

Navigating the 21st Century: Knowledge-Based Theory and Its Contemporary Challenges

Olusola Esther Igbekoyi¹, Oluyinka Isaiah Oluwagbade²,

Falana Gbenga Ayodele³

¹Department of Accounting, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria.

²Department of Accounting, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria.

³Department of Accounting, Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria.

E-mail: faanaga@pg.abuad.edu.ng

To Cite this Article

Olusola Esther Igbekoyi, Oluyinka Isaiah Oluwagbade, Falana Gbenga Ayodele (2024). Navigating the 21st Century: Knowledge-Based Theory and Its Contemporary Challenges. *Indian Journal of Applied Social Science*, 1: 1-2, pp. 41-64.

Abstract: The study investigated the strengths and challenges of knowledge-based theory in the twenty-first century. The study reviewed relevant literature through an exploratory approach to provide information on knowledge-based theory for solving contemporary issues. The study found that knowledge-based theory is essential for firms to manage information effectively in a complex and competitive global economy. The study highlights the importance of knowledge development, acquisition, and application. Investing in knowledge management systems, encouraging collaboration, and fostering a learning culture are all critical strategic priorities. Knowledge-based theories are always evolving to address new issues and trends in corporate dealings. Open innovation, knowledge sharing, and collaboration with external partners are critical to addressing global concerns, while ethical considerations in knowledge management strategies are also important.

Keywords: Knowledge-based theory, firm, dynamic capabilities, open innovation, knowledge assets, sustainability, social responsibility.

JEL Classification: D83, O32, O34

1. Introduction

Knowledge has become the foundation of progress in the twenty-first century, driving innovation, economic growth, and social development (Kefela, 2010;

Burduli, 2020). This change has resulted in an era in which information is easily available, and the ability to process, analyse, and use it offers enormous benefits for companies (Ndung'u & Signé, 2020). Despite these opportunities, significant challenges exist necessitating an adequate understanding of the theories and frameworks governing knowledge (Pereira & Bamel, 2021). This study explored the basic ideas of knowledge-based theory and its relevance in the twenty-first century.

Organisations can only thrive in today's dynamic business environment by understanding and adapting to challenges (Eruemegbe, 2015). Amidst this dynamism, knowledge-based theory emerges as an important theoretical framework for understanding and navigating the recent complexities (Tynnhammar, 2020). According to Ganesan (2017), knowledge-driven competency and capability are the foundations of competitive advantages and value-generation abilities. Kianto (2009), on the other hand, stated that knowledge-based theory recognises knowledge as a fundamental driver of organisational performance. To a great extent, firms' performance is determined by the effective acquisition, creation, and application of knowledge. However, contemporary issues present challenges that require a thorough reexamination of knowledge-based theory and its assumptions in this era.

One of the most important issues that organisations face in this dispensation is the rapid rate of technological advancements (Bayo, 2019). The twenty-first century has witnessed the emergence of disruptive technologies such as artificial intelligence, blockchain, and the Internet of Things (Yamin, 2019; Akinsola et al., 2022; Solanki & Sujee, 2022; Rejeb et al., 2023). These technologies have changed the way industries operate and disrupted existing business models. Another challenge is the increasing complexity of the business environment. This complexity is due to market interconnectivity and globalisation. Organisations operate in different legal systems, regions, and relate with a lot of different stakeholders.

Again, with technological advancements, comes information overload. This is another twenty-first-century challenge facing firms. With the development of the internet and social media, there is a lot of information available to organisations. In this regard, Ward and Augenbergl (2021) argued that knowledge-based theory must assume methods and procedures for the effective generation of knowledge, processing and evaluation of information in this big-data era. Although knowledge-based theory emphasises access to information as critical, the current information overload might contend with its assumptions (Kaplan et al., 2001). The study

proffers answers to the following questions: What are the emerging trends and/or developments that are likely to shape the future of knowledge-based theory? How can knowledge-based theory be used to address the challenges of the twenty-first century?

While these challenges may call into question the fundamental concepts of knowledge-based theory, it has become necessary to reevaluate them. This study explores these contemporary issues in this regard, examining both the benefits and drawbacks of knowledge-based theory. The study also examines how contemporary developments in information technology and social settings require a thorough understanding of knowledge-based theory. The study contributes to the body of literature by critically examining these challenges and offering a twenty-first-century perspective on knowledge-based theoretical thinking. However, the following sections provide in-depth coverage of the study's results and findings, conclusions, methodology, and literature appraisal.

2. Literature Review

The relevant factors, the study's underlying theory, and empirical research were examined.

2.1. Conceptual Review

The idea underlining both the dependent and independent variables was examined in this section.

2.1.1. Knowledge-based theory

Grant (1996) argued that knowledge and an organisation's ability to maintain a competitive edge are inextricably linked. The fundamental idea of the knowledge-based theory of the firm is that an organisation's knowledge resources determine its performance, sustainability, and competitive advantage. In this context, Ganesan (2017) recognised and emphasised the importance of organisational knowledge as the most crucial and strategic resource for establishing long-term competitive advantage. As a result, knowledge-based competency and capacity serve as the foundation for both competitive advantages and value-creation capabilities.

Additionally, Stoian et al. (2024) asserted that the emergence of knowledge-based theory is due to the significance of knowledge. According to Grant and

Phene (2022), knowledge-driven theory with global strategy should include recent technological breakthroughs. Based on this, Kianto (2009) opined that organisations are viewed by knowledge-based theory as constantly producing, disseminating, and changing communities of creativity, knowledge, and information. From this perspective, a firm represents knowledge in diverse forms and capacities (Haslinda & Sarinah, 2009). According to Grant (1996), knowledge is the primary resource that enables firms' success. However, the knowledge-based view of a firm assumes the ability to create, share, and use information for competitive advantage and is a determinant of the firm's performance (Curado & Bontis, 2006).

