

Analysing the Nexus between Innovation and Knowledge Sharing among Small and Medium Enterprises (SMEs) in Promoting Development in BRICS Countries

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Abstract

Small and medium-sized enterprises (SMEs) in the informal sector of Brazil, Russia, India, China, and South Africa (BRICS) play a critical role in boosting their nations' economies. Informal entrepreneurship is an important source of economic development thanks to knowledge sharing and innovation extensively employed in this area. The BRICS countries are viewed as leaders in economic development, innovation, and knowledge transfer among developing countries; abundant research into the factors of their success has so far paid insufficient attention to the relationship between innovation and knowledge generated by the SMEs and their role in promoting the BRICS countries' development. This paper attempts to narrow the gap by critically analysing the nexus between innovation and knowledge sharing among informal small and medium-sized enterprises in these countries. It offers a systematic review of academic sources obtained from EBSCOhost followed by a thematic analysis of secondary data and a discussion of its results, which, as we hope, will provide insights for development practitioners and researchers in BRICS countries.

Keywords

Innovation, Knowledge sharing, Small and Medium Enterprises (SMEs), Development and BRICS.

Аннотация

Малые и средние предприятия (МСП) в неформальном секторе Бразилии, России, Индии, Китая и Южной Африки (БРИКС) играют важнейшую роль в развитии экономики своих стран. Неформальное предпринимательство является важным источником экономического развития благодаря обмену знаниями и инновациям, широко используемым в этой сфере. Страны БРИКС считаются лидерами в области экономического развития, инноваций и передачи знаний среди развивающихся стран; при этом в многочисленных исследованиях факторов их успеха до сих пор не уделялось достаточного внимания взаимосвязи между инновациями и знаниями, генерируемыми МСП, и их ролью в содействии развитию стран БРИКС. В данной статье предпринята попытка уменьшить этот пробел путем критического анализа взаимосвязи между инновациями и обменом знаниями среди неформальных малых и средних предприятий в этих странах. В работе представлен систематический обзор научных источников, полученных из EBSCOhost, тематический анализ вторичных данных и обсуждение результатов, которые, как мы надеемся, помогут практикам и исследователям в области развития в странах БРИКС.

Ключевые слова

Инновации, обмен знаниями, малые и средние предприятия (МСП), развитие и БРИКС.

JEL: D80, O30, L26, M21.

Introduction

Knowledge sharing has become popular and is now recognised as an essential factor of sustainability in the small and medium enterprises (SMEs) sector. One may define knowledge sharing as the transfer of knowledge from one firm or individual to another (Hashish, 2017). Tassabehji, Mishra & Dominguez-Péry (2019) and Ibidunni et al (2020) emphasize the interchange of individuals' work-related experiences as part of such transfer; they note that it is significant in smoothening the SMEs' operations as it helps entrepreneurs to gain a diversity of skills, expertise, and experience that promote innovation and economic growth (Ibidunni et al, 2020).

Tassabehji et al (2019) point out that entrepreneurs operating SMEs can improve their innovation-related performance through the knowledge-sharing with other entrepreneurs across nations. By so doing, SMEs may become more creative and produce innovative ideas thus improving business processes and hence the quality of products and services. SMEs in the informal economies of Brazil, Russia, India, China, and South Africa (BRICS) play a critical role in boosting their nations' economies (Wang, Wang & Mardani, 2023). Informal entrepreneurship is important for economic development through knowledge sharing and innovation. The BRICS countries are viewed as leaders in economic development, innovation, and knowledge transfer among developing countries. However, there is a substantial gap in the research on the relationship between innovation and knowledge in the SMEs and their role in promoting the development of the BRICS countries. This paper attempts to narrow this gap by critically analysing

the nexus between innovation and knowledge sharing among informal small and medium-sized enterprises (SMEs) in promoting development in the BRICS countries.

SMEs in South Africa for example, are involved mostly in entrepreneurial activities where they transact their businesses selling services and products imported from other BRICS nations, e.g. China. There is little knowledge about innovation, particularly related to new products, among informal entrepreneurs operating SMEs in South Africa as compared to the other BRICS nations (Sidorova, 2018), which makes them rely on imports. To narrow this gap in the production of innovation and knowledge, Sidorova (2018) suggests that small businesses in the BRICS nations should participate in knowledge transfer or sharing activities, research and development, training, collaborations, and social networking.

