

DEVELOPING A CONCEPTUAL FRAMEWORK: INFLUENCING THE COMPETITIVE INTELLIGENCE EMBEDDEDNESS IN ORGANISATIONS

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ABSTRACT

Competitive Intelligence (CI) helps organisations achieve a competitive advantage when there is a commitment from the entire organisation and its supply network to develop actionable insights to attain superior performance. However, without an integrated model that assesses the internal and the external environment, it is difficult for organisations to anticipate changes in the marketplace to compete and survive. Management and employees need an integrated model to produce actionable intelligence for knowledge seamlessly transferred across the organisation. This study aims to review current CI literature, analyse existing CI, and finally propose an integrated model for CI. This study was qualitative, and library research methods were employed to identify peer-review academic journal articles and ensure reliability. A grounded theory method was employed to perform model analysis. The findings show that most CI models do not exploit the drivers and outcomes of CI. Most models suggest that CI systems are developed to analyse, collect, capture, store and disseminate information without incorporating organisational and market factors impacting the quality and use of information. Although models have established the need for CI to achieve organisational performance, they do not include a holistic view that affects CI to achieve revenue growth and market share.

Keywords: Competitive Intelligence, Customer Satisfaction, Employee Role Clarity, Information, Organisational Performance.

INTRODUCTION

In today's digitally infused world, business interactions involving customers and suppliers generate vast amounts of information, demanding rapid technological advances to perform data analytics (Chang et al., 2014). Thus, modern organisations survive by leveraging inbound and outbound data sources to provide value to customers, generate revenue, and maximise profits (ur Rehman et al., 2016).

The adoption of big data, cloud computing technologies and the internet has created more value for customers and organisations (Ranjan & Foropon, 2021). As mobile phones and social media platforms become increasingly accessible, millions of users generate big data that attracts businesses to these channels for gaining competitive intelligence (Markovich et al., 2019).

Big data is a value creation source for organisations when analysed and organised by intelligent tools (Chang et al., 2014). Therefore, organisations should develop a successful analytics framework that identifies constraints and transforms information into insights that focus on action (Hagel, 2015). Organisations need to apply Competitive Intelligence (CI) to

unlock enormous volumes of raw data into actionable insights to comprehend customers' needs and their unique circumstances to enhance their current product offerings and maintain competitive advantage (Cavallo et al., 2020).

Considering the growing volume of information and potential for information overload, quality is a crucial metric for distinguishing usable information (Saxena & Lamest, 2018). To date, existing research has largely ignored the quality of market information. CI practices need to be deployed, implemented correctly throughout the value chain of organisations. This present study addresses this gap by proposing an integrated conceptual model.

Research Problem and Objectives

CI systematically improves organisational effectiveness by enhancing the quality and flow of information throughout the organisation, allowing potential risks and opportunities to be identified early (Štefániková & Masárová, 2014). Therefore, CI assists companies in developing a competitive advantage when there is a commitment from the organisation and its entire network to formulate actionable insights leading to corporate performance.

Competitive Intelligence Embeddedness (CIE) benefits organisations, employees, customers, and trade partners. For example, when organisations acquire customer knowledge and their changing attitudes and behaviours with the aid of CIE, the outcomes will be customer satisfaction, increased sales volume, profits, and increased market share.

According to the resource-based theory, Markovich et al. (2019) posit that the organisational capability developed from embedding CI into decision-making and provision of products and services is *“an organisationally-embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm”*. Despite the benefits provided by CIE, knowledge regarding its drivers and outcomes is lacking.

Various researchers have developed models that explain how CI is created and formed. For example, the CI process models by Seyyed-Amiri's et al. (2017); Pellissier & Nenzhelele (2013); Gilad's (2016) information conversion model; Dishman & Calof's (2008) model of CI; CI cycle; Asghari's et al. (2020) CI effectiveness; CI strategy framework; and Maritz & Du Toit's (2018) CI strategy relationship model.

Markovich et al. (2019) raised concerns that these models focus on describing processes to develop a CI system instead of exploiting the drivers and outcomes of CI. Moreover, these models suggest that CI systems gather information from internal sources (e.g. organisation's value chain) and external sources (e.g. competitors, customers, developers, distributors, suppliers, and other stakeholders) (Gilad, 2016).

These factors are captured by Tornatzky's et al. (1990) Technology- Organisation-Environment (TOE) framework. The TOE is an application-level framework for research from the organisation-level perspective. Furthermore, TOE explains elements in three forms about an organisation's context that impacts adoption decisions (Piaralal et al., 2015). The TOE provides internal and external factors that influence an organisation to conceive innovative ideas and embrace and adopt them in their business operations.

The TOE modelled by Duh & Fabiao's (2018) proposes internal factors such as top management support, financial resources, and employee capability, while customer pressure, information technology, vendor support, and competitive pressure are external factors. Concerning adopting innovative and competitive ideas, Erkan & Evan's (2016) Information Acceptance Model (IACM) suggests that information attributes predict information adoption. Furthermore, IACM expands the notion of information adoption to include consumer behaviour

to explain the process that influences behavioural intentions.

