Integrating Social Media and Blockchain for Banking Marketing: An Activity Theory Analysis of Adoption Factors in South African Banks

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Abstract. This study investigates the factors influencing the adoption of social media and blockchain technologies for marketing purposes in South African banks. This study examines the factors that influence the adoption and use of blockchain and social media tools for marketing purposes. This could be more specific about the exact factors identified. The qualitative method was employed, involving the case study approach and the semi-structured interview technique for design and data collection, respectively. Using Activity Theory as a theoretical framework, we conducted a qualitative study involving semi-structured interviews with employees from two major South African banks. Our analysis revealed seven key factors: awareness, governance, interactivity, operationalisation, requirements, security, and skillset. These factors interact in complex ways to shape the adoption and use of these technologies. The study contributes to the literature by providing a nuanced understanding of technology adoption in banking marketing, highlighting the potential complementarity between social media and blockchain. Our findings have significant implications for bank marketers and technology strategists, suggesting the need for integrated approaches to technology adoption that consider organisational, technological, and human factors.

Keywords: Activity theory, Banks, Blockchain, Social media

1. Introduction

Competitively, many organisations including banks are progressively active in marketing their products and services. Thus, a South African banking institution is increasingly employing social media as a strategic tool for marketing and branding its products and services (Gavaza, Viljoen & Cilliers, 2019). This could be attributed to its benefits from different perspectives, such as cost-effectiveness and ease of information dissemination. According to Potgieter and Naidoo (2017), social media improves the quality of service and enhances client loyalty in South African banking institutions. In addition, through social media, some South African banks educate their clients about certain complex products, including creating transparency and brand awareness (Chikandiwa, Contogiannis & Jembere, 2013).

Based on these benefits, some South African banks subscribe to more than one social media platform. According to Gavaza et al. (2019), the approach seems to be working well primarily because many clients value the social media privacy dimension. Despite the successes and benefits, social media as a marketing tool presents different types of unique challenges in the areas of validated scales and variations in some of the platforms (Dwivedi et al., 2021). There have been efforts in trying to address some of the challenges, yet they persist (Parsons & Lepkowska-White, 2018). According to Dwivedi et al. (2021), social media presents unique challenges to different platforms. Thus, some banks explored a complementarity of social media with other tools such as blockchain.

For marketing purposes, blockchain has emerged as a possible solution. Moche and Iyamu (2023) argue that blockchain cannot be limited to cryptocurrency and that it redefines the meaning and importance of holistic marketing. The use of blockchain brings a different perspective to both the traditional and social media approaches of marketing and communicating with clients (Antoniadis, Kontsas & Spinthiropoulos, 2019). However, little is known about the influence social media and blockchain have on each other from the marketing perspective as little has been highlighted in research (Peres et al., 2023). Social media and blockchain for marketing purposes are well documented but separately (Parsons & Lepkowska-White, 2018; Kumar & Devi, 2014). Also, little is known about the influence of the complementarity of social media and blockchain in the South African banking sector. It does not seem to have been much researched.

However, there is limited research on how banks are integrating blockchain technology with social media for marketing purposes, particularly in the South African context. This study aims to address this gap by examining the factors that influence the adoption and use of blockchain and social media tools for marketing purposes in South African banks, using Activity Theory (AT) as a theoretical lens. Specifically, we seek to answer the following research questions: What are the key factors influencing the adoption of social media and blockchain for marketing in South African banks? And how do these factors interact within the AT framework? Activity theory (AT) is selected to underpin the study because it provides a theoretical framework that is central to human activities (Iyamu, 2024). AT is most appropriate in situations in which human activities influenced by tools are rapidly changing (Nardi, 1996). According to Jonassen and Rohrer-Murphy (1999), AT is a powerful lens, for analysing human activity due to its primary focus on human interaction and activity including consciousness, within context.

2. Literature Review

Social media such as Facebook, Twitter, YouTube, LinkedIn, and Instagram allow marketers to engage, collaborate, interact, and harness the intelligence of crowdsourcing for marketing purposes (Chikwandiwa et al., 2018). Based on this premise, some banks explore how clients and potential customers apply social media to enable them to connect with customers, increasingly (Chen et al., 2022). However, social media is not prevalently explored for banking processes and events to market products and engage with customers, across the world (Di Domenico et al., 2021).

Though blockchain was initially developed to serve as a distributed ledger for tracking Bitcoin transactions, it is useful in other business domains such as marketing (Ali, Ally, Clutterbuck & Dwivedi,

2020). The impacts of blockchain extend beyond Bitcoin and even beyond the financial industry to other business sectors (Ølnes, Ubacht & Janssen, 2017). Some studies have proposed a blockchain-enabled logistics finance execution platform (BcLFEP) as an integrated solution to facilitate logistic finance for e-commerce retail (Underwood, 2016). In essence, the scholars call for a blockchain agent model that grants mobile agents the capacity for underlying blockchain operations (Li et al., 2020).

Social media and blockchain are useful tools for marketing purposes. However, it is difficult to find where they have been complementarily employed for marketing by banking institutions. Foreseen substantial problems with blockchain need to be overcome in attempts to complement it with social media as a tool for marketing by banking institutions. One of the main challenges is scalability (Yli-Huumo et al., 2016), which can allow for complementarity with social media. Other challenges are unknown, at least at the empirical level (Grover, Kar & Janssen, 2019).

