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### Achieving Strategic Business Objectives from Business Analytics in Small and Medium Enterprises

Selen Esra Dereli

*Swinburne University of Technology*, sdereli@swin.edu.au

Axel Korthaus

*Swinburne University of Technology*, korthaus.axel@gmail.com

Helana Scheepers

*Swinburne University of Technology*, hscsheepers@swin.edu.au

Ashir Ahmed

*Swinburne University of Technology*, azahmed@swin.edu.au

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# Achieving Strategic Business Objectives from Business Analytics in Small and Medium Enterprises

Full research paper

## Selen Esra Dereli

Faculty of Business and Law  
Swinburne University of Technology  
Melbourne, Australia  
Email: [sdereli@swin.edu.au](mailto:sdereli@swin.edu.au)

## Axel Korthaus

Faculty of Business and Law  
Swinburne University of Technology  
Melbourne, Australia  
Email: [akorthaus@swin.edu.au](mailto:akorthaus@swin.edu.au)

## Helana Scheepers

Faculty of Business and Law  
Swinburne University of Technology  
Melbourne, Australia  
Email: [hscheepers@swin.edu.au](mailto:hscheepers@swin.edu.au)

## Ashir Ahmed

Faculty of Health, Arts and Design  
Swinburne University of Technology  
Melbourne, Australia  
Email: [azahmed@swin.edu.au](mailto:azahmed@swin.edu.au)

## Abstract

Enterprises use Business Analytics (BA) to achieve business value. Although Small and Medium Enterprises (SMEs) significantly contribute to economic development and constitute a large proportion of enterprises, research into BA has been mostly conducted in large enterprises. In recent years, the interest in technological resources has rapidly expanded, as technological resources are essential in achieving strategic business objectives for SMEs. BA is one type of technological resource that has gained increasing importance. However, there is a lack of understanding of the role BA can play in obtaining competitive advantage in the SME context. This research explores SMEs' BA resources in 12 SME case studies using Resource-Based View as a theoretical underpinning concept. It provides a richer understanding of how SMEs utilise BA resources, and the findings reveal that the purpose of using BA differs between micro and small-sized SMEs and medium-sized SMEs. Hence, this research provides an in-depth understanding of the role BA plays in different sizes of SMEs.

**Keywords** Business analytics (BA), strategic business objectives, operational business objectives, Resource-Based View (RBV), competitive advantage, small and medium enterprises (SMEs)

## 1 Introduction

Business Analytics (BA) has been recognised as crucial in monitoring business operations to improve business performance and strategising the objectives of enterprises (Akter et al. 2016; Krishnamoorthi and Mathew 2018). BA is an overarching term used for analysing data to gain insight into enterprises' decision-making. However, research in Small and Medium Enterprises (SMEs) shows a limited adoption rate of BA amongst SMEs (Llave 2019).

Despite the importance of SMEs to the economic prosperity of many countries, including that of Australia (Daly 2020; Karanikolas 2019), most research has focused on large enterprises. Llave (2019) conducted a systematic literature review of the use of BA in SMEs as reported in articles published between 2000 and 2018, which included benefits, solutions and implementations of BA. The author argued that although there are several frameworks and models which have been proposed to guide SMEs on BA adoption, there is no clear indication of how SMEs can achieve their strategic objectives (e.g., competitive advantage) from BA. Hence, this paper takes a more inductive approach by investing the mechanism of achieving strategic business objectives, specifically competitive advantage, from SMEs' utilisation of BA by using Resource-Based View (RBV) as an underpinning theoretical concept (Dereli et al. 2020). This involves conducting case study research with 12 SMEs operating in Australia. The overarching research question considered in this paper is: "What role does BA play in enabling competitive advantage for SMEs?". The findings revealed that different size of SMEs use BA for different purposes. While medium-sized SMEs use BA to achieve competitive advantage similar to large enterprises, micro and small-sized SMEs use to achieve operational business objectives. This paper is structured as follows. First, literature surrounding BA, competitive advantage and the use of BA resources is introduced and examined through the lens of SMEs' characteristics. Second, a description of the research method is provided, following the findings of this research and finally, a discussion.

## 2 Literature Review

This section examines the differences between SMEs and large enterprises, then investigates BA (i.e., BA resources) and competitive advantage, and concludes with a review of the use of BA in SMEs to create competitive advantage.

