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How social media usage contributes to open innovation?

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ABSTRACT

Service businesses are the most important factor in the economic growth of a country, and their importance is even greater if the consequences of their entrepreneurial work on the overall growth of society are analyzed. Firms adopt strategic behaviors conditioned by their specific characteristics and motivations that facilitate the emergence of a culture that focuses on preserving the future and enhancing stability. The purpose of this research is to investigate the role of social media activities in the emergence of open innovation. This research has been done by studying previous research regarding the relationship between the mentioned variables. Based on past studies, it was concluded that the use of social media leads to innovation.

Keywords: social media, profitability, service business, open innovation

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1. INTRODUCTION

Service businesses are the most important in a country's economy, and their importance is even greater if the consequences of their entrepreneurial work on the overall growth of a society are analyzed. The defining characteristics of family businesses are focused on the interaction of management with learning and the passing of these businesses from one generation to another. Companies adopt strategic behavior based on their own characteristics and motivations. This, in turn, facilitates the emergence of a culture that focuses on preserving the future and fostering stability (Jalilvand et al., 2019). Recently, organizations have typically attempted to create new knowledge by launching social media platforms. Hence, there is a growing scholarly interest in the role of social media, i.e., Web 2 generation digital technologies, in collaborative knowledge endeavors. However, most social media studies focus on knowledge sharing. In particular, researchers emphasize that social media facilitates knowledge-sharing behavior in organizations in a unique way (De Zubielqui et al., 2019). Regardless of the capabilities of social media, few primary studies directly address the role and function of media. Social networks focus on the purposes of collaborative knowledge creation. These studies further discuss the creation of knowledge based on social media from a technological perspective; that is, they herald the information transfer capabilities of social media. In this sense, they also use a relatively technological understanding of knowledge and conceptualize it as something that is easily stored and transmitted through social media. Called the Web of Data, the Web 2 transition is accompanied by technology and features such as intelligent collaborative filtering, cloud computing, commodity data, interoperability, and intelligent triggers. If Web 2 is dedicated to social networks and the creation of collaboration and partnership between author and user, then Web 3 refers to intelligent applications in natural language processing, machine-based learning, and reasoning.

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In line with the advancements of electronic learning methods, Web 2 technologies have caused a transition from traditional classrooms and also transformed the passive learner into an active participant in the learning process. Dialogue has been emphasized to create new knowledge in traditional settings. They suggest that knowledge acquisition emerges from communicative interactions and call for the study of these social interactions in new digital forms of collaborative knowledge acquisition. From the technological perspective of knowledge creation in social media, we lack a theoretical understanding of the social dynamics that enable the processes of knowledge creation in social media. It helps and enables us to discuss how organizations can foster open innovation through social media. It has been mentioned many times in the literature that the hope of having a stable future for companies will be possible when they can stabilize their position in any situation to achieve economic and social goals (Tajvidi and Karami, 2021). It is accepted that the issue of innovation and social media is something that companies seek to increase profitability on the one hand, increase market share, reduce costs, and improve their performance on the other.

2. LITERATURE REVIEW

Various studies in the literature have also shown that the use of social media has a positive effect on increasing the innovation activities of companies. In a study conducted by Patroni et al. (2022), it was observed that social media exploit knowledge competencies and innovation capabilities and lead to improved business performance. Similarly, in a 2015 study by Palacios Marquez et al., a relationship was observed between online social networks and innovation capacity in small firms. Also, in 2019, using a large-scale survey, De Zubielqui et al. observed a positive relationship between knowledge gained from social media and innovation.

In research conducted by Schlagwein and Hu (2017), an analysis of the social media literature was conducted and concluded that the use of these platforms effectively increases an organization's recruiting capacity. The use of social media supports the business's ability to learn exploratorily and acquire external knowledge, receiving market information and reviewing user-generated content faster and more effectively. Also, social media fosters transformative learning and helps increase an organization's collective intelligence. The authors have also shown that social media can support companies' ability to learn exploitatively and help to develop new business programs or business processes more effectively. It has also been stated in the previous literature that the use of social media increases the capacity of attracting small and medium-sized companies into family companies.