In the context of CI, the CIE model by Markovich et al. (2019) suggests that information attributes such as perceived quality of information sources, namely information source credibility and accuracy, are essential drivers of CIE. Furthermore, CIE capability understands the drivers and performance outcomes of the organisation. However, most studies in CI models have not exploited its drivers and outcomes except for Nasri's (2012) CI strategic benefits model. This model by Nasri (2012) advocates that CI outcomes are innovation, marketing differentiation, low cost, customer satisfaction, new market anticipation, revenue prospects and market share. Consistent with other CI models, this study also focused on highlighting processes and not providing clear, measurable drivers and outcomes. In contrast, the CIE model by Markovich et al. (2019) comprised the benefits and drivers and results of CI. In this research model, Markovich et al. (2019) suggested that the outcomes of CIE were the firm's performance.

Thus, the development of a CIE capability advances the implementation of the CI cycle through the organisation. CIE integrates information for the internal creation of knowledge to improve performance (Moustaghfir, 2009). Therefore, when information is produced, and employees embed it into their duties, it leads to role clarity, which is an essential driver for the organisation's performance and its brand (King & Grace, 2010). Besides, Markovich et al. (2019) study only offered conclusive evidence on related variables. The current study aims to provide an integrated set of variables influencing CIE in organisations.

METHODOLOGY

The present study is a conceptual review of different models and employed applied-qualitative and library research methods of peer-review academic journal articles. A grounded theory method was employed to perform model analysis.

Conceptual Review

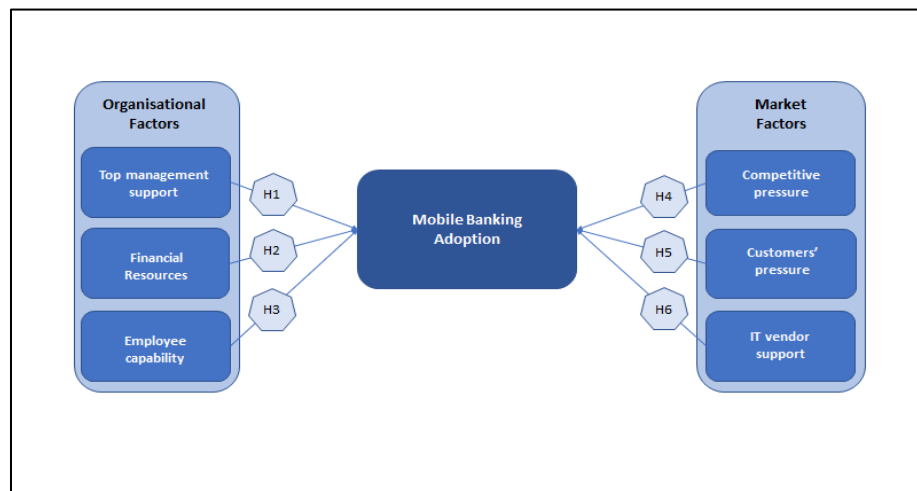
Recent advances in information technology and information systems have resulted in profound changes becoming essential parts of individuals' lives. With the plethora of online platforms, individuals share information online – in the interim, they use online platforms to search for relevant and valuable information (Wang, 2018). Organisations that use CI to transform this information into actionable intelligence will prosper and succeed in the fiercely contested business environment.

The TOE Framework

Tornatzky et al. (1990) developed the Technology Organisation Environment (TOE) framework, used to examine the adoption of technologies from different sectors of organisations worldwide. The TOE has emerged from a general theoretical perspective on Information Technology (IT) adoption – linking the technological, organisational, and environmental factors to the entire value chain of the organisation's operation.

Essentially, the TOE framework provides a holistic picture of the organisation's value chain activities and factors that influences business decisions to the pursuit of adopting technology as well as developing effective organisational capabilities to manage business activities (Lin & Lin, 2008; Wang et al., 2010; Zhu, 2004). Studies have used the TOE framework in different contexts, such as cloud computing and enterprise resource planning

(Gangwar et al., 2015; Gutierrez et al., 2015). Again, this signifies that the TOE framework is used extensively due to its comprehensive structure and sound theoretical basis for understanding organisations' technological adoption behaviour (Bernroider & Scmöllerl, 2013). Duh & Fabiao (2018) employed the TOE framework to understand organisational and market factors behind the success of mobile banking adoption in Mozambique (Figure 1). Duh & Fabiao (2018) investigated the organisational and market of adoption and found a significant impact in vendor support, customer, financial resources, and competitive pressure; the latter showing the greatest significant impact. This study's results corroborated with Gangwar et al. (2015), who found that competitive pressure and partner support significantly influenced cloud computing. Gutierrez et al. (2015) results showed that out of eight factors examined, competitive pressure, complexity, technology, and trading partner pressure had a significant influence on the adoption decision of cloud computing services.