### 2.1 Small and Medium Enterprises

The Organisation for Economic Co-operation and Development (2017) has acknowledged that there is no universal definition of SMEs that can be used. The most widely accepted definition of SMEs is based on their headcount. This research adopts the definition of SMEs from the Australian Bureau of Statistics (2021) where employee headcount is used as a criterion. According to the ABS (2021), businesses employing less than 5 employees are categorised as micro-sized enterprises, between 5 to 20 employees as small-sized enterprises, and from 20 to 200 employees as medium-sized enterprises.

Organisational size concerning business performance and value creation has been discussed by several researchers (Brunswick and Vanhaverbeke 2015; Hatta et al. 2015) and Gronum (2015) summarised these findings by concluding that large enterprises are likely to have more specialisations and resources with more market share, and have better economies of scale with a large product range. However, the structure of large enterprises tends to be more bureaucratic and rigid. In contrast, Gronum (2015) found that SMEs have more flexible structures and dynamic management which allows for rapid decision-making by responding in a timely fashion. Salles (2006) noted that SMEs' decision-making is more centralised on their owners and managers. Bianchi et al. (2015) observed that SMEs rely on a small number of customers and therefore, they operate in niche markets. Ojiako et al. (2015) argued that SMEs place a significant importance in building networks. In order to understand why SMEs are not using information communication technology (ICT), Arendt (2008) conducted research with SME owners and managers from Europe and the USA, concluding that neither funding nor technology explains why SMEs are lagging behind large enterprises in the use of ICT. The most significant barrier is a lack of skills, knowledge, and capabilities within SMEs.

## 2.2 Business Analytics

Business Analytics (BA) has emerged as an essential area of study for both industry practitioners and researchers since the 2000s. It has been used as a broader concept to encompass related terms, such as Business Intelligence or Business Intelligence and Analytics (Chen et al. 2012). However, BA is generally defined as "a set of systems, techniques and technologies which analyse data to support an enterprise to better understand its business and market" (Chen et al. 2012, p. 1166).

By employing BA as a resource, enterprises have an opportunity to generate information useful for them, in an adequate form and in a timely manner (Bose 2009). Projects which take into consideration the use of BA resources are organised around questions to which data may provide the answers (English and Hoffman 2018) and how enterprises can achieve their strategic business objectives, such as competitive advantage. This differs from traditional projects organised around defined tasks, plans and outcomes. While the conventional IT project approach focuses on operational goals, such as improving efficiency, reducing costs and increasing productivity with defined tasks and plans, projects involving BA resources change the way enterprises think and use data for their strategic decisions; they rely less on managers' assumptions and biases (Krishnamoorthi and Mathew 2018). Unlike traditional approaches (e.g., defined tasks and plans), the use of BA resources involves creating a strategy for business value creation and seeking unique insights to enable enterprises to serve their stakeholders better than what competitors are able to do (Krishnamoorthi and Mathew 2018; Marchand and Peppard 2013). Moreover, SMEs often have limitations associated with their greater dependency on individuals (generally the owners) for making key decisions, and the management style in SMEs differs from larger enterprises (Coyte et al. 2012; Man et al. 2002).

The outcomes SMEs gain from BA can differ from those gained by large enterprises and these differences depend on how SMEs position their BA resources to: (i) achieve strategic business objectives and (ii) achieve operational business objectives. To achieve both strategic (i.e., competitive advantage) and operational (i.e., business performance) business objectives, SMEs need to understand how to best use their BA assets and build BA capabilities to use these BA assets (English and Hoffman 2018; Krishnamoorthi and Mathew 2018). SMEs' characteristics (e.g., limited skills and lack of resources) entail that their BA capabilities are often different to and more limited than those of large enterprises. BA capabilities, defined as the skills needed to utilise BA assets in order to perform a BA related task (Krishnamoorthi and Mathew 2018; Wade and Hulland 2004), are grouped into four capability areas based on their similarities (Cosic et al. 2015): (i) governance, (ii) culture, (iii) technology, and (iv) people. The classification of BA capabilities provided by Cosic et al. (2015) is based on a review of 51 papers that are mostly focused on large enterprises and their BA capabilities. However, the sub-areas of these BA capabilities areas can be conceptualised differently in SMEs and this different conceptualisation can impact on how SMEs can enable competitive advantage from BA since SMEs have different characteristics from large enterprises. This paper aims to explore SMEs' BA capabilities and BA assets, and how they play a role in achieving competitive advantage.