Originating from the strategic management literature, Penrose (1959), Wernerfelt (1984), Barney (1991), and Conner (1991) opined that knowledge-based theory builds upon and extends the resource-based view of the firm. The foundation of knowledge-based theory gives an economic context to knowledge's relevance in an organisation. This includes being aware, knowing, and familiar with the organisation's procedures, systems, people, and surroundings. While this information resides in an organisation's employees, the acknowledgement of employees as factors of production leads scholars to identify knowledge as an organisation's unique strategic resource (Curado & Bontis, 2006). Based on this, Scuotto et al. (2022) asserted that firms' advantage is as a result of knowledge, with a focus on individuals and collective knowledge (Felin & Hesterly, 2007).

However, Nickerson and Zenger (2004) argued that the basis of knowledge-based theory includes knowledge as a resource and the ability to process resources. In this regard, Schütz et al. (2020) stated that greater performance levels are generally attained when information is present and appropriately managed. Grant (1996), on the other hand, defined organisations as both knowledge producers and integrators. Knowledge management, formation, and accumulation require mechanisms to be sustainable. These processes were the basic tenet of Nickerson and Zenger's (2004) conceptualisation of knowledge-based theory.

Again, such processes in an organisation bring about some unique features. Hughes et al. (2021), in this regard, stated that firms are thought of as diverse, knowledge-bearing, and adaptable entities. Being diverse denotes the extent of a firm's knowledge processes. Knowledge processes explain why a firm may adopt a specific organising style and a corresponding set of behaviours, even though a firm's form can influence the generation of knowledge as a resource (Foss, 1996; Spender, 1996; Nickerson &

Zenger, 2004; Jiang et al., 2019). This limits the level of imitation and duplication that can take place while making its codification and patenting a proprietary right. Hitt et al. (2001) and Eisenhardt and Santos (2002) asserted that such strategies and their effectiveness are influenced by the specific context in which a firm operates.

On the other hand, knowledge resources are scarce, complex, and multidimensional (Feng et al., 2022; Foster, 2023). This unique feature, according to Håkanson (2010), assumes that different types of knowledge have different governance implications, typically highlighting the distinction between “tacit” and “explicit” knowledge. Both tacit and explicit types of knowledge focus more on the process of knowing (Eisenhardt et al., 2000). Consistent with this, organisations adjust through activities and learning (Curado & Bontis, 2006). While Eisenhardt et al. (2000) opined that such lies in organisation’s learning, Cyert and March (1963) asserted that such lies in organisation’s routine. Both involve the formation and adjustment of knowledge processes that are influenced by past experiences as well as the adaptation and maintenance of organisational capacity.

Furthermore, knowledge is heterogeneously distributed across firms. While this assumes firm-by-firm uniqueness in knowledge processing, acquisition, and usage, Demsetz (1973) stated that knowledge is not evenly disseminated among economic agents, and its services are not offered to all economic agents at the same price. This implies that firms have distinct combinations of knowledge resources. In this regard, Kogut and Zander (1992) asserted that firms function as institutions for knowledge production and transfer. According to Grant (1996), firms intrinsically integrate and distribute knowledge, which impacts performance.

Again, knowledge is not perfectly transferable. Knowledge-based theory states that, due to its implicit and complex nature, knowledge is difficult to transmit or imitate by other organisations. According to Grant (1996) and Szulanski (1996), if knowledge were entirely transferable, firms would not be required to produce it. This view draws its basis from employee mode of knowledge, which is deeply rooted in an individual’s experiences, beliefs, and values. Individuals own knowledge, and it is also ingrained in organisational routines, procedures, and systems (Nonaka 1994). The knowledge-based paradigm recognises that a firm’s earlier experiences, decisions, and investments shape its knowledge base. Because of its context-specificity and path dependency, other businesses find it difficult to replicate or gain the same level of knowledge.

The ability of organisations to efficiently integrate and apply knowledge is critical for realising their full potential. This represents the organisation's capacity. Some societal factors influence how this capacity is used, acquired, and maintained. In this regard, Kogut and Zander (1992) argued that enterprises operate as social communities that specialise in transferring knowledge and integration. Nonaka and Takeuchi (1995), on the other hand, asserted that the continual process of knowledge production, integration, and application within businesses is facilitated by socialisation, externalisation, combination, and internalisation processes. According to Alavi and Leidner (2001), the capacity to integrate and use specialised knowledge gathered from numerous sources is vital for organisations to gain and maintain a competitive advantage.

Cohen and Levinthal (1990) used capacity to relate organisational learning and innovation to the firm's growing body of knowledge. Squicciarini and Loikkanen (2008) also argued that information and innovation have become critical assets for the success of businesses and governments alike. The direction of knowledge in an organisation may be influenced by the external environment and/or circumstances. Cohen and Levinthal (1990) linked knowledge and capacity to be mutually complementary in their relationship. However, Brown and Duguid (1991) opined that working, learning, and invention are the foundations of knowledge-based theory. The accumulation of individual employee knowledge constitutes organisational knowledge, and the unity of employee and organisational routine provides the foundation of knowledge-based theory. As a result, social norms and cultural values play an important role in knowledge formation.

According to Hughes et al. (2021), Grant and Phene (2022), and Stoian et al. (2024), enterprises must establish a complete framework of knowledge types and procedures to navigate the global environment. This comprises collaboration, sharing, and integration, which lead to overseas subsidiaries, joint ventures, and mergers. Stoian et al. (2024) stated that such phenomena are associated with these organisations' superior ability to appraise, integrate, and apply knowledge. The recognition of knowledge in global strategies and markets has highlighted the significance of knowledge and knowledge-based theory.

2.1.2. Contemporary issues

Contemporary issues might explain the dynamic relationship among current challenges. While these are frequently evolving, modern issues are important to

society. These include social, political, economic, environmental, cultural, and technological challenges that have an impact on people, systems, and theories, especially knowledge-based theories. According to Squicciarini and Loikkanen (2008), globalisation and the dynamics of knowledge and innovation are at the heart of today's socioeconomic transformation.

Also, one of the defining characteristics of this period is that previously unexpected disruptions have become the norm (Faulconbridge & Muzio, 2012). The methods and means for creating value have evolved, and new levers or drivers of competitive advantage have arisen. In this regard, Reeves (2016) asserted that increased transparency, globalisation, and new technologies have completely changed business environment. While these are current challenges, they can spur inquiry into new areas, resulting in discoveries and creative theoretical approaches and/or frameworks. Such a study may show limitations in existing frameworks. These limitations may call for the invention of new ideas. New trends necessitate the creation and adaptation of new and/or existing modified theories.

