Gordon Institute of Business Science
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The impact of fintech disruption on trade finance within economic organisations

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Abstract

This research investigates the impact of fintech disruption on trade finance within economic organisations, focusing on how technologies like Artificial Intelligence (AI), blockchain and open banking are transforming efficiency, cost frameworks and governance. Grounded in Transaction Cost Economics (TCE) and the Resource-Based View (RBV), the research explores how fintech innovation reduces coordination costs while enhancing organisational capabilities. A qualitative, interpretivist, and inductive methodology was employed, utilising semi-structured interviews with 16 respondents, comprising industry experts from economic organisations, fintech, and related industries. The results show that fintech makes operations more efficient, reduces transaction costs and encourages collaboration between traditional economic organisations and fintech firms through hybrid strategies. However, legacy infrastructure, regulation, and a skills shortage remain primary barriers to adoption. The research also finds that regulation acts as both an enabler and a constraint, with South Africa's proactive frameworks showing that the potential for adaptive innovation, friendly compliance and regulation is a reality. The research contributes to the theory by integrating TCE and RBV, offering an emerging market perspective on digital transformation. Practically, it provides guidance for economic organisations, fintechs and regulators seeking to balance innovation, stability and inclusion within the trade finance ecosystem.

Keywords

Fintech disruption, trade finance, artificial intelligence, financial innovation, economic organisations.

Plagiarism Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Chapter 1: Introduction to the Research Problem

Despite the essential and increasing role that trade finance plays in facilitating global commerce, the sector remains constrained by legacy information and transaction systems, regulatory changes, and inefficiencies, most notably in emerging markets such as South Africa. At the same time, there has been an acceleration in the adoption of financial technologies, such as Artificial Intelligence (AI), by suppliers of trade finance, which is altering the operational, strategic, and regulatory landscape of trade finance. Little is understood about the depth, mechanisms, and stakeholder ramifications of this fintech-driven disruption in emerging markets. The objectives of the research are to evaluate how fintech disruption influences the efficiency, security, and accessibility of key trade finance instruments, specifically focusing on trade finance, letters of credit, factoring, and supply chain finance.

The globalisation of international trade and the digitalisation of finance have rapidly progressed, creating not only opportunities but also challenges for financial institutions and businesses. Trade finance, which consists of financial instruments and products that facilitate international trade, remains a crucial part of global economic growth, with over $33 trillion in global export merchandise trade recorded in 2024 (UNCTAD, 2024). According to the World Trade Organisation and the International Chamber of Commerce, up to 80% of global trade involves a form of trade finance instrument. These include, but are not limited to, letters of credit (LCs), factoring, and supply chain finance, which are all designed to mitigate the risks associated with non-payment, failure to deliver a good or service, and currency fluctuations (Meynell, 2024). According to the World Economic organisation data (World Economic organisation Open Data, n.d.), South Africa has a trade openness ratio of 65% in 2023, which looks at the total sum of imports and exports as a percentage of gross domestic product. Whilst the global average is 95%, South Africa’s ratio is amongst the highest in sub-Saharan Africa, showing the increase in connectivity between countries and the critical role of trade finance mechanisms.

Despite its critical importance, trade finance has historically been plagued by inefficiency, due to the process being slow, admin-intensive and paper-based, manual compliance checks and having high transaction costs. Instruments such as letters of credit (LCs), factoring (also known as debtors' discounting), and supply chain finance are crucial for ensuring that importers and exporters transact safely but have been slow to evolve technologically.

BDO South Africa (2024) reported that South Africa was responsible for 20% of all startups in the fintech space in Africa and made up 40% of the fintech revenue in Africa. Furthermore, between January 2015 to May 2022, there were 357 fintech startups in South Africa, raising a combined funding package of just under US$1 billion. These advancements have increased the level of competition in the market, pushing both traditional economic organisations and new entrants to leverage technology to not only meet rising customer expectations but also regulatory standards.

As international trade becomes more complex, interconnected, and susceptible to risk, there is a need for robust, agile, and innovative financial solutions for businesses. Among the various financial technology advancements in the sector, artificial intelligence (AI) stands out for its disruptive potential, offering the potential of greater speed, accuracy, and resilience in the global economy.

The impact of fintech companies disrupting trade finance operations using artificial intelligence was selected due to the transformative potential that it has in addressing the inefficiencies of trade finance. According to Kowalski et al. (2021), trade finance supports up to 80% of global trade, bridging the gap between importers (who want goods before having to pay) and exporters (who want payment before shipping of goods). Some inefficiencies arise from trade finance methods such as letters of credit and bills of lading, which rely heavily on trust and economic organisations (intermediaries), leading to increased costs and additional processing times and do not fully eliminate risk. This has the potential to take revenue away from economic organisations if done through fintech companies.

Murinde et al. (2022) identified that fintech companies can help address challenges such as high transaction costs, regulatory issues, and limited scalability in trade finance. It was also established that economic organisations and fintech companies are either collaborating or competing to develop platforms that not only bypass traditional trade finance models, but also for faster and more accessible services.

Emerging markets are also poised for fintech companies to drive innovation, with institutional infrastructure often being less developed, which can lead to insights into legacy challenges and the decision to build (in-house) or buy (outsource) (Gatignon & Capron, 2020). According to the 2025 FIS (Fidelity Information Systems) Supply

Chain Finance Benchmark report, 55% of global economic organisations are investing in trade finance technologies, which allows this research to capture real-time efforts and challenges that are being experienced.

This chapter seeks to outline the clear need for an academic inquiry, define both the practical and theoretical dimensions of the problem, and establish the scope, objectives, and academic contribution of the study.

1.1 Business Rationale

For a business that uses trade finance in order to transact globally, inefficiencies can cause a financial strain. Delays as a result of processing documents manually can delay shipments, which erodes trust between parties, raises costs, reduces liquidity in the market, and can cause a business to lose its competitiveness in a global supply chain. These challenges become even more heightened in an emerging market economy such as South Africa, where there are currency fluctuations, market volatility, strict regulatory controls and limited access to working capital for small and medium enterprises (SMEs).

Artificial intelligence (AI), a rapidly evolving technology innovation, is widely recognised as a potential game-changer for trade finance instruments. By having the ability to automate document examination for letters of credit, real-time analytics for factoring a debtor's book or having the ability to forecast payment trends in supply chain finance, AI seeks to reduce human errors, increase speed of execution, mitigate fraud and risk and allow broader access to credit. A survey by Fidelity Information Services (FIS, 2025) revealed that more than half of the global economic organisations are investing in technology for trade finance instruments, which underlines the urgency and importance of digital transformation within the industry. This transformation is often impeded by legacy systems, regulatory uncertainty to changes, data privacy concerns and a shortage of skills in emerging economies.

Whilst this is important, economic organisations and the businesses that use trade finance face a new source of uncertainty, in the form of cyberattacks, digital security, and the evolving regulatory framework for compliance with the advancement of technology. For stakeholders, understanding both the pitfalls and potentials of the advancement of technology in trade finance is more than an academic exercise; it is a strategic imperative.

1.2 Theoretical rationale: literature and conceptual gap

From a theoretical perspective, this research is underpinned by seminal concepts in economics and innovation studies. Schumpeter's notion of 'creative destruction' suggests that technological innovation is a fundamental driver of economic progress and is also a force for disruption, as new entrants to the market can disturb established structures and practices (Schumpeter, 1947). More recent advancements of this framework, notably by Aghion et al. (2015) confirms that innovation-led growth remains an important factor in competition, the financial results of an organisation, and productivity. Their Schumpeterian growth model puts forward the link between technological advancement and market responses, which shows that a higher level of innovation results in an increased number of organisations entering or existing in a market, which ties into creative destruction in modern economies. Trade finance instruments, which were traditionally conservative and risk-averse, are now undergoing a new wave of creative destruction, with artificial intelligence presenting both opportunities and risks.

Transaction cost economics, as described by (Williamson, 2010), looks at how firms balance the cost of market transactions against the cost of internal governance. In trade finance, high transaction costs as a result of document checking and internal compliance have traditionally justified the use of intermediaries like economic organisations. Using to AI to enhance these processes can bring the firm closer to the market by looking at vertical integration, outsourcing, and partnerships.

The existing literature addresses fintech disruption on payments, lending, and retail economic organisations, but the impact on trade finance instruments remains limited. Many studies focus on a single product, such as LCs or supply chain finance, and mainly look at operational improvements. There is a critical gap regarding how AI is transforming multiple trade finance instruments, various stakeholder perspectives, and the consequences that arise. This literature aims to fill the gap, offering theoretical and empirical contributions to the understanding of digital disruption in financial intermediation.

Recent academic studies and industry reports have focused on the disruption that fintech and AI have had on payments and economic organisations; the trade finance segment remains notably under-investigated. Khalil et al. (2025), researched that although international trade finance underpins 80-90% of the global trade finance, its core underlying instruments are still dominated by paper-based systems with manual

processes, and now only beginning to see targeted AI applications. The rigorous literature review found that journals concentrated on digital solutions in payments and account-based economic organisations rather than on AI integration in traditional documentary trade finance, with a trend being seen in blockchain-based applications for e-LCs.

This is contrasted by Xu et al. (2025), which analysed publication trends from 2015-2024 and found increased growth in AI, fintech, and digital disruption in core economic organisations' functions such as payments, lending, and end-user experience. The mapping shows a level of maturity relating to AI credit scoring, mobile payments, fraud detection, and operational transformation in economic organisations, but the disruption happening in trade finance appears occasionally, often referenced as a niche area and grouped with emerging or underdeveloped fields. This emphasises fragmentation, where fintech disruption in payments is widely researched with abundant empirical evidence, the trade finance area is characterised by sporadic, product-specific mentions, rather than focused research with theoretical development.

Further, Vuković et al. (2025) conducted a review of AI in finance and specifically looked to highlight the ‘persistent gaps’, which included the sector-specific frameworks for AI adoption in financial services, with documentation relating to trade finance being one of them. The analysis shows that whilst applications geared towards fraud detection and credit scoring have mature literature and regulatory dialogue, the impact of complex, multipart, document-heavy operations like trade finance is in its infancy and only recently attracting systematic scholarly attention, lacking standardised technological or governance models.

Importantly, Khalil et al. (2025) also note that while fintech and AI have created pilot versions for the digitalisation of documentation in the LC process (e.g., Conpend, Traydstream platforms), there is little empirical or comparative research to measure the operational and compliance impact in real-world economic organisations. The gap is not only in the technology adoption but also in the evidence, where quantitative studies of efficiency, error rates, legal robustness, and value creation in AI are abundant in studies relating to payment, lending, and digital wallets; they are virtually absent with respect to trade finance processes.

Recent studies have also brought to light the tension between the impact technology is said to have vs its actual impact. Aghion et al. (2019) questioning the true measure of creative destruction and its effect on growth, whilst Yang (2021) points to the prevalence of incomplete contracts, renegotiation risk when AI solutions are externally sourced as opposed to developed in-house. Addressing these gaps is essential for a more nuanced understanding in order to help businesses adapt.

1.3 Scope of the research

The research project focuses on the impact of AI on three main trade finance instruments, namely letters of credit, factoring, and supply chain finance. The study uses a qualitative, multi-stakeholder approach, utilising interviews and thematic analysis to compare and contrast the operational, strategic and regulatory implications of AI on these instruments.

Geographically, while the context is addressed for comparative purposes, the research setting will be South Africa, a country that leads African regional trends in digital finance, as supported by data on fintech growth in the region, funding raised, and economic organisations sector resilience (BDO South Africa, 2024). The results will be relevant to other emerging markets and advanced economies grappling with similar issues.

This research project is limited to the South African trade finance environment and focuses on the instruments that are available in the country, where fintech disruption is evident.