According to the study of Scuotto et al. (2017), the use of social networking platforms has a positive effect on the capacity to attract family businesses. This research shows that using social media as cross-border tools can create transparent and multi-directional interactions and help create and maintain absorption capacity. Other research results also show that absorptive capacity is recognized as a critical resource for success in innovation. The research showed that the use of social media in high-tech companies can help increase transparent and multidirectional interactions and create and maintain absorption capacity. This research shows that the use of social media can help to obtain external knowledge, absorb and transfer it, and increase the innovation of companies. In addition, Moilanen et al.'s (2014) research also showed that absorptive capacity is related to the innovation performance of companies. This research shows that absorptive capacity can enable companies to acquire foreign knowledge and absorb and transfer it, thereby increasing their innovation. Therefore, the research shows that the use of social networking platforms can have a positive effect on the capacity to attract family businesses and the innovation performance of companies.

In the research conducted by Ali and Park (2016), they separately analyzed potential absorptive capacity and realized absorptive capacity and examined the effect of both variables on organizational innovation. The results show that both potential and realized absorptive capacity directly and sequentially affect open innovation in family firms (which includes product, process, and management innovation). To make full use of external knowledge obtained through social media, companies must prepare specific organizational processes to acquire and absorb external knowledge and implement specific procedures to exploit this knowledge and transform it into new service ideas.

In research conducted by Cepeda-Carrion et al. (2023), the role of the knowledge creation process in the relationship between social media and open innovation in family firms was investigated. This research showed that absorptive capacity as a set of knowledge creation processes plays a key role in the relationship between social media use and open innovation. Also, the use of social media appears as an enabler related to open innovation practices. Furthermore, the findings support the idea that using social media to acquire external knowledge and information helps family firms gain more innovative opportunities. Managers of family firms should foster a suitable learning culture in their organizations and provide specific training to develop employees' abilities to acquire, integrate, and use information captured by digital platforms. Social media has changed the way companies communicate with the market and provides a useful tool for gathering external knowledge and information. These tools are used by family firms as a new form of communication and collaboration with different stakeholders and have the potential to increase open innovation activities. However, empirical research in this area is scarce, and managers should accept the challenges

that social media can bring to fostering innovation and developing dynamic knowledge management capacities in family firms.

In research conducted by Farida et al. (2022), the effect of absorption capacity and creativity on workers' performance was investigated using social media as moderation. The results showed that absorption capacity and creativity have a positive effect on job performance. Also, the use of social media strengthens the effect of absorptive capacity on job performance. However, social media has no effect on the effect of creativity on job performance. This research shows that increasing the attractive capacity and creativity of workers can improve their job performance. At the same time, the use of social media as a moderating tool strengthens the effect of absorptive capacity on job performance. But it should be noted that social media has no effect on the effect of creativity on job performance. According to the results of this research, managers can implement appropriate programs and policies to improve the attraction and creativity of workers in companies. Also, using social media in moderation can enhance job performance.

In research conducted by Cuevas-Vargas et al. (2022), the impact of information and communication technology adoption on absorptive capacity and open innovation for greater company performance was investigated. The results showed that the adoption of information and communication technology has a significant effect on absorption capacity and open innovation. Also, the results show that absorptive capacity has a significant effect on innovation. In addition, absorptive capacity showed that it plays a significant mediating role in the relationship between ICT adoption and open innovation, indicating that ICT adoption has the ability to enhance open innovation through absorptive capacity. Also, the results show that open innovation has a significant impact on company performance. According to the results of this research, company managers can strengthen the capacity for absorption and open innovation by focusing on the adoption of information and communication technology and thus improving the performance of the company. Also, it is important to consider the mediating role of absorptive capacity in the relationship between ICT adoption and open innovation, as this role can strengthen the effect of technology adoption on open innovation.