## 2.3 Competitive Advantage of SMEs

The concept of competitive advantage has been researched, directly or indirectly, in many studies. Porter's (1980) seminal work is the starting point for most discussions on the concept of competitive advantage. Following Porter's (1980) work, Barney (1991) approached the debate on the concept of competitive advantage by focusing on enterprises' strategic resources. The author argued that an enterprise gains competitive advantage "when it is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors when these other firms are unable to duplicate benefits of this strategy" (Barney 1991, pg. 102) and Barney (1991) formulated the corresponding RBV theory. According to this theory, strategic resources with specific resource attributes, namely Valuable, Rare, In-imitable and Non-substitutable (VRIN), can enable competitive advantage (Barney 1991). Since this research acknowledges BA as strategic resource and aims to develop a deeper understanding of the use of BA resources in enabling SMEs' competitive advantage, it adopted RBV as an underpinning theoretical lens and developed a preliminary conceptual framework (Dereli et al. 2020) to explore the role of SMEs' BA assets and BA capabilities in enabling competitive advantage.

As highlighted out above, the characteristics of SMEs (e.g., regarding flexibility, management and entrepreneurship) (Buckley and Chatterjee 2012; Guarda et al. 2013) often differ significantly from those of large enterprises. While these characteristics can potentially help SMEs gain a competitive advantage, they can also create issues if not utilised effectively. For example, according to English and Hoffman (2018), if SMEs have data in a precise form that meets users' requirements, they can

strategically use it with their BA resources and produce outcomes with this data that can enable competitive advantage. However, SMEs have limited capacity to convert data into a form that fulfils these requirements. Another challenge to enabling a competitive advantage of SMEs is the lack of transparency and knowledge about the use of BA resources in the SMEs' market (English and Hoffman 2018). SMEs with little or no experience using BA may face a challenge in understanding how they can use their BA resources (i.e., BA assets and BA capabilities) to enable competitive advantage (English and Hoffman 2018). The next section explains the linkage between BA resources and SMEs' competitive advantage.

## 2.4 Role of Business Analytics in Creating Competitive Advantage

In recent years, although SMEs have started to notice the significance of the use of BA (Llave 2019), there has been no direct link created between the use of BA and SMEs' competitive advantage. A few researchers have linked SMEs' use of BA (i.e., BA resources) with SMEs' competitive advantage (Llave 2019). For instance, according to Llave (2019), a process involving the use of BA can have a positive impact on SMEs' organisational performance and this improvement can be considered as a competitive advantage. English and Hoffman (2018) suggest that the way BA activities are processed in SMEs can create essential BA capabilities and these capabilities make a fundamental contribution to enabling competitive advantage. In addition, Mikalef et al. (2018) posit that the orchestration of the BA capabilities can lead to business value creation and consequently competitive advantage. Studies conducted by Llave (2019) and English (2018) demonstrate that the linkage between BA and SMEs' use of BA to achieve competitive advantage is at an early stage. Hence, there is not a certain view on how to link the concept of competitive advantage with BA resources in SMEs. While the concept of competitive advantage applied in the RBV theory is concerned with enabling competitive advantage from enterprises' strategic resources, it does not focus on different sizes of enterprises (e.g., micro-sized SMEs and medium-sized SMEs) and SMEs' characteristics which can have a significant impact on obtaining competitive advantage. Therefore, a narrowly focused approach on how to achieve SMEs' competitive advantage from their BA resources is needed. As discussed earlier, there are uncertainty and different views about the concept of SMEs' competitive advantage and the various definitions of BA, such as process, system, technology in the literature. Hence, this research first clarified the definition of BA resources; following that it simplified the concept of competitive advantage, and lastly linked BA resources with competitive advantage by exploring the SMEs' perspectives for the role of BA in achieving strategic business objectives.

## 3 Research Methodology

As the research question of this study is: "What role does BA play in enabling competitive advantage for SMEs?", it employs an exploratory case study approach because case studies capture industry practitioners' knowledge and they can inform the development of theories from these insights (Benbasat et al. 1987). While a case study is advocated to describe unique phenomena of interest to the research (Eisenhardt 1989), a multiple case study design can allow comparison (Yin 2010). As proposed by Llave (2019), case studies demonstrate a key method of gaining in-depth understanding of phenomena of how SMEs can gain value from their use of BA.