1.4 Research objectives

The objectives of the research are to evaluate how fintech disruption influences the efficiency, security, and accessibility of key trade finance instruments, specifically focusing on trade finance, letters of credit, factoring, and supply chain finance. Furthermore, the study aims to compare and contrast adoption, opportunities, and risks associated with technology advancements across these instruments, highlighting patterns that emerge by sector and product. It also seeks to investigate the experiences and responses of primary stakeholders, including economic organisations, fintech innovators, and regulators in adapting to fintech-driven change within trade finance. In addition, the research will identify and analyse the technology, regulatory, and human challenges that influence the successful digital transformation of trade finance instruments.

The study advances academic understanding by providing an integrated analysis of how fintech innovation impacts multiple trade finance instruments within the context of an emerging market economy. It contributes empirical evidence and conceptual insights into stakeholder adaptation, regulatory responses, and operational shifts in response to the fintech disruption. The findings address a critical gap in the literature by uncovering the systematic, cross-product and contextual implications, thereby supporting the theory building in digital financial intermediation and offering actionable insights for business leaders, policymakers, and scholars who are navigating the evolving trade finance ecosystem.

Chapter 2: Literature Review.

2.1 Digital disruption in trade finance

Over the past decade, the trade finance sector has undergone disruption, driven by rapid advances in financial technology. More specifically, Artificial Intelligence (AI) has challenged the dominance of traditional intermediaries and disrupted the business models in economic organisations. The technology has offered both opportunities (improved efficiency, reduced costs, enhanced transparency, and greater financial inclusion) and challenges (regulatory uncertainty, new types of risks), making the integration into trade finance both a technical and strategic imperative.

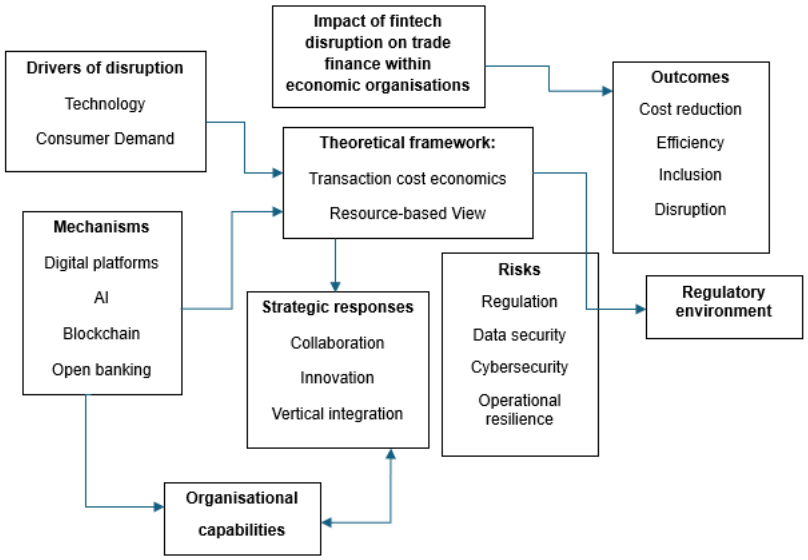


Figure 1: Conceptual map of literature review

Source: Researcher's own

2.2 Defining financial technology and its mechanism for disruption

Financial technology (fintech) has been broadly defined as the application of innovative technology to enhance or automate financial services. Thakor (2019) emphasises that fintech enables new and enhanced financial services through technology, which unlocks value for both the provider and the consumer. According to Zalan and Toufaily (2017), fintech companies leverage big data analytics, blockchain, artificial intelligence, and open API (application programming interfaces) to digitise services, decentralise operations, and disintermediate traditional economic organisations. Gu (2022) stated that this process of disintermediation, bypassing the

traditional financial system, captures value that would otherwise reside with established service providers.

According to Thakor (2019), fintech is intended to reduce the costs associated with matching parties, reduce verification costs, as well as uses its ability to gather large amounts of data to achieve economies of scale while securing the transmission of information. The goal is to reduce the cost of financial services and thus increase consumer welfare, which also extends to the value that is created for the consumer. Costs and value creation drive the question of whether economic organisations should vertically integrate or not, with the advancement of AI specifically.

2.3 Theoretical lenses:

2.3.1 Transaction cost economics

Fintech adoption in trade finance can be examined through the lens of transaction cost economics (TCE). Williamson (2010) contributed to seminal work on TCE, which weighed up the costs associated with transactions and economic exchanges. During these exchanges, various costs come into play based on the nature of the asset, how often transactions occur, and how uncertain the market is. Williamson (2010) identified that transaction costs in contracting, such as legal fees, monitoring to ensure agreements are complied with, the cost of parties acting selfishly against the agreement, and coordination costs to align the parties, significantly influence the overall costs and the governance decisions of the organisation.

It is to be noted that there are transaction costs within the organisation and transaction costs between organisations, which result from weighing up the cost of producing products internally vs acquiring services. Parties looking to exploit the investment by renegotiating the terms of the deal after the fact, and opportunistically create the hold-up problem (Williamson, 2010). This is the decision that economic organisations must make when deciding to either develop the technology themselves or partner with fintech companies that have already proven a product in the market.

The fintech companies can take advantage as they are the experts when the economic organisation does not have its internal capabilities. Yang (2020) broke this concept down into incomplete contracts, where a contract between the economic organisation and the fintech company cannot specify every future contingency and, as such, leaves the door open for renegotiation. It was also found that the size of the

deal (investment) also influences the behaviour of the parties in terms of bargaining over surplus division.

Yang (2020) further found that the governance choice results in firms vertically integrating when transaction costs are high, and outsourcing (partnering) when transaction costs are low and parties are deemed to be more reliable. This can leave economic organisations with the dilemma of whether they should vertically integrate or not.

de Goeij et al. (2021) looked to apply TCE to SME suppliers to understand what drives them to accept or reject supply chain finance offers from service providers. The study moved beyond the assumption that suppliers act rationally based solely on financial decisions but looked at qualitative factors as well.

A misalignment between financial attractiveness and of the deal and decisions was found by de Goeij et al. (2021). Bounded rationality played a factor due to a lack of knowledge or experience by smaller SME's who were also less sophisticated. There was also opportunism from the buyer who provided incomplete information to increase the pressure on SME's. Their overall theme of uncertainty and behavioural uncertainty strongly moderates the relationship between financial attractiveness and decision-making.

It was also established that asset specificity and frequency of invoices was not a major determinant in making financial decisions.

2.3.2 Resource-based view

Wernerfelt (1984) decided to look at the foundations of a firm's strategy, moving away from the products that the firm sells, and focused on the resources it possessed and was able to deploy. The seminal work argued that, whilst traditional approaches to strategy focused on the market positioning and which products to put into which market (Porter's five forces), the resource-based view was needed to gain unique strategic insights, especially for a business with multiple products that compete for resources, which are both tangible and intangible.

Three concepts were explored by Wernerfelt (1984), namely, resource position barrier, resource product mix, and strategic balance.

The resource position barrier is similar to an entry barrier in the product markets, but this is an advantage arising from the business's control over certain resources in the

market that are difficult for competitors to acquire or even imitate. These resources include, but are not limited to, technology, customer loyalty, and production experience. Comparable to the growth-share matrix, the resource product matrix shows how certain resources contribute to different products and how the exploitation or development of the resources can guide diversification and market entry strategies.

Whilst the two concepts were explored, Wernerfelt (1984) stressed that firms must have a strategic balance between exploiting existing resources for immediate advantage and developing new resources for future growth and preservation. Strategic acquisitions, according to Wernerfelt (1984), were to be seen as bundles of resources which could complement or supplement what the business already possesses

Barney (2001) examined the evolution and various 'positions' of the resource-based view proposed by Wernerfelt in 1984, by explaining how it relates to other key factors. The Structure-Conduct-Performance (SCP) paradigm was also considered, where a company's performance was primarily linked to industry structure. Scarcity, especially regarding resources like land, was also crucial for firm success, and Barney (2001) expanded this to include more resource types.

Wernerfelt's (1984) theory looked at the differences in what a firm has as the explanation for superior performance, whereas Barney (2001) sought to define exactly which resources are attributed to sustained competitive advantage, by being valuable, rare, inimitable, and non-substitutable (VRIN). Barney (2001) further reviewed empirical studies exploring firm versus industry effects and highlighted that 'firm effects' usually trump 'industry effects' in explaining variations in performance.

Both views emphasise that sustainable competitive advantage is rooted less in the industry structure than in firm-specific, hard-to-imitate bundles of resources and capabilities.

2.4 Vertical integration and the juxtaposition of transaction cost economics and the resource-based view

Gulbrandsen et al. (2009) explored vertical integration, which is derived from both the resource-based view (RBV) and transaction cost economics (TCE). It was found that both views have a focus on efficiency; however, unique factors come to the fore.

Gulbrandsen et al. (2009) argued that the resource-based view needs to be incorporated to look at aspects such as the limits of the firm's size when deciding on vertical integration. It goes further to look at the internal resources and competencies that are crucial in deciding a firm's boundary decision.

Gulbrandsen et al. (2009) further split up the definition of vertical integration into three, which are based on both operational and conceptual approaches. The first approach looks at the activity of the firm and classifies it as integrated into the firm or not, which only captures the current internal activities of the firm. The second approach considers value creation as the difference between sales and the costs which are associated with these sales. This is often criticised because of the multitude of inputs, which are not always related to vertical integration. The third approach has a combination of both TCE and RBV, whereby vertical integration is defined as the extent to which organisations intend to buy services from external parties, and the decision to do the activity in-house.

This approach encapsulates both the value-added effect of vertical integration as well as the unknown variances of the organisation. Because of the disadvantages of the resource-based view, a single theory (transaction cost economics) will be used to assess the impact of fintech disruption on trade finance within economic organisations. TCE can help in explaining an economic organisation's decision to adopt fintech in trade finance operations.

2.5 Fintech risk and opportunities

Murinde et al. (2022) examined the risks and opportunities associated with the rise of Fintech companies in the global economic organisations sector. Historically, economic organisations played two main roles in the global economy, namely, transactional services (acting as an intermediary for payments), and maturity transformation (managing liquidity mismatches with short-term deposits and long-term lending). According to Murinde et al. (2022), fintech companies are disrupting the environment in the realm of lending, payments, and digital economic organisations. Fintech firms without economic organisations licenses cannot perform the function of maturity transformation and, as such, act as brokers in the market. It was found that the largest amount of disintermediation takes place with payments due to lower regulations and faster adoption of technology.

The caveat is that although disintermediation is occurring, economic organisations have an inherent advantage due to access to liquidity, diversified pools of funding, and trust built up in the market with consumers, making total disintermediation unlikely (Murinde et al., 2022). Traditional economic organisations need to embrace the digital transformation and consider either acquiring or partnering to remain competitive in the evolving landscape. This further drives the notion of the importance of the impact that fintech companies are having and the need to assess the impact and responses to it.

Lee et al. (2022) explored trade finance, where economic organisations can adjust loan interest rates as the trade progresses, in order to reduce the loss that can arise from information asymmetry. Information delays in the process, such as slow verification of trade steps, can cause a large loss in the value of the deal. Lee et al. (2022) determined that fintech innovation, such as blockchain and smart contracts, can assist trade finance by increasing the speed of information flow and the automation of contract execution.

2.6 Blockchain Technology in Trade Finance

Chang et al. (2019) investigated how blockchain technology and smart contracts can impact international trade finance with a focus on letters of credit (LCs). It is argued that blockchain offers a shift from traditional, paper-intensive, centralised processes to a digital, decentralised function which improves transparency, efficiency, and trust amongst the transacting parties.

According to Chang et al. (2019) traditional trade finance relies heavily on intermediaries, which are typically economic organisations, to facilitate trust between importers, exporters, and logistic service providers. This process is manual and involves paperwork with relation to letters of credit and bills of lading, which results in a slowdown of the documentation flow, high transaction costs, as well as the possibility of fraud and forgery of documents.

