BUILDING DYNAMIC CAPABILITIES BY LEVERAGING DATA DEMOCRATISATION IN THE SOUTH AFRICAN SHORT-TERM INSURANCE INDUSTRY

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Abstract

Organisations increasingly recognise the potential of leveraging data to gain valuable business insights and improve overall performance. However, despite having access to vast amounts of data, many organisations struggle to fully utilise this resource, often only tapping into a small portion of it. This is due to challenges in extracting meaningful insights in a timely and actionable manner. This study delves into the concept of data democratisation and examines how it can be effectively sensed, seized, and transformed into dynamic capabilities within the South African short-term insurance industry. The research involves a comprehensive literature review, along with an empirical investigation conducted through semi-structured interviews with industry professionals. Through this approach, the study sheds light on the current state of data democratisation and its potential to foster data-driven decision-making and problem-solving, ultimately enhancing competitiveness and innovation in the South African short-term insurance industry.

Keywords

Data democratisation, dynamic capabilities, resource-based view, knowledge-based view, data, decision making, problem-solving, broader access, South Africa, insurance industry

JEL Classification

Introduction

In recent years, the rapid advancement and increased sophistication of digital technologies have led to an unprecedented surge in the generation of large volumes of data [1]. Consequently, organisations have begun to recognise the significant potential of leveraging their data resources to gain valuable business insights, maintain a competitive edge, and enhance overall business performance [2, 3]. However, most organisations only use a small fraction of the data they produce and gather [4]. The sheer volume of data being generated makes it challenging to derive meaningful insights from stored data in a timely manner. Therefore, removing barriers and enhancing accessibility is crucial to derive maximum value from the available data [3, 5].

Restricting data access proves impractical given the rapid pace of change and limits access to employees who require the data to fulfil their responsibilities effectively [4]. Conversely, an organisation can operate more effectively when data is decentralised and made accessible to more employees, facilitating improved problem-solving and decision-making and strengthening the organisation's ability to sense and seize opportunities [6, 7]. Moreover, data is crucial for enhancing an organisation's capacity to sense, seize and adapt to fluctuations in a dynamic and constantly changing business environment [8]. Therefore, empowering a broader spectrum of employees to access and utilise data – also known as data democratisation – should be a top strategic priority for any organisation [5].

Data democratisation is recognised as an essential capability for entrenching data literacy, data sharing, and accessibility throughout the entire organisation [9]. It enables an organisation to unlock the value embedded in its data and build a data-driven culture by making data accessible to all those who need it for problem-solving and decision-making [10]. For example, Airbnb, a leading online lodging platform, implemented data democratisation when they realised that employees were not using data as intended due to information being siloed among certain groups. By launching a universal data discovery and exploration tool called Dataportal, Airbnb fostered exploration, discovery, and trust among employees. Additionally, they established an educational program to improve employee data literacy, empowering them to make data-informed decisions [5].

The value and importance of data democratisation are well understood, although studies on it are still in their infancy and are limited to a few cases [3, 11]. Data democratisation may even be considered a capability, but there are minimal studies on how it can be a dynamic capability [5]. Michael Porter (1991) and David Teece (1996) considered the dynamic capability to be an advanced skill that organisations possess to create and capture value in times of change and, through strategic management, use such skills to create competitive advantage. At its pinnacle, these skills become dynamic capabilities when organisations can develop unique learning routines that are not valuable, rare, not easy to imitate and substitute [12]. Therefore, it is necessary to understand how data democratisation is utilised and how it can become a dynamic capability. The South African short-term insurance industry is particularly interesting due to increased competition, higher risks, and minimal differentiation among competitors. This may be the ideal situation that may create opportunities for differentiation through dynamic capabilities, enabling organisations to optimise their resources and capabilities to gain a competitive advantage. As a result, this study will focus on this specific sector.

Literature Review

Dynamic capabilities are essential for organisations to navigate the challenges and opportunities of highly competitive and rapidly changing business environments [13]. They enable organisations to adapt, innovate, and thrive in the rapidly changing technological landscape. The dynamic capability theory states that competitive advantage requires a high-order capacity to sense, seize and transform new market opportunities [14]. In simple terms, dynamic capabilities are a specific set of identifiable processes within an organisation that enable it to integrate, reconfigure, acquire, and release resources to match and create change as markets emerge, collide, split, evolve, and die [15]. Investment in data democratisation can significantly enhance dynamic capabilities

within organisations by fostering agility, innovation, and informed decision-making on a decentralised basis. By broadening access to data and empowering employees, organisations can better respond to changing environments and leverage data for strategic advantage [16]. Organisations must address challenges like data literacy, cultural shifts, and data privacy and security to fully realise the benefits of data democratisation [5]. Additionally, as organisations face increased competition, rapid technological advancements and market pressures, data democratisation must evolve to meet new challenges, necessitating a framework for ongoing capability development [17].