This research applied a cross-sectional view on industries selected from the top 10 industries listed in the Australian Bureau of Statistics (2021)'s report titled count of Australian enterprises including entries and exits list. Moreover, it used semi-structured interviews as the primary data collection method. In addition to using these interviews, documentations were included as a secondary data collection method to improve the validity of this study by making data triangulation possible. Table 1 shows the overview of cases.

	<b>Employee #</b>	<b>Size</b>	<b>Industry</b>	<b>Interviewees #</b>	<b>Role of Interviewees</b>	<b>Documentation</b>
Case 1	2	Micro	Logistics	1	Managing director	Annual reports
Case 2	13	Small	Hospitality	1	Financial controller	N/A

Case 3	70	Medium	Professional services	3	CEO, COO, General Manager (GM)	Dashboards
Case 4	9	Small	Fitness	2	Owner, manager	Operation report
Case 5	20	Medium	Education	2	GM, delivery manager	Dashboards
Case 6	10	Small	Professional services	2	CEO, delivery manager	N/A
Case 7	6	Small	Real Estate	1	Manager	N/A
Case 8	46	Medium	Logistic	1	General manager	Reports
Case 9	10	Small	Fitness	1	Managing director	Marketing reports
Case 10	19	Small	Professional services	2	Operation manager, GM	N/A
Case 11	10	Small	Hospitality	2	Supervisor, manager	N/A
Case 12	3	Micro	Real Estate	2	Principal sales and marketing, principal finance	Dashboards

*Table 1. Overview of Cases*

The interview questions focused on enterprises' use of BA resources (i.e., BA assets and capabilities), definitions of competitive advantage and these questions also included general questions regarding participants' background on BA. Each interview was recorded, coded (e.g., [case number. participant number], [Case1.1]) and transcribed in full verbatims. The transcription of each interview facilitated the familiarisation with the data for researcher, which is the first step of thematic analysis. Thematic analysis is described as "a method for identifying, analysing, and reporting patterns within data. It minimally organizes and describes the data set in (rich) detail. However, it also often goes further than this and interprets various aspects of the research topic" (Braun and Clarke 2006, p. 6). Since this study follows an exploratory qualitative approach and applies inductive reasoning to identify new trends from the data set, thematic analysis is an appropriate data analysis method. In order to achieve the second step of the thematic analysis (i.e., generating initial codes), Nvivo was used as a semantic tool to generate codes from interview transcriptions and documentations. Each generated code was mapped into potential themes as part of the third step of data analysis (i.e., searching for themes). In step 3, the generated repetitive codes led to the consolidation of themes. Finally, the developed themes were assessed to see "if the themes work in relation to the coded extracts and the entire data set, generating a thematic map" (Vaismoradi, Turunen & Bondas 2013, p. 402). This step addressed the requirements of the fourth step of data analysis (i.e., reviewing themes). In step 5 (i.e., defining and naming themes), a proposition was created for each generated theme, summarising the SMEs' perspectives on the use of their BA resources, which are explained in more details in the findings section. The final sixth step of data analysis involved producing a report for the outcomes of the data analysis.

## 4 Findings

### 4.1 Business Analytics Assets

Under the theme of BA assets, the researcher explored SMEs' perspectives on their use of BA assets by asking how SMEs use their BA assets and whether BA assets play a role in enabling competitive advantage. This included the findings of SMEs' definitions for BA assets and SMEs' utilisation of BA assets in achieving competitive advantage.

Most participants described their BA assets utilisation as marketing, managing operation, reporting, and decision-making. For example, for decision-making, C8.1 stated: "we can make our decision about

*the products and services that we can give out. So, when we pull data from our system, we can see what types of products we have available. We have got quite a detailed information of products on the system.*” In addition, participants were asked for their categorisation of BA assets. Software, tools, data and dashboard and systems are defined as elements of BA assets. Software was the most repeated code during data analysis of BA assets, appearing eight times across twenty interviews. C10.1 mentioned software as follows: *“BA asset is software. There is a variety of tools, software that we can use. We always start with capturing what we need from software and then from there depends on what value we would like to achieve to whether we bring in other BA tools as well”*. On the other hand, process and strategy were two codes that mostly emerged during the data analysis of the responses relating to BA assets. C10.2 defined BA assets as: *“the software is one of the BA assets we are using, and ... BA asset would be how we are using it. We hold discussions to stay current and regular with each other to see how things are going and work off each other. We rely not only on the outcomes of software, but we also rely on our strategy for using the software.”* The definitions of each component of BA assets are listed in Table 2.