Kowalski et al. (2021) further explored how blockchain addresses the issue of trust and efficiency in trade finance transactions. Trade finance relies heavily on trust amongst parties and intermediaries, which can lead to higher costs and increased potential of fraud. Blockchain is seen as transformative as it is decentralised, more secure and can create economic transactions that are trust-free. It achieves this by improving transaction and data security, increasing communication efficiency and

quality, as well as making the behaviour of the transacting parties more predictable. This further supports the view of the benefits of fintech companies and the threat they pose to economic organisations.

Chang et al. (2019) used a multi-case study approach, which involved companies such as Barclays, Maersk, and IBM, to establish how blockchain technology was affecting these businesses. The results of the study showed that there was increased transparency with reduced fraud, there was traceability and cost reduction via tracking of documents, less paperwork, and faster transactions with lower fees. There was also information transmission in real time and disintermediation with the economic organisations as direct settlements were used and reduced the need for third-party dependence.

Despite the obvious quick wins and successes, Chang et al. (2019) acknowledge that there are still limitations and hurdles for broad blockchain adoption. These hurdles include technical challenges such as scalability and privacy concerns across platforms, legal and governance issues across jurisdictions, and the network effect, which shows that full benefits will only be realized once all stakeholders have bought into the technology (economic organisations, regulators, customs, logistics service providers)

Dahdal et al. (2020), explored how blockchain technology could transform trade finance in Qatar, with broader implications for economic diversification. Similarly to Chang et al. (2019) and Kowalski et al. (2021) ,it was found that the main attributes of blockchain in relation to trade finance around the reduction in processing and compliance costs, the reduction in fraud, automation of documentation, and improved access to SME’s in the country. The practical challenges also revolved around legal risks and enforceability, as well as governance and compliance issues.

Whilst blockchain technology has an impact on documentary trade finance, it also has applications to other trade finance instruments. Guerar et al. (2020) explored a blockchain solution for invoice financing (factoring) to build a preventive for fraud.

Invoice financing is important for SMEs in a growing market, as it offers businesses immediate cash flow by selling their receivables (invoices) at a discount to financiers (generally economic organisations). However, fraud risks such as fictitious invoicing, double financing and buyer default remain pertinent. Guerar et al. (2020) put forward a solution comprising a public blockchain (Ethereum), interplanetary file systems for

encrypted storage, and smart contracts. The solution automated the settlement process, improved transparency and traceability, lowered insurance cost for parties, enabled new opportunities for access to finance for SME's and decreased administrative costs.

Similar results were also found by Guo et al. (2022), who investigated integrating blockchain technology and the Internet of Things (IoT), for transparency in supply chain finance. Supply chain finance is crucial for boosting the liquidity of smaller businesses, which depend on the creditworthiness of the larger 'core', businesses that it supplies to, to facilitate a loan to assist with working capital.

Supply chain finance is plagued by information asymmetry due to the siloed nature of which information is stored and a lack of real-time transparency. There is also limited adoption as most SME's lack the digital infrastructure, which does not allow them to integrate into larger networks. Many still have manual processes such as requesting a proof of delivery, invoicing, and physical original pieces of paper. It is also difficult to authenticate transactions with the underlying collateral needing to be verified (Guo et al., 2022).

2.7 Artificial intelligence

Cao (2023) explored artificial intelligence across various financial sectors, including economic organisations, trading, insurance, risk, and compliance, to name a few. It was found that AI can assist with various problems, but data challenges are central to its functions. AI can use maths and statistical modelling to learn complex system methods and analytics. It also has computational intelligence to learn both modern and hybrid ways of solving issues.

Opportunities that have been created by fintech companies include using AI and automation to streamline operations, compliance and even reduce human error. There is also an improved customer experience, with economic organisations having to adapt to the new standards of convenience, accessibility and personalisation that consumers have demanded (Murinde et al., 2022). Fintech disruption has also seen an increase in product innovation (such as peer-to-peer lending and real-time cross-border payments), which has also led to greater financial inclusion for consumers in areas that lack access to economic organisations services.

Olan et al. (2024) explored AI in relation to supply chain finance and supply chain networks. It was found that AI significantly enhanced the effectiveness of SCF by

integrating financial and operational data across networks, facilitating cash flow, inventory management, and assisting in making better credit decisions. There were also higher levels of input efficiency, resilience, and access to resources. Financial institutions were also able to broker deals to tailor financial services to supply chain companies, potentially lowering the barriers and improving access.

Ronchini et al. (2024) also looked into how AI supported innovation in supply chain finance. The key empirical findings were that there were faster processes from onboarding, application reviews, and financing decisions. This also caused a reduction in the amount of manual tasks, which increased the speed of funders to suppliers and buyers. There was also a cost saving due to lower admin fees associated with financing. According to Ronchini et al. (2024), the AI function was also able to reduce risk by detecting fraud in real time and make credit decisions based on learned metrics. It was also able to scale and be personalised for tailoring.

Murinde et al. (2022) found that risks included the speed of adoption from a regulatory point of view, indicating that there needs to be a balance between new technology as well as maintaining financial stability and ensuring that consumers are protected. Cybersecurity is also a risk, as there is an increased reliance on digital platforms, with economic organisations having to ensure robust systems to mitigate these risks.

Irannezhad and Faroqi (2021) reviewed maritime shipping documents and how inefficiencies could be addressed. A bill of lading is a document in trade finance as it serves as a contract, shows proof of the shipment and is essentially the title to the goods. It is a paper-based system which can be slow, costly, prone to fraud and even tampered with. Irannezhad and Faroqi (2021) propose a digital multi-layer framework integrating the Internet of Things (IoT), incorporating artificial intelligence to detect anomalies, predict risk, as well as flag suspicious activities in real time. This will assist in providing transparent and additional security in global trade operations.

2.8 Human and organisational factors in fintech adoption

The digital transformation of trade finance is widely recognised as a complex combination of the organisational, technological and human variables, as opposed to just advancement through software upgrades (Khalil et al., 2025). Whilst foundational studies emphasise the importance of digitalising legacy systems in economic organisations, more recent reviews highlight that the success of

implementing digital projects is also dependent on collaboration, leadership buy-in, and the organisation's willingness to re-examine functions and processes (Khalil et al., 2025;Vuković et al., 2025). For example, Khalil et al. (2025) argues that integrated transformation strategies, which combine both innovative digital platforms and thorough workforce upskilling and incentivisation, are most likely to result in both meaningful and sustainable results. Likewise, industry articles from EY (2020) point out that organisational momentum, gaps in communication and the lack of a digital vision can negatively impact the technology advancements and result in fragmented adoption, employee resistance and inefficiency in implementing. The evidence from these journals suggests that technology-driven change is to be looked at in conjunction with questions around leadership, culture and internal trust from the implementers and users of the systems.

This alignment between technical and human capital is especially important as AI and automation of systems dramatically shift the landscape of what skills are needed in economic organisations. Multiple studies reveal that there is a global shortage of employees with advanced digital capabilities, and that there is also a gap between senior management's digital ambitions and what is needed in the organisations (Xu et al., 2025; Bell et al., 2025). According to Bell et al. (2025), economic organisations and fintechs are now prioritising joint teams, innovation hubs and new career paths which focus on change management and data analytics. This is echoed by Bhutto et al. (2023), who found that the current ‘skills war’ extends beyond recruitment but instead is driving a global re-evaluation of the strategies in economic organisations around hiring, internal training and collaboration with educational institutions in order to upskill employees.

At the same time, evidence suggests that in both developed and emerging markets, staff apprehension towards technology, especially in older employees, remains a key reason as to why there is resistance (Cieslak & Valor, 2025). These concerns are as a result of skepticism around simply trusting technology and algorithms, a fear that the technology will replace them, result in job losses, and a discomfort with shifting performance metrics towards a skill that has not been acquired yet, in the form of using technology. However, Doherty & Stephens (2023) present evidence to suggest that organisations that adopt reskilling of employees, which is inclusive, show higher digital engagement from employees, reduced employee turnover and improved performance.

Despite the growing awareness of these organisational challenges, the literature remains divided. Authors such as Khalil et al. (2025) and Vuković et al. (2025) stress that the impact of fintech on trade finance will only be realised when there is internal buy-in, active management involvement, and support, as well as an ongoing alignment of IT, compliance, and various business units. Nesindande et al. (2024) cautions that existing cultural practices, weak employee incentive programs, and regulatory frameworks can slow down digital transformation and even technical investment in fintech. Cieslak & Valor (2025), added a nuance around the resistance coming from ‘middle management’, where digital mandates are often not correctly communicated, resourced, or supported, and thus not driven by the layer of middle managers.

What unites the multiple perspectives is the findings that successful digital change in trade finance depends not just on the acquisition of new technologies, but on the holistic strategies that focus on the human elements, such as leadership, trust, and cross-functional governance.

2.9 Small and Medium Enterprises' specific barriers and opportunities with fintech disruption in trade finance

Small and medium enterprises (SME’s) represent a critical part of the economy, contributing significantly to employment, innovation, and economic growth. However, their participation in international trade finance remains constrained by barriers that fintech disruption has the potential to address. Understanding these barriers and the opportunities presented by fintech disruption is essential to gauge the broader implications of digital disruption in trade finance, particularly in emerging markets like South Africa, where SMEs are the backbone of the economy.

2.9.1 Information asymmetry and creditworthiness assessment challenges

The fundamental challenge facing SME’s in accessing trade finance is a result of information asymmetry between lenders and borrowers, which creates significant barriers to credit assessment and the ultimate approval of the credit. Wang et al. (2022) established that financially constrained SMEs operate under severe information asymmetry and that ‘bad’ firms can sell overpriced products by pretending to be ‘good’ firms, and that ‘good’ firms need to impose adverse selection costs to distinguish themselves from their lower credit quality counterparts. These information asymmetries are particularly pronounced in trade finance, where

economic organisations must assess not only the creditworthiness of the SME but also the complex multiparty transaction risk that is inherent in trade finance.

The research by Wang et al. (2022) reveals that asymmetric information makes ‘good’ organisations accelerate investment, leading to investment distortion and higher guarantee costs, which directly affects the SMEs' ability to access trade finance instruments. It was further established that the traditional approaches to creditworthiness assessments relied heavily on historical financial statements, collateral requirements, and established economic organisations relationships, all of which disadvantage SMEs in emerging markets where formal financial records may be incomplete or relationships not formed as yet.

Fintech disruption presents an opportunity to address these information asymmetries through improved sources of data and AI-powered credit assessment models. Research by Bu et al. (2024) demonstrates that digital finance can significantly alleviate SME financing constraints by leveraging big data analytics, transaction histories, and real-time business performance indicators to create a more accurate view of the risk.

2.9.2 High transaction costs and process inefficiencies

The economics of trade finance for SMEs are fundamentally challenged by the high transaction costs relative to the size of the loans that they are granted, which does not create any incentive for economic organisations to serve this market. The OECD (2021) found that onboarding costs of a client relating to Know-Your-Client (KYC), and anti-money laundering (AML), are significant, and when linked to trade finance instruments, which are international transactions with multiparty players, it creates a disproportional expense, relative to the loan. Traditional trade finance processes involve manual document processing, verification, and compliance checks that create an additional cost burden on economic organisations (Trade Finance Global, 2022). The time-consuming nature of these processes, combined with the cost-to-loan-size size, makes it even more unattractive for economic organisations to target SMEs.

Fintech disruption offers significant opportunities to reduce these transaction costs through process automation and operational efficiency improvements. According to the Trade Finance Global (2022) The Boston Consulting Group anticipates that 10-15% of trade finance and 20-25% of SME trade finance will be conducted by digital

platforms by 2025. AI applications in document processing, automated compliance checking, and digital verification systems can substantially reduce the manual element that contributes to the high transaction costs for trade finance.

2.9.3 Digital literacy and technology infrastructure barriers

The successful adoption of fintech solutions by SMEs is constrained by significant digital literacy gaps and technological limitations, particularly in emerging markets such as South Africa. Neumeyer et al. (2021)identified critical barriers to technology adoption, including lack of financial resources for hardware and software, insufficient digital literacy capabilities, and limited access to infrastructure. These barriers are particularly sensitive to SMEs who often operate as a survival or lifestyle business, with limited resources to invest in digital systems.