2.1.2.1. Social Trend: While Horx (2010) and Pufé (2017) described a trend as a transformation process in all areas of society, its relationship to social events and/or changes entails social trends. Therefore, contemporary social trends refer to individuals' attitudes, habits, and preferences noticed in society (Sagor, 2024). While these trends frequently develop in response to cultural shifts, technical advancements, and economic changes, adjusting to them is what allows firms to stay ahead of severe competition (Ghosh, 2024).

Again, social reality is dynamic; social transformation is not a novel phenomenon. Humans have become accustomed to perpetual change as society is always changing. People, enterprises, and theories are impacted by recent developments in social space such as globalisation, populism, disinformation, cancel culture, social media, digital divide or gap, and social cocooning (King, 2020). In this regard, Nunns et al. (2020) argued that certain social trends are expected to have consequences both now and in the future.

2.1.2.2. Economic Trend: Every year brings its share of new and old economic issues. A shift in the way firms function has become necessary due to recent advances in economic factors. However the world is dynamic, and a variety of external and internal factors cause economic trends to constantly change. These could be medium-term, long-term, or short-term. The 21st-century economic trends are

labour disruptions, green, blue, sharing, circular or she-economy, economic growth and survival, global supply chains, outsourcing, offshoring, knowledge society, mobile work, customer centricity, work-life balance, and e-mobility (Marquardt et al., 2018).

2.1.2.3. Technological trend: According to Martínez-Caro et al. (2020), the advent of new digital technologies has resulted in significant transformations for individuals, companies, and society at large. Technological trends are the general directions in which technology is developing. In an era of constant, complex, and disruptive technology innovation (Fenwick & Vermeulen, 2016), knowing what, when, and how has been the basis for keeping up with 21st-century developments. Based on this, Brandão Santana et al. (2015) and Heeks and Stanforth (2015) argued that technical development and innovation drive social and economic advancement.

These trends could be attributed to a variety of factors, including advances in scientific knowledge, adjustments in consumer preferences, and changes in political laws. Diverse economic, social, and technological factors have been presented as catalysts for innovation; however, viewpoints on how and to what extent innovation is a response to changes in the social or economic environment differ (Taalbi, 2017). Innovation is the first stage of a technical transformation and/or trend. As a result, it spreads throughout society. Contemporary technological advancements include artificial intelligence (AI), big data, cloud computing, and the Internet of Things (Marquardt et al., 2018).

2.1.3. Knowledge-based Theory and Contemporary Issues

On the one hand, scholars have advocated for a knowledge framework that embraces the needs of firms in contemporary issues (Grant & Phene, 2022; Stoian et al., 2024). Pereira and Bamel (2021) stated that the knowledge-based perspective has improved tremendously. The general acceptance and use of this essential theoretical framework will necessitate its potential use in various contemporary contexts and phenomena. It can also be extended to specific modern events and situations. In addition to this, the acceptance of the knowledge-based view as a framework for enhancing performance and achieving a competitive edge may be pushed by contemporary trends (Stoian, 2024).

On the other hand, the basic components of the current socio-economic revolution include innovation, globalisation, and knowledge dynamics (Squicciarini

& Loikkanen, 2008). Stakeholders must evaluate and broaden their understanding of persistent patterns and occurrences in a fast-changing global business environment. A more interconnected global economy and a tendency towards a knowledge society have led to an increasingly complex business environment (Arpe, 2012; Kraus et al., 2021). Knowledge-based theory requests thorough empirical or scientific analysis (Kaplan et al., 2001). To guarantee knowledge-based theory's continued relevance in accounting, it must be frequently reviewed.

Current advances affect firms' operations. Among these include globalisation, changes in the legal and economic landscape, and workforce diversity resulting from globalisation (Okolie & Udom, 2019). It also comprises technological advancements, shifts in the educational backgrounds of employee, and working conditions and expectations. These factors may have an impact, direct or indirect, on the feasibility of applying knowledge management approaches.

2.2. Theoretical Framework

Although introduced by David Teece, Gary Pisano, and Amy Shuen in 1997, this study's theoretical basis is grounded in the assumptions of dynamic capability theory. It is assumed that a firm's ability to respond to and shape quickly changing business environments is dependent on its ability to integrate, build, and reconfigure internal and external resources or capabilities (Teece, 2010; Konopik et al., 2022). The dynamic capability theory outlines a firm's competitive advantage contemporary environment (Samsudin & Ismail, 2019). In the same vein, the general usage of a theory is based on its application to a wide range of situations as new trends emerge and evolve.

Again, dynamic capabilities should be distinguished from specific capabilities (Gnizy et al., 2014). Rather, dynamic capabilities are a method of analysing the resources and talents required to remain competitive, especially in an ever-changing market context (Wilden et al., 2013). While knowledge-based theory emphasises knowledge as a critical strategic resource for businesses, dynamic capability theory supplements this by focusing on the dynamic capabilities required to effectively manage and utilise knowledge. The usage of a theory is determined by its widespread acceptance, generalisation, and application in its field of postulation. Dynamic capability theory sheds light on the dynamic processes required to create and preserve these knowledge resources. In essence, dynamic capacity theory answers the "how" of knowledge-based theory's "what".

However, the dynamic capability theory has been criticised for being too difficult to define and measure because of its nature (intangibility and context dependence). While the theory has gained popularity, more empirical evidence is needed to validate its claims across industries and contexts. Bleadly and Ibrahim (2018) argued that existing research supporting dynamic capability theory is frequently anecdotal or case study-based, limiting its generalisability. Dynamic capability theory is primarily concerned with internal firm-level capabilities, potentially neglecting the role of external factors, social and ethical dimensions.

2.3. Empirical Review

Numerous authors have conducted studies on knowledge-based views and contemporary issues. Some of these studies' findings are summarised below, pointing out a gap in the body of knowledge that this study seeks to fill. In this regard, Stoian et al. (2024) investigated existing literature on knowledge-based views in international firms. The study reviewed 124 papers in 40 journals. The study found that firms require internal, external and technological knowledge to operate in an international environment. Aparicio et al. (2023) examined literature on knowledge-based perspectives. This study analysed 1228 articles published in journals. The study found that the future directions of knowledge-based views are knowledge-based economies and management.

