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BUSINESS ACUMEN: FINAL REPORT

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EXECUTIVE SUMMARY

This report presents the business acumen research work undertaken by Professor David Gilbert and his research team. The research commenced in 2018, as a research funded by Quad Assessment to examine and test the validity of the Business Acumen Gauge (BAG), a business acumen assessment tool. The research team consists of Professor David Gilbert as the principal investigator, Dr. Fararishah Abdul Khalid and Dr. Lin Xiong as Research Fellows, and two researchers from RMIT University; Associate Professor Afreen Huq, and Dr. Ashenafi Biru. This team has significant expertise in the Entrepreneurship and Management areas, and combined capabilities in conducting quantitative and qualitative research.

The research is divided to three phases: (i) a quantitative study validating and extending the preliminary business acumen research that was undertaken by Quad Assessment, (ii) a qualitative study in partnership with Murdoch Children's Research Institute (MCRI) to gain an in-depth understanding of business acumen amongst medical researchers, and (iii) a quantitative study to test the causal relationship between business acumen and additional factors and firm performance, as well as the mediating impact of innovation capability on firm performance. The research is now in Phase 3, where a survey questionnaire is planned for distribution to 250 SMEs from April 2021.

The first part of this report provides an overview of the three phases of this research in more detail. This is followed by the publications that have resulted from the research, both academic as well as reports generated explaining the course of the research. This report also acknowledges that business acumen is fast becoming a management lexicon as we have discovered in the literature review, with business acumen being used across many disciplines including healthcare, engineering, and IT fields. Following this, we detail the literature review approach in collecting all significant journal articles that have been published on business acumen. Based on the journal articles collected, we have identified seven key themes that represent business acumen that provides a basis for future research aimed at defining, measuring and operationalising business acumen. We conclude this report by identifying potential areas for future research of business acumen and propose that additional capabilities such as entrepreneurial acumen, be included in the future developments of the BAG.

1.0 THREE-PHASE RESEARCH

'Business acumen', or the skills and knowledge underpinning business capabilities, presents an undeniably essential possession for managers. However, business literature has yet to operationalise these competencies beyond normative commentaries. This study aims to progress business acumen from a generalised popular understanding to a theoretically robust concept. By defining, measuring and improving the business capabilities wielded by managers in organisations at the forefront of innovation, business acumen offers a practical pathway for commercial development.

The research project started with a quantitative study (Phase 1) to validate and extend the preliminary business acumen research undertaken by Quad Assessment. The study utilised Quad Assessment's extensive database of global firms in order to define, test, and measure and theorise about the constituent elements of business acumen. The instrument validity and reliability were tested incorporating all 11 capabilities of the BAG. Exploratory factor analysis (EFA) and confirmatory factory analysis (CFA) were employed, with a total of 6,340 participants involved. Tests for independent EFAs suggest that most items load on their target constructs, except for the models of Broad Scanning and Duty-of-Care, which revealed two-factor solutions.

Following this, the research team undertook a qualitative study (Phase 2) in partnership with Murdoch Children's Research Institute (MCRI) to gain an in-depth understanding of business acumen in a setting where translation of high value IP is imperative to long-term success. In this study, a total of 15 medical researchers across career levels were interviewed over a period of three days to gain insight on their opinion regarding business acumen. The key personnel of the interviews were made up three groups: the business development team, early-career researchers, and the technology arm of the research institute; each group represented by 5 people. Each team detailed their roles at MCRI and their general understanding of what business acumen is. During the interviews, participants were assessed on their ability to understand the concept of business acumen, their view on the importance of business acumen in their line of work, and the actual level of business acumen in the research institute. Each interview lasted about 50-60 minutes and was recorded using an application called Otter.ai. The interviews were guided by an interview protocol consisting of 4 sections: Background, Business Acumen in Organization, Generational Difference in Understanding Business Acumen, and finally, Future Capabilities Required.

