often is a highly experienced team and Netz et al. (2020) suggested that experience is also important in uncertain situations. Conversely, this may be associated with the theory of minimal bureaucracy in the management system as suggested by Rovelli et al. (2020). “BOD no EXE no HR” and “EXE no HR no BOD” configurations are evidently the most popular, however, they both perform low in comparison to “BOD + EXE + HR” and “EXE + HR no BOD”. Likewise, EXE no HR no BOD configuration remains at the bottom with a slope of 0.0931, yet, it is the most popular choice of managerial configuration (see Table 6). A

managerial configuration such as exclusively BOD and exclusively EXE has no dedicated team in the management hierarchy responsible to respond to management social network in the unstable market. This is reflected in the results in Table 6, where, exclusively EXE configuration performs the lowest.

Martin and Bachrach (2018) proposed that DMC improve quality of managerial decisions, strategy, and organisational performance. Similarly, HRM in the configurations facilitates the configuration practices to reconfigure resources, which creates dynamic management as a source of competitive advantage (Barney and Wright, 1998). When SMEs choose exclusively "BOD or EXE" management configuration, often, they are trying to reduce operating costs. A study by Thorgren and Williams (2020) on how SMEs ward off impending disaster in an unfolding crisis observed that one of the immediate actions taken was to reduce labour costs. This action involved practices such as, dismissing all extra staff, suspending recruitment, and in the company several board members are unpaid for their work.

Conversely, when SME organisation choose an exclusively top management configuration, such as configurations without HRM, they expect a better performance, yet this is not the case as seen from the results in Table 6. A management configuration such as an exclusive BOD assumes strategic managerial decision-making for better performance and overlooks Augier and Teece (2009) and Barney and Wright (1998) suggestions on the role of managers, for example, HRM, and developing sustainable competitive advantage through employment of behavioural and evolutionary theories.

Although this may be a setback in performance, BOD no EXE no HR exhibited a much better performance in comparison with BOD+ EXE no HR. This further compliments RQ1 and management configuration regarding the market environment.

Management configuration with exclusively BOD and exclusively EXE, undermines the HRM responsibilities (Barney and Wright, 1998), innovativeness from top management social network (Harris and Helfat, 2007), yet HRM ensure effective sustainable competitiveness and performance through coordinating the management decisions and the market environment. R-squired (R^2) in Table 6, represents decision-making in management, which translates to the ability to endure market disruption. The configurations with human resources have a higher R-squired for example, $R^2 = 0.2191$ (BOD+ EXE+ HR) and $R^2 = 0.2078$ (EXE + HR no BOD), compared to configurations without human resources. Furthermore, from the slope (x) of regression in Tables 6 and Graph 1 we see that the configurations "BOD+ EXE+ HR" and "EXE + HR no BOD" are performing well with the

highest slope (x) of 0.9978 and 0.9069 respectively. Conversely, from performance ranking, BOD no EXE no HR is closest to them; however, its slope (x) is almost half of the other well-performing configurations. The effects of HRM are evident in the management configurations affiliated with HRM, such as executives with HRM and full TMT, and thus answers RQ2. In addition, "BOD + EXE + HR" and "EXE + HR no BOD" configuration also demonstrate a high resilience compared to the configurations that excluded HRM from the team. This is in line with Dias et al., (2020) who argues that HR management capabilities' significantly influence firm performance. Our study also has similar findings that the full management configuration slightly outperforms executives with HRM configuration. For example, management configuration "BOD+ EXE + HR" and "EXE + HR no BOD" outperformed other management configurations (see Table 6 and Graph 1). Despite exclusively BOD configuration's average performance, the outstanding $R^2 = 0.2408$ indicates the configuration competence in good managerial decision-making. Conversely, Netz et al. (2020) suggested that in uncertain situations experience is also important whereas Hambrick and Mason (1984) suggested other career experience and exclusively BOD configuration might reflect this suggestion.

For performance, an organisation has the option to choose what managerial configuration works in the environment. Mintzberg (1987) proposed different strategic postures in different scenarios for performance, for example, management configuration. In Graph 1, we illustrated the comparison of the effectiveness of management system in reference to management configuration at a given time. Here, effective management systems refers to

a set of integrated management process and tools that align HRM behaviour, dynamic governance system and environment, as shown in Figure 1 and registers better financial performance. For example (see Graph 1), the instance of the year 2010 indicates that all configurations were at "equal" performance. However, "BOD + EXE + HR" and "EXE + HR no BOD" significantly outperformed configurations without HR within one year. A more interesting instance is in the year 2012, where both "BOD + EXE + HR" and "EXE + HR no BOD" configuration performance dropped significantly and then surpassed the other configurations with time. However, BOD + EXE + HR remained dominant in performance in contrast to the other configurations. From the results, performance of BOD + EXE + HR system make full TMT the overall outstanding performer and thus answers RQ3 (see Table 6 and Graph 1). Nold and Michel (2016) suggested that HRM as part of leadership configuration, and in our study it contributes to the resilient performance. However, the affiliation of limited resources in SMEs limits the options in the managerial system, yet organisations have to adapt to unpredictable environments.