The framework developed by Neumeyer et al. (2021) identifies four distinct levels of technology and digital literacy: basic usage, application mastery, development capabilities, and transformational abilities. Most resource-constrained SMEs are at levels 1 and 2; however, with tracking, access to technology digital platforms, SMEs can move towards levels 3 and 4.

2.9.4 Financing constraints and working capital management

SMEs face fundamental challenges in accessing adequate trade finance for their operations, which fintech disruption can address through innovative credit assessments and lending. Yao & Yang (2022) found that digital finance can boost SME innovation by easing the financial constraints, particularly for organisations with limited access to traditional economic organisations services. The digital finance platforms allow a more accurate assessment of the SMEs' creditworthiness through the use of data, and potentially expand access to trade finance for businesses that were previously excluded.

2.10 Cybersecurity and risk management in fintech trade finance

The digital transformation of trade finance through technologies such as artificial intelligence and blockchain technologies has fundamentally changed the way in which economic organisations operate, whilst also bringing to light complex cybersecurity risks which were not encountered when paper-based systems were in use. As economic organisations increasingly adopt fintech solutions to enhance trade finance operations, cybersecurity frameworks have had to evolve in order to meet compliance requirements.

The evolution towards AI advancement in trade finance has increased the number of potential attack points for cybercriminals to exploit. Research published in *Expert Systems with Applications* identifies eleven central cyberthreats affecting fintech operations, with data breaches, advanced persistent threats, and social engineering attacks coming out as the most critical risks to trade finance within economic organisations (Javaheri et al., 2024). The systematic review also reveals that the finance and insurance sectors has consistently ranked as the second most targeted industry from a cybercrime perspective since 2018, with the peak of the attacks during the COVID-19 pandemic.

Central economic organisations' assessments, which are documented in the Economic organisation for International Settlements (BIS) working paper, indicate that phishing and social engineering represent the most common attack that economic organisations face, with the most risk coming from those who are providers of large-scale cloud infrastructure (Doerr et al., 2022). The interconnected nature of digital trade finance creates situations that are risky where a single breach can compromise multiple stakeholders in the value chain, which shows how the impact of a breach is not just contained to the local counterparty as in the past.

The sophistication of cyber threats has evolved to include AI-powered attacks that exploit machine learning vulnerabilities through techniques such as data poisoning and evasion attacks. Recent analysis published in the BIS paper demonstrates that generative artificial intelligence can be used for defensive and offensive opportunities in the cybercrime landscape. AI tools can now be used to execute sophisticated social engineering campaigns 'day-zero' attacks at a scale that has not been seen before (Aldasoro et al., 2025). These advanced threats specifically target AI systems that economic organisations deploy for trade finance automation, creating a paradox for the organisations, where the technology that was meant to enhance security, now potentially allows additional ability for attacks on the system.

The implementation of predictive analytics in cybersecurity frameworks enables economic organisations to anticipate potential attacks before they occur. Studies demonstrate that predictive cybersecurity models can forecast threats based on historical data on the attacks that have occurred, threat patterns, and internal security measures, which allows economic organisations to implement defensive targeted interventions (Javaheri et al., 2024). AI-powered systems demonstrate particular effectiveness in detecting trade-based money laundering and document forgery,

which are persistent challenges in traditional trade finance operations that require sophisticated pattern recognition technology.

Real-time threat detection capabilities represent a significant advancement in trade finance security architecture. Research on economic organisations indicates that AI tools can significantly improve cyber threat detections and reduce response times to cyber-attacks, while also enabling the processing of large data sets with more sophisticated analytics to gather important information. The integration of machine learning with blockchain technology has shown results in enhancing security frameworks, with blockchain-secured economic organisations seeing improvements in fraud detection accuracy and overall cybersecurity (Javaheri et al., 2024).

2.10.1 Cost-benefit analysis and implementation challenges

While cybersecurity investments represent a significant amount towards operational expenses, the financial implications to economic organisations of not having it far exceed the implementation costs (Doerr et al., 2022). The financial impact of cyber-attacks has increased substantially with the global financial sector facing approximately $ 486 billion in annual losses due to financial crime. Additionally, there are indirect costs associated with reputational damage, penalties from the regulators and post-attack security system upgrades.

Implementation challenges, especially in emerging markets, are persistent in economic organisations that lack cybersecurity expertise and resources. Research by Javaheri et al. (2024) found significant differences in cybersecurity maturity between large economic organisations and fintech firms, with smaller institutions showing higher risk scores due to resource constraints and less sophisticated compliance systems. The rapid pace of technological change in AI and blockchain requires continuous adaptation of security measures, which then requires a sustained level of investment in both technological infrastructure and human capital.

2.11 Risks, regulations, and organisational challenges

The regulatory landscape which governs cybersecurity in fintech and trade finance has evolved significantly to address the unique challenges posed by digital transformation within economic organisations. The economic organisations sector as a whole has transformed, particularly following the increased regulation and reputational challenges which were faced post the 2008 global financial crisis. It fundamentally changes how economic organisations approach risk management and

regulatory compliance (Vives, 2019). Digital disruption has shifted economic organisations away from being paper and branch-based, to technology and data-driven models, which have been propelled by technology such as APIs, blockchain, AI and the advancement of smartphones, which now enable new business models that are more consumer-centric (Vives, 2019).

BIS working papers analysis revealed that central economic organisations have noticeably increased cybersecurity-related investment since 2020, choosing to prioritise technical security controls and system resilience over the traditional approaches, which are reactive in nature (Doerr et al., 2022). In Europe, the comprehensive regulatory framework now encompasses General Data Protection Regulation (GDPR) compliance, Payment Card Industry Data Security Standard (PCI DSS) adherence, and emerging requirements for transparency relating to AI, especially when explaining the automated decision-making process that AI now gives the ability to do. Central economic organisation research emphasises that established rules of conduct and ensuring a thorough understanding of risks and benefits associated with the use of generative AI tools for employees are essential to maintain high standards of cybersecurity (Aldasoro et al., 2025).

In parallel with global central economic organisations' trends, South Africa’s regulatory authorities have demonstrated proactive leadership in cybersecurity and fintech regulations. The South African Reserve Bank (SARB) issued Directive No.01 of 2024 on cybersecurity and cyber resilience within the National Payment System in May 2024, which established frameworks that economic organisations were required to implement by August 2024 (South African Reserve Bank, 2024). This directive mandates payment institutions to develop robust cybersecurity governance arrangements, requiring board-level oversight of cyber risk tolerance levels and annual reviews of cybersecurity policies and strategies that are aligned with international best practices (South African Reserve Economic organisation, 2024). The Financial Sector Conduct Authority (FSCA) and Prudential Authority (PA), published Joint Standard 2 of 2024 in Cybersecurity and Cyber Resilience Requirements, establishing minimum standards for economic organisations to implement best practices to not only identify but also mitigate cybersecurity risks, with compliance required by the 1st of June 2025 (Financial Sector Conduct Authority & Prudential Authority, 2024).

The FSCA's 2025-2028 regulatory strategy demonstrates South Africa's forward-thinking approach to AI regulation in financial services, emphasising clear governance expectations, risk-based supervision, and collaboration between stakeholders to ensure the responsible use of AI (Financial Sector Conduct Authority, 2025). The strategy laid out specifically addresses AI risks, including algorithm bias, data privacy concerns, and the need to be able to explain automated decision-making systems. South Africa's Intergovernmental Fintech Working Group (IFWG), which was established in 2016 as a collaborative effort between the National Treasury, the SARB, and the FSCA, has created a cross-regulator innovation hub that allows and encourages fintech development which still ensuring appropriate oversight of the developments (Intergovernmental Fintech Working Group, 2025). This multi-regulator approach represents a global first in coordinated fintech regulation, which enables policymakers to not only understand fintech developments and their regulatory implications but also to be able to foster innovation in the financial services industry (Intergovernmental Fintech Working Group, 2018).

The South African regulatory framework demonstrates particular sophistication in addressing fintech disruption in trade finance, with the SARB's fintech unit actively exploring artificial intelligence applications in financial services, central economic organisation digital currencies, and financial markets tokenisation as part of their strategic focus (South African Reserve Economic organisation, 2025). This approach promotes continuous monitoring and incident response capabilities, which requires economic organisations to report incidents within 24 hours and maintain recovery systems that are capable of continuing critical operations to prevent widespread disruption (South African Reserve Economic organisation, 2024).

While fintech disruption can enhance efficiency, diversify options for consumers, and promote inclusion, it can also intensify competition and may prompt economic organisations to take on greater risks to acquire new clients, which makes regulation crucial in balancing innovation with financial stability and consumer protection (Vives, 2019). This regulatory challenge is spotlighted in open economic organisations' initiatives where economic organisations share clients' data with third parties via APIs. Bringing both risk and new opportunities (Chan et al., 2022). Consumer adoption of these technologies is driven by the perceived benefits, ease of use, social influence, and perceived security risk and with higher financial literacy, potentially

increasing consumer skepticism and the lowering of initial trust in open economic organisations platforms (Chan et al., 2022).

Fintech-driven digital disruption, particularly through technologies like AI, blockchain, and digital platforms, is reshaping economic organisations by reducing costs, improving efficiency, and expanding access, including previously economically excluded populations (Ashta & Herrmann, 2021; Gomber et al., 2018). These innovations enable faster, more secure, and more transparent processes in areas such as payments, settlements, and lending, which are the core of trade finance operations. However, these advances bring new challenges, which include regulatory gaps, the risk of data bias, and the need for ethical oversight and human involvement as reliance on the algorithms grows (Ashta & Herrmann, 2021; Gomber et al., 2018).

Survey findings from the study carried out by Aldasoro et al. (2025)indicate that most central economic organisations have enabled or plan to enable staff access to cloud-based generative AI applications, with restrictions, in the aim of mitigating risk whilst building organisational capabilities with respect to fintech disruption. The interconnected nature of trade finance ecosystems calls for third-party risk management approaches that are sophisticated enough to assess potential risk and subsequent losses when cyberattacks occur, to ensure prevention as there could be infrastructure providers that serve multiple economic organisations (Doerr et al., 2022).

The factors influencing fintech adoption in trade finance, such as trust, perceived usefulness, and risk, are equally relevant in the digital transformation and adoption, which requires an approach that takes into account both the technical abilities needed and the regulatory compliance across multiple international frameworks.

Chapter 3: Research Questions

Building on the insights from the literature review in Chapter 2, this research defines the specific questions that guide its qualitative nature. The research is interpretive and inductive in nature, aiming to explore the lived experiences and organisations' responses rather than test statistical hypotheses. The questions are informed by two complementary theoretical lenses: Transaction Cost Economics (TCE), which explains how digital technologies enhance efficiency, coordination and costs, and the Resource-Based View (RBV), which focuses on how technological, human and data capabilities become sources of sustained advantage (Barney, 2001; Wernerfelt, 1984; Williamson, 2010).

Fintech disruption in trade finance remains relatively under-researched, particularly in the context of emerging markets such as South Africa. Previous studies by Thakor (2020), Murinde et al. (2022) and Vives (2019) recognise its potential in increasing efficiency and access but less is known about how these technologies are operationalised within economic organisations, how adoption challenges are navigated and how regulatory systems evolve to manage the future and risk. These knowledge gaps motivate the following research questions.

3.1 Research Question 1: How does fintech disruption impact efficiency and cost in trade finance?

This question stems from the literature suggesting that automation, AI and blockchain technologies improve transparency, data integrity and process speed (Chang et al., 2019; Gomber et al., 2018; Olan et al., 2022). Yet, evidence on how these efficiencies result in the real-world trade finance operations, and whether they lead to sustainable cost reductions, remains limited. Exploring these relationships provides insight into how digital transformation changes transaction costs and operational performance within economic organisations.