Source: Duh & Fabiao (2018)

FIGURE 1
MOBILE BANKING ADOPTION MODEL

Equally, Duh & Fabiao (2018) found that top management support and employee capability were insignificant when compared to variables of market and organisational factors. This implied that top management support is no longer an essential driver with organisations acquiring and adopting technology at a reasonable cost. Additional studies also found no need for top management support to adopt technology (Gutierrez et al., 2015; Lian et al., 2014). In contrast, other research studies found that top management support contributed significantly to technology adoption (Gangwar et al., 2015; Sila, 2013). These varying results show that the TOE framework has its limitations relating to how variables are selected and empirically tested in different contexts (Aboelmaged, 2014; Ismail & Ali, 2013).

The TOE modelled by Duh & Fabiao (2018) (Figure 1) showed that other variables had no significant effect. Yet organisational capabilities improve an organisation's agility, flexibility, and scalability. This result highlights that the TOE framework needs strengthening by integrating it with other models with clear constructs (Gangwar et al., 2015). Variables of the TOE framework vary across different contexts with their level of significance, as seen in Duh & Fabiao (2018) who found both significance and insignificance amongst the variables under organisational and market factors. Therefore, Duh & Fabiao (2018) study emphasised that a

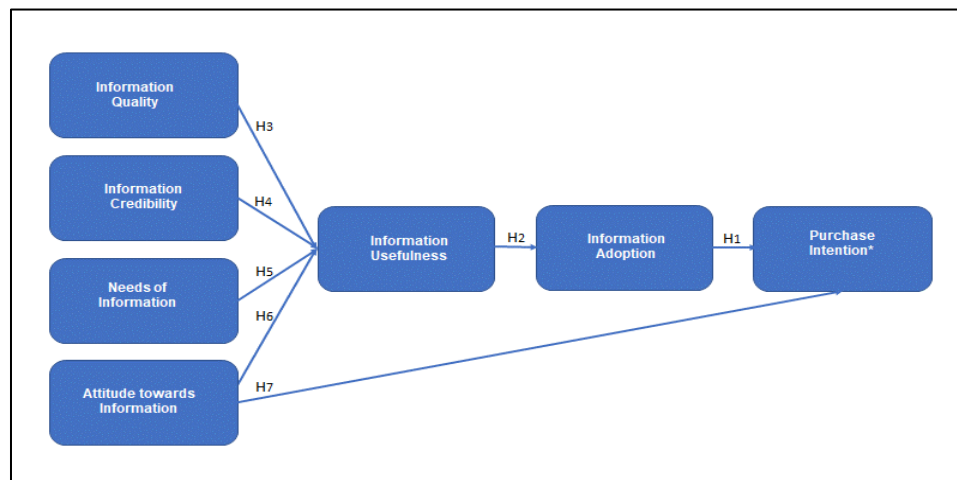
common set of variables could not be generalised to explain the application of technology adoption in a different context (Gangwar et al., 2015).

Based on the criticism of the TOE framework, this study modified the use of the Duh & Fabiao (2018) model and employed cognitive and sociological variables to enrich the TOE framework of Duh & Fabiao (2018) to achieve its research objectives.

The Information Acceptance Mode (IACM)

Sussman & Siegal (2003) developed an Information Adoption Model (IAM) that explains how individuals adopt information as well as change their intentions and behaviours with computer-mediated communication platforms (Wang, 2016). The IAM model emphasises information quality, credibility, and usefulness (Erkan & Evans, 2016). The original IAM model successfully investigated online opinions in online communities (Tseng & Wang, 2016; Zhu et al., 2016). Researchers have replaced the original mediated variables of the IAM to build complex models (Chen et al., 2011; Jin et al., 2009; Li, 2013).

This study's results showed that the influence of information should not be limited to characteristics of information but rather consider exploring consumers' behaviours towards information. Hence, some researchers have integrated both IAM and the Theory of Reasoned Action (TRA) models in their studies to understand customer behaviours towards information (Wang, 2016). For example, Gunawan & Huarng (2015) developed a model integrating IAM and TRA, which showed that source credibility and social influence affected users' attitudes towards information usefulness. Furthermore, this study found that both source credibility and social influence affected behavioural intentions, whereas behavioural intentions were associated with subjective norms.



Source: Erkan & Evans (2016)

FIGURE 2
INFORMATION ACCEPTANCE MODEL

Perceived risk has a negative influence on behavioural intention. Erkan & Evans (2016) investigated the impact of (eWOM) in social media on consumers' purchase intentions and developed their research model, the Information Acceptance Model (IACM), by integrating IAM with the related components of the TRA model. The IACM explains the process that influences