The present paper raises the question about the capability of informal entrepreneurs operating SMEs in BRICS nations to practice knowledge transfer and share innovative ideas that could lead to the creation of new products. Moreover, it is still not clear in what way innovation and knowledge sharing among SMEs can contribute to the development of the BRICS countries, which makes it difficult for informal entrepreneurs in BRICS nations within the SMEs sector to gain a comprehensive understanding of the necessary tools or measures that influence knowledge sharing or knowledge transfer, innovation and development. This paper attempts to provide a critical analysis of the nexus between innovation and knowledge sharing among SMEs in promoting development in the BRICS countries with a special focus on informal entrepreneurship.

Defining Key Concepts

The key concepts of this paper include innovation, knowledge sharing, development, small and medium-sized enterprises (SMEs), and BRICS. These terms are defined briefly below in their respective order.

Innovation

The concept of innovation has several definitions based on different approaches. To some authors, innovation is a process in which knowledge is attained, shared, and adapted to produce new knowledge used in production or managerial processes, products, services, service methods, and structures like socio-environmental frameworks (Harrington et al., 2017), which has become an imperative for development practitioners and policymakers globally (Pfothenauer, 2019). It is vital to unite regulators and innovators so that they could reach a mutual understanding of how introduce and spread innovation (Soete, 2019). Inputs that promote innovation as noted by Pfothenauer and Jasanoff (2017) include research, development, training, and financial resources. According to Soete (2019), innovation is also influenced by knowledge transfer or sharing, exchange of expertise, intuitions and experience, information dissemination,

intuitions, and artistic approaches. In this paper, innovation is understood as the most important capacity that an informal entrepreneur operating in the SME sector needs to obtain to maintain a competitive benefit as the success of informal entrepreneurs operating an SME is highly dependent on being innovative and sharing knowledge and information with other entrepreneurs.

Innovation normally requires advanced technology and economic and financial resources, but largely, as argued by Diercks, Larsen, and Steward (2019) it is promoted through the sharing of knowledge by the participants of economic activity. In this sense, it integrates physical and technical knowledge-related elements into innovative production. The study of innovation processes should cover the following three aspects: the actors involved, activity types favourable, and innovation modes observed (Diercks et al, 2019).

Knowledge Sharing

Today, knowledge sharing is a popular research topic in the field of Economics, Entrepreneurship, and Business Management Studies. It involves the exchange or transfer of knowledge, skills, information, and experience among workers (Castaneda & Cuellar, 2020). Podrug, Filipovic, and Kovac (2017) argue that knowledge sharing involves the ability of an individual to transfer expert knowledge, perceptions, experiences, and information into innovative production and practices. In a wider sense, knowledge sharing can be understood as a way for an enterprise to have access to knowledge from other organisations (Podrug et al., 2017). In this paper, knowledge sharing is viewed as the act of transferring knowledge from one entrepreneur to another to promote innovation which is essential for economic growth and development. It is generally recognized that knowledge sharing contributes to improved competition through its influence on innovation and development of new services and products that satisfy customers' needs and demands (Castaneda & Cuellar, 2020).

Development

The Society for International Development (SID) (2021) defines development as a process that generates growth, progress and positive change. Its purpose is to improve the quality of human life, create and expand local and global income and employment opportunities without jeopardizing natural resources (SID, 2021). In the previous years, research experts and professionals have suggested several major definitions of development. For example, Amartya Sen, (the Capability Approach philosopher), understands development as a tool that enables people or individuals to reach their highest ability levels, through acquiring freedom of action, freedom of socio-economic and family actions (SID, 2021). He looks at the concept through the lenses of social, economic, environmental, political, and human goals regarding it as a process that allows informal entrepreneurs and SMEs to become more innovative and contribute to both technological advancement as and economic growth.