3.2 Research Question 2: What are the main drivers and barriers to fintech adoption in trade finance?

Existing studies highlight both technological enablers, such as automation and interconnected systems, as well as organisational constraints such as legacy systems, skills shortages and cultural resistance (EY, 2020; Murinde et al., 2022; Thakor, 2020). However, the interplay between technology, leadership commitment and workforce adaptability is still unclear in emerging market contexts. This question

examines the cognitive-technological and managerial actors that influence not only the pace but the cusses of adoption.

3.3 Research Question 3: How are traditional economic organisations responding to fintech disruption in trade finance?

Studies argue that the incumbent institutions are not merely displaced by fintech entrants, but are reshaping themselves through partnerships and their own internal innovation (Gulbrandsen et al., 2009; Murinde et al., 2022; Zalan & Toufaily, 2017). Yet, the mechanisms through which these organisations balance collaboration and competition require further exploration. This question investigates the strategies that economic organisations are employing to remain competitive.

3.4 Research Question 4: What role do regulation and policy play in shaping fintech's impact on trade finance?

The literature reveals tensions between innovation and regulatory oversight where effective frameworks can either enable or constrain technological progress (Aldasoro et al., 2025; Doerr et al., 2022; Vives, 2019). South Africa's evolving policy landscape offers a rich environment to explore this. This question examines how regulation influences innovation trajectories, risk management and cross-sector collaboration in trade finance.

3.5 Overall focus

These questions aim to generate a holistic understanding of how fintech disruption is reshaping trade finance efficiency, adoption, organisational strategy and regulatory governance. They are designed to generate deep, context-specific insights through qualitative methods, allowing theory and data to interact with each other. The findings drawn from these questions will be discussed in relation to the theoretical frameworks and existing literature in subsequent chapters.

Chapter 4: Research Methodology

4.1 Purpose of research design

The purpose of the research design was explanatory. This was because the study looked to provide a detailed account of the current situation of fintech disruption and its impact on trade finance (describe). It also looked to identify the mechanisms, processes and relationships between fintech companies and economic organisations (explain). This aligned with the guidance of (Casula et al., 2021), who noted that while exploratory research was typically qualitative and inductive, explanatory research was designed to test and refine theories by establishing connections between variables and drawing informed inferences from observed phenomena. Taking fintech disruption and trade finance into consideration, an explanatory design allowed for actionable insights to not only contribute to academic knowledge but also to real-life decision-making.

4.2 Philosophy

The adoption of an interpretivism philosophy was justified given its focus on understanding the lived experiences, perceptions, and stakeholder strategies in both the fintech and trade finance communities. Interpretivism was grounded in the belief that social reality was not objective or fixed, but rather was shaped by cultural context, shared meaning, and human interactions. This agrees with (Saunders & Lewis, 2018), who found that interpretivism is the study of a social phenomenon that occurs in its natural habitat. Unlike a positivist approach, which looked for laws through observation, interpretivism seeks to create knowledge through respondents and researchers. This aligned with the aims of the study, which is to observe and document trends and to interpret how stakeholders perceived, implemented and made decisions around fintech disruption in trade finance.

4.3 Approach selected

The inductive approach was used for this research as it allowed for the development of new insights which were grounded in the realities of relevant stakeholders in the context of fintech disruption and trade finance in economic organisations. Inductive research began with data collection, which was detailed and rich in context, often through interviews, observations and information. This was done without a bias from preconceived ideas or theories. This flexibility allowed for patterns to be recognised, themes and relationships to emerge from the data that had been collected. O'Kane et al. (2021) noted that this bottom-up approach was valuable when investigating

complex phenomena where little prior research existed and there was an element that was evolving at play. By systematically analysing the raw data, which was collected, the research condensed extensive information into meaningful categories and further built on or refined the theory that was linked to the lived realities that were found. This aligned with the purpose of the research and helped to contribute to the academic understanding of fintech disruption of trade finance in economic organisations.

4.4 Methodological choices

The decision to use a mono-method approach using semi-structured interviews was aligned with the aims of the research, which sought to explore fintech disruption on trade finance in economic organisations. Qualitative research was widely recognised for its ability to generate information which was rich in detail and revealed the insights of lived experiences, something which quantitative methods can overlook (Saunders & Lewis, 2018). Semi-structured interviews offered a unique balance between structure and the ability to be flexible and allowed the interviewer to probe ‘how’ and ‘why’ questions, whilst allowing respondents to express their perspectives in their own manner (Saunders & Lewis, 2018). This method also enhanced the credibility and trustworthiness of the findings, as the interviewer was able to clarify responses to ensure there was an understanding of the responses.

4.5 Strategy

The adoption of phenomenology as a research strategy was fitting as the research aimed to explore the mechanisms and implications of fintech disruption on trade finance within economic organisations, as well as to understand the diverse perspectives of the stakeholders in both the fintech companies and economic organisations. Phenomenology, as described by (Neubauer et al., 2019), is a qualitative approach focused on the study of individuals’ lived experiences within the world, seeking to capture both the “what” and the “how” of a phenomenon as it was subjectively encountered. This is relevant for the research of fintech disruption and trade finance as it was context-dependent and not easily achieved through quantitative measures. This will also allowed for rich, multi-layered information from stakeholders to gain insights into an under-researched area.

4.6 Time horizon

The selection of a cross-sectional time horizon for this research was both methodologically sound and practically justified. Cross-sectional research was

designed to collect information at a point in time, providing a ‘snapshot’ of the phenomenon under investigation (Saunders & Lewis, 2018). This approach was suitable as the research aimed to describe current conditions, identified relationships between variables, and generated insights into ongoing trends without the need for long-term follow-up. Also, given the time and resource constraints of this academic research, a cross-sectional time horizon allowed for efficient data collection and analysis, making it possible to gather rich information from a diverse group of respondents in a relatively short period.

4.7 Proposed research methodology

4.7.1 Population

The population included the relevant stakeholders in the fintech and traditional economic organisation space. This consisted of the CEOs and founders or COOs of fintechs, as they were the ones driving the disruption, so understanding their ideas, strategies, use of technology, and customer value propositions was essential. The same C-suite from traditional economic organisations (starting with my employer, Investec) was also looked at. This was because they were facing competition from fintech companies, so an understanding of how they were adapting, responding and the challenges they face was also important for the study.

The study also looked at regulators and policymakers – in this case, the South African Reserve Bank (SARB) and the Financial Sector Conduct Authority (FSCA). Regulations played an important part in how competitive the industry was, so an understanding of the current playing field and potential future changes was vital.

The study also looked at industry experts and investors in the industry to better understand the trends and what was seen as competitive and viable in the market.

4.7.2 Unit of analysis

The unit of analysis for this study was individuals, specifically those who occupied key decision-making positions within fintech companies, economic organisations, regulatory bodies and industry expert groups. This was a deliberate choice to align with the research objectives, which not only sought to understand fintech disruption in trade finance, but also the perspectives, experience and expertise of those who were directly involved in creating and driving strategy.

4.7.3 Sampling method and size

The research employed a non-probability, purposive sampling method, which was known for having the ability to select respondents who had a wide knowledge of the topic at hand and could give rich insights into the phenomenon (Saunders & Lewis, 2018). The sample criteria looked at individuals who held a professional role (CEO, COO, founder, C-suite), had direct experience in fintech disruption or trade finance and were willing to communicate their insights for the research. The sample size was 10 – 20 individuals until saturation had been achieved. Hennink & Kaiser (2022a)found that when used in a broader context, saturation occurred when additional information gathered did not bring in additional insights into the study. According to (Campbell et al., 2020), when the intention was to get a deeper understanding of the issue, a purposive sample was selected to achieve this. Respondents were identified through professional networks, industry associations, as well as reaching out directly to organisations and explaining the task at hand. Snowball sampling was used, where respondents were encouraged to put forward names of respondents whom they considered experts or important in the relevant field.

4.7.4 Measurement Instrument

The measurement instrument for this study was the interview guide, which used semi-structured interviews as the primary source of data collection. This aimed to gain in-depth insights from the key stakeholders and sought to explore insights, experiences and opinions on the topic. This method will also allowed insights into complex phenomena such as technological disruption and the strategic responses to it. A questionnaire (Appendix 1) was also be developed for the study to ensure that all the relevant topics of discussion were covered uniformly, whilst still allowing the ability for respondents to go deeper based on their own experiences and knowledge of the topic (Young et al., 2018). Kallio et al. (2016) indicated that the interview guide should have had well-formulated interview questions which guided the individual being interviewed but did not lead them. The questions also had have a main theme that was consistent throughout the interviews, but should also allowed for follow-up questions. It was also important to test the questions and techniques beforehand to make sure that the questions were understood and produced the data which was required (Saunders & Lewis, 2018).

Depending on whether the interviews happened in person or virtually, a recording was taken either as video for online or audio for in-person, and then transcription software was used.

4.7.5 Data gathering process

The data gathering process for this study began by clarifying the interview objectives, which were to gain a deeper understanding of how fintech disruption was impacting trade finance in economic organisations, the strategies involved, responses and the regulatory landscape. An interview guide was developed to ensure that the necessary data was collected in line with the objectives of the interviews (Kallio et al., 2016). To enhance the clarity and quality of the interview and questions, a pilot interview was conducted, which allowed refinement and alignment with the approach of the interview and the questions.

Sampling was purposive, targeting key individuals based on their expertise within relevant companies and professional bodies, and the ability to provide informed perspectives. Recruitment was carried out through professional networks such as LinkedIn, personal contacts, and email outreach. The study's purpose, confidentiality measures and requirements were communicated to all potential respondents to make sure that there was informed consent. Appendix 2 shows an example of the informed consent which was received from each respondent.

Before each interview, thorough preparation was done, including reviewing the relevant theories and constructs. This was to ensure that the discussion with the respondents was not only meaningful, but that both parties were familiar with the terminology needed to engage in the topic. Semi-structured interviews were then conducted, guided by the interview protocol but allowing flexibility for respondents to express opinions as well as the interviewer to probe deeper on any relevant aspects (Sandy Qu & John Dumay, 2011). Open-ended questions encouraged respondents to provide detailed responses, which was required to gain the richness of the information.

All interviews were audio-recorded and transcribed to ensure the accuracy and reliability of the data (Rutakumwa et al., 2020). Recordings and transcripts were securely stored with the identifying information removed to protect the confidentiality

of the participant. Throughout the process, ethical considerations were strictly upheld, ensuring the integrity and trustworthiness of the research and resulting data.

4.7.6 Analysis approach

The choice of an inductive analysis approach using coding and thematic analysis was aligned with the interpretivism philosophy and the exploratory nature of this research. Inductive analysis was also appropriate for qualitative research where the aim was to identify patterns, themes and concepts to emerge from the information which has been gathered, rather than trying to make the data fit into pre-determined categories and theoretical frameworks (Azungah, 2018). This approach ensured that the feedback was grounded in the respondents' lived experiences, which was essential for explaining the complexity and potential nuances in fintech disruption and trade finance.

The analytic process started with getting familiar with the information that had been collected, followed by breaking it into smaller, more manageable pieces to assign descriptive codes and to identify recurring ideas, themes and concepts. As Kiger & Varpio (2020) highlighted, the development of these was an iterative and recursive process involving multiple rounds of review and refinement.

Once the main themes had been established, they were clearly defined and articulated in the final report, ensuring transparency and clarity in the interpretation of the information. The use of software such as Atlas.ti further enhanced the rigour and efficiency of the process by assisting in the coding, organising and retrieval of the smaller informative segments.

4.7.7 Research ethics

Ethical conduct was extremely important for this research, considering the qualitative interview nature of the research and the involvement with individuals. These individuals held sensitive professional roles and could see this as an exercise to gain information about their company, and not necessarily for academic research. As such, informed consent was obtained from all respondents before data collection, with each participant being briefed on the aim of the research, procedures, their rights

and potential risks. The consent process was clear and transparent, ensuring that respondents were fully aware before accepting (Saunders & Lewis, 2018).