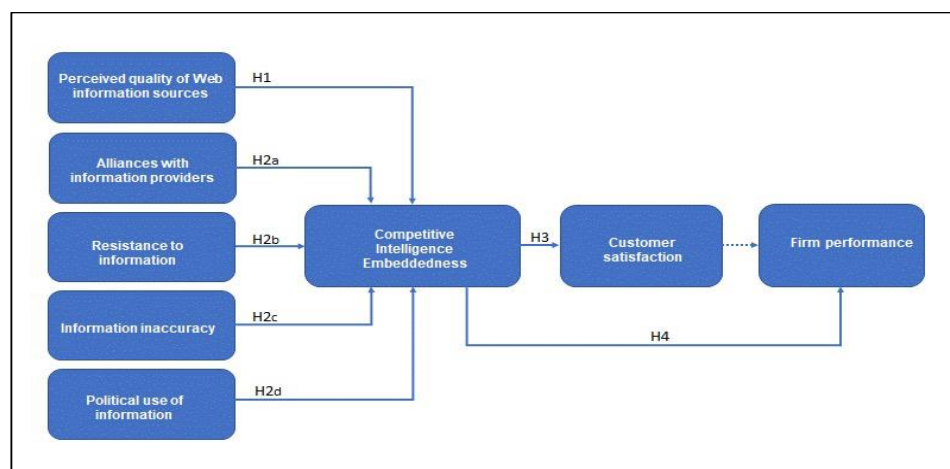
behavioural intentions and examines the relationships between this study's information attributes (Figure 2). Results indicate that both characteristics of eWOM information and behaviours of consumers had a positive impact on consumers' purchase intentions resulting in six hypothesised relationships between IACM variables, finding statistical significance except for H6, which showed statistical insignificance.

The IACM modelled by Erkan & Evans (2016) offers a more comprehensive approach by considering consumers' behaviour together with the characteristics of information within the same model. Essentially, the IACM expands the notion of information adoption by including consumer behaviour in the pursuit of explaining the process that influences behavioural intentions. Therefore, this study integrates the related components of the IACM to measure hypothesised relationships amongst the variables. In this research, the variable information accuracy is integrated with a mediated variable, which needs information to improve the study's effectiveness and gives more valuable and practical conclusions and implications.

Competitive Intelligence Embeddedness Model

Most CI research focuses on its intrinsic functions, such as analysis and information gathering techniques, but fails to integrate these attributes throughout the organisation. Yet, CI affects decision-making and contributes immensely to the organisation's operation and performance (Ahearne et al., 2013). Therefore, Competitive Intelligence Embeddedness (CIE) is a capability that inspires CI-related organisational culture and performance. In so doing, CIE dispenses competitive information about the organisation's external environment to make effective strategic and tactical decisions (Markovich et al., 2019).

Previous research studies like Akram & Waheed (2012); Sepahvand et al. (2016); Tahmasebifard (2018); Uzoamaka et al. (2017) have found the existence of causative relationships between CI and organisational performance. However, these studies have not explored CIE capabilities in understanding the relationship between customer satisfaction and the organisation's overall performance. For that reason, Markovich et al. (2019) developed a research model that integrated CIE with related information attributes, customer satisfaction and organisational performance (Figure 3).



Source: Markovich et al. (2019)

FIGURE 3
COMPETITIVE INTELLIGENCE EMBEDDEDNESS

Markovich et al. (2019) explored the concept of CIE capability while discussing its drivers and its impact on Web competitive information sources: perceived quality and action-orientated information. Results showed that CIE positively impacted the perceived quality of Web information sources and alliances with information providers. Furthermore, Markovich et al. (2019) found that CIE impacted the company's performance with the mediating role of customer satisfaction. Using the information gained from the knowledge of CI has increased the level of customer satisfaction, thus increasing financial performance for the company. Markovich et al. (2019) research model demonstrates that CI's influence on performance depends on improved customer satisfaction, whereas improved customer satisfaction impacts the overall performance. These findings validated that a well-established CIE capability within an organisation augments customer satisfaction. Improved customer experience inspires organisational performance (Markovich et al., 2019).

Conceptual Framework

This section proposes a model drawn from three streams of research, and it incorporates related components of the CIE by Markovich et al. (2019), IAM by Erkan & Evans (2016), and the TOE framework modelled by Duh and Fabiao (2018) for mobile banking. The seven characteristics, customer satisfaction, employee role clarity, information attributes, market factors, organisational factors, and performance were consequential to the three base models. Given the varying context, this study's integrated model introduces different variables. The constructs used have been carefully selected to customise components of the base model to make the proposed model more relevant to the present research.

Integration of the TOE framework, information acceptance and CIE models provides an analytical process that transforms competitor and industry information into actionable strategic knowledge about competitors' capabilities, intentions, performance and position in the market (Bernhardt, 1994). Several studies have demonstrated that CI focuses more on gathering and disseminating information to make effective decisions and develop and formulate business strategies (Seyyed-Amiri et al., 2017; Bartes, 2014; Cavallo et al., 2020; Maritz & Du Toit, 2018). Therefore, CI filters volumes of competitive information to speed up the organisation's strategic decision-making. This validates that the inclusion of CI across the organisation is inevitable since it requires leadership attention and awareness (Wright et al., 2008). Considering that CIE is based on intra-organisation information use, leaders should embrace quality information so that CI is entrenched successfully into the corporate culture (Markovich et al., 2019). Markovich et al. (2019) added that leadership commitment is needed to embed processes and procedures that support CI activities to enhance CIE capabilities through the organisation's value chain. CIE relies on information to create and add value that improves customer satisfaction (Markovich et al., 2019)

This study proposes a conceptual framework illustrated on how companies can leverage CI to create and enhance value throughout the organisations value chain (Figure 4). This paper investigates each related element to establish a connection with CIE.