Small and medium-sized enterprises (SMEs)

The World Bank (2022) defines small and medium-sized enterprises (SMEs) as businesses that maintain and sustain their revenues and assets with a limited number of employees below a specific threshold. These businesses play a critical role in most emerging economies, including those of BRICS. They account for most of the businesses globally and are significant contributors to global economic growth, job creation, and sustainable development (World Bank, 2022). SMEs represent approximately 90% of businesses, and up to 60% of informal employment in emerging economies (World Bank, 2022). This paper focuses only on SMEs that are operated by informal entrepreneurs within the BRICS nations.

BRICS

The Library of Congress (2023) states that BRICS is an acronym for Brazil, Russia, India, China and South Africa. The BRICS was formed to promote development, cooperation, peace, and security in its five countries. It also aimed to significantly improve human and economic development through establishing a fair and equitable world (Library of Congress, 2023). China, India and Brazil have recorded a dramatic increase in science research and publications since 2002. Between 2002 and 2007, they doubled their investment in science and research thus increasing their collective stake in global Research and Development (R&D), from 17 to 24 % (Library of Congress, 2023). China has targeted multiple scientific fields and industries related to clean energy, innovation and green technology and many others. Among the BRICS nations, China is leading in terms of Research and Development since 1999 (Wang et al., 2023).

Literature Review

In search of relevant literature, we followed a systematic literature review approach to search for relevant sources. This paper only included sources that contain literature on the relationship between innovation, knowledge sharing and development among SMEs in the BRICS countries as well as those on informal entrepreneurs in small and medium-sized businesses.

Innovation, Knowledge Sharing, and Development among SMES in BRICS Nations

It is of paramount importance for informal entrepreneurs within the SME sector of the BRICS countries to understand the nexus between innovation, knowledge sharing, and development. South Africa is an emerging economy in the Global South; some other African countries with comparatively modest performance in terms of innovative activity aspire to join the BRICS group. At the same time,

China has a fast-growing economy at a high level of technological advancement and digitalisation (Liu, Lin & Yu, 2022). This paper seeks to prove that countries like China, Brazil and India may benefit from sharing their knowledge and innovative ideas on producing advanced technology and digitisation with such BRICS nation as South Africa and Russia that are still lagging behind in some of the high-tech areas. This is in line with the argument that was raised by Podrug et al.(2017), who state that “to accumulate technological capabilities and shift up heads on the global technological frontier of innovation, organisations in the developing nations must engage in technological learning and development processes that would allow them to share knowledge and information”. From this declaration, we note the significance of knowledge sharing in the accumulation of innovative skills, capabilities, and ideas, propelling informal entrepreneurs in BRICS nations like South Africa and Russia to enhance their technological innovation capacity.

According to Renno, Andrade and Gonalo (2021), China is leading the BRICS 4.0 Foreign Direct Investment (FDI); it is followed by India and then by South Africa, Russia, and lastly Brazil. While Russia is following China in innovation, the other three BRICS nations (India, South Africa, and Brazil) are greatly improving their socioeconomic performance (Renno et al., 2021). All the BRICS nations have innovative potential but in some of them most of the informal small and medium-sized businesses were hit by the COVID-19 pandemic which slowed down their economic development (Rogovsky & Cooke, 2021). Russian informal entrepreneurs operating within the SMEs sector have been seriously affected by the Russia-Ukraine war and this was also damaging for their innovative practices (Rogovsky & Cooke, 2021). Shocks like the COVID-19 pandemic and war are major setbacks to innovation and economic development; to cope with their consequences, governments of the BRICS nations should collaborate and develop knowledge-sharing frameworks that support innovation and informal entrepreneurs’ resilience to such shocks. Knowledge-sharing frameworks will improve their ability to adopt sustainable practices, digital and others, that promote economic growth and sustainable development.

There are significant linkages between innovation, knowledge sharing, and development. Putra & Santoso (2020) assessed the role of knowledge sharing on the performance of SME entrepreneurs with innovation as an intermediate variable. Their findings point to the existence of a causal relationship between innovation and knowledge sharing and indicate that, within the SME sector, knowledge sharing is very effective as a source of innovation (Putra & Santoso, 2020).

Methodology

In selecting relevant articles for our systematic literature review, we followed the strategy recommended by Booth, (2019) and Kraus et al (2020) that includes three major steps. The first step involves planning, i.e. defining the study protocol to guarantee a transparent and high-quality systematic literature review process.