In research conducted by Cruz-Ros et al. (2021), the effect of absorptive capacity on innovation and company performance was investigated. The results showed that innovation in service delivery processes is affected by two of the four dimensions of absorptive capacity: knowledge transformation and knowledge exploitation. In other words, absorptive capacity has a positive effect on innovation in service delivery processes. Also, the results show that innovation in service delivery processes encourages outstanding performance and mediates the relationship between absorptive capacity and business performance. These results are confirmed by comparative analysis using fuzzy sets. In addition, the comparative analysis using fuzzy sets shows that the absorption and transformation of knowledge are necessary conditions for companies to surpass their competitors. In other words, the capacity to absorb and transform knowledge can help companies stay ahead of their competitors and improve their business performance.

In the research conducted by De Beule and Van Beveren (2019), the sources of open innovation in foreign subsidiaries were examined. The results showed that technology-creating foreign subsidiaries can exploit a combination of industry-based value chain partners and science-based partners. In particular, the combination of customers and universities provides a strong incentive for the research efforts of technology-creating companies. The results also show that technology-seeking subsidiaries collaborate more with competitors. In other words, instead of collaborating with competitors, they use collaboration with customers and universities for research and development. Also, technology-exploiting subsidiaries use significantly fewer external knowledge sources and have less research and development intensity. These findings are based on the analysis of species identification and enrichment carried out in the research.

In research conducted by Hossain (2018), the motivations, challenges, and opportunities of successful solvers on an innovation platform were investigated. The aim of this study was to identify the motivations, challenges, and opportunities of successful solvers in virtual teams of innovation competitions organized by an innovation intermediary. Based on 82 interviews with successful solvers, it provides new results about innovation competitions. The main motivational factors of successful problem solvers are money, learning, fun, a sense of achievement, passion, and networking. Major challenges that solvers face include unclear or insufficient problem descriptions, a lack of communication options, language barriers, time zone differences, difficulties in finding the right team members, framing results, and difficulties in becoming fast learners and team players. is. Despite the challenges, solvers have many opportunities, such as diverse knowledge, a culture of learning, the development of different ways of thinking, gaining insight from other professionals, the ability to work in diverse environments, post-retirement and remote work options, and new sources of income. These results are presented based on the analysis of the interviews and the findings obtained from them.

In the research conducted by Santoro et al. in 2018, the Internet of Things was investigated, as was the creation of a knowledge management system for open innovation and knowledge management capacity. New and innovative technologies in the field of the Internet of Things, especially, change the way knowledge is managed in organizations and require a new and innovative knowledge management system and an open approach to strengthen knowledge

flows. The purpose of this model is to increase the development of internal knowledge management capacity and, through it, create a prerequisite for innovation in the company. The findings indicate that the knowledge management system, through the development of internal knowledge management capacity, facilitates the creation of open and collaborative ecosystems and the exploitation of internal and external knowledge flows, which, as a result, increases innovation capacity. In addition to its findings, this research is also used to identify important scientific and managerial implications and determine future research directions.

A study by Zhang et al. (2018) investigated open innovation and firm performance, particularly in the Chinese mechanical manufacturing industry. This article examines the impact of human capital on the relationship between open innovation and the financial performance of companies. The results indicate the existence of an inverted U-shaped relationship between open innovation and corporate profitability. It is also shown in this research that human capital (in both qualitative and structural aspects) plays an important role in moderating this relationship: in general, a higher education level of employees has a positive effect on innovation, but this argument is not true for production-oriented companies. In technology-oriented companies, increasing the ratio of technical employees to production employees improves the financial performance of companies due to the implementation of an open innovation strategy. But in production-oriented companies, it has a negative moderating role.