Research Findings

From the proposed conceptual framework discussed above, the following common and unique characteristics, together with research findings, were identified.

Organisational Factors

The organisational factors include strategic orientation, corporate culture, and organisational commitment. These are unique organisational resources that are highly valued and help organisations achieve their stated goals, including superior performance and market leadership (Ahmed et al., 2018). The organisational factors that impact CIE adoption and implementation consist of leadership, strategy, structure and process, and employees' capabilities.

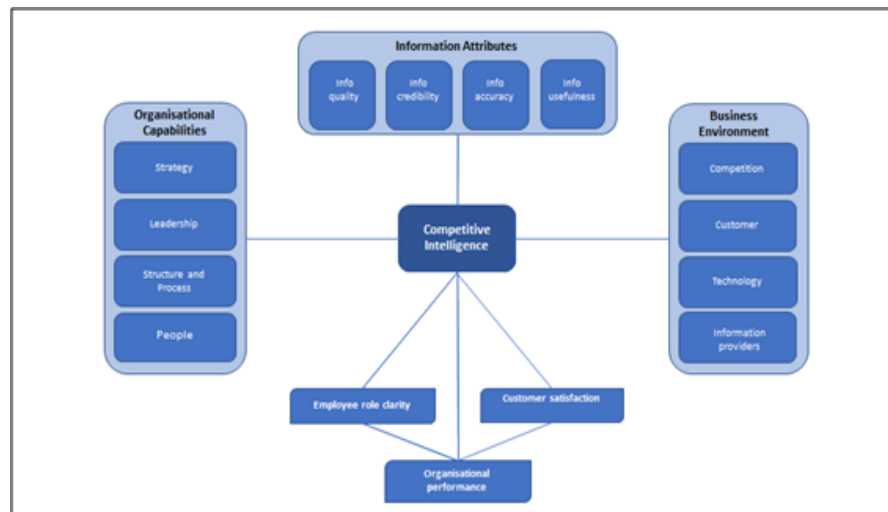


FIGURE 4
CONCEPTUAL FRAMEWORK INFLUENCING THE EFFECTIVENESS OF CIE IN ORGANISATIONS

Leadership

Leadership is a dynamic process that drives employee motivation to achieve organisational goals, executing managerial tasks such as planning, organisation, and decision-making processes, and guiding the employees towards fulfilling objectives (Baig et al., 2021). Thus, leaders must stay on track and remain motivated to achieve success and serve as role models for the rest of the organisation's personnel (Kumar & Bhatti, 2020).

Chinyamurindi (2016) found that middle-management communicated information gathered from CI to top managers to assist them in making strategic decisions. Leadership is, therefore, the ability to influence people's behaviour. It concerns using non-coercive means to obtain coerced participation and aiming to achieve objectives (Ivan, 2015). De Almeida et al. (2016) proved the relevance of inspiring knowledge sharing behaviour through information system support, top management support, and information feedback. Leadership's attention and awareness are crucial to establishing CI throughout the organisation (Wright et al., 2008) and leaders need to foster an organisational culture that supports CI practices by involving employees (Saayman et al., 2008).

Since leadership engagement authenticates the importance and implementation of CI processes and a supportive organisational culture, leaders need to embed CI practices supporting the success and use of CI throughout the organisation (Ardito & Petruzzelli, 2017). Mohd Asri &

Mohsin (2020) showed that respondents perceived CI was being used at various levels throughout the organisation's value chain and departments, regardless of position. This signifies that leadership engagement, alongside culture and structure that encourages trust and aiding communication and the flow of information, ensures the implementation of CI activities throughout the organisation (Nasri, 2011).

Strategy

Strategy is about identifying and pursuing new market possibilities that address new methods of producing and providing value for consumers by delivering new goods or solutions, expanding existing product lines, and reconfiguring existing solutions (Fahey, 2007). Therefore, organisations adopt strategic management processes, including formulating, implementing, and evaluating the strategic actions to achieve long-term organisational goals (Ahmed et al., 2018). CI thus adds value to planning and the organisation's decision-making processes. Consequently, the linkage between CI intelligence and strategic management is critical (Bulley et al., 2014). Cavallo et al. (2020) discovered a link between CI practices and the strategy creation process. Therefore, a correctly organised intelligence signifies synergies between CI and strategy management. Thus, CI and strategy translate strategic plans into sustainable organisational performance (Adidam et al., 2012). In doing so, CI begins with an existing strategy and considers how the environment will impact the plan's success (Calof et al., 2015). CI then brings together competitive advantage and strategic implementation (Colakoglu, 2011). CI also strengthens the strategic planning process by effectively implementing competitive strategies (Cavallo et al., 2020). Furthermore, CI arms leaders with strategic intelligence, assisting them in assessing competitors' strategies and formulating new strategies to counter the competition (Ahmed et al., 2014).