The results from the qualitative data indicated that the capabilities measured by the BAG were relevant and important and also that additional factors were likely to be associated to business acumen, such as generational differences, entrepreneurial mindset, agility, and the impacts of big data. These results

helped inform the next phase of research, an extension of the BAG, whereby a causal model has been developed. In this causal model, the BAG capabilities will be tested in combination with measurement items found to be significant by other research in a quantitative study to examine their impacts on firm performance and innovation capabilities. This will have broader implications for the innovation and performance outputs of a range of companies in translating valuable organisational knowledge and capability to commercial outcomes.

The questionnaire incorporates the measurement items that were significant in the quantitative analysis of the BAG and additional items (i.e. generational differences, entrepreneurial mindset, agility, and impacts of big data) that are considered essential from theorists in the field and their impacts on firm performance, and a mediating factor (firm innovation capabilities). The proposed theoretical framework for this study is presented in Figure 1. The proposed sample for the survey questionnaire is 250 tech-based companies, accessed through Quad Assessment's database. The questionnaires are expected to be distributed to 250 companies from early April 2021. Data will be collected from the questionnaire portals and will be analysed using SPSS. The questionnaire aims to further refine and position the BAG in responding to recent global circumstances and results from the qualitative study conducted at MCRI and how this may have significant impact on tech firm's performance and innovation capabilities. It is envisioned that stronger causal links will be established between business acumen, which is widely acknowledged as vital for long term competitive advantage of firms, and critical performance outcomes of firms that when aggregated provide compelling evidence to support the notion of significant impacts on national competitive advantage.

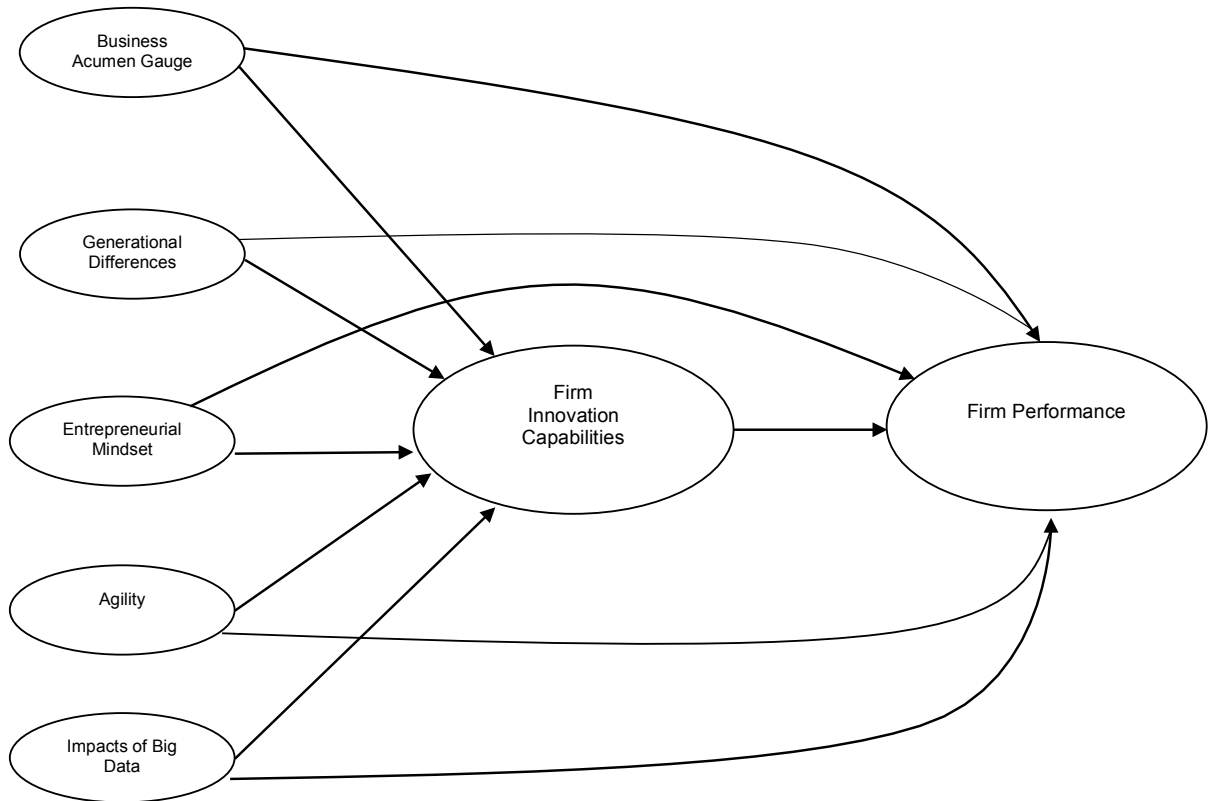


Figure 1: Proposed theoretical framework for the quantitative study (Phase 3).