Dynamic Capabilities

The dynamic capabilities theory is premised on maintaining a competitive advantage in volatile industries by continuously sensing, seizing, and transforming opportunities and threats [18]. Capabilities can only be dynamic if they involve processes and behaviours that help organisations adapt to change, drive innovation, and sustain their competitive advantage [19]. These capabilities convert resource advantages into competitive advantages, optimising resource use. Examples include strong leadership, technological innovation, adaptable organisational structures, and developing new business models to adapt to rapidly changing environments [20].

Dynamic capabilities are unique to each organisation and are influenced by different factors based on the context in which they manifest themselves, but what is common across organisations is their critical role in organisational success [21]. It is worth noting that ad-hoc problem-solving differs from dynamic capabilities, although it confers dynamism. In that, ad-hoc problem-solving is autonomous and unplanned, whereas a dynamic capability is an organised capability that the firm can employ and replicate repeatedly [22]. It is, therefore, imperative for an organisation not to confuse its ability to problem solve on the fly with possessing a dynamic capability - A key characteristic of a dynamic capability is that it is a planned and repeatable action [18, 23].

Data Democratisation

Data democratisation entails more than just making data accessible; it encompasses a set of steps that must be taken to ensure effective use of and access to organisational data [10]. The organisation must embrace a culture of data-driven decision-making, and employees must be empowered with the necessary knowledge and minimum level of skills to manipulate, document, and analyse data [24]. Furthermore, the data must be cleaned, categorised, contextualised, and placed in an easy-to-access data storage tool [5]. This study considers data democratisation as the process of establishing a data-driven culture by broadening access to data to all employees and empowering them with the necessary knowledge, skills, and tools to interact and manipulate data for decision-making and problem-solving [4, 10, 24]. When data is democratised and backed by a supportive culture, research has demonstrated that it can lead to better decision-making, willingness to accept diverse opinions, and increased collaboration and knowledge sharing among employees [17].

Data democratisation is recognised as an important concept in both research and practice. Yet, the literature still differs on whether data democratisation is a process, an activity, or a capability [25], and to further complicate matters, literature that posits that data democratisation is a capability does not provide insight into what type of capability it is and how to develop it [5]. Labadie et al. (2020) [26] concur, stating that further studies should be undertaken to understand what data democratisation comprises and how it is built. To overcome these challenges and build a deeper understanding of data democratisation as a capability, the critical success factors of data democratisation are analysed and used to develop a framework for data democratisation.

Critical success factors of Data Democratisation:

The concept of data democratisation is considered crucial for making data-driven decisions. However, there is still uncertainty about its composition and development [10]. Therefore, it is crucial to explore the critical success

factors of data democratisation [16]. Based on previous literature analysis, six essential success factors have been identified: 1) Data management policies and practices, 2) Data literacy and training, 3) Data platform and tools, 4) Data sharing culture and collaboration, 5) Organisational vision, plan and leadership, and 6) Data governance and privacy. These factors form the basis for a sustainable, adaptable, and practical framework for data democratisation.

Figure 1 illustrates the representation of the critical success factors of data democratisation and how the various components are interconnected.
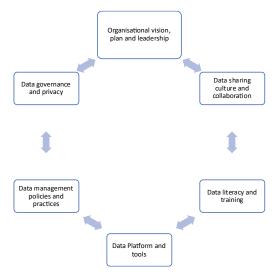

Figure 1: *Data democratisation framework* (*Source*: **Adapted from Takang and Amaechi (2023) [25]).**

Figure 1 above depicts the six critical factors underpinning a successful data democratisation capability. These six factors are interdependent, and each plays an integral role in data democratisation. These factors are discussed in detail below.

1. Data Management Policies and Practices:

Removing silos to provide access to data to a broader group of employees is key to data democratisation and entails removing obstacles to data access, providing better visualisation, and enabling self-service capability for all users [16, 27]. This includes creating data catalogues to facilitate easier access and management of data. Data catalogues serve as a central component in data management landscapes, enabling organisations to gain an overview of available data and its characteristics, crucial for fostering data-driven decision-making and governance practices [28]. They address challenges related to data retrieval by providing a systematic way to locate and manage vast amounts of information, ultimately supporting organisations in making timely and informed decisions [29].