Some studies also focus on the distribution of content on social media (Choi et al., 2020). Some studies focus on the issue of the rising amount of false data and fake information on social media (Guidi 2021; Wasserman & Madrid-Morales, 2018). In this age, a 'fake news" industry has been created (Rodny-Gumede, 2018). However, the mushrooming of false information has complex cultural and social reasons (Wasserman & Madrid-Morales, 2018). Despite the prevalence of fake data, studies show interest in consumer-to-consumer platforms and their design, showing how blockchain can help consumers connect to and transact with each other, share personal data, and avoid the centralization of control by large e-commerce companies (Shrestha, Joshi & Vassileva, 2020; Shorman, Allaymounq & Hamid, 2019).

Based on these benefits, some South African banks subscribe to more than one social media platform. According to Gavaza et al. (2019), the approach seems to be working well primarily because many of their clients value the social media privacy dimension. Despite the successes and benefits, social media as a marketing tool presents different types of unique challenges in the areas of validated scales and variations in some of the platforms (Dwivedi et al., 2020). There have been efforts in trying to address some of the challenges; yet they persist (Parsons & Lepkowska-White, 2018). The challenges seemed to increase when some banks had to complementarily employ social media and blockchain for marketing purposes.

3. Activity Theory

The study is underpinned by activity theory (AT). The theory focuses on activity, which is defined as a structure of actions influenced by the intentional interaction between subject and object (Bhattacherjee et al., 2013). One of the strengths of the theory lies in its model, which has six components, see Figure 1 (The theory helps to examine interactions between people, and the ways they are shaped by human activities (Mkhomazi & Iyamu, 2013). The focus of the theory is on activities and episodes including human actions within social systems (Iyamu, 2021). Daniels et al. (2010) argued that AT is useful in understanding the activities of user groups in the development of models and frameworks about the relationship between actors in an environment.
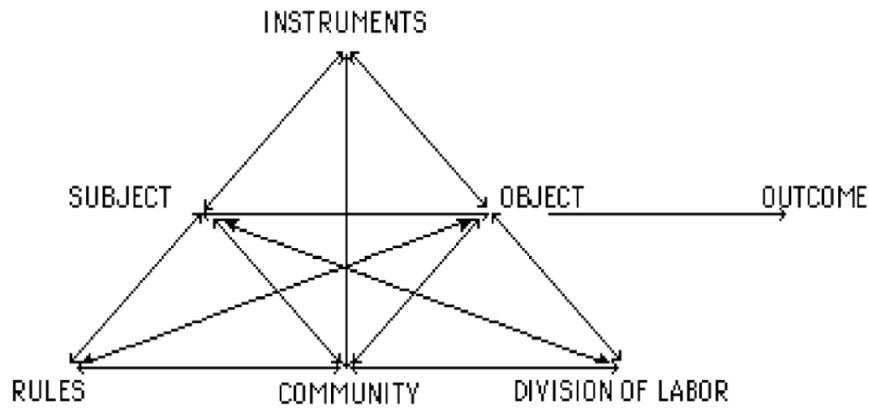
Fig 1: Activity model (Engeström et al., 2016)

A tool is a mediating device that can be an instrument, signs procedures, machines, methods, and laws by which action is executed (Moawad et al., 2013). The rules, which are sets of conditions that help to determine how and why individuals may act are a result of social conditioning (Dennehy et al., 2023). The division of labour represents the individual roles and responsibilities of the subjects that are involved in an activity and involves the divisions of power and status (Iyamu, 2021; Engeström et al., 1999). It is an interdependent system because of the collaborative efforts of its members. A subject may be part of several communities and a community, itself, may be part of other communities (Engestrom, 2001).

Activity theory has been applied in many studies in the areas of social media (Kelly, 2018). One of the reasons is that human activity is embedded in a field of interrelated social practices (Camargo-Henríquez & Silva, 2022). A few cases in which the theory is used are stated herein. Treiblmaier and Önder (2019) applied AT in their study on the impact of blockchain on the tourism industry. Forsgren and Byström (2018) employed AT to gain a better understanding of the use of multiple social media in the workplace. The components are closely interconnected with human activities and actions.

4. Research Methodology

We employed a multiple case study approach, selecting two South African banks (Oagile Bank, South Africa and Tshwaragano Bank, South Africa) based on their active use of social media and exploration of blockchain technology for marketing. This approach allows for in-depth exploration of the phenomenon within its real-life context (Yin, 2017). Semi-structured interviews were conducted with 15 participants from each bank, including marketing managers, IT specialists, and senior executives. The interview data were analysed using thematic analysis, guided by the components of Activity Theory. Oagile Bank, South Africa (OBSA) and Tshwaragano Bank, South Africa (TBSA) are pseudonyms, to avoid disclosure of identity. Both banks agreed to participate on condition of anonymity.

The case study approach was selected because it allows research to take place in a natural setting (Yin, 2017). Setia (2017) affirms that the case study approach is suitable for an in-depth investigation of a phenomenon within its real-life context, to bring to light the problem and solutions. The semi-structured interview technique was selected because it allows conversation between the interviewer and interviewees, which enables probing and clarifications. According to Iyamu (2018:9), the technique is most suitable for collecting qualitative data, as it provides the opportunity for conversation, "through which complexities are explained and new topics emerge". Yin (2017) explains how the semi-structured interview allows participants to freely express themselves, thereby collecting rich data.