2.0 REPORTS GENERATED FROM THIS RESEARCH

The team has produced a number of reports since the beginning of this research to update the progress and milestones of the BAG research. The reports that have been written are listed below:

1. Business Acumen Gauge Instrument Validity and Reliability (June 2018)
2. Business Acumen Gauge Literature Review: Definitions, Measurements and Dimensions (August 2018)
3. Business Acumen: Review of Literature and Future Directions (December 2019)
4. Business Acumen: A Contemporary View (July 2020)
5. Quad Assessment Research Plan 20/21 (December 2020)

3.0 PUBLICATIONS GENERATED FROM THIS RESEARCH

The research has also resulted in a number of academic publications, at international conferences and in peer-reviewed journals. Below are the papers that have been generated from this research:

Peer-Reviewed Journal Articles:

1. Organizational Dynamics – **“Business Acumen: Past beliefs - future directions”**, October 2019. The paper was not suitable for the journal, and will be reconsidered for another journal, i.e. **Business Horizons**.
2. Journal of Small Business Management – **“Business acumen — a systematic literature review and empirical validation”**, January 2021. This paper was initially not accepted, but is now being considered for another journal (International Journal of Management Reviews).
3. Academy of Business Journal - Paper was published in March 2021 and is entitled **“Business Acumen and the Future of Work”**. This is a special edition journal focusing on Covid-19 issues.
4. The Leadership Quarterly – Paper was submitted on 1 March 2021 and is entitled **“The Psychometric Properties of a Commercial Diagnostic Assessment Tool to Measure Business Acumen”**.

International Peer-Reviewed Conference Papers:

1. Academy of Management Conference 2019– **“Business Acumen: What do we know and where do we go from here?”** December 2019. Paper was not accepted and has been reshaped into a literature review paper and is now in the process of targeting to a suitable journal.
2. Academy of Business Research Conference 2020 (USA) – **“Business Acumen and the Future of Work”**, August 2020. **The paper received the ‘Best Paper Award’ for the Conference.**
3. 2020 ISPIM Global Connects (Osaka, Japan) – **“Easing the medical research translation-outcome gap: does having business acumen help?”** December 2020.

4.0 GLOBALLY RECOGNIZED NEED

Over 50 universities worldwide recognize the importance of business acumen, offering business acumen courses either as part of a program or as a short course including Harvard University, University of Melbourne, Aalborg University, Columbia University, RMIT, Liverpool Hope University, University of Canterbury, Singapore University of Social Sciences, Singapore Management University, UNSW, and University of Minnesota. These courses offer a combination of knowledge and understanding of the operational, resource, financial, and other functions of an enterprise, commercial acumen, and leadership development courses.

Business acumen is also actively featured on the World Wide Web, with some 24 Google search pages on business acumen. These pages present business acumen highlights and links to business acumen for practitioners and academics. In addition to higher educational institutions offering courses on business acumen, there are a number of professional services firms and consultants such as BTS in Sweden that bring to the market a strong focus on business acumen. There are also online magazines dedicated to discussing the topic of business acumen, such as the Business Acumen Magazine that highlight news, events, and directories for corporate and business communities.