Confidentiality and privacy were also strictly maintained, and all information was anonymised to protect the identity of the respondents. Digital recordings were securely stored and were only made available to those involved in the research itself. The report findings were reported in a way which did not identify the individual or the respective organisation.

The study was also sensitive to potential power dynamics, given the hierarchical nature of financial services and the public profile some respondents may have had. Respondents were not coerced based on perceived power, and their perspectives were represented accurately and fairly (Saunders & Lewis, 2018).

4.7.8 Quality controls

The study was dependable, credible, transferable and authentic to ensure quality control.

Dependability referred to the stability and reliability of the research findings over time (Collingridge & Gantt, 2019). To achieve this, the research process was thoroughly documented, including maintaining detailed interview transcripts, records of coding and thematic analysis decisions, as well as any researcher notes. This provided evidence of a logical process which was not only traceable but also allowed readers to assess the consistency of the research.

Credibility, aligned with the internal validity of qualitative research, was concerned with the accuracy and truthfulness of the findings (Collingridge & Gantt, 2019). The research enhanced credibility through triangulation, using multiple interviews to gauge similar themes and cross-verifying. This approach ensured that the results reflected the honest, perspectives of the respondents.

Transferability was the degree to which the findings could be applied to other contexts or settings (Drisko, 2025). This was supported by providing a rich, detailed description of the context, key stakeholders, and the interplay between fintech

disruption and trade finance. This level of description allowed the reader to determine if the findings applied to their contexts.

Authenticity involved fairly representing the views of all relevant stakeholders (Amin et al., 2020). This research addressed this by ensuring the samples included were balanced between the various stakeholders to ensure there was no bias towards or against a certain group. The diversity of the information was important to better understand the research question.

4.7.9 Limitations

The sample size of this study may have been too small to make a general observation about the topic. There were also limitations in gaining access to the key stakeholders at fintechs, traditional economic organisations and the regulators that have been mentioned. There may also be bias from the respondents, as they may not want to expose strategies and processes for fear of the information getting out. This may also be an issue as I work at an economic organisation, which competes in this market, and the stakeholders at the fintechs may see this as a threat and potentially be cagey with information. Due to the study being in South Africa, there was limited access to information on fintechs that are new to the industry.

Chapter 5: Findings/Results.

5.1 Introduction

This chapter discusses the analysed results from the 16 qualitative interviews coded in Atlas.ti. The coding technique followed a grounded and inductive logic process, where 267 initial codes were reduced to 131 through consolidation of commonalities and grounded frequency analysis. The data were clustered into thematic families aligned with the four research questions. For each of the research questions, major themes and sub-themes are presented in a table summary followed by an evidence-based narrative supported by verbatim respondent quotations. Each quotation is linked to a respondent identifier (e.g., R3 – Economic organisation Executive), providing transparency in the origin of the data and triangulation across the different stakeholder perspectives, including economic organisations, private financiers, fintechs, regulators, and industry experts. This approach makes sure thar the golden thread connecting data to interpretation remains explicit, linking Atlas.ti themes directly to each research question.

5.2 Sample Description

The researcher utilised insights from 16 respondents reflecting a diverse spectrum of trade finance and the fintech sector. Respondents were selected purposively to ensure coverage of traditional financial institutions, fintech innovators, and supporting or regulatory entities directly engaged with trade finance processes.

Most of the respondents were employed within economic organisations and financial services organisations, with a smaller number from fintechs, technology solution providers, and regulatory or advisory bodies. All held mid-senior level roles such as Head of Product, Executive, Analytics Manager, and Chief Operating Officer, to name a few. This ensured a breadth of functional and strategic perspectives across various roles.

The average professional work experience exceeded 17 years, ranging from 7 years to 5 years, confirming substantial industry experience amongst the respondents. Respondents were based primarily in South Africa, though several had regional or global mandates. The sample included four females and 12 males, with advanced qualifications such as an MBA, MSc, and CA(SA).

For ethical reasons, all names and company affiliations have been anonymised. Each respondent is identified by a neutral code (e.g., R1), and Table 1 below

presents an anonymised summary of the respondent group, showing sector, role, experience, and geographic focus.

Table 1

Respondent	Role	Sector	Male/Female	Geographic focus	Experience (Years)
R1	Head of product	Banking, Financial Services	Female	South Africa	11
R2	Head: Operations	Banking, Financial Services	Male	South Africa	16
R3	Head: Analytics and Testing	Banking, Financial Services	Male	South Africa	24
R4	Head: Treasury Sales	Banking, Financial Services	Male	Global	35
R5	Head: Africa Trade Finance	Banking, Financial Services	Male	South Africa & Africa	27
R6	COO	Banking, Financial Services	Female	South Africa	20
R7	Director: Global Intelligence Analystics	Financial Services	Male	Global	9
R8	Chief Credit Officer	Alternative Finance	Male	South Africa	13
R9	Trade Finance and Collateral Manager	Logistics, Supply Chain Services	Male	Global	7
R10	Head: Commercial credit structured lending	Banking, Financial Services	Female	South Africa	13
R11	Head of Consulting Services: Supply Chain Finance	Financial Technology (Fintech)	Male	South Africa & Africa	12
R12	Director	Financial Technology (Fintech)	Male	South Africa & Africa	14
R13	Executive Head: Doc Trade and Supply Chain Finance	Banking, Financial Services	Female	South Africa	12
R14	Managing Director: Working Capital Solutions	Alternative Finance	Male	South Africa	28
R15	Portfolio Manager	Alternative Finance	Male	Global	22
R16	Director: Digital	Banking, Financial Services	Male	South Africa	19

5.3 Suitability of the sample for the study

The chosen sample was exceptionally suitable for fulfilling the objectives of the research, which aimed to investigate the impact of fintech disruption on trade finance within economic organisations. The study adopted a qualitative, exploratory design which was underpinned by interpretivist principles, requiring respondents with rich experiential and contextual knowledge rather than statistical representativeness. Accordingly, purposive sampling was used to select respondents who had direct, practical engagements with fintech integration and digital transformation within the trade finance ecosystem.

All 16 respondents held decision-making or specialist roles within economic organisations, fintech firms, regulatory agencies, or advisory institutions, ensuring comprehensive coverage of the trade finance ecosystem. Their cumulative experience varies by nearly 20 years, which means they were all well-positioned to provide insightful, reflective, and theoretically rich accounts of the technological change and disruption. The inclusion of both the incumbent and disruptive players in the ecosystem further strengthened the balance of capturing multiple institutional perspectives.

The diversity aligns closely with the multi-stakeholder nature of trade finance, where operational and regulatory interdependence define transformation. By ensuring that there is representation from these various areas, the study achieved conceptual

saturation across key dimensions of the research questions, being efficiency, adoption, organisational response, and policy context. The resulting dataset was therefore both sufficient and credible, supporting robust thematic analysis.

Finally, the geographic and organisational spread of respondents, while primarily centred in South Africa, reflects exposure to international trade and cross-border regulatory environments. This enhances the transferability of the findings to comparable emerging market contexts.

5.4 Data saturation

To ensure the credibility and sufficiency of the qualitative data, a saturation analysis was conducted to monitor the emergence of new codes across all 16 interview transcripts. Table 2 and Graph 1 below illustrate the pattern of new code generation and the accumulation of code during the coding process.

As shown, a total of 133 unique codes were identified across all interviews. The first seven interviews produced most of these codes, with the number of new codes declining sharply after respondent 7. The curve flattened completely by respondent 8, and no new codes were generated beyond respondent 10, indicating that thematic saturation had been achieved. The subsequent transcripts served primarily to reinforce and validate the existing code structure, rather than to contribute to new conceptual categories.

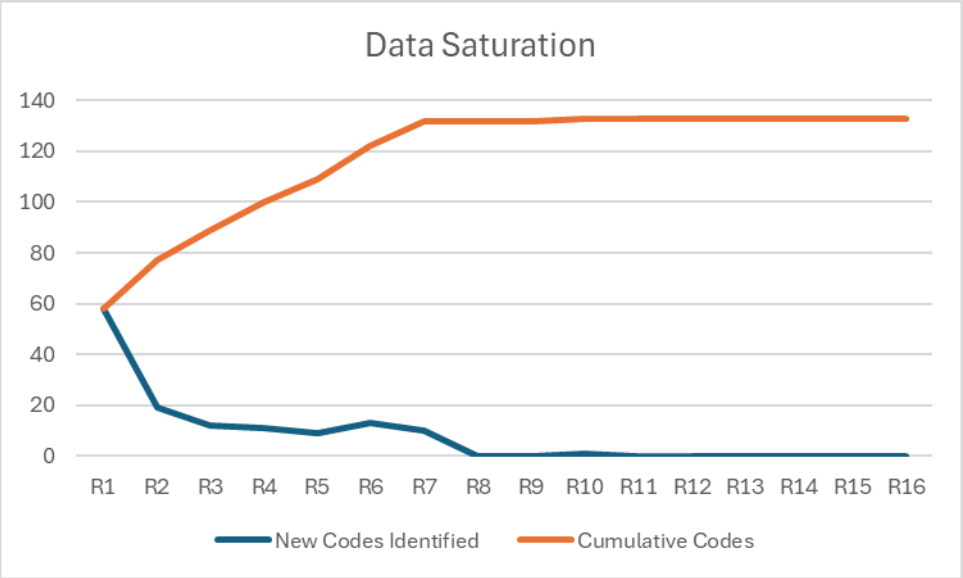
The blue line in Table 3 (‘New Codes Identified’) represents the number of new codes emerging per script, whilst the orange line (‘Cumulative Codes’) shows the total number of distinct codes identified to that point. The plateau in the cumulative curve shows the point which adding more data doesn’t give any new information (Hennink & Kaiser, 2022a). This pattern demonstrates that the data set was sufficiently rich and comprehensive, capturing the full range of perspectives relevant to fintech disruption in trade finance.

The saturation tracking also confirms the rigour and dependability of the coding process within Atlas.ti. Continuous comparisons of the transcripts ensured that codes were refined iteratively and that conceptual repetition rather than new ideas made up the final interviews. This justified the decision to conclude data collection at 16 respondents.

Table 2

Transcript (Respondent)	New Codes Identified	Cumulative Codes
R1	58	58
R2	19	77
R3	12	89
R4	11	100
R5	9	109
R6	13	122
R7	10	132
R8	**0**	132
R9	**0**	132
R10	**1**	133
R11	**0**	133
R12	**0**	133
R13	**0**	133
R14	**0**	133
R15	**0**	133
R16	**0**	133

Graph 1: Data saturation



5.5 Presentation of findings

The findings show that fintech disruption, mostly caused by AI and automation technologies, is changing the efficiency, cost and risk profile of trade finance operations. Respondents emphasised real reductions in processing times, operational expenses and compliance inefficiencies, while also identifying the introduction of new digital risks and skills required. To stay competitive, traditional economic organisations are also actively forming strategic partnerships or internal digital transformation, while regulators are evolving frameworks to address cybersecurity and governance risks.

Across all four research questions, a consistent golden thread emerged: the convergence of technology, human adaptation and governance determines the success of digital transformation in trade finance. A complete code book can be viewed in Appendix 3.

5.5.1 Summary of findings for RQ 1: How does fintech disruption impact efficiency and cost in trade finance?

5.5.1.1 Operational efficiency

The theme of ***operational efficiency*** emerged as one of the most saturated and recurring categories during the analysis process, appearing in 14 out of the 16 interviews. It was derived through an iterative coding process in Atlas. This study began with an open coding process and then proceeded to clustering based on commonality. This then culminated in selective thematic development.

Coding process and thematic development

During the coding process, the initial codes were assigned to the segments relating to speed, automation, manual processes, access, AI and decision making. This phase generated more than 60 individual codes across the dataset. Codes such as automation, speed and manual processes appeared multiple times across the interviews, reflecting a strong focus on reducing turnaround time and administrative effort.