A set of criteria was used to select the participants: the participant must have been with the organisation for a minimum of 18 months, which is long enough for a person to under his/her environment including the processes; the participant must be in the sale or marketing department or

unit, which was the focus of this study; and the participant must know about social media or blockchain. The interviewees allowed the recording of the interviews. The interviews were transcribed and assigned codenames OBP, from 1 to 30 representing the number of the participants. A format was created by including page and line numbers, for ease of referencing purposes. For example, OBP3; 4:20-21 represents Participant number 3; Page 4 of the transcript; and line numbers 20-21.

Activity theory helps to examine interactions between people, and the ways activities shape and are shaped by human activities (Mkhomazi & Iyamu, 2013). Daniels et al. (2010) argue that AT is useful in understanding the activities of user groups in the development of models and frameworks about the relationship between actors in an environment. The components of AT: tools, subject, rules, division of labour, community, and object were employed in the analysis, to examine the interaction that happens between the actors involved in applying social media and blockchain for marketing. This helps to gain an understanding of the influencing factors.

5. Analysis of the data

Activity Theory: Tools

In AT, tools can be physical such as a hammer, or non-physical entities, including language, culture, or a process, Uden (2007) explains. In the context of this study, the physical and non-physical are both technical and non-technical entities such as blockchain and social media solutions, including the processes involved in them. In OBSA, some of the social media tools (solutions) employed for marketing purposes include Facebook, Twitter, LinkedIn, Instagram, YouTube, and the Internet. The banks use these social media platforms to share information about their products and services and interact with the clients also, by making brand awareness. This was explained by one of the employees who participated in the study as follows: *"Yes, I do see adverts on social media like Facebook, but I do not comment on them because the marketing department deals with them" (OBP2; 5:179-180).*

Some non-technical tools in the two banks are processes, rules, and standards, which govern the use, administration, and management of blockchain or social media for marketing purposes. However, when, and how the tools are applied influence and deter the outcome. When the tools are applied to achieve their intended purposes varies due to evolvement. According to Iyamu (2021), in the context of AT, tools are constantly evolving, and influenced by innovations and advancements. Thus, the tools are used at organisational and individual (employee and client) levels. At the organisational level, tools are employed for both operational and strategic purposes, to enact goals, objectives, and processes. Individuals use tools to provide and receive services. Thus, the banks draw on tools, intentionally, to implement their marketing strategy and operation towards enhancing service delivery.

The employees adopt some of the tools for interacting with existing and new clients, towards achieving the marketing objectives of the banks. According to O'Leary (2010), tools are used to shape how humans interact and connect. The tools refer to the technological components that facilitate the execution of marketing strategies on blockchain platforms, as well as the social media platforms used by banks. These tools serve as enablers, allowing banks to engage with their audience effectively, establish trust, and promote their services. However, the tools require awareness and knowledge in employing them, for baking purposes. An employee states as follows: *"I need human interaction to make me understand blockchain. Also, many of my employees do not know about it" (OBCP1; 3:112-114).*

On the blockchain side, tools such as smart contracts and decentralised applications provide the means to create secure and transparent transactions. These tools ensure the integrity of financial processes, enabling banks to offer innovative services such as peer-to-peer lending and remittances. By utilising blockchain tools, banks can enhance customer experience, streamline operations, and reduce costs. Additionally, social media platforms act as powerful tools for banks to connect with their customers and prospects. Thus, a unit within the bank is dedicated to employing it for services. According to one of the participants, *"There is a specific department that deals with responding to*

social media, so the user handles for Oagile Bank will respond, compliment, or comment on Facebook because they have the mandate to do so" (OBP2; 5:181-183).

Despite the increasing use of blockchain to advance marketing strategies and operations, OBSA has not listed it as a tool in the organisation. Blockchain is a tool that could be used to effectively manage the bank's risk and save time for marketing processes and transactions. Thus, at the individual level, there is a lack of awareness about the tool and how it could assist the organisation for marketing purposes. This has an impact on competitiveness from the marketing of products and services' perspectives. Some of the participants affirm their lack of awareness and knowledge of blockchain, as follows: *"We don't know about blockchain. To be honest with you in the banking sector, the blockchain is not something that we can say we were told about"* (OBP1; 16:545-549).

One of the implications of the lack of awareness is trust. Even though some of the employees do not understand or know how the tool works, they have challenges that relate to trust in the adoption of the tools. Also, some employees in the marketing unit of the organisation are sceptical about the use of social media as a tool for financial transactions. *"I do not trust blockchain by banks that much. I think when it comes to finances, the bank still needs to do more for us to trust even social media, for instance, and even the use of blockchain, I think there's more that needs to be done"* (TBCP1; 3&4:102-107).

This makes awareness an essential aspect of the adoption and use of the tools for marketing purposes in the organisation. At the time of this study, the lack of awareness creates uncertainty among the employees as well as the clients.

Activity theory: Subject

In the context of AT, subjects represent actors with consciousness, and hence actors are only living beings with needs and motives (Vinthagen & Johansson, 2013). Within the OBSA environment, actors include clients and employees. As actors, employees and clients depend on each other for the successful operation of the organisation's objectives. Thus, they are both equally important to the organisation as the business ceases to exist without the other.