The second stage of our systematic literature review involved selecting material for analysis. Following Malabanan and Bayeng (2019), we used online journal articles from EBSCOhost as it offers high-quality licensed articles from reputable publishers, that meet the specific needs and standards of scientific and academic scholars and are recognised by international library professionals. EBSCOhost is a global source information that consists of electronic journal services and research database of 60,000 publishers (Malabanan & Bayeng, 2019) and provides quality content in full-text, referenced articles (Malabanan & Bayeng, 2019).

We also selected databases like Academic Search Ultimate, Africa-Wide, Business Source Ultimate, and Education Source. From these databases, we searched for articles that contained literature on the nexus between innovation and knowledge sharing among SMEs in promoting development in BRICS countries, particularly, the informal entrepreneurs in the SMEs sector in BRICS countries. We used the Boolean/Phrase search for key terms like “innovation” AND “knowledge sharing” OR “informal entrepreneurship and development in BRICS nations”.

During our search, we found 2770 articles published in 1990-2023. However, seeking to identify the recent trends in economic processes, we limited our search to publications between 2017 and 2023 and got a total of 1367 articles. In accordance with our inclusion and exclusion criteria, we only considered full-text referenced and peer-reviewed articles written in English, on research conducted in BRICS countries.

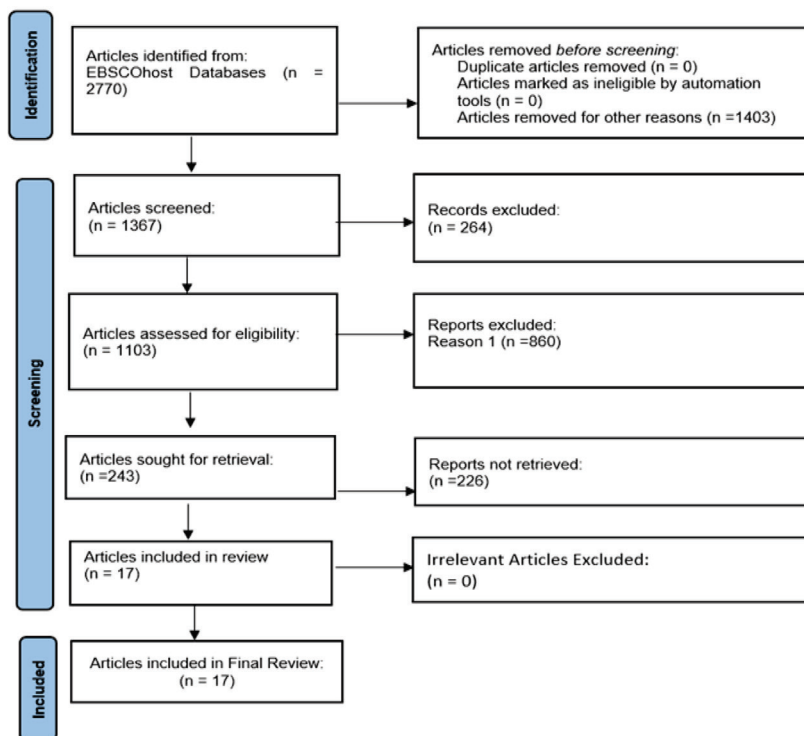


Figure 1. PRISMA 2020 Flow Diagram (Page et al., 2021).

We also used the PRISMA 2020 guide to reduce the subjective element and potential attribution mistakes (Figure 1). According to Page et al (2021), PRISMA 2020 provides guidance on the recording of the number of articles that were identified, included, and excluded as well as the motives for inclusion and exclusion. The figure below shows the PRISMA 2020 flow diagram that was followed in this paper.

From EBSCOhost, we then removed databases like conference materials (81 articles), trade publications (37 articles), magazines (35 articles), and reports (2 articles). After removing these, we were left with 1103 articles from the academic journal's database. From these 1103 journals, we only selected 243 full-text articles, with references available and peer-reviewed. We also removed articles that did not contain references to research papers on innovation, knowledge sharing, and development in BRICS countries, particularly on the informal entrepreneurs in the SME sector (226). Our final inclusion consisted of 17 academic articles, and these were all included in our present analysis. Some of the articles were obtained from Google Scholar; these include articles on the systematic literature review, PRISMA 2020, and other key elements of this paper.