Grant and Phene (2022) assessed the global relevance of knowledge. This study asserted that differences in the nature of knowledge affected knowledge-based views. The complexity and diversity of global knowledge creation and utilization processes are multifaceted, despite knowledge-based view offering insightful perspectives on multinational companies' management and global strategy. The study found that recent technological advancements must be incorporated into a knowledge-driven theory. Institutions and individuals across locations must be considered in this framework. The study suggested that the assumptions of knowledge-based theory must include social perspectives and the multilevel nature of knowledge processes.

Using knowledge-based and resource-based perspectives, Pereira and Bamel (2021) researched the application of knowledge-based theory to modern events. Although the study noted that studies on knowledge-based theory have developed significantly, it has varied due to the diversity of the field. By reviewing recent literature, this study examined the future potentials of knowledge-based theory.

The study showed that there were new areas in the resource- and knowledge-based perspective to explore as well as future possibilities.

Hughes et al. (2021) evaluated the outcome of knowledge production and its links to entrepreneurial orientation and profitability. This also included stakeholder engagement, entrepreneurial orientation, and knowledge use. The research was based on knowledge-based theory. Empirical evidence from small- and mid-sized businesses in Taiwan and Japan revealed that an achievable path to improved SME performance consisted of three separate stages. This includes developing and mining knowledge throughout the organisation. Absorbing, exploiting, and applying knowledge throughout the organization. Establishing and maintaining a work environment that encourages engagement, transparency, and collaboration with stakeholders while discarding outdated knowledge should be carefully considered.

Gupta et al. (2021) assessed knowledge-based approaches for Industry 4.0 assistance. To that end, a conceptual model was developed with all the necessary elements needed for practical execution. The research employed a knowledge-based theoretical framework and qualitative analysis. Several emerging categories were found because of thematic analysis. The study suggested a framework for future research.

Based on social capital theory and resource-based theory, Singh et al. (2021) investigated multinational companies' innovative performance in emerging markets. Data were gathered from 352 respondents. The study's hypotheses were analysed using structural equation modelling. The study found that social capital moderates knowledge-based HRM practices and knowledge-sharing behaviours. The study found that information sharing affects social capital and innovation performance while social capital and information sharing affect innovation performance.

Also, Kianto et al. (2020) studied the crucial concept of knowledge as the foundation for both human and organisational productive behaviour. Based on recent trends on knowledge intensity of labour, organising, and value production, there is a need for reevaluation of the fundamentals of knowledge. Since knowledge has become an important resource for competitive advantage, evaluating it has become imperative. For IC measurement, its nature must be considered. Knowledge-based view acknowledges knowledge development and its emergence as a competitive advantage for regions, countries, and organisations.

Hamilton and Philbin (2020) explored the factors that contributed to efficient knowledge management and transfer among research-intensive universities. While

the knowledge-based view was used as the theoretical basis, this study reviewed the existing literature. In the instance of the review process, a total of 10,126 articles were found. 29 studies were chosen for analysis. The study found that startup firms' performance can be linked to knowledge management and deployment.

Despite research on knowledge-based views, the future extension and application of knowledge-based views have been understudied (Pereira & Bamel, 2021). In this regard, Stoian et al. (2024) asserted that there is a need for future research on KBV. The 21st-century change demands ongoing adaptation and learning. Furthermore, there is a need to study the role of knowledge-based theory in tackling contemporary challenges. This includes artificial intelligence, big data analytics, digital transformation, and global market complexity and interconnectedness. In the quest to explain knowledge-based phenomena, scholars (e.g., Kogut & Zander, 1993; Nonaka, 1994; Nonaka & Takeuchi, 1995; Grant, 1996a; Spender, 1996; Tsoukas, 1996; Nonaka et al., 2000; Grant and Baden-Fuller, 2004) often did not prioritise the further development of the KBV beyond the initial assumptions that emerged in the 1990s and early 2000s. Thoroughly investigating this research gap would lead to a thorough understanding of this theoretical basis in 21st-century contemporary issues.

3. Methodology

This study focused on theoretical adaptability and consistency to support the concept of knowledge-based theory in the context of 21st-century contemporary challenges. It used an exploratory approach to explaining the concept of knowledge-based theory, examining its strengths and limitations in today's complex and fast-changing world. The study created a conceptual framework for analysing knowledge-based theory in the twenty-first century by conducting a thorough examination of the literature and leveraging multiple sources and perspectives to provide a relevant analysis.

4. Findings and Discussion

Recent developments and trends entail knowledge-based theory to inculcate more concepts and/or assumptions. Globalisation has mostly resulted in a reduction in the duration of information sharing and transmission, an increase in information overload, and increased public awareness of environmental and social issues. These

factors have had a substantial impact on knowledge management, transmission, sharing, storage, and development. According to Grant (1996), companies must navigate numerous cultural settings and harness knowledge from multiple sources to remain competitive in global marketplaces.

Berliant and Fujita (2011), on the other hand, argued that long-term economic growth is positively connected with the effectiveness of public knowledge transmission and, more importantly, knowledge collaboration. According to Mandruleanu (2008) and Bejinaru (2016), knowledge formation and transfer occur through interaction between individuals and organisations that is influenced by socialisation, externalisations, combinations, and internalisation.

Guile and Fosstenlökken (2018) asserted that knowledge is a network that crosses regional and national boundaries through socialisation, externalisation, combinations, and internalisation. This reflects a current understanding of knowledge as being dynamic and complex. The knowledge-based theory has a changing nature. This emphasises the dynamism and collaboration component of knowledge management. This also has a strategic value in today's business operations (Tzortzaki & Mihiotis, 2014). As organisations face challenges and opportunities in the current dispensation, efficient management of knowledge will be essential to establishing and maintaining competitive advantages.