2. Data Literacy and Training:

High data literacy enables employees to interpret and utilise data critically, leading to more reliable outcomes [5, 17]. Research indicates that organisations with strong data literacy frameworks can better assess data quality and build trust, leading to more reliable outcomes [30]. Conversely, a lack of data literacy can hinder organisations from fully leveraging data, resulting in poor decisions [31]. Consequently, developing data citizens through continuous training, awareness, and support is crucial for data democratisation.

3. Availability and Access to Analytical Tools:

Implementing analytical tools that enable users to discover, use, and manipulate data is essential. These tools make data accessible and actionable for a broader range of users [32]. While these tools significantly contribute to data democratisation, organisations must ensure that all employees possess the necessary skills and understanding to leverage these tools effectively [5, 10]. Addressing these gaps is crucial for realising the full potential of data democratisation.

4. Data Sharing Culture and Collaboration:

Employees' willingness to collaborate and share data is a crucial component for the success of data democratisation [24]. Organisational culture changes that break down silos and promote open communication, data sharing, and collaboration are essential for democratising data and driving high efficiency of overall operations [16]. A data-driven culture is a key factor in determining the overall success and continuation of data democratisation capability because data democratisation will succeed where there is good leadership, the right culture fit, and an enabling structure [25].

5. Organisational Vision, Plan, and Leadership:

Data democratisation aims to support a data-driven culture that embraces data-driven decision-making by empowering all employees [10], and organisational plans through which data democratisation is pursued are important to its success [25]. Thus, data democratisation initiatives should be guided by the organisation's vision and strategic plans, which will allow the organisation to define data democratisation success and ultimately ensure alignment between data democratisation and the organisation's core strategy [16, 25].

6. Data Governance and Privacy:

Effective data democratisation implementations require rigorously enforced security and privacy protocols to avoid the organisation's data being used for nefarious purposes and instead for the intended purposes [10, 17, 25]. Therefore, a holistic approach is required to ensure that data are easily accessed from safe, secure, and trustworthy data stores or catalogues at any time by anyone with reasonable limitations on legal confidentiality, security, and privacy issues [10, 16].

Research Methodology

The study employed a qualitative research method to examine participants' perceptions of data democratisation and its utilisation within the South African short-term insurance industry. A case study research strategy was selected to achieve the study's objectives and answer the research questions. This strategy involves an in-depth inquiry into a case subject within its real-life context, allowing the researcher to conduct an in-depth analysis of data democratisation and dynamic capabilities.

The population for this study consisted of experienced individuals working in the short-term insurance industry in South Africa. Due to the industry's size, a purposive, non-probability sampling technique was selected from this population and used to identify the best cases to answer the research questions. A sample of 12 participants was selected for semi-structured interviews. These participants were chosen based on their experience and senior roles within the short-term insurance industry.

Data was collected using semi-structured interviews, which allowed for probing and flexibility in the order of questions. Participants were contacted via email to introduce the study and obtain their consent. Interviews were conducted face-to-face or online using Microsoft Teams, depending on the participant's preference, and were recorded for transcription.

The study utilised thematic analysis to systematically identify, organise, and offer insight into data. The researcher used manual coding to generate codes and followed Braun and Clarke (2012) [33] six-phase approach to thematic analysis. This approach includes familiarisation with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

To establish trustworthiness, the study applied Lincoln (1985) [34] four dimensions of criteria: credibility, dependability, confirmability, and transferability. These criteria ensure the completeness and quality of qualitative research, the stability of findings over time, the data's accuracy and relevance, and the results' applicability to other contexts.

Findings

The findings commenced with the analysis of the demographic information. A total of 50% of the participants had six to ten years of experience in the short-term insurance industry, while 25% had one to five years of experience, and another 25% had over ten years of experience in the industry. Additionally, 42% of participants were executives, 25% were senior specialists, and 33% were managers.

The study found a significant lack of knowledge and awareness regarding the concept of data democratisation. Most participants only became familiar with the term during the data collection process. While this is not entirely surprising, as data democratisation is still in its early stages, it is noteworthy that some of the participants are senior executives within the industry who are responsible for developing capabilities to better utilise the data available to their organisations.

The data analysis highlighted the essential role of data in achieving both organisational and individual success. While organisations recognise the importance of data for strategic initiatives, decision-making often lacks a data-driven approach. Employees continue to face numerous barriers to effective data usage, including difficulties in accessing data and a lack of support to utilise it.