Augier and Teece (2009) proposed that HRM decisions are at the heart of organisation performance, however, with limited resources in respect to performance, it is conceivable to choose exclusively "BOD or EXE" management configuration. Thus, it is important to examine and understand the managerial behaviour of top executives (Hambrick and Mason, 1984; Haleblian and Finkelstein, 1993), management configuration, and their potential to promote the organisational resilience and performance in a turbulent market environment. Based on the results of Table 6 and Graph 1of this study, we strongly argue that the nature of management configuration will define the level of contribution towards organisational resilience and performance. This is in line with Moustaghfir et al., (2020) who argues that HRM practices can be a major driver of firm performance. For example, "BOD + EXE + HR" and "EXE + HR no BOD" configuration showed better performance, yet, their popularity is low. However, in adversity and limited resources, and when there is pressure to reduce cost, EXE + HR no BOD might be more logical managerial configuration for SMEs.

5.1. Theoretical contribution

We have seen the different configurations relate to dynamic governance systems, strategy, and organisational performance. Making decisions is challenging, carries risks and under uncertain conditions it is even more risky. To ease decision-making on resource fluidity requires the firms' effective

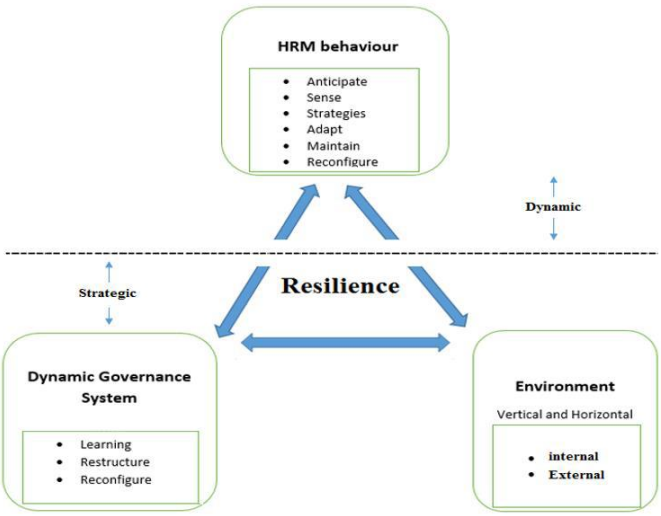
assessment of the internal and external environment and coordination of market conditions for quickly redeploying resources where they are most needed. Making fast and effective decisions requires effective, agile and adaptive management. The management behaviour strongly influences the performance of the firm. For decisions to have an effect, the management behaviour revolves around rules, adaptability, and a set of ideas on how to achieve organisational goals such as resilience.

We argue that the influence of HRM in SMEs' top management system can improve decision-making to survive in crises and turbulent market environments. In such environments, SMEs will behave differently, as Lengnick -Hall and Beck, (2005) also suggested. Table 6 and Graph 1 illustrates the difference in management configurations and their diverse performances. Depending on the available resources, these results can be a valuable information's for SMEs in identifying and selecting a management configuration.

DMC scrutinises the ongoing firms´ strategies and measures of performance. Here, decisions are derived from learning about the dynamism

of the market environment through building, integrating, and reconfiguring organisational resources and competencies. This involves, identifying managerial resources that impact on strategic change and the contribute toward firm performance. To mitigate the uncertain business environment, the management strategy may involve HRM in the TMT to take advantage of their policies and practices for efficient decision-making. The position of HRM is strategic, specifically for maintaining and protecting the organisations´ survival in competitive environments. We propose a dynamic resilience triangle (Figure 1) emphasising an inter-connection loop (Williams et al., 2017) of the managerial system and HRM in an uncertain market environment.

Figure 1. Resilience triangle



As shown in "Figure 1. Resilience triangle", anticipate, sense, strategies, adapt, maintain, reconfigure, etc. are few examples of HR activities that support TMT towards SMEs resilience. Figure 1, shows a decision- making interconnected loop for a dynamic governance system. It involves HRM, the market environment, and a dynamic governance system relating to dynamic management. The environment is assessed horizontally with time being the variable factor, while, the vertical assessment seeks additional knowledge, it is denoted, and sectioned into two: the upper being dynamic and strategy in the lower section. Customary, management without HRM represents the lower section, associated with little knowledge of the market environment, whereby decisions are mainly through directly assessing the market environment. Unlike management without HRM, in the upper section of the loop (Figure 1), HRM gathers additional dynamic knowledge on reconfiguring, anticipating, and sensing to develop strategies dynamically, that will adapt to the environment and maintain the firms´ operation. With HRM in place, the design forms the resilience triangle structure, for effective assessment of the market environment internally and externally in both vertical and horizontal manner. This structure design provides abundant knowledge of the market environment to the HRM and the governance

system for efficient and effective decision-making on resource allocation.