4.1. Practical Implications

In today's dynamic and complex business world, knowledge-based theory provides a framework for firms to utilise their knowledge assets. The notion of knowledge dynamics was created as a theoretical rationale to better understand the changing nature of knowledge-based theory (Bratianu et al., 2010; Bejinaru, 2011). This is achieved through the development of methodologies that prioritise knowledge application, generation, and distribution. Organisations must consequently prioritise strategies for capturing, storing, sharing, and leveraging knowledge (Huie et al., 2020). This includes developing information databases, allowing staff to share expertise, and cultivating a culture of continual improvement and learning (Zamiri & Esmaeili, 2024).

Robertson et al. (2023) opined that the knowledge-based theory emphasises the necessity of continuous innovation and learning. Organisations must, therefore, foster a culture that promotes knowledge creation and human capital development,

appreciates knowledge growth, stimulates cooperation, and rewards creativity (Ahmed et al., 2016). This could include forming cross-functional teams, encouraging collaboration, and rewarding innovative behaviour. Strategic relationships and networks can help businesses gain access to outside expertise and experience. In this regard, businesses must devise measures to safeguard their intellectual assets, such as patents, copyrights, trademarks, and trade secrets. According to Çakmak (2023), a knowledge-based strategy emphasises the need for organisations to be agile and adapt to changing circumstances.

4.2. Potential Benefits and Challenges of Implementing the Concept of Knowledge-Based Theory.

Resource allocation is the first step towards the effectiveness and efficiency of any company. Although organisations rely on several types of knowledge for this (Buckley & Carter, 2000), Ganesan (2017) opined that its management is crucial for firms' performance. Given the importance of knowledge as an organisational asset (Johannessen, 2018), funding for knowledge generation, acquisition, knowledge-sharing platforms, information systems, training, and research and development has become critical (Ibidunni et al., 2020). The advantages of this investment in knowledge can be seen in the firms' potential (Grant & Phene, 2022; Stoian et al., 2024). Such possibility provides a huge competitive edge. One result of this competitive advantage is innovations.

Furthermore, knowledge has served as the basis for making better decisions (Jones, 2006). This is the outcome of having access to relevant information. Making use of knowledge entails sharing and collaboration. This encourages the development of ideas, services, products, processes and operational efficiency (Rumanti et al., 2023). Also, firms that value collaborative efforts attract and retain talented individuals (Beyerlein et al., 2017). This encourages adaptability and resilience to 21st-century issues.

On the other hand, implementing a knowledge-based approach in a business may entail significant cultural changes (De Long, 1997). While these changes might become imperative in this present dispensation, worker resistance to such change must be managed appropriately (Darmawan & Azizah, 2020). This also pertains to knowledge management, protection, and security. Potential misuse or unauthorised access must be avoided. This could be tough in a knowledge-sharing setting. Again,

the intricacies of data integration might be intimidating. These tasks demand the application of standardised methodologies and technologies. Knowing how to deal with these issues is essential. Knowledge becomes obsolete with time (Young, 1999), while such happens at an alarming pace. It demands a large amount of resources and can be tough to manage. However, assessing and measuring the value of knowledge can be difficult (Massingham, 2017).

5. Conclusion

Knowledge-based theory is extremely relevant in the twenty-first century, providing critical insights into how businesses manage information to solve current challenges. Organisations can position themselves for long-term success in a complex and competitive global context (Agustian et al., 2023) by supporting technological innovation, fostering a collaborative culture, and aligning their management with strategic goals. While there are implications for HR management and strategy (Abdullah, 2009), attracting, developing, and retaining knowledge workers takes precedence (Abu-Rub, 2010).

In this regard, knowledge has emerged as the defining factor of twenty-first-century progress, pushing innovation, economic growth, and social development (Karnouskos, 2013; Chiu & Chen, 2016; Rezaei et al., 2021). Through knowledge generation, acquisition, and application, knowledge-based theory emphasises firms' performance and competitiveness are encouraged (Alosaimi, 2016; Bloodgood, 2019). To successfully use knowledge, capabilities must be developed by organisations (Omotayo 2015). Firms' critical strategies and priorities include investment in the management of knowledge systems, fostering a learning culture and encouraging collaboration.

Again, knowledge-based theory can help address modern organisational challenges. While knowledge-based theories evolve, knowledge must always be updated (Hertzog et al., 2009). It is necessary to modify the theoretical assumptions to reflect contemporary trends. Knowledge-based theories must always evolve to remain relevant and deliver useful advice to businesses.

The study's findings underscore the growing relevance of cross-organisational networking, collaboration, and knowledge sharing, as well as open innovation. This includes investing in R&D and developing an atmosphere that promotes the knowledge cycle (Taher, 2021). The study's findings emphasise the importance of ethical issues in strategy and knowledge management (Chatterjee & Sarker, 2013).

The study contributes to the ongoing discussion over the role of knowledge in promoting current dispensation. knowledge can help address challenges. Overall, the study emphasises the importance of knowledge in the twenty-first century, and continued research to advance the understanding and application of knowledge-based theory in a fast-changing world.

However, future research can investigate the function of knowledge-based theory in tackling contemporary challenges. Empirical research is required to validate the propositions of knowledge-based theory across multiple industries, settings, and geographic regions. Since the current theory only considers firm-level abilities while neglecting external impacts, research can be done to examine the social and ethical components of knowledge-based theory (Kengatharan, 2019).

Additionally, for businesses to successfully traverse the global environment, a complete framework that integrates the many forms of knowledge and knowledge processes must be developed (Snyman, 2007). Investigating the multilayered structure of knowledge processes is necessary, considering the contributions made by individuals, groups, organisations, and institutions to the creation, exchange, and use of knowledge (Hannah & Lester, 2009).

It is possible to investigate how knowledge-based theory influences approaches of the management to firms' structure, cultural contexts, and locations (Islam et al., 2008). Knowledge cycle may be impacted by contemporary issues such as globalisation, populism, disinformation, social media, and digital divide. To measure and evaluate knowledge value, studies can be done on metrics and measurement frameworks (Ramirez & Steudel, 2008; Matošková, 2016).