The employees in OBSA include commercial managers, private bankers, and mobile consultants. Based on the structure of the organisation, the employees are in various units. The employees were categorised into different units based on factors which include their skills and knowledge about the specific unit's products and services. The employees in the marketing unit are tasked with the responsibility of increasing the wallet share for the bank. The employees employ social media marketing to increase their wallet share while blockchain could enhance the subject's ability to retain existing clients and be competitive in the market they operate in. One of the employees briefly explained: *"The bank has an aggressive social media campaign to communicate its value proposition to the different target markets"* (TBP3; 5:173-174).

The bank deploys social media to market its products and services. What is even more important is how employees use social media tools for marketing purposes. Firstly, the employees employ social media via different channels such as the intranet (internal website) and extranet (external website), to create awareness of OBSA's new offerings and existing products. Secondly, it is about the content, which must be created in a way that is relevant and useful to the intended consumers. These factors make the role of subjects critically important. One of the participants in this study, a client explains as follows: *"I think, lately, what I've realized is that some of the most interesting information about products and services, is via social media, such as Twitter. Thereafter, 'I would follow up with my banker"* (OBCP1; 2:64-68).

The employees execute the OBSA strategy by using social media platforms such as Twitter and Instagram, allowing the banks to reach a wide range of users who are active on these platforms. TBSA increases its visibility and reaches a larger audience by using social media as a tool for marketing. One other benefit is targeted marketing where banks can tailor their advertisements and promotions on social media to specific demographics or customer segments. Visibility, advertisement, and promotions are

some of the heterogeneous uses of social media for marketing. Some of the clients understand the usefulness of social media, as alluded to by a client who participated in this study, stating: *"By using Twitter and Instagram, I think it's a smart way that they're doing, and I appreciate it definitely"* *(TBCP3; 2:61-62).*

The heterogeneity should extend beyond a set of a tool (platform or solution), to maximise resources used by the actors. This includes a complementarity between social media and blockchain, for marketing processes, events, and activities. This helps the OBSA to remain flexible, and to accommodate the needs and changing preferences of the customers. Despite the lack of awareness that is identified, empirically, OBSA has not relented in its efforts. According to one of the employees: *"The bank is considering the benefits of exploring blockchain to drive customer experience"* *(OBP3; 5:188-189).*

The heterogeneity is an advantage that should extend beyond a set of a tool (platform or solution), to maximize resources used by the employees. Trust in social media and blockchain is a concern for some clients due to personal experience on social media where fraudsters often try to hack clients' information or banking accounts. As a result, some clients do not feel comfortable using social media for banking-related communication. However, they prefer using social media for non-banking purposes, such as staying updated on trends in the housing market. This increases the need for fortification of security in the areas of social media and blockchain for marketing purposes. One of the clients explained: *"I don't want to communicate with the bank via social media because intruders tried to hack my details"* *(OBCP2; 2:63-64 & TBCP2; 1:46-47).*

Thus, security is critical and not negotiable. What is even more critical is how the actors adopt security through their adaptation channels to protect the bank and its clients, while executing their marketing strategies. Hence, it is crucial to streamline the actors' roles and responsibilities in their use of social media and blockchain for marketing purposes. This involves training employees on how to use blockchain and social media platforms effectively and efficiently.

Activity theory: Rules

In AT, rules are one of the key components that shape and guide human activities within a specific context. According to Engeström (1999), rules emerge because of the interaction between individuals, the tools they use, and the specific context in which they are engaged. The organisation has rules that govern the use of social media marketing. Some of the rules are made obligatory passage points (OPP), which govern the staff as they employ social media for their marketing activities. Iyamu (2021:74) defines OPP as "a narrow path that forces actors to converge on a certain topic, action, or purpose." From a governance structural perspective, some employees of the bank explained as follows: *"There is a specific department that deals with responding to social media marketing, so their user handle for the bank responds, compliment, or comment same on Facebook because they have the mandate to do so"* *(TBP2; 5:181-183).*

Thus, rules play fundamental roles from two perspectives, on how each tool (social media or blockchain) is or can be adopted and in the complementarity of both tools, for marketing purposes. Moawad et al. (2013) however, cautioned that rules can enable or constrain the events or processes involved in an activity. On one hand, rules instil the practices of security and privacy of clients' information during marketing activities. OBSA adheres to the South African legislation, the Protection of Personal Information (POPI) Act of 19 November 2013. On another hand, the POPI Act constrains free access to individuals' contact using social media or blockchain. From a constraints angle, an employee shared his view: *"So POPIA and other rules are a bit of a stumbling block to everyone in general as that makes it difficult for other departments to contact the client without consent"* *(OBP1; 8:270-272).*

The government legislation (POPIA) guides the actors' intentions and goals to establish interactions and market products and services of the banks. As a result, and they wish, OBSA marketers are

constrained in contacting and interacting with potential clients, using social media or blockchain. This then requires a policy that demonstrates security alignment with the government legislation. The policy allows clients to demand more information from marketers.

In the adoption and use of social media or blockchain, rules are important and serve a critical part of marketing processes in the banking environment. What is even more important is the transparency of the rules that show or demonstrate consistency and predictability. This is intended to boost confidence in the clients, in embracing social media and blockchain for transactions and interactions with the bank. It is emphasised that clients need to be comfortable and trust that their platform is secure in adopting blockchain or social media for services, interactions, and transactions.

