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### Introduction

According to Watkin (2012), small businesses operate in the same technological and regulatory environment as large organisations do and are subject to the same restrictions, including operational, financial, regulatory and statutory compliance requirements. In pursuance of their financial, regulatory and operational objectives, businesses encounter significant risks on a routine basis (Kerstin, Simone and Nicole, 2014), which escalates the importance of risk assessment and management by the board (Watkins, 2012). In the context of internal controls, risks are the significant events and circumstances that may prevent a business from achieving its objectives (Sadgrove, 2016). The key is to attain an understanding of the extent to which an entity is willing to accept the risks so that it does not conflict with the fulfilment of shareholders' objectives and in pursuance of value is termed 'Risk appetite' (Hillson and Murray-Webster, 2017). Subsequent paragraphs provide deep insights into various risk management tools SMEs can systemically implement in their systems. Further, we shall explore how SMEs can make a difference by incorporating various elements in their risk management mechanisms within the constraints of insufficient staff and other resources.

### **Risk Assessment and Management Toolkit**

According to Burgstaller and Wagner (2015), as compared to large organisations, SMEs have a lower chance to benefit from economies of scale and access to resources. Thus, low equity ratios make SMEs more vulnerable to external events and factors due to their comparatively smaller set of financial, operational and human resources (Dobrovic *et al.*, 2018).

# 1. Implementation of Supply Chain Management Tools

A quantitative study on Germany-based small enterprises concluded that these organisations should offer a wide range of products in order to stay competitive (Thun, Drüke and Hoenig, 2011). As the markets have grown in complexity, the supply chains are also becoming more complicated and globalised, and the chain partners are less interconnected with each other (Suresh, Sanders and Braunscheidel, 2020). Also, diversity in customers' needs requires manufacturers to diversify the supply chain by concentrating not just on the local markets (Thun, Drüke and Hoenig, 2011). Specifically, in the context of SMEs, this increasingly complicated supply chain may lead to an increase in trade debts, thus confronting more challenges for the survival of the SME. According

to Wilson and Altanlar (2014), start-up businesses with arrears of debts are more susceptible to falling into insolvency due to their limited financial resources. Consequently, they sometimes fail to use SCM tools and techniques within their business model.

### 2. Implementation of Crisis Management Tools

More specifically, changes in business environment have both direct and indirect influences across the companies, in the form of disruptions to sites, utility supplies and supply chains. Nearly 90% companies in construction are SMEs, and any efforts to improve resilience at the organisational level can lead to improvement of the industry as a whole (Wedawatta and Ingirige, 2016). Although not absolutely eliminable, the extent of vulnerability can significantly be reduced through a number of key factors.

According to Linnenluecke and Griffiths (2012), SMEs are particularly more vulnerable to climatic changes and extreme weather events that may have disastrous consequences for these businesses, which tend to be ill-prepared. Skouloudis *et al.* (2020) regarded firm size as a key factor in determining the variation in vulnerability to climate changes and identified several barriers in SMEs' efforts to cope with extreme weather events (EWEs). Among others, these obstacles majorly relate to the lack of financial capital, limited know-how and limited technological competencies and skills base of human resources. On the other hand, Pal, Torstensson and Mattila (2014) showed that some of the attributes of SMEs, such as efficient and fast decision-making, strong internal communication and low-level bureaucratic processes, serve as a benefit for small businesses to cope with extreme weather conditions.

Wedawatta and Ingirige (2016) analysed two construction - SME case studies: CSA group, a building contractor and CSB group, a civil engineering contractor. They concluded that the organisations with small size, less specialised or diversified operations are less vulnerable to EWEs. For instance, the latter company expanded its operations beyond core operations, such as earthworks, to extend to demolition, recycling, aggregate supply and transport etc., to show more resiliency. Also, CSA was able to transfer the cost and risk associated with EWEs down to the subcontractors by increasing the extent of subcontracting and thus, diversifying the supply chain rather than having a single in-house supply chain. Other factors identified by Wedawatta and Ingirige (2016) include wider economic climate, coping strategies, coping capacity, the experience of EWEs, nature of the organisation and availability of expertise, senior management and

knowledge etc. are all the factors that can influence the effective adoption of risk and crisis management by an organisation.