Structure and process

The organisational structure is the organisation's anatomy that provides a foundation for the organisation (Wang & Zhou, 2019). In contrast, a business process is a complete, dynamically coordinated set of logically related tasks performed to fulfil the strategic goals (Strnadl, 2006). Wang & Zhou (2019) concluded that the organisation's structure and business process govern the total relationship flows and revealed that even if CI provides actionable intelligence, it is challenging to develop actionable intelligence without adequate processes (Pellissier & Nenzhelele, 2013). This corroborated Nasri's (2011) result on the process and structure, which indicated that corporations were underinvesting in the internal infrastructure needed for effective intelligence operations. Similarly, Ncube & Ndlovu (2015) found that companies encountered considerable challenges in applying and implementing CI due to a lack of financial resources allocated to CI activities and knowledge to execute CI procedures. These results correlate with Pellissier & Nenzhelele (2013), who suggested that CI requires appropriate policies and procedures and a formal or informal infrastructure so that employees can contribute effectively to the CI system and gain benefits from the process.

Employee capability

Employee capabilities are a set of abilities, experience, knowledge, and skills that assist employees in achieving organisational outcomes (Bontis & Serenko, 2007). Therefore,

employees and information play a critical role in successful organisations (Hagiu & Tanascovici, 2013). The organisation's employees are also essential sources of CI since they acquire knowledge and intelligence about competitor activities and customers. Because they are closer to the information sources, employees are frequently better equipped to gather and apply CI more efficiently (Hughes et al., 2013). Cekuls's (2015) study showed that employees regularly provided their superiors with information on the competitive environment. Calof, Richards and Santilli (2017); Calof et al. (2018); and Calof & Sewdass (2020) found that most employees were aware of CI, and on average, some participated in CI activities. Wright & Calof (2006) reported similar results where company employees were aware of and participated in CI operations. CI integrates information throughout the organisation, whereby employees provide the information needed for intelligence efforts (Calof et al., 2017). Therefore, it is vital that employees who gather this intelligence share their knowledge with others to increase organisational innovation (Nemutanzhela & Iyamu, 2011). De Almeida et al. (2016) showed that relationships between employees and others involved in the CI process correlated positively with intrinsic motivation. These results validate that the organisation's culture and the employees' understanding of collecting and exchanging business information play a fundamental role in accomplishing.

Market Factors

The macro-environment consists of external forces shaping and dictating how the industry develops (Duh & Fabiao, 2018). Essentially, an organisation's macro-environment consists of wide-ranging stakeholders – industry members, customers, competitors, suppliers, and communities (Angeles, 2014). Also, the macro environment includes the availability or absence of technology service providers (Gutierrez et al., 2015). Therefore, organisations that understand competitor dynamics and are forewarned by these activities will respond rapidly to the market dynamics (Tuan, 2016). The market factors impacting the adoption and the implementation of CIE comprise competition, customer insights, technology, and information providers.

Competition

Competition probes organisations to see the possibilities in the marketplace (Sundiman, 2018). The drivers of CI in organisations include identifying competitor information, pricing policies, and product production (Asghari et al., 2020). CI anticipates market developments, providing much-needed information about opportunities and threats that may confront organisations. In addition, CI examines competitors' capabilities, intentions, actions, and vulnerabilities to anticipate any developments in the market quicker than the competition (Uzoamaka et al., 2017).

Reinforcing these views, Nazar & Seidali Route (2017) found that knowledge trends in the market, foreknowledge of competition, technology, and strategy had a positive and significant relationship with organisational flexibility. Additionally, Asghari et al. (2020) found that competitor information positively and significantly influenced CI. Koriyow & Karugu (2018) found that CI is useful for analysing competitiveness, monitoring the external environment, and evaluating new technological developments. CI, therefore, provides organisations with insights into competitors' actions and intentions.

Customer insights

With increased business activity, customer insights are gaining more value to enhance business performance and achieve a competitive advantage in target markets. As customer expectations grow, organisations can obtain customer information in high volumes and variety due to increasing social media usage (Choudhury & Harrigan, 2014). Therefore, CI combines data obtained from the market to arm organisations with new knowledge about competitors, customers, and suppliers (Sassi et al., 2015). This view matches Urbinati et al. (2019), whose research found that exchanging big data and analytics was essential for co-innovation with suppliers and customers. Calof et al. (2018) found that companies used intelligence gathered from CI for strategic and tactical business decisions, focusing on intelligence being dominantly on competitors and customers and innovation being among the most frequent intelligence focuses. Therefore, CI combines the organisation's resources in the pursuit of creating value for customers (Gračanin et al., 2015).

Technology

Technology is vital for CI since it drives the process and can produce information and disseminate it to other platforms (Almada-Lobo, 2015). Technology can provide accurate, reliable, and relevant information timeously from both the internal and external for organisations to anticipate and identify potential problems and find solutions (Igbaekemen, 2014). Therefore, technology plays a significant role in achieving the market share, satisfying and meeting the needs of customers (Asghari et al., 2020). Successful organisations use technological and market knowledge to gain an advantage (Rakthin et al., 2016). As the technology positions of an organisation may be determined by its competitive advantage and innovation opportunities, the set of the technologies the organisation will master includes innovation and the performance of CI (Sarica et al., 2019). Bisson & Tang Tong's (2018) research provide empirical evidence to promote training and technology adoption among companies to achieve higher CI practices. Therefore, new technologies could still positively affect CI performance and change how intelligence is gathered and disseminated through an organisation (Tahmasebifard, 2018). In essence, organisations should embrace technology to achieve market share and satisfy the customers' needs (Asghari et al., 2020).