Rules are induced into governance. According to Iyamu (2022: 163), governance consists of standards, policies, and principles. Primarily, this is important in two aspects at OBSA. Firstly, it protects the adoption and use of social media or blockchain for marketing against the employees' resistance. At OBSA, some employees and clients are unsure of blockchain, for reasons such as security. Rules can be used to highlight the mitigation strategies. Secondly, governance can be employed to define the adoption and use of the tools (social media and blockchain), to ease resistance and ensure security. This allows OBSA to innovate while maintaining necessary control and adherence to regulations. Enforcing rules consistently across all levels of the organisation can be challenging.

Activity theory: Community

In AT, a community consists of a group of people who share a common interest or goal. In the context of OBSA, many communities were involved in marketing activities. One of the communities focuses on providing marketing services to clients and potential clients. This is the focal aspect of this study. Other communities include those that provide technical and managerial support to the marketing team, including a group of bank clients who engage with the bank regularly via social media marketing for new products or services. This was explained by one of OBSA's clients who prefers to communicate via social media platforms as per below: *"Social media platforms are preferable as tools, for marketing of the bank's products and services" (OBCP1; 2:73-75).*

In OBSA, these communities are formed in line with the organisational structure, to ensure distinctive deliverables and functions towards achieving the objectives of the bank. In OBSA, the marketing community uses social media platforms such as LinkedIn, Twitter, Instagram, and Facebook for marketing purposes. The platforms enable the marketers to create another community between themselves and the clients, referred to as a virtual community. It allows the marketing employees to directly, connect and interact with clients in providing services which include brand awareness.

In OBSA, the community is critical for knowledge sharing which happens via their social media platforms in a form of marketing. The community serves as a space for sharing knowledge, experience, and expertise. For example, when clients need more information regarding a specific product or service, they send their requests and receive information via their various communities. In OBSA, a unique approach is employed in the communication and interactions within communities. It is referred to as direct messaging (DM). As synonymous with many clients, one of the participants explains the benefits as follows: *"Lately, what I've realized is that I receive some of the most interesting information about OBSA's products and services via social media like Twitter. Also, the bank interacts and shares more information about a product or a service with us" (OBCP1; 2&3:65-71).*

However, communities (marketing, technical, and managerial supports) in OBSA encounter challenges. One of the most crucial challenges is not having trust in social media or blockchain adoption and use. While clients use social media platforms, the complementary use of social media and blockchain creates trust challenges. Trust is an essential foundation for collaboration and the effective functioning of a community. Building trust among community members and maintaining it can be a challenge, especially in financial transactions, in virtual or online circumstances. One of the clients shared his concerns in an advisory manner, as follows: *"I do not trust blockchain that much. I think*

when it comes to finances the bank needs to do more for us to trust social media and the use of blockchain. People have got to understand how blockchain works, including an understanding of the pros and cons" (OBCP1; 3&4:102-106).

Community fosters collaboration between employees (on behalf of the bank) and clients, on the one hand. On another hand, it nurtures working relationships between the various teams (communities, e.g. technical and managerial supports) that focus on executing the marketing strategies of OBSA. The communities enact the rules that enable the execution of marketing strategies and objectives. Thus, the tools used by marketers remain critical in achieving their goals and objectives. Another area of concern is awareness. It is therefore crucial to address the confusion posed by a lack of understanding of trust or security in using social media and blockchain.

Activity theory: Division of Labour

In AT, the division of labour is concerned with how tasks (activities) are allocated among members of a community (Lioutas et al., 2019). Allocation of tasks is guided by factors such as the roles, responsibilities, skill sets, and capabilities of individuals or groups. It is a process that is underlined by criteria and requirements. Also, the structure within a community can be a determinant in the allocation of tasks. The factors, criteria or requirements are aimed at a desired outcome.

For marketing purposes, the tasks involved in marketing OBSA products and services could be divided into two main categories, strategic and operational. In OBSA, some of the marketing tasks, from both strategic and operational perspectives include advertising, creating content, publishing content, and enabling tools (social media platforms). The division of labour contributes to making the marketing activities of OBSA easier and more visible on social media platforms. According to one of the clients that participated in the study: *"That's what I'm saying that on all social media platforms that I have subscribed to, and I see Oagile Bank's marketing"* (OBP1; 13:449-452).

In addition, the division of labour allows activities to be tracked, traced, and monitored as employees execute their tasks and interact with clients or publish content on social media platforms. Tracking, tracing, and monitoring of activities are additional or different types of tasks that are allocated. Also, in the process of interaction, more information is often needed by clients. The marketing team, of different expertise, provide additional information, answers questions, and sets up appointments with various specialists if needed.

Other factors include expertise, collaboration, and teamwork, which are vital to the marketing activities of OBSA. Within this context, in OBSA, the division of labour allows individuals to develop specialised knowledge and skills by carrying out assigned tasks to them, such as enablement of social media, publishing content, and creating content. The division of labour promotes collaboration and teamwork. This is because individuals or teams work together, in the process, complement each other's skills, share knowledge, and gain more insights. This means that the more specialised the team or individuals involved in the marketing activities are, the easier the allocation of tasks. Also, this increases the maximal use of social media for marketing purposes.

However, in OBSA, there are some challenges to how the division of labour is employed. This includes communication and coordination difficulties experienced in the allocation of tasks, and in using social media for marketing. The difficulties include inefficient communication and coordination among individuals or groups. One of the implications is that it can lead to delays and misunderstandings of marketing products and services in the use of social media. Also, the challenges hinder progress and goal attainment.