Business acumen studies have been published in various fields apart from business, including the health sciences, engineering and IT, indicating critical intellectual property needs are materializing, leading to an emphasis on business acumen not just amongst business leaders, but also amongst leaders in a variety of domain specific fields. The current state of play shows us that our understanding of business acumen appears to be based on long held notions with very little supporting empirical evidence, and this lack of knowledge development on business acumen is at odds with contemporary times driven by agility, technology and innovation. There is also a concerning lack of investigation into underlying behavioural aspects that may drive approaches to business acumen from both dispositional and situational perspectives. This has resulted in largely descriptive outcomes regarding our understanding of both the 'what' and 'how' concerning business acumen. Current dynamic and uncertain environments require high value employees to be more than technically proficient in distinct domains. The chorus for professionals to be 'entrepreneurial' and 'innovative' grows continually louder as more lean and agile approaches to business are deemed necessary for survival and growth. Business acumen is another 'label' that is often thrown into this mix, but perhaps suffers some

legitimacy concerns due to the lack of a similar scholarly foundation. This has left a vacuum that practice has endeavoured to fill, albeit with varying degrees of success.

5.0 BUSINESS ACUMEN: ACADEMIC RESEARCH

Research on business acumen can be traced back to the 1920s. Despite nearly 100 years of research we are yet to develop an accepted definition of business acumen, with current definitions covering a wide set of elements thought to constitute business acumen. These range from notions of 'savviness' to a 'deep understanding of the integrative nature of all aspects of a business'. *Business acumen is widely acknowledged as important, yet little consensus beyond agreeing on this importance is to be found in academic circles and indeed as well amongst many practitioners, who may just be ahead of the academic world in shaping a more complete and contemporary understanding of business acumen.* Considering this lack of understanding regarding business acumen in the literature, the research team undertook a systematic literature review to uncover a deeper and more nuanced understanding of business acumen. Efforts to define and measure business acumen have gathered more momentum since the early 2000s, covering a range of issues including e.g. understanding the organization's business model and financial goals; better utilisation of economic, financial, and organizational data; strategic thinking and more extensive development of soft skills including empathy, communication and emotional intelligence - but little of the hypothesising and analysis is built on theory or on empirical data. On-going research on business acumen conducted by our research group provides an in-depth review of pertinent literature on business acumen focussing on relevant definitions, dimensions, survey instruments/ measurements, conceptual frameworks and/ or tested hypotheses between business acumen and other factors.

A search of various data sources (i.e., academic journal articles, magazines and theses) reveals that in 2020, there is still no universally accepted definition of business acumen, nor any commonly used, validated survey instruments. A systematic classification of definitions, themes, measurement and hypothesised causal relationships was conducted to build a knowledge base on which a more empirically-driven development of our knowledge regarding business acumen can proceed. The first step involved searching electronic databases including EBSCOhost, Emerald insight, ProQuest, Science Direct, Digital Dissertations, JSTOR, and Google Scholar. The keyword identification deployed was "acumen" and "business acumen". Most studies have treated business acumen as one sub-component of leadership or other managerial competencies. Furthermore, although the vast majority of

research views business acumen conceptually as a *multidimensional factor*, there were only four studies that had undertaken validated empirical testing – and all four did so specifying a *one-factor construct*. Financial resource management, human resource management and technology management are the most often cited one-factor dimensions of business acumen. The results of the literature search revealed the following:

- 79,981 articles from the 8 databases had "acumen" found in "anywhere in the article"
- 54,698 articles had "business acumen" found in "anywhere in the article"
- 252 articles had "business acumen" found in "title"
- 54 peer-reviewed articles were retained
- 39 articles found from the bibliographies of the 54 articles
- 93 articles were finally selected

Given that business acumen has been identified as important over some ten decades now, it is telling that of nearly 80,000 academic papers examined, only 93 papers progressed beyond putting 'Business Acumen' in the title of the paper and only 17 papers from that nearly 80,000 collection of articles, presented any empirical data and analysis to support the research conducted.

The under-specification of business acumen presents some challenging questions: "Is the phenomenon too hard to pin down?" The research team does not believe so. "Has the approach to date been too ad-hoc and not of a scientific standard required to be published in peer reviewed journals?" The research team believes this certainly is a significant factor. "Lastly, is there a reliance on the position that we are all actually talking about the same phenomenon?" The research team concurs that despite an inability to define and measure business acumen, there does appear to be implied acceptance that we are all talking about the same thing. It turns out however, that we are not all talking about the same thing and greater empirical precision is required to advance our understanding of a critical phenomenon that has been acknowledged as so important – business acumen was identified along with innovation as one of the two defining critical, success factors driving the USA's emergence as a post WWII global leader (United States Chamber of Commerce, 2006).