Results

Research in the selected sources indicates the importance of training, which allows informal entrepreneurs in the SME sector operators to grow and acquire innovative skills, which then facilitate sustainable development of the SMEs. It has been proved that in the BRICS countries, informal entrepreneurs' involvement in R&D and social networking enhances knowledge sharing, which, in turn, boosts their innovative skills and contributes to adopting advanced technology. All this assists small and medium-sized businesses in providing innovative products that satisfy customers' needs and demands.

SMEs in the BRICS economies make up about 99% of businesses, with 60% of these operating in the informal sector (OECD, 2023). Informal entrepreneurs provide employment opportunities to unskilled people. They are also considered important innovation sources and contributors to economic growth. Moreover, they often provide basic services in places that are too small for bigger businesses to engage (OECD, 2023). Given the positive impact of these SMEs, it is necessary to support them by facilitating their access to essential knowledge and innovative ideas. Improved production boosts the competitiveness of informal entrepreneurs in the SME sector and allows them to reach new markets and potential investors (OECD, 2023). As articulated by the OECD (2021), informal entrepreneurs within the SME sector need funding to adopt new innovative and advanced technology, especially those who are still at the developing stage, or start-up phase. They also need entrepreneurial funding to be able to access innovation-related knowledge from larger firms.

The results of this paper indicate that knowledge sharing and innovation are critical for enhancing the resilience of informal enterprises in the SME industry that enables their sustainable development (Lin, Mao & Wang, 2019). Lack of knowledge sharing across

SMEs can jeopardise the transition towards digitalisation and other innovative practices. This can also have drastic implications for informal entrepreneurs' performance, production, and economic growth in countries like South Africa and Brazil. The results also indicated that knowledge-sharing and innovation could only be established if entrepreneurs from various nations collaborate, interact and build strategic alliances that can enable them to share innovative ideas and knowledge (OECD, 2021). It may be most beneficial for the BRICS countries to collaborate and develop alliances that would allow them to engage in research and discussions concerning knowledge sharing, innovation, and development.

In South Africa, SMEs account for over 98% of enterprises, they employ between 50 and 60% of the country's labour force across all sectors, and are responsible for a quarter of job creation in the informal sector (SEDA, 2021). Despite this, informal entrepreneurs in the SME sector are facing challenges that prevent them from maximising their potential for economic growth and sustainable development (SEDA, 2021). One of the major causes that make these informal entrepreneurs more vulnerable is the lack of research and development on the nexus between innovation, knowledge sharing, and development among informal entrepreneurs operating in the SME sector. This is evidenced by the OECD (2023) which pointed out that the role of knowledge-sharing for informal entrepreneurs in the SME sector had received minimum attention in research and development in South Africa. In countries like China, however, the role of knowledge sharing in innovation and development has received maximum attention. We may conclude that partnerships, research, and development collaborations can greatly improve the prospects for innovation, knowledge-sharing and development of informal businesses in the SME sector of BRICS.

This paper's systematic literature review indicated that most research on innovation, knowledge sharing, and development of SMEs among informal entrepreneurs had been conducted in China. According to Gramkow and Anger-Kraavi (2018), in 2018, 50% of research on innovation, knowledge sharing, and development was carried out in China, 32% in India, 9% in Brazil, 6% in Russia, and only 3% in South Africa. Furthermore, Gramkow and Anger-Kraavi (2018), note that China and India, owing to their sustainable development aspirations, had more research on innovation and knowledge sharing as compared to Brazil, Russia, and South Africa.

As highlighted by Albekov et al (2017), although Russia has a lower amount of research on innovation and knowledge sharing, it has implemented innovative and efficient energy technologies linked to products with a focus on sustainable development. Green technology, for example, promotes the implementation of environmental safety mechanisms and international environmental standards that contribute to sustainable development (Albekov et al., 2017). Russia could share its knowledge and innovative ideas related to green technology with other BRICS nations to promote sustainable development in all the BRICS countries.