Reference

- Abdullah, H. (2009). Major challenges to the effective management of human resource training and development activities. *Journal of International Social Research*, 2(8).
- Abu Rub, D. B. S. (2010). The Role of Human Resource Management on Attracting and Retaining of Qualified Employees in Jordan Organizations. *Available at SSRN 1600813*.
- Agustian, K., Pohan, A., Zen, A., Wiwin, W., & Malik, A. J. (2023). Human Resource Management Strategies in Achieving Competitive Advantage in Business Administration. *Journal of Contemporary Administration and Management (ADMAN)*, 1(2), 108-117.

- Ahmed, F., Shahzad, K., Aslam, H., Bajwa, S. U., & Bahoo, R. (2016). The role of collaborative culture in knowledge sharing and creativity among employees. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 10(2), 335-358.
- Akinsola, J. E. T., Adeagbo, M. A., Oladapo, K. A., Akinsehinde, S. A., & Onipede, F. O. (2022). Artificial intelligence emergence in disruptive technology. In *Computational intelligence and data sciences* (pp. 63-90). CRC Press.
- Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 25(1), 107-136.
- Alosaimi, M. (2016). *The role of knowledge management approaches for enhancing and supporting education* (Doctoral dissertation, Université Panthéon-Sorbonne-Paris I).
- Aparicio, G., Iturralde, T., & Rodríguez, A. V. (2023). Developments in the knowledge-based economy research field: a bibliometric literature review. *Management Review Quarterly*, 73(1), 317-352.
- Arpe, J. (2012). Globalization and its Complexity: Challenges to Economic Policy. Bertelsmann Studies.
- Bayo, P. L. (2019). Technological challenges in management of organizations. *International Journal of Business & Law Research*, 7(2), 99-111.
- Bejinaru, R. (2011). Knowledge dynamics and the concept of 'BA'. *The USV Annals of Economics and Public Administration*, 10(3), 217-223.
- Bejinaru, R. (2016). Knowledge dynamics impact on intellectual capital in organisations. *Management Dynamics in the Knowledge Economy*, 4(4), 515-534.
- Berliant, M., & Fujita, M. (2011). The dynamics of knowledge diversity and economic growth. *Southern Economic Journal*, 77(4), 856-884.
- Beyerlein, M., Collins, R., Jeong, S., Phillips, C., Sunalai, S., & Xie, L. (2017). Knowledge sharing and human resource development in innovative organizations. *Knowledge Management Strategies and Applications*, 25-45.
- Bleady, A., Ali, A. H., & Ibrahim, S. B. (2018). Dynamic capabilities theory: pinning down a shifting concept. *Academy of Accounting and Financial Studies Journal*, 22(2), 1-16.
- Bloodgood, J. M. (2019). Knowledge acquisition and firm competitiveness: the role of complements and knowledge source. *Journal of Knowledge Management*, 23(1), 46-66.
- Brandão Santana, N., D.A.D.N. Rebelatto, A.E. Périco, H.F. Moralles, and W. Leal Filho, (2015): Technological innovation for sustainable development: An analysis of different types of impacts for countries in the BRICS and G7 groups. *Int. J. Sustain. Dev. World Ecol.*, 22(5), 1–12, doi:10.1080/13504509.2015.1069766.

- Bratianu, C. (2008a) Knowledge dynamics, *Review of Management and Economic Engineering*, 7(5),103-107.
- Brown, J. S. and P. Duguid (1991). "Organizational Learning and Communities of Practice: Toward a Unified View of Working, Learning and Innovation." *Organization Science* 2(1): 40-57
- Buckley, P. J., & Carter J.M, (2000). Knowledge Management in Global Technology Markets: Applying theory to practice, *Long Range Planning*, 33(1), 55-71, ISSN 0024-6301, [https://doi.org/10.1016/S0024-6301\(99\)00102-8](https://doi.org/10.1016/S0024-6301(99)00102-8).
- Burduli, V. (2020). Essence of knowledge economy and the degree of its interoperability with innovative economy. *International Journal of New Economics and Social Sciences IJONESS*, 11(1), 61-82.
- Çakmak, Z. (2023). Adapting to Environmental Change: The Importance of Organizational Agility in the Business Landscape. *Florya Chronicles of Political Economy*, 9(1), 42-53.
- Chatterjee, S., & Sarker, S. (2013). Infusing ethical considerations in knowledge management scholarship: Toward a research agenda. *Journal of the Association for Information Systems*, 14(8), 1.
- Chiu, C. N., & Chen, H. H. (2016). The study of knowledge management capability and organizational effectiveness in Taiwanese public utility: the mediator role of organizational commitment. *SpringerPlus*, 5, 1-34.
- Cohen, W. M. and D. A. Levinthal (1990). "Absorptive Capacity: A New Perspective on Learning and Innovation." *Administrative Science Quarterly* 35(1): 128-152
- Curado, C., & Bontis, N. (2006). The knowledge-based view of the firm and its theoretical precursor. *International Journal of Learning and Intellectual Capital*, 3(4), 367-381.
- Darmawan, A. H., & Azizah, S. (2020). Resistance to change: Causes and strategies as an organizational challenge. In *5th ASEAN Conference on Psychology, Counselling, and Humanities (ACPOCH 2019)* (pp. 49-53). Atlantis Press.
- Davenport, T. H., & Prusak, L. (1998). Working knowledge: How organizations manage what they know. *Harvard Business Press*.
- De Long, D. (1997). Building the knowledge-based organization: How culture drives knowledge behaviors. *Centers for Business Innovation-Working Paper*, 1-29.
- Drucker, P. F. (1999). Knowledge-worker productivity: The biggest challenge. *California Management Review*, 41(2), 79-94.