<b>BA Assets</b>	<b>Components</b>	<b>Definition of Component</b>
BA Assets	BA Software	A set of analytics programs that run BA activities, including optimising solutions or process
	BA Tools	A variety of BA software that captures data from BA systems and incorporates the data into a repository
	BA systems	A group of interacting analytics elements that executes according to a set of unified BA activities
	Data & Dashboard	A graphical view of the key business metrics which visualises BA
	BA Strategy	A general plan on how to utilise BA to achieve one’s longer-term goals under different conditions
	BA processes	A set of BA activities that interact to produce a specific result, such as sales pipeline or annual revenue

Table 2. BA Assets

## 4.2 Business Analytics Capabilities

Under the BA capabilities’ theme, the researcher explored SMEs’ perspectives on their use of BA capabilities (i.e., governance, people, culture and technology BA capability area) by asking how SMEs use their BA capabilities and whether BA capabilities play a role in enabling competitive advantage. This section outlines the findings of the SMEs’ definitions for these BA capability areas and their utilisation by SMEs to obtain competitive advantage.

In the governance BA capability areas, the sub-areas data governance, data engagement, trial and error, and risk management were identified. Data governance was the most repeated component, mentioned in seven cases by eleven participants. C3.1 stated: *“governance is tremendously important, and it is an important key to success as it involves business engagement. Therefore, you obviously need engagement skills to develop the data governance”*. In addition to data governance, the participants also acknowledged that data structure could not be refined at first time. A trial-and-error process is required to lead to the development of unique BA capabilities for their enterprises. Case3. 3 argued: *“whether we use tools, systems, or insights, BA was part of our regular cadence. So, the business built its competencies through its operating rhythm around the use of data”*. In the context of BA, the people BA capability area is defined as focusing on employees who use their organisations’ BA resources as part of their daily task. In this research, it was found that the people BA capability area involves technical skills, soft skills, experience, and leadership. C5.1 stated: *“one the most important skills are internal skills that your employees have, like soft skills, such as communication skills and empathy, second, how you use these soft skills for your customer to choose your services.”* Moreover, employee experience was stated by C8.1 and C1.1, respectively, as, *“the experience that an employee has in the use*

of BA in the organisation” and “*what we prefer is the employee experience with the BA resources we are currently using*”. In the technology BA capability area, use and development capabilities were found as sub-capability areas during the analysis. Use capability was mentioned nine times and stated by C11.1 as follows: “*BA resources have to be user friendly. It should not be too complicated. And it should have a simple interface. We do not have a person to train a new employee on how to use the complex BA system.*” Furthermore, C12.2 indicated that “*usability of the system improves both staff and client experience and increases the ability the get real-time data to help decision-making.*” Lastly, the significance of development capability is explained by C3.3 as “*a certain level of deep customisation and specific enhancements or changes make BA fit the organisation.*” The BA capability areas, their components and the definitions of each component are listed in Table 3.

<b>BA Capability Area</b>	<b>Components</b>	<b>Definition of Component</b>
Governance	Data Governance	Setting up the structure of a system of decision rights accountabilities for the use of BA resources
	Data Engagement	Taking data to use it to engage in daily BA tasks
	Trial and Error (T&E)	Refining the governance structure over time through T&E
	Risk Management	Risk management activities taken according to the outcomes of data analyses
People	Technical Skills	Employee technical skills to use BA resources
	Soft Skills	Employee skills that is desirable in all professions
	Experience	Employee experience in using BA resources
	Leadership	People in leadership positions at the use of BA in SMEs
Culture	Change Management	Management of the organisational behaviour change
	Transparency	Operating in a way that open for all employee to show business progress
	Data driven decision-making	Using insights derived from data to make decisions
Technology	Use Capability	Usability of BA
	Development Capability	Customizability of BA