Possibly the most significant finding, with respect to theoretical development of business acumen and practice-based approaches to developing 'better business acumen', that underlies the lack of progress to date - is that both research and practice has almost universally been undertaken from a functional or

discipline-specific context with emphasis skewed to that discipline whether it be HR, finance, leadership or a technical focus. This was then more often than not, overlaid with a call for more business acumen to better translate these discipline skills into a higher order capability that then apparently impacts positively on a firm's competitive advantage. In contrast, results from this research study indicate that business acumen is composed of a broad set of strategic capabilities (as opposed to oft cited tactical interventions) that are cross-cutting in nature, irrespective of discipline, with the one functional imperative being understanding your numbers. This nuanced difference speaks to a more integrative understanding of business acumen and also to the notion of learning agility and translative capacity.

6.0 SEVEN EMERGING THEMES

The extensive systematic literature review resulted in 7 emerging themes that provide a basis for future research aimed at defining, measuring and operationalising business acumen. These seven themes conceptualise what is current knowledge and do not preclude the real need to research emerging needs. Empirical data and analysis supported by scientific rigour is required to establish a robust basis to deepen our understanding of what business acumen is and how we can build individual, firm and national expertise in this area. The 7 emerging themes include:

1. Business savviness
2. Financial competency
3. HRM competency
4. Technological competency
5. Leadership (Strategic) competency
6. Personal qualities (Soft skills)
7. CEO Performance

The 7 emerging themes demonstrate that the conceptualization of business acumen amongst scholars is primarily driven by functional capabilities. Whilst this may (or may not) be appropriate, there is, as we have highlighted some concern regarding the lack of empirical data and testing to support this conceptualising. Quite often, business acumen is arbitrarily generalized based on the lens from which the researcher viewed things (e.g. Finance, Marketing, HR, IT or Leadership) and assumptions offered -

but rarely tested. For example, one significant assumption, readily witnessed in the academic literature is that low business acumen of executives, directly correlates to poor competitive advantage of the firm. Yet, the research team has found little evidence as to what constitutes ‘low business acumen’ and how this is causal in terms of firm competitive advantage outcomes. From the systematic literature review conducted, we have derived 42 primary codes associated with the seven themes as shown in Table 1 following. The 42 themes provide a robust basis built on existing theory, for future development of our theoretical and subsequent (or concurrent) practical understanding of business acumen and the effects it may have on firm outcomes.

Table 1: Emerging themes and associated primary codes from the literature

Emergent themes	Primary codes
Business savviness	<ul style="list-style-type: none"> ▪ Organizational astuteness ▪ Being grounded in business and industry ▪ Significant operational experience ▪ Knowledge of business process and structure to serve core business purpose ▪ Commercial orientation ▪ Market awareness ▪ Holistic understanding of internal and external business environment (local and global) ▪ Professional expertise ▪ Executing business plan ▪ Analytical skills
Financial competency	<ul style="list-style-type: none"> ▪ Familiarity of financial levers ▪ Budgetary skill ▪ Ability to raise capital ▪ Maximizing assets ▪ Application of financial data ▪ Effective Cost management
HRM competency	<ul style="list-style-type: none"> ▪ Understandings of HR principles and practices ▪ Knowledge of management principles ▪ Cross-cultural management skills ▪ Relationship management ▪ Ability to recruit and train knowledgeable staff ▪ Effective contract management
Technological competency	<ul style="list-style-type: none"> ▪ Incorporating new technology ▪ Knowledge and application of new technologies
Leadership (Strategic) competency	<ul style="list-style-type: none"> ▪ Organizational leadership ▪ Being a role model in business and industry ▪ Recognizing business priorities