These challenges are not limited to non-technical or non-data specialist employees; even those in data specialist roles encounter significant obstacles. These include data gatekeeping, inadequate data tools, poor data quality, inadequate support, and low data literacy. Additionally, there is a prevailing belief that data should solely be managed by specialists, which creates dependence among non-technical employees on these specialists for all their data needs. This reliance hinders non-technical employees from building the skills and confidence necessary to use data effectively, ultimately limiting the greater use of data in problem-solving and decision-making.

Leadership support is essential for cultivating a culture that promotes data democratisation and emphasises data-driven decision-making and problem-solving. Data analysis highlighted that without the backing of top management, any initiative is likely to fail, no matter how important it may be. The study further revealed that top management needs to do more to encourage employees to embrace data and its democratisation, mainly to help alleviate the intimidation and fear that non-technical employees often experience when working with data.

Discussion

The concept of data democratisation remains largely unfamiliar within the short-term insurance industry. It is mainly viewed as merely increasing or opening up access to data for more employees. This limited understanding, driven by self-exploration, indicates a lack of formal data democratisation initiatives within organisations, and if there are such initiatives, they are not socialised with broader employees within organisations. Data democratisation involves more than just making data accessible; it requires increased data literacy, availability of tools, and the right organisational culture [10]. Furthermore, developing data citizens necessitates continuous training, awareness, and support for all employees [16]; therefore, data democratisation is ineffective if there is general awareness about it throughout the organisation. Despite its infancy in both research and practice, there

is potential for data democratisation within the South African short-term insurance industry, as indicated by positive attitudes towards data and its strategic importance.

Data has emerged as a critical resource across various sectors, influencing decision-making, enhancing problem-solving, and driving innovation. In the South African short-term insurance industry, access to high-quality data assets, such as government and industry data, is acknowledged. However, numerous obstacles hinder employees' ability to access data, including excessive red tape, lack of support, gatekeeping, and poor data quality. Data democratisation entails broadening access to data and providing the necessary support, tools, and training to find, understand, and use data. As a result, improving access to data and removing unnecessary barriers are paramount to supporting data democratisation.

The industry's capability to implement and support data democratisation is influenced by its dynamic capabilities. In moderately dynamic markets, such as the South African short-term insurance industry, the dynamic capabilities process follows a problem-solving approach. Organisations have established processes to identify and respond to market changes, including market research, trend analysis, and internal audits. However, shifting from a reactive to a proactive stance is needed. It is worth highlighting that dynamic capabilities cannot deliver superior outcomes if the underlying capability is subpar. Therefore, improving the quality of capabilities is essential. Additionally, it is difficult to distinguish ad-hoc problem-solving, which confers dynamism, from a dynamic capabilities process, especially in organisations following the problem-solving approach to dynamic capabilities. As a result, organisations mustn't confuse their ability to effectively use data for problem-solving with having a data democratisation dynamic capability.

Leadership plays a crucial role in driving data democratisation and strategic change. Effective leadership is necessary to foster a culture that promotes data democratisation and prioritises data-driven decision-making and problem-solving. The context for this study was data democratisation, which, through the dynamic capability's lens, is considered a capability that offers opportunities for achieving and sustaining competitive advantage. In line with the data democratisation framework
defined by Takang and Amaechi (2023) [25], in addition to leadership, this study identifies the following components as critical for establishing data democratisation as a dynamic capability.

- Data management policies and practices
- Data literacy and training
- Data platform and tools
- Data sharing culture and collaboration
- Data governance and privacy

Organisations must provide ongoing training and support to cultivate data-savvy employees. While tools for data democratisation exist, they are often aimed at technical staff. In the short-term insurance industry, with its complex data landscape, it is crucial to establish data management policies that break down silos and ensure data quality. Data catalogues play a vital role in this process. Each organisation should tailor its approach based on its unique needs and maturity in data democratisation.

Limitation and Future Research

This study provides a foundation for further research to be conducted on data democratisation in which a broader focus could be employed. Also, exploring data democratisation from the perspectives of lower-level managerial and non-managerial employees could offer valuable insights into their experiences and observations.

This study has a narrow sample and was limited to a single South African short-term insurance industry. As a result, the themes, patterns, and findings are limited to the short-term insurance industry in South Africa, and no

generalisations to other industries may be applicable. Additionally, due to the localisation of the study, findings and recommendations may not apply to other geographies.

Conclusion

This research presents a unique perspective on data democratisation, focusing on defining its key components, adding to the body of knowledge, and simplifying terminology to make data democratisation accessible and practical for the South African short-term insurance industry. It is recommended that further research be conducted to understand better how data democratisation as a dynamic capability is developed for value creation in the organisation. Nevertheless, the study may help organisations better understand how to identify, build, and deploy their data democratisation capabilities in a fast-changing business environment.

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