*Table 3. BA Capabilities*

### 4.3 Competitive Advantage

In the twenty interviews with SMEs’ owners or managers across the twelve cases studied, this research analysed the notion of competitive advantage expressed by the informants from SMEs. The researcher first repeated the definition of competitive advantage and asked, “How do you define enabling competitive advantages in your organisation?”. Remarkably, it was noted that micro and small-sized SMEs’ definitions refer primarily to their operations and how they achieve their operational business objectives. As understood from the literature, competitive advantage can have different foci based on the method applied by the enterprises or enterprises’ characteristics. However, the definition of competitive advantage is different from achieving operational business objectives. Examples from the micro and small-sized SMEs include C2.1: “*our business competitive advantage is the uniqueness of the venue. That is the way we see it as inimitable here*” and C10.1: “*competitive advantage is something that you do differently and better by focusing on your operational business goals*”. On the other hand, the example of medium-sized SMEs’ competitive advantage given by C5.1 is: “*competitive advantage is repeated good reputation of our brand and company. So, our competitive advantage is turning this reputation into a strategy that our competitors cannot imitate*”.

The findings drawn from the analyses showed that micro and small-sized SMEs mixed the definition of competitive advantage with the description of achieving operational business objectives. Hence, SMEs' use of BA resources does not match the VRIN conceptualisation for micro and small-sized SMEs (see section 2.3), nor does it have a particular view of VRIN. The 'valuable' criterion from the set of VRIN criteria is defined as analysing and defining business opportunities which is generated as an outcome from the use of BA resources. The 'rare' criterion is defined as uncommon way of using BA resources. The 'inimitable' criterion is defined as a way of using BA resources which is difficult to imitate, and the 'non-substitutable' criterion is defined as BA resources cannot be substituted by any other available business resources.

It is evident that the findings of this research highlight the differences between SMEs and large enterprises with respect to the use of BA capabilities and assets. In addition, this research revealed that an investment in BA resources can change the way SMEs make decisions, define their strategic objectives and hence, it can replace the managers' assumptions and biases with hard evidence based on data, which will make an important difference in their decision-making. Consequently, there is a need for SMEs to have a deep understanding of the affordances of their BA resources (i.e., BA assets and BA capabilities) and the key elements of SMEs' BA resources which can contribute business value, thus gaining competitive advantage. While the earlier research by Cosic et al. (2015) have reported on large enterprises' BA capabilities, this research explored and outlined SMEs' BA capabilities and BA assets, which differed from those of large enterprises. Considering the role BA capabilities can play in achieving SMEs' competitive advantage put forth by Llave (2019), this research also gained a deeper understanding of competitive advantage as viewed by SMEs. The findings to address the research question are discussed in the next section.

## 5 Discussion

As suggested in existing literature, competitive advantage has different definitions. Nevertheless, this research also found that although the definition of competitive advantage differs among various size enterprises (e.g., SMEs and large enterprises), it also changes among SMEs (e.g., micro-sized SMEs and medium-sized SMEs). According to Gupta (2016), achieving competitive advantage from BA is not only about making an investment in BA assets and using them for their operation, but also having BA capabilities, where an enterprise can gain insights from data and consequently, gain value. BA scholars believe that BA can enable enterprises to derive different types of value, such as better performance (Krishnamoorthi and Mathew 2018) or improved business strategy (Aker et al. 2016; Shanks and Bekmamedova 2012; Vidgen et al. 2017). Mikalef et al. (2020) discussed the value creation stream from BA capabilities which can lead to competitive advantage. However, there is limited literature about how competitive advantage can be directly achieved from BA capabilities in SMEs.