### 3. Risk Perception and Characteristics of SME Owners

According to Falkner *et al.* (2015), individual attributes of SME owners and the ownetship structure also influence the business direction of organisations and the relevant risk management practices within the organisation. Also, a quantitative study on health and finance sectors conducted by Acar and Göç (2011) showed that risk perception is negatively related to risk appetite and positively associated with organisational size. Also, an entity's risk assessment and management budget enlarge with the increase in its size, and conversely, small businesses have a relatively low-risk tolerance. Accordingly, in view of their financial and non-financial constraints, SMEs have to focus largely on more growth-oriented and less risk associated business strategies (Gilmore, Carson and O'Donnell, 2004). Factors that can significantly influence SME owners' risk perception include unstable demand, the pace of technological change and other industry attributes. Furthermore, managers of organisations based in developing countries are relatively less willing to accept risk appetite; likewise, western managers show more entrepreneurial behaviour and may be less efficient in their risk assessment and risk management strategies (Acar and Göç, 2011).

### Suggested Elements in Risk Assessment and Risk Management

### 1. Tools for Supply Chain (SC) Risks Management

Achievement of robust SC requires disturbance and disruption management (Vlajic, 2015). Vlajic *et al.* (2012) designed a model for robust supply chains, considering the integral components for the successful handling of disruptions and relationships among them. This has four components: The first one is a managed system which refers to physical infrastructure or tangible assets, including vehicles, equipment and human resource, and product characteristics. Second, managing the system includes planning, control and coordination of the logistics processes. The information system, i.e. third component, includes the decision support system, while last building block, i.e. organisation structure, refers to tasks of functional departments and executive positions within and across the supply chain, and coordination among these responsibilities in order to ensure the realisation of organisational objectives.

According to Vlajic *et al.* (2012), making an assessment of risk appetite can help managers reduce the influence of disruptions by disabling the domino effect on supply chain performances.

As SMEs confront challenges due to the limited presence and lack of diversity in their supply chains, building an online presence and employing simulation technologies are the useful strategy employed by SMEs to stand out in the competition. Simulation aids decision-making through what if analysis and evaluation of quantitative opportunities and problems arising from operating in a cooperative environment (Terzi and Cavalieri, 2004).

### 2. Weather Derivatives

While strategically selecting tools that can be helpful for a company trying to stand out from the competition and make a difference, SMEs can employ weather derivatives to hedge their exposure to catastrophic conditions. Major benefits associated with hedging through weather derivatives include smoothening of revenues, covering excess costs, reimbursement of lost opportunity costs, sales stimulation and increasingly diversified investment portfolios, and financial pressure associated with EWEs risk being 80 per cent lower (Leggio, 2007). Besides, the weather derivative offerings have further expanded to include precipitation-based products; weather derivatives can now sell weather contracts to provide protection to small firms from suspected changes in climate.

### 3. Networking

SME managers can utilise their personal networks to handle and manage risky areas, for example, close connections with the suppliers of key materials and clients so as to attract more business and opportunities for profits (Gilmore, Carson and O'Donnell, 2004). Smart SME managers tend to enter into more cooperative relationships when they feel a certain high level of relational risk or in situations where they want to achieve a competitive advantage in the industry when most of the rival organisations are also concentrated around a limited number of suppliers. This is also seen that increasing networking is a useful strategy for coping with the significant market, financial and technological risks.

As SMEs often fall short of knowledge and expertise, building strong relationships with other partners, clients and suppliers in the industry can also aid with the organisation's knowledge management (Gilmore, Carson and O'Donnell, 2004).