The strategic position of HRM mitigates the dynamism of the business environment and coordinates it with the governance system. The governance system learns about resources and HRM dynamic behaviour towards the market environment, at the same time they also learn from the environment to make better decisions on restructuring and reconfiguring resources. Here, the HRM duties are strategically dynamic and represent Wright and McMahan (1992:298) view of strategic-HRM (S-HRM). This highlights the importance of HRM as S-HRM in developing resilience capacity and OA. In business modelling, Doz and Kosonen (2010) advocated for embedding agility in strategy. On DC, agility, and uncertain environment, Teece et al. (2016) proposed that OA is a required subset of dynamic capability. From Lengnick –Hall and Beck (2009) suggestion, it is conceivable to propose that resilience is an antecedent to agility and moderates the performance of the firm's dynamic activities.

The configuration approach loop incorporates HR practices and strategic-HRM (SHRM) and extends on Nold and Michel (2016) performance triangle. For developing organisational resilience, the resilience triangle proposes agility through strategic decision-making as a team (Pitelis and Wagner, 2019) and SHRM as a mediator (Hambrick and Mason, 1984; Haleblian and Finkelstein, 1993) with respect to top management, and strategic posture (Mintzberg, 1987). With organisational resilience, the firms' management

goal is to mitigate the drift toward weakness and failure through appropriate decision-making. On organisational resilience, Linnenluecke (2017) suggested that it is the firms´ actions and capabilities, which anticipate and deal with recovering from a crisis. The action of monitoring the internal and external environment from both the HRM and the management team is to help in sensing and anticipating uncertain market environment to deal with the adversity. These actions are dynamically active and the interplay is resilient actions of management strategies and HRM practices to make the appropriate decisions. This helps in restructuring and reconfiguring resources for resilience with respect to the market environment.

By exploring the influence of management configuration, the study also contributes to Teece (2007) micro-foundations of dynamic capabilities, Kor and Mesko (2013) suggestion on reconfiguration through executive team dynamic capabilities, and Martin and Bachrach (2018) managerial cognition proposal. In addition, we have seen an advance of Augier and Teece (2009) suggestion, who urged for development of DC from micro- foundations of dynamic capabilities evolutionary and behavioural perspective. Our analysis focused on DMC and management configurations with HRM as the variable factor in the configurations to examine its effect on resilience. However, there are other factors affecting organisations resilience, for example, TMT

integrated (Hambrick, 1995) and multi-level relational aspects of DMC (Martin and Bachrach, 2018). Furthermore, we know little about how the action of cognitive capabilities of individuals in the configurations affects the decision-making process, particularly in uncertain business environments. We suggest future deep studies on the relationship and contribution of each team member to the configurations in decision-making and their effects on uncertain business environments.

5.2. Managerial implication

Organisational reaction to external threats has to be agile in such a way that its resources are allocated appropriately with respect to the environment. Organisational behaviour should develop capacities to form dynamic SHRM (D-SHRM) that maintains operations and respond effectively to the prevailing market environments. This could be through established operations to develop structures across the organisation to support effective decision-making. Most of all, top management should consider HR professionals to implement SHRM practices. SHRM managerial configuration practices support dynamic capabilities throughout the resilience process. Table 6 reflects how managerial configurations have influenced the performance and resilience of a firm. SMEs dominantly prefer an executive committee (EXE) and BOD as the main or dominant

management configuration. Interestingly as seen in Table 6, top management alone were not that effective in developing the dynamic capability in SMEs, however, their effectiveness were increased while working together with HR professionals. Hence, this study helps to further understand and emphasise the importance of HRM function and its strategic role in developing organisational resilience and improving performance.

5.3. Limitations and suggestions for future research

Despite the contribution to the literature, the data is on EU criteria for SMEs, does not include all the EU countries, and not all SMEs sectors are represented, and some sectors are poorly represented. In addition, the criteria for SMEs do not appreciate the social and cultural constructions of the firm size that may play a big role in SHRM practices. There is a need for more specific study that focuses on a particular SME sector and the role of the SHRM in promoting resilient practices in SMEs. Even better, if the future research consider dynamic nature of SHRM.

In firms, most especially in the start-up phase, it is normal to have no or negative net income for the first few years. Therefore, when it comes to management configuration start-up can opt for either of management

configuration (see Table 6) or HR outsourcing depending on resource availability and firm's ambitions. Furthermore, the analysis of ROE does not favour start-ups or SMEs in the start-up phase, therefore, a separate study considering start-ups or SMEs in the start-up phase might give us a different result in regards to management configuration. ROE is subjective, such that it considers net income rather than revenues that affect decisions for investment. Therefore, despite the contribution to the literature, with these limitations, HR professionals should adopt the results and recommendations cautiously. Future research could examine HRM practices and different levels for developing dynamic capabilities with intervention to enhance resilience. In addition, a qualitative research could explore new variables such as individual management contribution with respect to dynamic capabilities, which might help in better understanding of resilient behaviour of SMEs in uncertain market environments.

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