	<ul style="list-style-type: none"> ▪ Ability to formulate strategies ▪ Strategy implementation ▪ Stakeholders orientation
Personal qualities (Soft skills)	<ul style="list-style-type: none"> ▪ Natural inquisitiveness ▪ Foresight or visionary ▪ Entrepreneurial spirit ▪ Emotional and social intelligence ▪ Achievement orientation ▪ Physical and emotional stamina ▪ Cognitive skills ▪ People skills to drive change
CEO Performance	<ul style="list-style-type: none"> ▪ Generate profitability ▪ Succession planning ▪ Creating value proposition ▪ Producing quality products

7.0 KEY FINDINGS

In addition to unfolding the various definitions of business acumen from the literature review, the team has also validated some of these definitions with the qualitative data collected from the work at MCRI. Triangulation between various data points drawn from these sources has led to the following findings.

Business acumen is linked to the C-suite

One key theme that emerged from this research review, draws attention to the capabilities of CEOs and perceived temporal links to greater business acumen. Similar C-suite positions including CKOs, CMOs, CIOs, and CTOs have also according to many analysts, been observed to be where the majority of a firm's business acumen resides. This theme captures a potential shortcoming with our current understanding of just what business acumen is and how we might measure and improve critical issues related to the phenomenon; business acumen is perceived to be directly related to experience! Researchers irrespective of discipline (see e.g. Barnett and Tichy, 2000; or Bissessar, 2010), associate greater business acumen with executives who have more experience. This assumption may indeed be (partially) accurate however, none of the studies examined presented any modelling that looked at either mediated or moderated relationships between experience and greater business acumen, highlighting that even the most basic assumptions regarding business acumen have not been tested or validated.

More recent research has started to challenge this assumed relationship between experience and greater levels of business acumen. A school of thought in the academic literature has emerged over the

past decade theorising that business acumen is actually just as important, if not more important, for more junior or less experienced employees. Kim and Longest (2014) and Liang, Wang and Lazaer (2018) both call for further research to be conducted concerning generational differences. Given the decidedly strategic profile of entrepreneurialism globally, combined with more agile business practices and sharper cycle times driven by big data, technology improvements and better educated and more demanding consumers – the authors of this report concur and see this as a promising avenue of future research. As Gomez and Zakovich (2008) observe, employees are now expected to think like CEOs.

Business acumen is linked to success in multidisciplinary fields

The selected articles represent a number of distinct fields that discussed a common theme – business acumen's role in driving organizational performance (Veliyath, Stivers, Hair, Joyce and Sarstedt, 2012). In the audit field for example, business acumen is perceived to be responsible for reducing costs, increasing revenues, and expanding business (Tan, 1999). In the medical field, business acumen has been mooted to be a competency that is important amongst CEOs of hospitals, surgeons and nurses (Bliss and Caputy, 1995). Business acumen is feted as a 'valuable skill' for research and development managers and linked (though not empirically) to successful business and commercial development of research outputs (Pallarito, 2005). Business acumen has also been prescribed as essential in graduates in the engineering (Clardy, Sarkani and Mazzuchi, 2017), construction (Arain, 2013), and information technology (Bassellier and Benbasat, 2004) fields to better prepare students for the job market by focusing on developing skills that cannot be offshored. Even in religion we see business acumen described as an essential asset in sustaining religious organizations (Wallace, 2017). Music artists too are equally deemed in need of such acumen, particularly marketing knowledge, in an effort to adapt to changing market conditions in the music industry (White, 2007).

The achilles heel of this widespread assignation of causality between business acumen and success is that there is little empirical proof to justify such claims. Whilst there does appear to be wholesale acceptance of the value of business acumen to top line, bottom line and sustained competitive advantage in the academic literature, supporting evidence is thin on the ground. This provides a broad opportunity for researchers to develop from a theoretical base, a body of work that clearly defines what business acumen is, how we measure it and what impacts it might have on both individual and firm level outcomes.