Activity theory: Object

In AT, an object refers to the goal or purpose of an activity (Iyamu & Shaanika, 2019). It can be seen as the driving force behind an individual's actions and behaviours within a particular activity system. In the context of this study, the object of OBSA's marketing activity is having more people enrol in the

company's products and services. This makes the social media tools used to garner more enrolment critical. It is an object that exists in the context of the bank's marketing services as social media is used to market the bank's products and services.

From the OBSA client's perspective, the object refers to Facebook, Instagram, and Twitter as these are the platforms clients are subscribed to via social media where they see the bank's advertisements. From both the subjects (employees and the bank's clients) these objects are critical because they are tools or platforms used for communication with each other like when the bank communicates with their existing and prospective clients that they are the best bank, banking transactions, and marketing their products and services. They play a role in how the bank contacts and engages with its clients at the end of the day. One of the participants explained: *"Yes, I subscribe to Twitter, Instagram, WhatsApp, and Facebook. I follow the bank activities on the social media platforms" (OBP1; 12:411-414).*

OBSA uses social media and employees are on the same page on the use of social media. On the other hand, OBSA's use of blockchain for its services is not known at this stage. However, it can be noted that OBSA is considering the benefits of exploring blockchain to enhance the customer experience. Based on this information, both social media and blockchain are existing objects. While social media is currently critical for communication and marketing purposes, blockchain is not currently utilised but is being considered for the potential future. This is affirmed by some of the employees, as follows: *"No, the bank does not make use of blockchain at this stage. The technology utilized is legacy systems that are difficult to integrate into new technologies" (OBP3; 5:182-184). "The bank is considering the benefits of exploring blockchain to drive customer experience" (OBP3; 5:189-190).*

Effective communication via aggressive social media campaigns for OBSA Bank advising its existing clients and prospective clients about how great OBSA is and having won the Bank of the Year from the digital perspective is one of the benefits. Social media provides an opportunity to reach a large audience and potentially attract new clients as seen when OBSA's clients interviewed saw OBSA's marketing on social media and reached out to their bankers for more information. These social media platforms allow direct engagement with the customer allowing for feedback, inquiries, and building customer relationships as noted by one of the clients who participated in the study where they would be required to send direct messaging (DM) or even email addresses for the bank to respond directly to them. *"I think businesses can leverage off your blockchain and social media in the sense that it's going to be easy for them to reach people. So, one of the improvements is that people who are on those platforms using blockchain do not have to go far and wide to find information" (OBCP1; 5:162-165).*

In OBSA, challenges of the object include privacy and security. Social media platforms may expose the bank and its customers to potential privacy and security risks as per one of the client's feedback items who participated in the study.

6. A Model for Integrating Social Media and Blockchain for Marketing

Following the subjective approach, the factors that influence the integration of social media and blockchain for marketing purposes were identified from the data analysis presented above. The factors are shown in Table 1. The findings are mapped to ascertain the most influencing factors that generally apply to the organisations. Arrows are used to indicate the similarity between the two sets of findings. In the mapping of the findings, similar factors, such as governance were combined. Thereafter, the remaining findings, a total of seven (7) factors from both cases are combined. These are (1) Awareness; (2) Governance; (3) Interactive; (4) Operationalisation; (5) Requirements; (6) Security; and (7) Skillset. The factors determine and influence the deployment and use of social media, blockchain, or complementarity of both for marketing purposes in the South African environment.

Table 1: Mapping the influencing factors

Case #1: OBSA		Case #2: TBSA
Awareness	⟷	Awareness

Governance		Governance
Interactive		Operationalisation
Security		Requirements
Training		Security
		Skill and retention
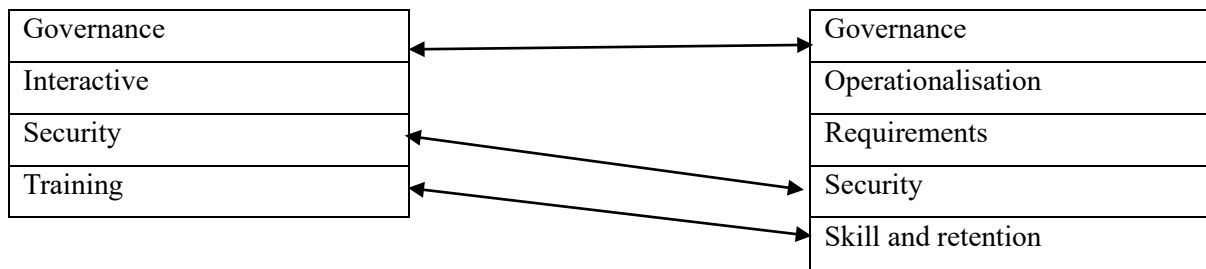
Our findings both support and extend previous research on social media marketing in banking (e.g., Chikandiwa et al., 2013; Gavaza et al., 2019). However, the integration of blockchain technology introduces new complexities, particularly in terms of security and trust. The application of Activity Theory revealed tensions between the 'tools' (social media and blockchain) and the 'rules' (governance and security requirements) that banks must navigate.

However, based on the influencing factors, Awareness; Governance; Interactive; Operationalisation; Requirements; Security; and Skillset from the mapping, a model is developed (see Figure 2). The model is aimed to guide the complementary use of blockchain and social media for marketing in a South African bank. As revealed in the data analysis, none of the factors influence the use of social media, blockchain, or their complementarity in isolation. This means that the factors are either interconnected or interdependent, to influence the use of social media or blockchain, in operationalising the activities and processes of marketing by employees. The relationships between the factors are indicated with arrows, as shown in Figure 2 (Model).