2.1 Use of social media

Social media are media technologies that enable the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks (Cepeda-Carrion et al., 2023). A set of social relations, such as friendships, collaborations, or social relations, communicate with each other. Social media is one of the internal tools used to maintain customer loyalty. It describes: This media translates into media convergence, participatory culture, and collective intelligence. Social networks have been developed in this individual combination. Media convergence changed "the relationship between existing technologies, industries, markets, genres, and audiences" and thus may be considered a paradigm-shifting culture. This changes the logic by which traditional media operate and by which they process consumer news and entertainment. The author believes that this convergence is a process, not an end point, and we have been living in this culture for some time now (Khatri, 2021).

To understand and use social media as a marketing tool, a retailer must be familiar with all aspects of it. Social media uses Web 2.0 in a new way that end users can benefit from. This environment is where content is continuously modified by users through sharing and participation. This concept has more to do with the way people use technology than the technology itself, because users are creating and consuming content. For this reason, websites that allow users to do this add value. Social media is defined as a group of Internet-based applications that are built on the ideology and technology of Web 2.0 and enable the creation and exchange of user-generated content. This broad term refers to software tools used by users to create and share content. However, some basic features are essential for a website as a social network. To this end, the website should include user profiles, content, and tools that allow users to communicate with each other, post comments on each other's pages, and join virtual groups with common interests, such as fashion or political groups (De Castro et al., 2021).

2.2 Open innovation

Open innovation is an approach that is used to source ideas and solutions from a wide range of people and organizations to drive innovation (Cepeda-Carrion et al., 2023). This approach focuses on innovative thinking and emphasizes the use of external knowledge obtained through suppliers, customers, and institutions (Ali et al., 2020). Open innovation means opening the borders of the organization in order to create the flow of innovation, so that innovation does not mean only the flow of knowledge within the organization (Yasa et al., 2020). Rather, the purposeful opening of the doors of the organization for the entry and exit of the flow of innovative ideas into and out of the company is considered (Soto-Acosta et al., 2018). This approach supports internal and external knowledge and the combination of internal and external paths to innovation. The goal of open input innovation is to benefit from external knowledge to improve the scientific and technical innovation of the organization (Ting et al., 2021). Outbound innovation considers achieving profit by sending internal ideas to markets, selling intellectual property, and commercializing technologies in the external environment (Park et al., 2018). The purpose of open-output innovation is to establish relationships with external organizations in order to commercially exploit the organization's knowledge in different markets (Purwanto, 2020).

3. DISCUSSION

Considering that the use of social media has an impact on open innovation, I can suggest that companies strategically use these tools to communicate with different stakeholders. This can make companies more open and responsive to the environment, as well as capture valuable ideas for developing new products and services that meet customer needs. In this regard, companies can use social media to understand the needs of customers and spend their time and effort on social media according to these needs. Also, they can systematically collect customer feedback on social media sites and use it to improve the quality of their services. Also, they can use social media to search for general information about their target market as well as check out competitors.

Considering that the use of social media has an effect on the capacity of absorption in companies, I can suggest that in order to use all the potential that the use of social media can bring in this field, companies should develop specific organizational and cultural routines. Create absorption capacity. Managers should foster a proper learning culture in their companies and provide specific training to develop employees' abilities to acquire, integrate, and use information collected on digital platforms. Companies can also use social media information to provide complete details about their products and services and use this information to meet the needs of their customers. Also, they can use social media to improve their advertising strategies and communicate directly with their customers. This direct interaction with customers can help companies actively respond to customer comments and suggestions and attract customers.

Finally, the use of social media by companies can lead to the promotion of brand recognition and increase customer trust. By creating an active presence on social media and sharing relevant and attractive content, companies can show their customers that they care about them and want to be in touch with them. This direct communication with customers can increase customer loyalty and increase company sales.

In general, the strategic use of social media can be useful for companies as a powerful tool for attracting customers, improving services, developing products, and promoting brand recognition. By creating a culture of learning and using the information available on social media, companies can continuously improve their services and their marketing.

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