- Eisenhardt, K. M., Santos, F. M., Pettigrew, I. A., Thomas, H., & Whittington, R. (2000). Knowledge based view. Handbook of strategy and management. London: Sage Publications.
- Eruemegbe, G. O. (2015). Impact of business environment on organization performance in Nigeria study of union bank of Nigeria. *European Scientific Journal*.
- Faulconbridge, J. R., & Muzio, D. (2012). Professions in a globalizing world: Towards a transnational sociology of the professions. *International sociology*, 27(1), 136-152.
- Feng, X., Liu, Y. and Wang, X. (2022), "Analysis of interdisciplinary characteristics and knowledge structure from multidimensional perspective: a case study of national fitness topic in China", *Library Hi Tech*, <https://doi.org/10.1108/LHT-06-2021-0189>
- Fenwick, M., Kaal, W. A., & Vermeulen, E. P. (2016). Regulation tomorrow: what happens when technology is faster than the law? *Am. U. Bus. L. Rev.*, 6, 561.
- Foss, N. J. (1996). Knowledge-based approaches to the theory of the firm: Some critical comments. *Organization Science*, 7(5), 470-476.
- Foster, N. (2023). 21st Century competencies: Challenges in education and assessment.
- Ghosh, S. (2024, January 17). 29 Latest Social Media Trends That You Should Follow in 2024. Stan Ventures. <https://www.stanventures.com/blog/social-media-trends-this-year/>
- Gnizy, I., Baker, W. E., & Grinstein, A. (2014). Proactive learning culture: A dynamic capability and key success factor for SMEs entering foreign market. *International Marketing Review*, 31(5), 477-505.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122.
- Grant, R., & Phene, A. (2022). The knowledge-based view and global strategy: Past impact and future potential. *Global Strategy Journal*, 12(1), 3-30.
- Guile, D., & Fosstenlökken, S. M. (2018). Introduction to the special issue: knowledge dynamics, innovation and learning. *Industry and Innovation*, 25(4), 333-338.
- Gupta, S., Justy, T., Kamboj, S., Kumar, A., & Kristoffersen, E. (2021). Big data and firm marketing performance: Findings from knowledge-based view. *Technological Forecasting and Social Change*, 171, 120986.
- Håkanson, L. (2010). The firm as an epistemic community: the knowledge-based view revisited. *Industrial and Corporate Change*, 19(6), 1801-1828.

- Hamilton, C., & Philbin, S. P. (2020). Knowledge based view of university tech transfer—a systematic literature review and meta-analysis. *Administrative Sciences*, 10(3), 62.
- Hannah, S. T., & Lester, P. B. (2009). A multilevel approach to building and leading learning organizations. *The leadership quarterly*, 20(1), 34-48.
- Haslinda, A., & Sarinah, A. (2009). A review of knowledge management models. *Journal of international social research*, 2(9).
- Heeks, R. and C. Stanforth, (2015): Technological change in developing countries: Opening the black box of process using actor–network theory. *Dev. Stud. Res.*, 2(1), 33–50, doi: 10.1080/21665095.2015.1026610.
- Hertzog, C., Price, J., Burpee, A., Frentzel, W. J., Feldstein, S., & Dunlosky, J. (2009). Why do people show minimal knowledge updating with task experience: Inferential deficit or experimental artifact? *Quarterly Journal of Experimental Psychology*, 62(1), 155-173.
- Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions and organizations across nations. Sage publications.
- Horx, M., 2010. Trend-Definitionen. [pdf] Available at: <<http://www.horx.com/zukunftsforschung/Docs/02-M-03-Trend-Definitionen.pdf>> [Accessed 10.01.18].
- Hughes, M., Hughes, P., Hodgkinson, I.R., Chang, Y.-Y., and Chang, C.-Y. (2021). Knowledge-based Theory, Entrepreneurial Orientation, Stakeholder Engagement, and Firm Performance. *Strategic Entrepreneurship Journal*,
- Huie, C. P., Cassaberry, T., & Rivera, A. K. (2020). The impact of tacit knowledge sharing on job performance. *International Journal on Social and Education Sciences*, 2(1), 34-40.
- Ibidunni, A. S., Kolawole, A. I., Olokundun, M. A., & Ogbari, M. E. (2020). Knowledge transfer and innovation performance of small and medium enterprises (SMEs): An informal economy analysis. *Heliyon*, 6(8).
- Islam, M. Z., Mahtab, H., & Ahmad, Z. A. (2008). The role of knowledge management practices on organizational context and organizational effectiveness. *ABAC Journal*, 28(1).
- Johannessen, J. A. (2018). Knowledge Management as a Strategic Asset: An Integrated, Historical Approach. *Emerald Group Publishing*.
- Jones, K. (2006). Knowledge management as a foundation for decision support systems. *Journal of computer information systems*, 46(4), 116-124.
- Kaplan, R. S., & Norton, D. P. (1996). The balanced scorecard: Translating strategy into action. Harvard Business Press.

- Kaplan, S., Schenkel, A., von Krogh, G., & Weber, C. (2001). Knowledge-based theories of the firm in strategic management: A review and extension. *International Journal of Project Management*, 25(56), 143-158.
- Karnouskos, P. (2013). Key contributing factors to effective knowledge management and its subsequent impact on innovation.
- Kefela, G. T. (2010). Knowledge-based economy and society has become a vital commodity to countries. *International NGO Journal*, 5(7), 160-166.
- Kengatharan, N. (2019). A knowledge-based theory of the firm: Nexus of intellectual capital, productivity and firms' performance. *International Journal of Manpower*, 40(6), 1056-1074.
- Kianto, A., Ritala, P., Vanhala, M., & Hussinki, H. (2020). Reflections on the criteria for the sound measurement of intellectual capital: A knowledge-based perspective. *Critical Perspectives on Accounting*, 70, 102046.
- King, D. L. (2020). Transforming the Library. *Foundations of Library and Information Science*, 197.
- Konopik, J., Jahn, C., Schuster, T., Hoßbach, N., & Pflaum, A. (2022). Mastering the digital transformation through organizational capabilities: A conceptual framework. *Digital Business*, 2(2), 100019.
- Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital transformation: An overview of the current state of the art of research. *Sage Open*, 11(3), 21582440211047576.
- Mandrulianu, A. (2008). Knowledge dynamics. *Economic Informatics Review*, 12(4), 122-129.
- Marquardt, K., Olaru, M., Golowko, N., & Kiehne, J. (2018). Study on Economic Trends, Drivers and Developments of the 21 St Century. In BASIQ The 4th international Conference on New Trends in Sustainable Business and Consumption (pp. 65-73).
- Martínez-Caro, E., Cegarra-Navarro, J. G., & Alfonso-Ruiz, F. J. (2020). Digital technologies and firm performance: The role of digital organisational culture. *Technological Forecasting and Social Change*, 154, 119962.
- Massingham, R. K. (2017). The Role of accounting in legitimising the culture of the Australian construction industry.
- Matošková, J. (2016). Measuring knowledge. *Journal of Competitiveness*.
- Ndung'u, N., & Signé, L. (2020). The Fourth Industrial Revolution and digitization will transform Africa into a global powerhouse. *Foresight Africa Report*, 5(1), 1-177.