Furthermore, each of the factors is discussed below. Thus, the discussion should be read with the model to gain a better understanding of how the factors influence the use of the tools (social media and blockchain for marketing purposes.
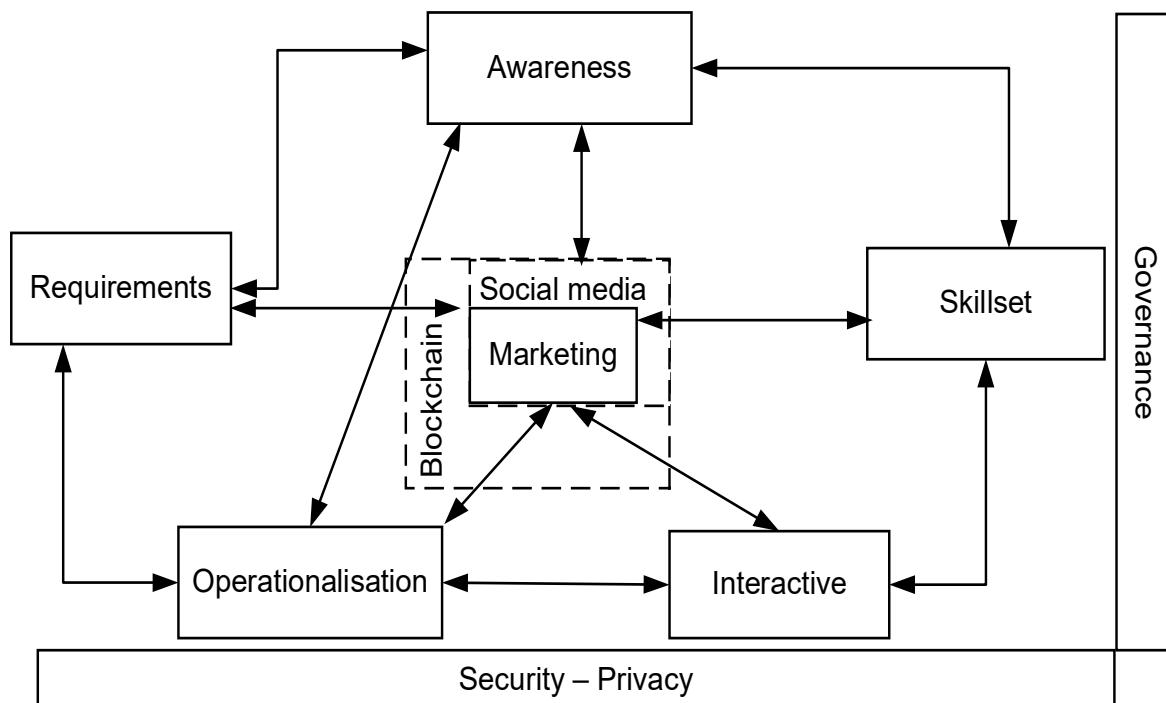

Fig 2: Social Media and Blockchain Model for Marketing

Awareness

Awareness of the use of social media for marketing in financial institutions is critical. This is because social media or blockchain enables employees (or marketers) to connect with clients, build a brand

reputation, and even gather market insights (Naeem, 2020). The importance of awareness of the use of blockchain for marketing is to enhance security, streamline financial processes, and promote transparency for clients and financial institutions. Tan and Saraniemi, (2023) argue that it is more significant when combining both social media and blockchain for marketing for making secure and transparent transactions, fostering trust, and ensuring data integrity. Each employee must be aware of the tools that are there for them to use like blockchain, social media for marketing, or even a combination of both to achieve the goals and objectives of the bank (Naimi-Sadigh et al., 2021).

Lack of awareness of blockchain use, social media, or a combination of the two leads to misunderstanding and confusion (Ostern, 2020). Shehata and Montash (2020) suggest that the lack of awareness leads to missed opportunities for enhancing customer engagement, improving efficiency, and getting a competitive edge. Awareness of both blockchain and social media use for marketing is critical; hence the lack of this hinders effective strategies to reach the target market, maximise market potential, and lastly leverage innovation by the financial institutions (Upadhyay, 2020).

Requirements

The importance of requirements in the use of social marketing and blockchain in marketing is to provide all employees with clear guidelines for content creation, how to measure the success of the campaigns, creating relevant campaigns for a targeted audience, and at the end of the day making sure that all these requirements are aligned to the strategy of the organisation (Madhani, 2022). While Ledikwe (2020), argues that well-defined requirements assist in maintaining consistent brand awareness (Tan & Saraniemi, 2023), contends that it enhances engagements with the targeted markets and credibility and transparency of marketing through the social media and blockchain space.

The lack of clear requirements in blockchain for marketing may lead to interoperability issues hindering collaboration and limiting marketing to the broader community (Rejeb et al., 2020). The lack of requirements on social media for marketing may result in the wrong target markets being a focus point and difficulties in measuring the success of marketing and not cost-effectiveness as the main aim of marketing (Korcsmáros & Csinger, 2022). A well-defined requirement is crucial as it enhances overall business performance when employees know what is required from them and how to go about achieving the business goals in both the use of social media and blockchain to better serve the clients (Agarwal, 2021).