Information providers

Information providers have experience in dealing with database vendors. They have developed strategies and techniques of databases to source relevant information for decision-makers of an organisation (Uzohue & Yahaya, 2016). Tanev & Bailetti's (2008) research found that specialised suppliers had the most remarkable rate of utilising information about consumers and the industry compared to new technology-based and service organisations. Degerstedt's (2015) finding validates the notion that internet-centred information providers are progressive while traditional enterprise IT providers impede. In addition, Markovich et al. (2019) showed that CIE positively impacted the perceived quality of web information sources and alliances with information providers.

CI, therefore, gets much of the information used from experts outside the organisation, and it combines secondary sources outside the organisation with internal information for making strategic decisions (Calof, 2017). In so doing, CI interprets quality information sourced from

web-based aggregators of information outsourced collectors for strategic decision-making (Gilad, 2016).

Information Attributes

The organisation's information climate influences how access and information is used through having an information infrastructure (Correia & Wilson, 2001). So, reliable data and information provide analytic and predictive capabilities for effective strategic management decisions (Igbaekemen, 2014). The attributes that measure the value of the intelligence produced through a CI program include accuracy, usability, relevance, readiness, and timelines (Bose, 2008).

Information quality

Information quality determines the quality of information developed and delivered within the organisation (Azemi et al., 2017). Information quality is vital in distinguishing between usable and additional information (Saxena & Lamest, 2018). Information amplifies CI, and its quality impacts implementation. Teo & Choo (2001) discovered that external internet use and research substantially impacted the quality of CI information while Teo & Choo (2001) found that the internal usage of the internet had no impact on the quality of CI information.

Web information sources augment the CIE capability function and provide decision support to improve organisational performance (Markovich et al., 2019). The perceived quality of online competitive information sources and management's action-oriented utilisation of that information influenced the CIE capabilities and performance of the organisation. Similarly, a direct relationship between web information quality and organisational capabilities and performance. Therefore, CI assists organisations in developing a competitive advantage when the entire organisation and its networks commit to developing actionable insights.

Information credibility

Conversely, information credibility does not only refer to the objective evaluation of information quality and precision, but it also refers to measuring information sources (Zhao et al., 2015). This view illustrates that it is vital to prevent the proliferation of fake or malicious information obtained from web information sources by developing techniques to verify information received from any web-based information sources. Thus, credibility provides a required rationale to build trust in any given situation. This view aligns with Jamal et al. (2021), whose study found that transparency correlated positively with the trustworthiness of the information. This result validates that information trustworthiness about an organisation adds value, accelerates trust, and increases customer satisfaction and loyalty (Jamal et al., 2021). CI, therefore, monitors web information effectively if connected to some specific domain.

Information accuracy

Information accuracy refers to the validity of information obtained from a search (Jaworski et al., 2002). In essence, information has value if relevant, accurate, reliable, and accessible on time (Stefanikova et al., 2015). Thus, multiple sources communicating information about the same issue quantifies the accuracy of information (Jaworski et al., 2002). Wright et al. (2009) found that data used to produce information was accurate if it came from more than one

credible source. Therefore, the purpose of a CI program is to gather relevant information that is valid and accurate.

Information use

Information use allows the development and creation of competitive advantage for most organisations. Hence, organisations exploiting effective information use remain competitive (Aramide & Adebisi, 2018). Erkan & Evans (2016) found that information quality and credibility affected the usefulness of the information. In addition, Hussain et al. (2020) found that quality and trustworthiness had a substantial positive impact on information usefulness, whereas engagement negatively impacted information usefulness. Therefore, information collection and correct use directly impacts business results (Adidam et al., 2009). Souchon et al. (2003) found that information use correlated with organisational performance. Also, Aramide & Adebisi's (2018) study identified that adequate information use was an integral part of coping with challenges organisations face to enhance performance and productivity. Their study further found a connection between CI and information in an organisation. Thus, organisations must comprehend and understand all strategic information; CI is the most appropriate tool for achieving this aim (de las Heras-Rosas & Herrera, 2021).

Employee role clarity

Role clarity is the degree to which an individual gets and comprehends information essential to accomplish their job (Kundu et al., 2021). Role clarity emphasises the alignment of employees and teams to their organisation's objectives (Kim et al., 2020) and assesses whether workers clearly understand their work goals and duties and the processes necessary to do the tasks assigned to them (Kim et al., 2020). Therefore, employees with clear roles are frequently better at collecting and utilising CI since they are closer to the source (Hughes et al., 2013). Samie et al. (2015) discovered a substantial and direct link between role clarity and staff efficiency. Considering that employees are the primary sources of CI in organisations, Muritala et al. (2019) found that CI had a favourable association with employee productivity, which supports this viewpoint.