- Nickerson, J. A., & Zenger, T. R. (2004). A knowledge-based theory of the firm—The problem-solving perspective. *Organization science*, 15(6), 617-632.
- Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Oxford university press.
- Nunns, P., Donovan, S. B., & Genter, J. A. (2020). Auckland, New Zealand. In Parking (pp. 147-167). Elsevier.
- Okolie, U. C., & Udom, I. D. (2019). Challenges of HRM in a global business environment: a review and research agenda. *International Journal of New Economics and Social Sciences*, 9, 181-194.
- Omotayo, F. O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature. *Library Philosophy and Practice*, 1(2015), 1-23.
- Pereira, V., & Bamel, U. (2021). Extending the resource and knowledge-based view: A critical analysis into its theoretical evolution and future research directions. *Journal of Business Research*, 132, 557-570.
- Ponzi, L. J. (2001). Ethical challenges in knowledge management: USAA's response. *Journal of Knowledge Management*, 5(3), 233-243.
- Pufé, I., 2017. Nachhaltigkeit. 3. ed. Konstanz and München: UVK Verlagsgesellschaft mbH.
- Ramirez, Y. W., & Steudel, H. J. (2008). Measuring knowledge work: the knowledge work quantification framework. *Journal of Intellectual Capital*, 9(4), 564-584.
- Reeves, M. (2016, May 27). Adaptability: The New Competitive Advantage. *Harvard Business Review*. <https://hbr.org/2011/07/adaptability-the-new-competitive-advantage>.
- Rejeb, A., Rejeb, K., Appolloni, A., Jagtap, S., Iranmanesh, M., Alghamdi, S., ... & Kayikci, Y. (2023). Unleashing the power of internet of things and blockchain: A comprehensive analysis and future directions. *Internet of Things and Cyber-Physical Systems*.
- Rezaei, F., Khalilzadeh, M., & Soleimani, P. (2021). Factors affecting knowledge management and its effect on organizational performance: Mediating the role of human capital. *Advances in Human-Computer Interaction*, 2021, 1-16.
- Robertson, J., Caruana, A., & Ferreira, C. (2023). Innovation performance: The effect of knowledge-based dynamic capabilities in cross-country innovation ecosystems. *International Business Review*, 32(2), 101866.
- Rumanti, A. A., Rizana, A. F., & Achmad, F. (2023). Exploring the role of organizational creativity and open innovation in enhancing SMEs performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), 100045.

- Sagor, M. (2024, January 3). What is an example of a Social Trend. Pioneer Marketer. <https://pioneermarketer.com/what-is-social-trend/>
- Samsudin, Z. binti, & Ismail, M. D. (2019). The Concept of Theory of Dynamic Capabilities in Changing Environment. *International Journal of Academic Research in Business and Social Sciences*, 9(6), 1071–1078.
- Schütz, K., Kässer, M., Blome, C., & Foerstl, K. (2020). How to achieve cost savings and strategic performance in purchasing simultaneously: A knowledge-based view. *Journal of Purchasing and Supply Management*, 26(2), 100534.
- Scuotto, V., Lemaire, S. L. L., Magni, D., & Maalaoui, A. (2022). Extending knowledge-based view: Future trends of corporate social entrepreneurship to fight the gig economy challenges. *Journal of Business Research*, 139, 1111–1122.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. Currency Doubleday.
- Singh, S. K., Mazzucchelli, A., Vessal, S. R., & Solidoro, A. (2021). Knowledge-based HRM practices and innovation performance: Role of social capital and knowledge sharing. *Journal of International Management*, 27(1), 100830.
- Snyman, M. M. M. (2007). Knowledge management framework for the development of an effective knowledge management strategy. *South African journal of information management*, 9(2).
- Solanki, R., & Sujee, L. S. (2022). Fintech: A Disruptive Innovation of the 21st Century, or Is It? *Global Business and Management Research*, 14(2s), 76–87
- Sponder, J. C., & Grant, R. M. (1996). Knowledge and the firm: Overview. *Strategic Management Journal*, 17(S2), 5–9.
- Squicciarini, M., & Loikkanen, T. (2008). Going global: The challenges for knowledge-based economies.
- Stankiewicz, K. (2015). Contemporary Issues and Challenges. *Econ papers*, 7–8.
- Stoian, M. C., Tardios, J. A., & Samdanis, M. (2024). The knowledge-based view in international business: A systematic review of the literature and future research directions. *International Business Review*, 102239.
- Taalbi, J. (2017). What drives innovation? Evidence from economic history. *Research Policy*, 46(8), 1437–1453.
- Taher, M. (Ed.). (2021). *Handbook of Research on the Role of Libraries, Archives, and Museums in Achieving Civic Engagement and Social Justice in Smart Cities*. IGI Global.

- Teece, D. J. (2010). Technological innovation and the theory of the firm: the role of enterprise-level knowledge, complementarities, and (dynamic) capabilities. In *Handbook of the Economics of Innovation* (Vol. 1, pp. 679-730). North-Holland.
- Tynnhammar, M. (Ed.). (2020). *The Crest of the Innovation Management Research Wave*. Vernon Press.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge university press.
- Wilden, R., Gudergan, S. P., Nielsen, B., & Lings, I. (2013). Dynamic capabilities and performance: strategy, structure and environment. *Long Range Planning*, 46(1), 72-96.
- Yamin, M. (2019). Information technologies of 21st century and their impact on the society. *International Journal of Information Technology*, 11(4), 759-766.
- Young, M. (1999). Knowledge, learning and the curriculum of the future. *British Educational Research Journal*, 25(4), 463-477.
- Zamiri, M., & Esmaeili, A. (2024). Methods and Technologies for Supporting Knowledge Sharing within Learning Communities: A Systematic Literature Review. *Administrative Sciences*, 14(1), 17.