Interactive

Interactivity in any organisation is key to the success of the business and its continuity. It is then critical to use social media and blockchain for marketing to enhance clients' and employees' engagements and foster a community that is trusting and loyal to each other. This is what organisations need for their survival, a loyal client (Madhani, 2022). In the social media landscape, interactive marketing encourages participation from the targeted audience, and brand visibility and it reaches most of its audience. While in the blockchain space, interactive elements can assist users in providing feedback which organisations can use to create innovative solutions or even better their current solutions to clients (Rabby et al., 2022). Interactivity in blockchain contributes to the success and adoption of blockchain by those who are sceptical of the use of blockchain (Rozak et al., 2021).

The absence of interactivity in social media leads to reduced targeted clients' interest in what is being marketed and makes social media marketing more expensive as it no longer reaches more clients (Bushara et al., 2023). The lack of interactivity in blockchain for marketing reduces the targeted audience's engagement and limits its intended results of awareness of blockchain. Embracing interactivity is important to cover all the negativity around social media and blockchain and clears any confusion on the complementary use of both for marketing to maximise the impact of marketing (Joachimsthaler, 2020).

Operationalisation

Operationalisation is part of the process through which theoretical concepts are translated into practice. It therefore has satisfactory influences on how social media or blockchain is used or managed for marketing purposes. From a production standpoint, Fatorachian and Kazemi (2018) argued that operationalisation is an enabler of concept. It provides a mechanism for translating things, concepts, or innovations into reality or practice.

However, there are challenges, and one of them is how to facilitate the operationalisation of innovation in an organisation (Jaaron & Backhouse, 2018). According to Seeber (2020), another challenge of operationalisation is to provide suitable representations of other related factors. This is critical because the factors revealed in the analysis are interrelated or interdependent to influence the use of social media or blockchain for marketing in an organisation. Thus, a specific design or definition that specifies the scope, boundaries, variables, and measurables is required, to ensure precise focus of the operation.

Skillset

The importance of training staff on blockchain is to ensure that they have the skills and knowledge to leverage technology's potential for enhancing business processes and driving innovation while being competitive in the market they operate in (Kant, 2021). Happy employees tend to have great attitudes and influence the morale of the entire team, and this can happen when they know and enjoy what they do daily because they have been trained to be the best in the market. Atherton (2023) argues that training staff on social media for marketing is critical to harnessing the power of social media platforms like Facebook, Twitter, and Instagram for effective brand promotion, customer engagement, and driving business growth.

The lack of training of employees on social media may lead to missed opportunities for online marketing, brand visibility, staying competitive in a digital world, and great customer engagement which leads to retaining of staff (Cartwright & Raddats, 2021). So, if the financial institution fails to retain trained employees this may result in a loss of expertise in the long run, knowledge, and continuity of the bank in using blockchain or social media in marketing. Kurdi and Alshurideh (2020) argue that the loss of trained staff will lead to increased costs in recruiting and training new staff while impacting client service.

Governance

The importance of governance in blockchain for marketing is for the establishment of policies, rules, protocols, and easier decision-making processes while ensuring accountability and transparency to all related parties (El Khatib et al., 2022). It promotes the use of blockchain to those who are not comfortable seeing that rules or policies are created to protect their interests. Governance in social media promotes collaborations and fosters trust that assists in resolving any disputes that could arise knowing that the rules are there to be followed and guide users (Daskal et al., 2020).

The lack of governance in social media and blockchain leads to the frustration of users as there are no guidelines on how their disputes can be resolved (De Filippi et al., 2020). This leads to trust issues as clients are sometimes not treated fairly and transparency becomes a challenge. The absence of governance may damage the good reputation the organisation has created and erode the trust of the clients (Tavanti & Tait, 2021).

Security

It is important to have security in the use of blockchain and social media for marketing to ensure the integrity and trustworthiness of the transactions and data while preventing fraud and unauthorised access to client information and data manipulation (Eriksson et al., 2020). Kethan and Basha (2022)

argue that the bank will retain any client and have loyal clients when they have a trusting relationship with their bank.

A lack of security in social media for marketing may cause a breach of the Protection of Personal Information Act (POPIA) for customers due to identity theft from data breaches (Kumar et al., 2022). This could also damage the brand reputation which could lead to the loss of clients and the continuity of the business (Koonin, 2020).

7. Conclusion

This study advances our understanding of the complex interplay of factors influencing the adoption of social media and blockchain technologies for marketing in South African banks. By applying Activity Theory, we identified seven key factors that shape this process: awareness, governance, interactivity, operationalization, requirements, security, and skillset. These findings highlight the multifaceted nature of technology adoption in banking, emphasising the need for holistic approaches that consider technological, organisational, and human dimensions.

Our research contributes to the literature on technology adoption in banking by providing a nuanced perspective on how traditional (social media) and emerging (blockchain) technologies can be integrated for marketing purposes. The study also demonstrates the utility of Activity Theory in understanding complex organizational phenomena. Practically, our findings suggest that banks need to focus on developing comprehensive strategies that address all seven factors identified. This includes investing in employee training, strengthening governance structures, enhancing security measures, and fostering a culture of innovation and adaptability.

However, this study also has limitations. The focus on two South African banks limits the generalisability of the findings. Future research could expand this investigation to other cultural contexts or banking systems. Additionally, future research could explore these issues in other cultural contexts or investigate the long-term impacts of these technologies on bank performance.

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