Russia presents a good example of the role of climate and environmental factors in transforming economies in the context of the Fourth Industrial Revolution (Porfiriyev, 2018). Transformations include eco-innovations, green technology incentives, green

and renewable energy production, innovations in the forest and agro-industrial complexes (Pahomova et al., 2017). Russia has increased its research on green buildings, sustainable cities, renewable energy sources, and water management using intelligent systems (Pahomova et al., 2017); this contributed to major progress in innovation and technologies aimed at mitigating carbon emissions, improving waste processing and wastewater treatment, and enhancing the quality of urban environment, e.g. promoting Ecocities (green cities) projects that produce ecological and economic benefits (Pahomova et al., 2017). Again, Russia has a lot to share with the other BRICS nations; it can assist them in adopting innovative ideas related to green economy and sustainable cities.

Most of the articles analysed in this paper focus on how knowledge sharing has influenced innovation and development in China. Many scholars, such as Liu et al (2022); Siddiqui et al (2019) maintain that China is leading in terms of innovation, technology and development. They believe that research on innovation, knowledge sharing, development and entrepreneurship play a critical role in promoting development in China. The study conducted by Liu et al (2022) on the relationship between knowledge sharing, technological innovation, and internal institutions in China revealed that knowledge sharing significantly enhanced the technical innovation of most Chinese enterprises and institutions. The study by Lin et al (2019) shows that knowledge sharing promotes paradoxical leadership, which may subsequently increase innovation.

According to Yang, Nguyen and Le (2018), knowledge sharing plays an intermediating part between product and process innovation and thus stimulates entrepreneurs' knowledge sharing attitude and behaviour, which then leads to more innovative production. As argued by Tassabehji et al (2019), knowledge sharing is significant for innovation performance, particularly for informal entrepreneurs operating in the SMEs sector, who have little or no access to resources. These scholars believe that SMEs operated by informal entrepreneurs are at the forefront of innovation because of their small size (Tassabehji et al., 2019): they are less reluctant to share knowledge within their small circle and this allows them to produce innovative ideas and improve their innovative performance.

Jalowski, Oks, and Möslein (2023) point out that knowledge sharing is crucial for innovation, and vice versa. For example, through scientific research, open discussion, and engagement processes, knowledge sharing promulgates innovative ideas, which facilitates the development of digital and persuasive technologies. Presbitero, Roxas, and Chadee (2017) assert that knowledge sharing is related to innovation because they both influence organizational learning capacity. The findings of this paper suggest that the BRICS countries should invest in research and development initiatives that focus on innovation and knowledge sharing. For example, countries like South Africa should invest more in research and development activities that enhance the effects of knowledge sharing on innovation to transit towards sustainable development. South Africa should also consider sending its students and emerging researchers to countries like China and India to acquire knowledge that would enable them to be innovative.

It is well known that people learn by doing and interacting with one another. The sharing of knowledge also becomes easier when people interact and engage in learning processes (Kucharska & Erickson, 2023). Although such theoretical or philosophical assumptions are not alien to the BRICS nations they have not yet been examined empirically. Still, through collaborative learning and networking, informal entrepreneurs from the BRICS nations can learn a lot from experts and other entrepreneurs operating medium to large enterprises. This will allow them to have knowledge and innovative ideas that will make them produce better products and services.

Although there are many studies that focus on knowledge sharing and innovation, there is little research on the nexus between innovation, knowledge sharing, and development among informal entrepreneurs in SMEs in BRICS nations like South Africa.

Discussion

As we have analysed the selected sources, we saw general agreement about knowledge sharing as a way to better innovation capacity. Both knowledge sharing and innovation are some of the key factors of financial, operational, and economic achievement. Innovation is indeed crucial for entrepreneurs as it may help them attain and manage their competitiveness in both local and global markets with opportunities for sustainable development. It is now clear that entrepreneurs with less innovation capacity are likely to lose market share, quotas, and customers. Entrepreneurs who have embraced innovation often gain more access to new markets and customers, and this increases their sales.