Business acumen is linked to a range of capabilities

According to many analysts, business acumen synthesises multiple capabilities, and those that possess (these hard to pin down) capabilities are armed with astute knowledge and exceptional abilities (Morrison, 2000). As a result of this prescribed significance and the positive impact it apparently brings, business acumen has morphed into a capability catchall that has grown expansively over the last twenty years. One of the most commonly associated capabilities with business acumen is “strategic”; from being a strategic planner, to having strategic thinking skills, to executing strategic approaches to commercial problems (Guns, 1997). Other capabilities regarded as being part of business acumen include having a clear understanding of financial planning and ability in performing cost-benefit analysis (Gratton, 1987). Morrison (2000) believes there are five separate components of competencies of business acumen: depth of field (an ability to switch perspectives from global to local) entrepreneurial spirit, professional expertise, stakeholder orientation, and total organizational astuteness. Tennent (2008) listed six areas of business acumen: engaged with business strategy, understanding key performance indicators, reading and interpreting financial reports, contributing to the budget process, identifying financial implications of decisions, and continuing to seek ways to add value. While Hurd and Buschbom (2010) recognized four main competencies associated with business acumen; business (one would hope so), financial management, human resources management and technology. Testament to the under-developed state of theory however is that skills, competencies and capabilities are often used interchangeable to ‘deconstruct’ business acumen. Psychology and organisational theorists such as McClelland (1973) or Prahalad and Hamel (1990) would be alarmed as they are not one and the same thing and by doing so any theory building around business acumen becomes ensnared in loose foundations; detracting from a domain of knowledge and practice that warrants greater respect.

Business acumen is linked to learning agility

The fourth theme that emerged from the literature suggests business acumen can be taught and learned and that it is constantly evolving (Veliyath et al., 2012; Baharom, Salleh, Sivapalan, Ali and Abdullah, 2014; Gomez, 2014). This view departs from the more traditional perception of business acumen being directly correlated to experience. There is emerging evidence in the literature that business acumen can be taught and learned on the back of studies highlighting the absence of business knowledge amongst graduates, especially from technical fields, such as engineering and information technology (Turner and Gianodis, 2018). Particularly in the USA, there are now strident

calls for universities to blend entrepreneurial programs across faculty disciplines in an applied, real-world manner. It is clear that producing graduates with at least some degree of business acumen is no longer just about what material or curriculum is offered. Questions are being raised also about how the material is delivered, who delivers the material, and when the material is delivered (Turner and Gianodis, 2018). There is some evidence in the field, that programs initiated in the 1990s to integrate business acumen with IT skills in the curricula, via double majors in business and IT or business and engineering are bearing dividends and this trend will become more globally widespread across the higher education and workplace training sectors (Longo, Alexander, Earle, Pahl and Koska, 1990).

As we navigate the arrival of the Fourth Industrial Revolution, it is clear that the future of work requires agile, quick-to-adapt employees armed with cross-functional skills. Once siloed fields such as genetics, artificial intelligence, robotics, nanotechnology, 3D printing and biotechnology are blending and amplifying skills and capabilities leading to new competencies that are driving seismic change to the way we live and work. The rapid pace of change and the requirement for more agile and adaptive responses to these forces offers a fertile landscape for better understanding of the 'what' and 'how' in relation to business acumen. It also calls into play the perceived correlation between business acumen and time spent in the trenches. Businesses will not have the luxury of time to wait for their employees to accumulate the required experience and then to translate this into increased business acumen. On the one hand, ageing populations in many countries would mean that there must be a lag between accumulation and execution if this theory holds true, while conversely countries with younger populations like Vietnam will need to wait as its bank of business acumen matures. This of course opens up opportunity for learning institutions and organisations to upskill their human capital in meeting and potentially exceeding the demands of a new world order.

8.0 CONCLUSION AND FUTURE RESEARCH DIRECTIONS

The literature mostly positions business acumen as a set of capabilities, skills or competencies that stem from accumulated experience, which indirectly implies that one would only possess business acumen after having had a required number of years in the field. This also indicates that business leaders with less experience may generally be associated with possessing less business acumen compared to a leader who has a greater number of years behind them in business. Yet, we have found little evidence as to what exactly constitutes 'greater experience' and how 'better business acumen' is

measured against this greater experience. Nor are we enlightened as to how the connection between a deemed set of capabilities and greater business acumen is then assessed to impact competitive advantage. This is of interest given that much of the literature on business acumen, fragmented and untested as it is, was developed during Industry 2.0 and 3.0 times and knowledge transferability to current times may not be entirely appropriate. Essentially, many of the assumptions made in the literature have little research basis, yet what remains steadfast is the belief that *business acumen is not only important, it is essential*.