# Conclusion

Risk management also has significant implications for an entity's ability to survive in the industry while strategically exploiting more opportunities and reducing potential losses. Below is the comparison between two case study companies, demonstrating how use of risk assessment and and management toolkit varies across companies or industries:

# **Case Studies' Comparison**

Risk Assessment & Management Tools	Kentucky Fried Chicken	Kmart
	(MC)	
Supply Chain Management	Running an extensive retail	Kmart's supply chain is
Tools	chain of restaurants across the	comprised of individuals.
	world, delivering the best	organisations, information,
	quality products at same	transportation, storage, suppliers
	consistency is the primary goal	etc. Its business model is
	of KFC.	focused at decentralisation
		(away from in-stores), low
	Following globalisation and in	pricing strategy.
	view of strong competition.	F8,8, -
	KFC diversified its product	Major problem with Kmart's
	range and supply chain.	supply chain strategy was that it
		failed to respond to market
	KFC's business practices ensure	competition and changing
	that all stakeholders and partners	business trends. For instance, its
	in its diverse supply chain	turnover and earnings peaked in
	operate at maximum utility.	1992 and declined after that on
		account of competition from
	-Company has a dedicated	new entrants, including Target
	and centralised governing	and Walmart.
	council, whose function is to	
	ensure that integrated and	No investment in IT:
	friction-free operations, while	
	minimising risks of inefficiency	As opposed to competitors, it
	and disintegration.	failed to invest in computer
	-From planning stage to	technology for effective SCM.
	execution stages, SCM governing	
	council aims to ensure timely	Minimum investment in new
	delivery of fresh raw material to	improvements:
	customers without any quality	
	compromise.	In an urge of maintaining high
*	-Top management ensures	dividend proportions, Kmart
	smooth communication between	failed to make sufficient
	widely distributed chains of	investment for new growth
	partners to make process of risk	opportunities and new products.
	management proactive.	

		Limited presence & concentrated/centralised supply chain.
		Kmart lacked proper supply chain strategy that could align with low cost business model.
Hazards and Crisis Management	Type and extent of crises varies from industry to industry. As discussed above, while construction sector is sensitive to EWEs, food sector has exposure to different risks: <u>Food Safety Crisis:</u> Referring to 2012 crisis, company responded by using following crisis management tools (Alrawabdeh <i>et al.</i> , 2020): -Choosing social media platforms as post-crisis	Former retail giant, Kmart failed to respond to continuously changing consumer demands, selling store after store. According to Williams and Sumner (2010), there was a huge plethora of problems in Kmart's operations that became cause of crisis consequent of its being 'out of business'. These include information technology gaffs, staffing and ethical problems, data breach crisis, supply chain problems and other issues with productivity.
	communication strategy to communication strategy to communicate to the consumers, reasons behind crisis. -Public relation management: addressing public concerns, acknowledging them about uncertainties	<u>Evaluation of Crisis</u> <u>Management</u> -No response to crisis -no communication of reasons behind crisis -no improvement in existing
	- PR practice - Immediate response - Trust-repair strategy	(Caywood and Englehart, 2002).
Networking	Referring to KFC's response to the 2018 transport logistics crisis, when it had to suffer about £1 million loss on a daily basis, closing more than half of its 900 stores (Young and Bhattacharyya, 2020). Kentucky responded to the	In response to previous problems faced on account of ineffective risk management tools, Kmart has now built strong networks with various external stakeholders, including Wesfarmers, new suppliers, customers, and retail chains.
	situation by dedicating a page on its website to make the customers aware of the	Also, it's networking with one of partners 'Target' may prove fruitful in future, whose most of

locations that were still open.Further, they employedsimulation technologies tostress-test SC operations in asafe digital environment.Likewise, it responded to2012 food safety crisis inChina by using trust-orientedaugmentation theory	the retail outlets have now turned to K-stores (Mortimer, 2016).
(Alrawabdeh <i>et al.</i> , 2020).	

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