Most studies under consideration focused on assessing the relationships between innovation and knowledge sharing of SMEs in the informal sector in countries like China, proving that knowledge sharing has a significant influence on entrepreneurs' innovation and performance. It is therefore advisable for the other BRICS countries to invest in knowledge sharing and innovation research and development. This will help informal entrepreneurs in the SME sector to adopt the tools that will enhance their production performance.

The results obtained by many scholars suggest that informal entrepreneurs in the SME sector in the BRICS countries should be involved in international business collaborations that support knowledge sharing, innovation, and development. Zhang and Min (2022) assert that research and development are promoted by the veritable tools of knowledge sharing that work well for entrepreneurs in international business collaborations. Research and development generate new knowledge that is commonly the source of business innovation and performance. It means that informal entrepreneurs in BRICS nations should be involved in research and development initiatives to gain new knowledge that will enable them to be innovative and productive.

Tsai et al (2022) reveal that entrepreneurs involved in research and development are innovative and usually are the first to launch new products and services. Evidence

from various scholars shows that the entrepreneurs in SME sector that are involved in research and development initiatives make more profit through knowledge sharing and innovation than those who are not involved in research and development initiatives.

Social networking plays a critical role in knowledge sharing and innovation (Chen et al, 2017). The analysis conducted in this paper indicates that social networking positively contributes to knowledge sharing and generation of new ideas which then leads to more active innovation and improved production of informal entrepreneurs operating SMEs. Besides, knowledge sharing that takes place during social networking between informal entrepreneurs from across nations helps these entrepreneurs adopt new technologies and introduce innovation in their enterprises. In line with the scholars cited in this article (Cheng et al., 2017; Tsai et al., 2022; Zhang & Min, 2022), the present paper suggests that informal entrepreneurs in BRICS nations use social networking to form connections that may empower them and assist in generating innovative ideas and knowledge, particularly on advanced technology and markets.

Conclusion

The present paper focused on analysing the nexus between innovation and knowledge sharing among SMEs in its role in promoting development in the BRICS countries. Much attention is given to the informal entrepreneurs in BRICS countries operating in the SME sector. This paper has presented a review of literature, findings from other scholars and a discussion on the possible relationship between innovation and knowledge sharing and the development of informal entrepreneurs in the SME sector in BRICS countries. It was found that knowledge sharing is vital for innovation, business performance, economic growth, and sustainable development. Innovation and knowledge sharing are not only a matter of individual companies, but of whole countries that want to grow and enhance their competitiveness in the business environment. In this context it is advisable for informal entrepreneurs from the BRICS countries to consider collaborating and forming networks that will allow them to share knowledge and ideas on how to become innovative. Countries like China and India are encouraged to share their knowledge with other BRICS countries helping them to gain knowledge on how to achieve progress in research, science, innovation, technology, and development.

Following the findings from the sources analysed in this paper, it is possible to conclude that international collaborations and social networking together with research and development play an integral part in knowledge sharing, innovation and hence productive performance of informal entrepreneurs in the SME sector. Research and development initiatives linked to innovation and knowledge sharing are the realms that contribute to sustainable development, so informal entrepreneurs in the SME sector in all BRICS nations should be encouraged to participate in research and development initiatives, conferences, social networking, and collaborations. It will allow them to gain new knowledge and innovative ideas that will sustain their businesses and make them grow economically and technologically.

Another significant suggestion made in this paper is that investors and policymakers in BRICS nations should focus more on funding and promoting research and development, international business collaborations, and social networking initiatives that accommodate informal entrepreneurs in the SME sector. This will allow informal entrepreneurs to learn and gain new knowledge that will improve their innovations, performance, and production. The insights and discussions presented in this paper also apply to informal entrepreneurs in other developing nations which lack understanding of the nexus between innovation and knowledge sharing among SMEs in promoting development. Hitherto, among the BRICS countries, most research on innovation and knowledge sharing has been done in China. Countries like South Africa, Russia, and Brazil are lagging so they should try and strengthen their relationship and business collaborations with China and India to learn more about the importance of knowledge sharing in innovation and development. In the future, scholars should be encouraged to conduct more research and fill the existing gap in literature, research, and development on innovation, knowledge sharing and development, particularly on informal entrepreneurs in the SME sector.

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