Kunc and O'Brien (2019) described how BA supports businesses to achieve their strategic objectives. The authors described an 'achieving strategic objectives' process with five different activities, namely setting direction, analysing the environment, formulating strategic options, rehearsing, and choosing options and implementing strategy. All the activities in the process of achieving strategic business objectives are always supported by BA in enterprises. However, according to these findings, interestingly, the first activity (i.e., setting direction) is only sometimes supported. Hence, according to Kunc and O'Brien (2019), enterprises mostly do not use BA for achieving strategic objectives, but mostly for achieving operational objectives. Although the authors determined that achieving strategic business objectives (e.g., enabling competitive advantage) can be supported by using BA, there is a danger for managers to perceive the use of BA as operational support for decision-making. In this research, this possibility was seen in micro and small-sized SMEs which used BA on an ad hoc basis, whereas medium-sized enterprises used BA as a strategic resource and used the outcome of their BA resources as part of their services and; therefore, medium-sized SMEs can enable competitive advantage from their use of BA. In addition, the findings show that medium-sized SMEs use various BA resources and they consider whether their use of BA resources aligns with VRIN conceptualisation or not; on the other hand, micro and small-sized SMEs use their BA resources to monitor their operational business objectives achievements. Thus, in medium-sized SMEs, BA resources are connected with a solid arrow (see Figure 1) to VRIN criteria which are linked with competitive advantage with a dash arrow, and in micro and small-sized SMEs BA resources are connected with a solid arrow to operational business objectives (see Figure 2). The arrows between BA assets and BA capabilities in Figure 1 and Figure 2 demonstrate that BA resources consist of BA assets and BA capabilities. Moreover, findings from this research reveal that although BA capability areas of SMEs are similar to large enterprises', SMEs have different elements for

each capability area, which are impacted by their characteristics, compared to large enterprises. In addition, SMEs have a narrower view of BA capabilities.

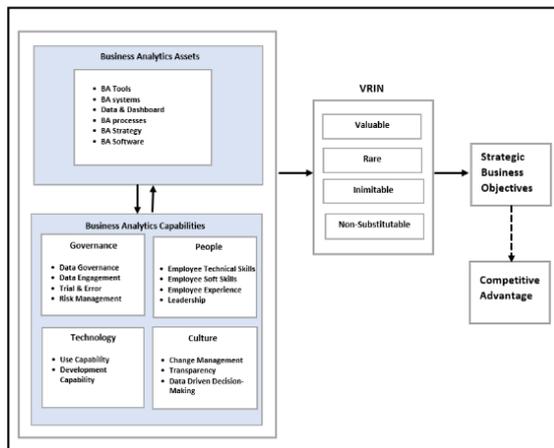


Figure 1: Conceptual framework for the role of BA in achieving strategic business objectives for medium-sized SMEs

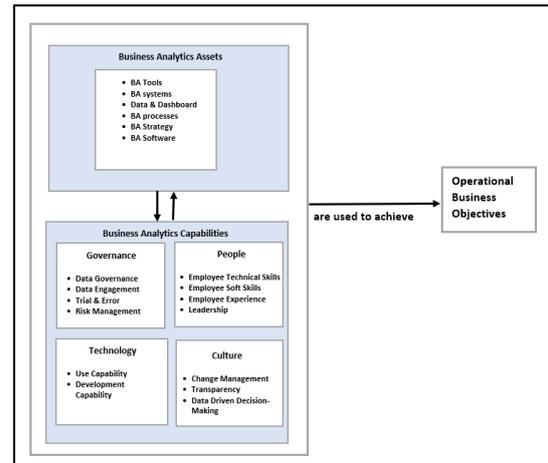


Figure 2: Conceptual framework for the role of BA in achieving operational business objectives for micro and small sized SMEs

## 6 Conclusion

The paper has explored how SMEs use their BA resources in enabling competitive advantage. Based on empirical data gathered in this research about SMEs' BA resources and competitive advantage and the literature review on SMEs, BA and competitive advantage, it concludes that SMEs' BA capabilities and BA assets differ from large enterprises. While this paper finds that these differences in BA capabilities can play a significant role in achieving both strategic and operational business objectives, it has shown how the use of BA can match with VRIN conceptualisation as well as obtaining competitive advantage in medium-sized SMEs. As the existing competitive advantage theories (i.e., RBV, dynamic capabilities) lack a detailed view of how to enable competitive advantage from different resources (i.e., BA resources) and do not particularly focus on any enterprises (i.e., SMEs, large organisations), this paper's outcomes can be considered a contribution to the body of knowledge on the role BA plays in enabling competitive for SMEs. In addition to the theoretical contribution of this study, it contributes to practice by informing SME practitioners on their BA assets and BA capabilities in achieving their strategic business objectives as well as operational business objectives, and the role that their organisations' BA resources can play. Future research can aim to verify medium-sized SMEs perspective of competitive advantage obtained from BA. In particular, they can focus on the impact of the perspective of medium-sized SMEs, along with their measurement criteria in evaluating BA resources to achieve strategic business objectives.

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