Through axial coding, these were grouped into related clusters that then reflected broader conceptual patterns. Codes relating to Automation and digitisation were clustered under automating and streamlining processes, while codes connected to Accuracy, Data utilisation, integrity, visibility and API integration were clustered under

better data and connected systems. Another cluster emerged around collaboration, client experience and partnerships, which captured the respondents' comments on improving service delivery through collaboration and client responsiveness. Finally, cloud services associated with scalability, flexibility and customisation were consolidated into systems that can grow and adjust, which describes the adaptability of digital platforms to the ever-evolving business of organisations.

Selective coding then followed, which focused on integrating these clusters into themes that represented the underlying meaning across respondents. Through frequency analysis, operational efficiency was identified as a core theme that encapsulates how fintech solutions streamline trade finance processes, enhance data accuracy, and enable scalability. Thematic saturation was achieved when no new codes or clusters emerge, which was after the twelfth transcript.

A summary of this analysis is presented in Table 3.

Table 3

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Automation • Speed • Manual Processes • Access • Digitisation • AI • Decision-Making	**Automating and streamlining processes**	Faster turnaround and smoother processing	**Operational efficiency**
Accuracy • Data Utilisation • Integration • Visibility • API Integration	**Better data and connected systems**	Accurate and transparent digital workflows	**Operational efficiency**
Collaboration • Partnerships • Client Experience	**Working together and improving service**	Better customer experience and communication	**Operational efficiency**
Scalability • Flexibility • Customization	**Systems that can grow and adjust**	Flexible digital platforms that adapt to business needs	**Operational efficiency**

Findings and participant perspectives

Respondents described in detail how automation and digitisation have reduced manual intervention and administrative issues in trade finance operations. The transition from traditional paper-based systems to digital platforms was repeatedly brought up as being important. Respondent 5 noted:

> *"So the systems that we have, it's not even necessary for somebody on the economic organisation side in a lot of cases to even type that message. So, you've got a link to your client who's applying for that letter of credit. They can even apply for that letter of credit online now… It feeds through to the economic organisation… populates all the relevant fields of the SWIFT message… The economic organisation's not even typing that information. It's coming directly from the client… Everything's done online. It removes a lot of the admin around letters of credit." (R5)*

This quote illustrates just how digital integration and client-side automation are replacing manual inputs, which enable straight-through processing and eliminate steps that are often repetitive.

Respondents also discussed how intelligent document processing tools, especially those which use AI, have refined operations within trade finance. Respondent 7 noted:

> *"Using optical character recognition and AI for document processing means we no longer have analysts spending hours checking data manually. The progress compared to before is significant, even though there's still more to do."* (R7)

Another respondent expanded on these points, describing the impact of AI on document validation:

> *"The intelligent document processing software has been a complete game-changer. It's not just reading documents; it orchestrates and validates them. In onboarding and credit risk, it will save a huge amount of time, for example, in logistics, it's expected to cut manual data capture almost in half."* (R12)

These responses reinforce the link between automation, digitisation, and AI, demonstrating how the costs from the cluster automating and streamlining processes contributed directly to improved productivity and speed of execution.

Several respondents also noted that automation is enabling institutions to achieve greater scale with fewer resources. Respondent 6 explained:

> *"Automation and digitalisation will enable scale and volume while reducing the very heavy documentation and operational side of trade finance. We're investing in technology specifically to achieve that."* (R6)

Similarly, another respondent further emphasised the scalability and flexibility of fintech-enabled systems:

> *"it is a huge disruptor. I feel that our limited operation team with a decent fintech or a solution engine behind them will be able to discharge all our current manual functionality as well as the additional work volumes… simply by the efficiency and the markup efficiency… All of that can now be prescribed on a platform, uploaded by the client, assessed by our operational team on a much, much quicker basis."* (R15)

Efficiency gains were also visible from the client perspective, which was illustrated by working together and improving the service cluster. Respondent 13 states that automation and integration have significantly accelerated transaction approval and improved the client experience:

> *"Clients don't want to wait two days to get their supply-chain finance transactions approved — we're now doing same-day or T+1 payments through our fintech integrations. It's cut down a lot of time in getting clients to transact. Efficiency has been the name of the game."* (R13)

Collectively, these accounts from the respondents show how digital transformation is reducing manual workloads, enabling growth and improving the responsiveness across the trade finance value chain.

Whilst the first theme demonstrated that fintech disruption enhances operational efficiency, these improvements have a direct impact on systems and structures that are in place regarding trade finance.

The efficiencies achieved through digitalisation do not exist in isolation, but have an impact on cost, system collaboration and long-term financial optimisation. The following section, therefore, extends this discussion by exploring how operational efficiency evolved to cost restructuring and the decommissioning of legacy systems.

5.5.1.2 Cost structures and decommissioning

The theme of ***cost structures and decommissioning*** emerged as another dominant finding from the analysis that was done on Atlas.ti, appearing in 13 of the 16 interviews. It captures how fintech disruption is transforming and reducing the cost of trade finance operations through automation, investment in technology and the replacement of legacy systems.

Coding process and thematic development

During open coding, the initial codes were assigned that referred to cost reduction, manual processes, efficiency, supply chain finance, innovation, integration, AI, legacy systems, competition, complexity and disruption. These codes appeared frequently across the dataset, which indicated that the respondents viewed cost savings system transformation as a key aspect of fintech disruption.

Through axial coding, the codes were grouped into three main clusters, which then reflected broader themes, as seen in Table 4.

The first cluster, *streamlining work to save money*, brought together cost reduction, manual processes, efficiency and supply chain finance, which highlighted how fintech is cutting daily operating costs through automation and simplification.

The second cluster, *investing in smarter technologies*, combined innovation, integration and AI to show how technological improvements enable organisations to increase their returns.

The third cluster, *pressure to modernise systems*, emerged from legacy systems, competition, capacity and disruption, which represented the organisation's drive to replace outdated infrastructure in order to be competitive in the ever-evolving financial landscape.

Selective coding integrated these clusters into the overarching theme of *cost structures and decommissioning*. These codes were strongly related to those in operational efficiency, which confirmed that fintech disruption is closely connected to process improvement.

Table 4

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Cost Reduction • Manual Processes • Efficiency • Supply Chain Finance	**Streamlining work to save money**	Cutting daily operating costs	**Cost Structures and Decommissioning**
Innovation • Integration • AI	**Investing in smarter technology**	Using technology better to improve returns and save resources	**Cost Structures and Decommissioning**
Legacy systems • Competition • Complexity • Disruption	**Pressure to modernise systems**	Replacing outdated systems to stay competitive	**Cost Structures and Decommissioning**

Findings and participant perspectives

Respondents described how technology-driven automation and reduced manual processes have reshaped the cost of trade finance. Respondent R7 explained that technology has allowed economic organisations to operate more efficiently and re-evaluate their long-held assumptions about cost-to-income ratios:

> *"…trade finance has been a business where if you're an economic organisation and you want to engage in trade finance, you know it's going to be a loss leader. I think that is no longer the case; operations departments have far too much headcount, and technology completely changes the kinds of cost-to-income ratios you can have. We ran a study internally, global average is around 73–74%, and if we built a fully tech-forward trade-finance department, we could probably get that down closer to around 38–39%."* (R7)

This illustrated how efficient and manual processes codes reflect a measurable financial impact as automation can reduce the headcount needed, lower transaction costs, and optimise operational resources.

While cost savings were noted, respondents also acknowledged that fintech adoption required significant upfront investment before benefits are realised. Respondent 13 explained:

> *"…there are costs that we have to factor in. But when you look at research, research tells us that when you implement a system, it takes three to five years for you to start seeing the cost benefits. So, where I think a lot of leaders are missing the boat is that they expect immediate cost benefits. You can't. It takes three to five years. You must be decommissioning the legacy systems also. So, it's not like you're just going to see the cost improvement, the platforms come at a fee, but we do start to see the benefit over time, because through the fintechs, we are able to do more transactions, which allows us to make more revenue at a cheaper rate."* (R7)

Another participant reflected on the financial balance between developing in-house or adopting external fintech platforms:

> *"So on a cost basis, obviously having to code and to manufacture your own system, I'll point you back to LMS, which we made for ourselves. There's always an opportunity cost, you want ten different things changed about the system, that has to be balanced against the fact that we only have one developer. That seems to be a very legacy component. Most of the solutions are provided to multiple users… and it is a relatively simple matter to deploy it into your system in a matter of days, where previously it could take months or even longer."* (R5)

These accounts reflect the cluster, investing in smarter technologies, which shows that while fintech implementation demands resources, it also delivers enhanced efficiency and a reduction in redundancy.

Respondents also discussed how legacy systems impose high maintenance costs and operational complexity, which leads to an industry-wide push for decommissioning of older systems. Respondent 13 indicated:

> *"We were building our own platform, and as part of my deliverables was to decommission our old system. This year, we will officially be decommissioning those systems… Because at the end of it, there's cost, running costs. And for us to start realising the benefits, we have to decommission the systems. We used to have three workflows internally… our strategy was one front-end channel, one workflow, one processing engine. That is it."* (R13)

Respondent 18 reinforced this sentiment by indicating a 'no legacy' policy:

> *"The third element has been all legacy systems, decommission them. A client must have one interface. Operations must have one interface. Processing must be on one interface. Let's not have multiple systems. it's been a multi-pronged strategy. The third piece is we decommission anything that is legacy. We do not want that. It doesn't work for us."* (R18)

Another respondent further emphasised the challenge of balancing costs and long-term strategy:

> *"That's a tough one because it depends on what cost you're looking at, we did spend quite a bit of money deploying the solution. I think payback was over seven years on the deployment. You're reaching payback now, and then all of a sudden, they're talking about replacing it. From an end-to-end perspective, the total cost of ownership hasn't changed materially."* (R1)

These reflections aligned with the cluster, pressure to modernise systems, which highlighted that while decommissioning legacy infrastructure can be costly, it is necessary to reduce duplication, simplify operations and maintain competitiveness in an evolving financial market.

Overall, the evidence suggests that fintech is influencing the cost structures through strategic use, as opposed to immediate savings. By investing in smarter systems and getting rid of outdated legacy systems, economic organisations are gradually shifting from fragmented, resource-heavy operations to digitally integrated models that support both efficiency and eventual profitability. Fintech is therefore acting as an enabler for cost control as well as a restructuring mechanism.

While fintech has clearly reinvented the cost structures and operational models, its ability to influence goes beyond financial efficiency. The same technologies which are driving the integration of systems and decision-making are also transforming how organisations approach risk management and control.

5.5.1.3 Risk management and control

The next theme of ***risk management and control*** emerged as another significant finding from the Atlas.ti analysis. It captures how fintech disruption is rehauling the way economic organisations are identifying, assessing and trying to mitigate risk through automation, data analytics, and the integration of human oversight, where necessary.

During open coding, the initial codes related to risk management, fraud prevention, trust, data utilisation, visibility, accuracy, scepticism, uncertainty and complexity. These codes were consistently referenced by respondents when discussing technological risk monitoring, the use of AI for due diligence and the balance between automation and human oversight.

Through axial coding, the raw codes which were identified during open coding were grouped into broader conceptual clusters, which capture the underlying relationship between risk, technology and human judgment. The first cluster, *keeping systems secure and reliable,* brought together the codes for risk management, fraud prevention and trust. These codes collectively represent how fintech disruption is being leveraged to strengthen control in environments that are required to maintain high levels of integrity, such as trade finance transactions.

The second cluster, *using data to improve oversight,* integrated the cost for data utilisation, visibility and accuracy. This grouping highlighted how respondents viewed data as an enabler for transparency and governance. Through the fintech disruption, organisations are now able to monitor real-time transactions, to identify deviations from the expected trade patterns, and to improve the reliability of credit and compliance.