Customer Satisfaction

Customer satisfaction is a perceived value experienced through a relationship between the customer, products and services, and the company that provides products and services (Mazreku, 2015). Thus, customer satisfaction is an important performance metric for a company. It serves as a forerunner of customer purchasing intent and loyalty (Muritala et al., 2019). CI, therefore, increases customer satisfaction, resulting in high sales and profitability for the organisation.

This view is consistent with which established that CI was an essential factor that can increase customer satisfaction, indicating that CI is a capability that fosters a positive customer experience in every state of the customer journey (Hughes et al., 2013). With customer satisfaction directly related to revenue growth, a study by Markovich et al. (2019) indicated that CIE was an essential factor that influenced consumer satisfaction, and consequently, the organisation's performance. Therefore, CI inspires customer satisfaction which sequentially enhances the organisation's profitability (Afolabi & Adegoke, 2014).

Organisational Performance

Organisational performance involves analysing a company's performance against its objectives and goals. For instance, organisational performance comprises actual results or outputs compared with intended outcomes (Irenaus et al., 2021). CI is an organisation's capability to acquire and decode competitor information to enhance its competencies to capture opportunities in the competitive environment (Tuan, 2015).

Furthermore, CI augments the strategic fit between an organisation and its environment to inspire organisational performance (Zhang et al., 2012). Therefore business leaders should embed CI to identify market opportunities, giving them an edge over competitors and sustaining performance (Muritala & Ajetunmobi, 2019). Therefore, CI's positive mediator role stimulates organisational performance. Mohd Asri & Mohsin (2020) concluded the existence of a relationship between CI practices and organisational performance. Similarly, Irenaus et al. (2021) determined a positive association between CI and organisational performance.

As organisations rely on daily information from web sources, they should invest in a dedicated unit to collect and manage web information. The significance of CI therefore goes beyond developing a competitive advantage - it enhances the sustainability of an organisation in the long term (Cavallo et al., 2019). Magasa et al. (2014) and Stefanikova et al. (2015) also found that the implementation and utilisation of CI enhanced performance and affected the sustainable growth of an organisation. CI, therefore, plays a vital role in identifying, developing, and sustaining resources and capabilities that create a competitive advantage for organisations and enhances performance and strategy development processes.

Competitive Intelligence Embeddedness

CIE capacity is how CI pervades the whole organisation, allowing tactical choices to be made considering all relevant external competitive information, which significantly impacts organisational performance (Markovich et al., 2019). The development of a CIE capability advances the implementation of the CI cycle through the organisation. It integrates information for the internal creation of knowledge to improve performance (Moustaghfir, 2009). CIE transfers knowledge obtained from external, competitive, and relevant information sources throughout the organisation to make strategic and technical decisions. Furthermore, CI impacts the organisation's performance with the mediating role of customer satisfaction.

Using the information gained from the knowledge of CI has therefore increased customer satisfaction and the organisation's performance. This view corroborates with Markovich et al. (2019), who discovered that CIE had a favourable impact on consumer satisfaction but had an interceding effect on performance.

While challenging several hypotheses to demonstrate how CI impacts operations and performance, leadership commitment is needed to embed processes and procedures that support CI activities across the organisation's value chain. Therefore, organisations need to pay more consideration to CIE related aspects to improve customer satisfaction. They should develop the integration and application of CI by combining the organisation's resources to create value for customers (Gračanin et al., 2015).

DISCUSSION

Prevailing themes in the literature show that researchers developed different models for

CI (Seyyed-Amiri et al., 2017; Asghari et al., 2020; Dishman & Calof, 2008; Gilad, 2016; Nasri, 2012; Maritz & Du Toit, 2018; Pellissier & Nenzhelele, 2013). However, most of these models do not exploit CI drivers and their outcomes; instead, they describe processes followed to develop CI systems. In addition, these models suggest that CI systems are designed to analyse, collect, capture, store, and disseminate information without paying more attention to information attributes, which point to a gap among these models. Markovich et al. (2019) developed a CIE model that focuses on the drivers and outcomes of CI, thereby promoting an intelligent, driven organisational culture that inspires employees to contribute information and insights along with other capabilities of the company's intelligent network. Nevertheless, Markovich et al.'s (2019) model has some limitations as it does not cover aspects such as market and organisational factors that have a bearing on CIE. Instead, it focuses on information drivers and their political use affecting the company's performance with a mediating role of customer satisfaction.

CONCLUSION

Having accurate and quality information to implement and monitor strategy effectiveness is a key differentiator for most organisations to leverage CI across the entire value chain to increase revenue growth and market share in the fiercely contested business environment. While the need for CI is widely present in the literature, this literature review illustrates that some areas of CI are less defined than others, which points to a research gap. Upon scrutinising various models and reviewing literature linked to previous studies, this study created an integrated research model for CIE.

The applied-qualitative library research showed that the investigated CI models did not include market and organisational factors impacting the successful deployment of CI for organisations to attain superior performance. The proposed conceptual model was created to test internal and external factors likely to influence the organisation's performance. This study's proposed integrated model is further expected to develop a specialised CI model for organisations across all sectors.

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