Due to the current lack of scientific-based evidence, future research would potentially benefit from examining what is happening in practice. More often than not, theory informs practice, but given the current under-developed state of theory with respect to business acumen, there is an opportunity to fast track our understanding of business acumen and to rigorously test this understanding through the field of practice. Whilst practice is similarly still coming to terms with the concept of business acumen, there are some markers in the sand such as the Business Acumen Gauge that may afford the opportunity to make better progress in the study and operationalisation of business acumen in contemporary environments, that just may see the Rorschach blot that is the current state of play, brought to a state of clarity and usefulness. The following are hence, suggested future research directions in the field of business acumen:

- Develop a working definition of business acumen based on theory and practice. Without this, theoretical development in terms of explaining, testing and predicting will remain stunted, fragmented and essentially irrelevant. Irrespective of discipline bias, we need to be talking about the same thing. From an epistemological perspective, if we can't define something then it is very difficult to make sense of it and hence any explanation offered, lacks any real power.
- Hypothesize and test potential constituent constructs of business acumen. This will enable a set of measurement items to be formulated that can be operationalized across a wide variety of fields. It is critical that behavioral drivers are brought more into focus so as to depart from the current approach that is often characterized by a list of things that may constitute elements of business acumen without any understanding of either the situational or cognitive factors that lead to the activities listed as being critical to business acumen
- Examination of generational differences. According to Forbes, Baby Boomers currently hold approximately 29% of all jobs and 56% of leadership roles in America. By 2029, these individuals will all be 65 years or older. Our current understanding of business acumen,

threadbare as it is, relates predominantly to this cohort. This presents obvious questions relating to whether subsequent generations that are emerging as the business leaders of the very near future, perceive business acumen differently. This may indicate that we require either control variables for generational differences or entirely different construct development. This latter scenario speaks to the importance of a shared understanding of what business acumen is, not just across disciplines or industries but also across generations and thus the need for ongoing knowledge development anchored around a theory of business acumen, seems quite critical.

- Investigate gender differences to cultivate a more nuanced view of business acumen. One of the more contentious issues to emerge from the literature review, was the implicit (and sometimes explicit) bias relating to business acumen. The phenomenon was positioned to some extent as belonging to male senior executives, firstly because they held the majority of such positions and secondly, as a result they had the required experience associated so often with business acumen. Some scholars were rather overt in these assertions using the pronoun 'he' to illustrate their views about someone possessing considerable business acumen. This study was not about examining gender biases in business, but it does highlight an opportunity for future research in cultivating a more nuanced view of business acumen as we have proposed is required.
- Examine implications for education. The future of work presents a very dynamic context for educators. From a university perspective and in particular a business school viewpoint, we of course would like to have our business graduates possess at least some degree of business acumen. But what does that look like and how do we facilitate this to prepare our graduates for a world that is complex, constantly evolving and demanding of business capabilities that did not exist just five years ago, let alone sixty years ago?
- Extend current descriptive modelling of business acumen into causal domains. Given the need for firms to be more agile, adaptive and entrepreneurial - particularly amidst one of, if not the worst global pandemic ever; the credibility of business acumen would be greatly enhanced by investigating the impacts and significance it may have on critical firm outcomes such as performance or innovation capability.

Looking forward, there is opportunity to build on the research undertaken in this current research project through a further phase of research. This phase would move the current modelling into causality

by studying the impact of business acumen on firm performance and innovation capabilities and whether this relationship between business acumen and firm performance is mediated by innovation capabilities. Ultimately, the research has proven that the Business Acumen Gauge is relevant and on the whole robust, with potential to have even greater efficacy through measurement item refinement and further development to examine relationships between individual and aggregated business acumen and critical firm outcomes.

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