Finally, the third cluster, *balancing technology and human judgment,* connected the codes for scepticism, uncertainty and complexity. This cluster reflected the awareness among respondents that whilst automation delivers speed and precision, it does not have the ability to fully replace professional judgement when it comes to special cases or exceptions. The interplay between the technology and the human validation, therefore, emerges as a condition of risk control.

A summary of this can be seen in Table 5:

Table 5

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Risk Management • Fraud Prevention • Trust	**Keeping systems secure and reliable**	Using technology to monitor risk and prevent fraud automatically	**Risk Management and Control**
Data Utilization • Visibility • Accuracy	**Using data to improve oversight**	Analysing data to spot risks early and improve transparency	**Risk Management and Control**
Skepticism • Uncertainty • Complexity	**Balancing technology and human judgement**	Combining automation with human checks to manage uncertainty	**Risk Management and Control**

Findings and respondent perspectives

Respondents described how fintech has become an integral part of securing financial systems and improving trust in trade finance transactions. Respondent 15 explained how digital tools and AI-driven assessment enhance due diligence and the onboarding of clients:

> *"So we see it as adding immense value at inception. One, being able to risk assess a client. Is he real? Has he moved the actual stuff, which I've touched on earlier, right? Is he trustworthy and honest? Or, you know, is his business reputable with undisclosed legal cases for failures to perform? or fraud or any other elements. Those are all now much more visible than they once were. Then we use an independent risk management consultancy, and they are extensive users of AI and other digitisation and fintech platforms to be able to also assess a client on our behalf as a third party. So all of that then distils into a client you're willing to take a risk on, primarily because definitively they are a legitimate client."* (R15)

This illustrated how keeping systems secure and reliable cluster operations, by integrating technology into the front end of trade finance processes, not only detects fraud, but also validates clients and ensures compliance is adhered to. This

automation increases confidence in decision-making and reduces the likelihood of human error or manipulation.

Another aspect of this theme involved the use of data analytics and visibility to enhance oversight and detect anomalies early on in the transaction life cycle. Respondent R7 highlighted how advanced tools and AI models enable economic organisations to detect trade-based money laundering and irregularities:

> *"So for example, from South Africa to the United States, we are trading, I don't know, biltong. We'll find you using that HS code. What is the average price that we've seen over that trade lane? And why that's important is that helps detect over and under invoicing, which is a massive contributor to trade-based money laundering and why trade finance is deemed the highest risk product for money laundering in the economic organisation. So it makes a massive difference to the safety of our financial markets and also helping clients very efficiently and quickly detect potential illicit activities."* (R7)

This statement demonstrates the *use of data to improve oversight clutter,* where fintech platforms use pattern recognition and data analysis to ensure regulations and compliance are being met, in order to reduce risk. By automating the detection of discrepancies in trade values, organisations can proactively identify and prevent fraudulent activity before it arises.

Respondent R8 further explained how digital tools streamline credit risk management and data handling:

> *"Monitoring becomes incredibly key from a credit risk side of things. And have from that perspective is you always need to understand what your underlying risk is. When you assess the client on day one, might not be the case on day 90 or six month's time, 12 months time. So monitoring is quite key. And I think the big thing that we've built we've made monitoring not a painless, not a painful process, but more of a seamless and easy process. We've integrated into certain things with the client, but over and above that, certain information that they provide us, be it financial statements or economic organisation statements and the like, instead of your manual input of data, we use technology such as OCR image screening that can take the cumbersome role of taking data, inputting it into a system, it streamlines all of that, it's all*

ultimately collected, stored, and translated to credit managers and credit analysts to make decisions." (R8)

This reflects how fintech disruption improves continuous monitoring, allowing organisations to maintain up-to-date visibility of client risk and financial health. Automation, in this sense, acts as both a control and an enabler for better decision-making.

However, respondents also emphasised that while automation enhances reliability, it must be balanced with human oversight to manage uncertainty. Respondent R13 articulated this hybrid model:

"And if so, for some of the LCs which are unconfirmed, where the economic organisation is not taking risks, we utilise the platform completely. We don't have any human intervention. Now, for you, if you just think about what I said, that's amazing. We don't have any human intervention in terms of checking those documents. But where we've got confirmed LCs and the economic organisation is taking risk, we utilise the robot and the machine, or shall I say the platform. And then we have a human to just validate if those false positives are really false positives and so on. So for me, I've seen a beautiful collaboration with the fintechs and they've disrupted in a very good kind of way that has enhanced our processes in the economic organisations community." (R13)

This example demonstrates that even in highly automated environments, there is still a need for human expertise in validating exceptions and special cases.

5.5.2 Summary of findings for RQ 2: What are the main drivers and barriers to fintech adoption in trade finance?

5.5.2.1 Technology enablers

As fintech continues to redefine risk and operational processes within trade finance, its most visible impact lies in the rise of the ***technology enablers***, which are the actual digital infrastructure and intelligent systems which support the transformation behind the scenes. Where *risk management and control,* illustrated the purpose of technological evolution, this theme highlights the mechanism that allows it to. The data revealed that the introduction of advanced digital tools, such as AI, blockchain and API-driven integration, is not only automating trade processes but also creating

flexible, scalable systems that allow organisations to grow and adapt in a rapidly changing technological environment.

The coding process revealed a strong technological current running through the data. Initial codes included AI integration, automation, blockchain, data interoperability, digitisation, innovation and customisation, which were clustered around the idea of *new and advanced digital tools*. Respondents consistently described these technologies as catalysts for transformation, making a shift from basic digital adoption towards intelligent integration.

A second cluster emerged around integration, PAI connectivity, visibility, flexibility, scalability and efficiency. These codes reflected an organisational desire to build *connected and adaptable systems*, where systems could interact seamlessly with each other.

Bringing these clusters together created the overarching theme of **technology enablers**, which encapsulated how fintech disruption is no longer discrete but core to infrastructure that enables digital agility and assisted growth across trade finance, as summarised in Table 6.

Table 6

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
AI integration • Automation • Blockchain • Data interoperability • Digitisation • Innovation • Customisation	**New and advanced digital tools**	AI and Blockchain are driving major digital change	**Technology Enablers**
Integration • API connectivity • Visibility • Flexibility • Scalability • Efficiency	**Connected and adaptable systems that have growth potential**	Building flexible systems that work efficiently together	**Technology Enablers**

Findings and respondent perspectives

Respondents consistently described how technological innovation has transitioned from pockets of digital efforts towards a more holistic digital ecosystem. AI integration, automation, blockchain and data interoperability emerged as key enablers of this shift, which represents a transition from manual to fragmented processes to highly adaptive, intelligent systems.

Respondent R6 illustrated the evolution vividly when explaining how machine learning models continuously improve their performance through iterative training:

> *"The model doesn't train per client. The model trains on what it's looking for. And it will learn over time. So when we did our proof of concept, we maybe had the first round of learning at a 50 or 60% accuracy. We ended our proof of concept at like around a 75, 80% accuracy. And so that's a complete game changer from, we're going to use it in three places from a fintech perspective at the moment."* (R6)

This account shows how fintech innovation has progressed beyond static automation to dynamic, learning systems that are continuously looking to evolve. The use of AI for document processing, onboarding, and transaction validation reflects how trade finance operations are becoming progressively intelligent and responsive. R6 further elaborated:

> *"So we're going to use it in three places at the moment. The one is on our onboarding... This type of software has evolved that it's also the orchestration... So it's a full automation tool with an AI piece to it, and a learning piece."* (R6)

Together, these insights show how automation is evolving into coordinating multiple steps of the trade finance process into a single intelligent system.

A second dimension of this theme relates to the development of connected and adaptable systems, derived from the cluster of codes highlighting integration, API connectivity and flexibility. Respondents emphasised that fintech's real value lies in enabling seamless interactions between systems that have multiple layers, which allow for faster and more transparent communication. Respondent R9 captures this:

> *"And I think maybe something that I haven't mentioned, but we're trying to integrate into anything that we're building is the APIs. Because if I put my, from listening to clients and if I put myself in the client's shoes, definitely in the future, the client probably doesn't even want to log on to a economic organisations system. They want it to come directly from their system to ours."* (R9)

This quote reinforces the trend toward frictionless connectivity, where digital platforms will be able to communicate directly with client systems through the liked of APIs.

Another pattern which emerges from the data was the blending of internal innovation with external collaboration where respondents described how economic organisations and fintechs increasingly co-create solutions that combine institutional expertise with agile, specialised technology. Respondent R13 explain this model:

> *"We have utilised our own skills and our own intelligence and IP, you know, that we've accumulated over the years and digitised the process. So on the documentary trade side, we utilise a lot of our own, but in the back end, like I said, like the processing engine and also document checking, we partner with a lot of fintechs in that regard."* (R13)

This sentiment aligns with respondent R11, who observed that while economic organisations innovate steadily, fintech remains the true driver of agility and experimentation:

> *"The economic organisations continue to innovate in certain aspects. But I think typically speaking, where there's been a lot of innovation, especially in the supply chain finance space, is across the fintechs because we're more nimble, more flexible."* (R11)

Together, these accounts demonstrate how the ecosystem of trade finance innovation relies on collaboration and interoperability, rather than competition.

5.5.2.2 Organisational readiness

The rapid rise of technology enablers across trade finance has brought to light the fact that digital transformation is only as effective as an organisation's ability to absorb, adapt, and lead it. While advanced tools such as AI, blockchain and APIs

drive technological change, their success depends on the **organisational readiness,** which is the next theme that developed from the respondents.

The previous theme highlighted how fintech enables automation and connectivity, but this theme extends to discuss how organisations must evolve and adapt to take advantage of this. The data revealed that leadership commitment, employee training and cultural adaptability are the decisive enablers of successful digital transformation.

The coding process revealed that concepts such as leadership buy-in, digital culture, skills availability, change management, adoption and adaptation clustered around the idea of *strong leadership with a digital-forward mindset.* Respondents consistently pointed to the importance of leaders who campaign for technological change and ensure alignment across the various levels within the organisation.

Respondent R13 illustrated this leadership trait:

> *"We need to change with this era and so on. So very limited resistance that we got. And also, I think what is key is when it comes from the top all the way down. So the executive leadership was very clear. And they were aligned on the strategy. So whether I spoke to my boss, or my boss's boss, or my boss's boss's boss, you were hearing the same message. So when I cascade to my team, and they cascade to the operations teams, it's the same message that we were all hearing."* (R13)

This quote exemplifies how consistent messaging and executive alignment create the organisational momentum required to support the digital change. Fintech disruption and adoption thus succeed when the leadership transforms the vision into the culture, ensuring that the digital strategy is communicated, understood and reinforced throughout the layers.

Similarly, the respondent R7 described how leadership mandates are now directly tied to digitalisation objectives:

> *"But that culture has changed a little bit more where they're more open, more trusting towards fintechs to get involved and try and help them on larger and more complex projects. And I can only see it becoming stronger because the mandates and KPIs of pretty much all the trade and working capital execs I*

deal with — all your major economic organisations in South Africa — all of them have a digitalisation KPI." (R7)

This reflects a wider shift within economic organisations, where digital transformation has become an important executive performance metric, embedded in the technological readiness of the organisations.

A second cluster emerges from the codes being trained: knowledge sharing, adaptability, and internal communication. This centred around building skills and sharing knowledge, where the data revealed that readiness is as much bout upskilling as it is about leadership. Fintech disruption is creating a demand for a new technological capability and adaptive learning culture where employees feel supported.

Respondent R10 described the evolution:

> *"There are specific strategies, but I think the financial constraint becomes a very big piece because the roadmap is from here to Cape Town — like it is long. There's a lot of things. And it's very… there are specific strategies. I mean, even to a point whereby we all now have to do compulsory AI training. All of us. Credit, everyone. So that tells you how it's on everybody's mind and it's a focus."* (R10)

This demonstrates a growing recognition that digital readiness must extend to all employees, not just the IT and innovation teams. Mandatory training programmes illustrate a proactive approach to embedding digital literacy into the organisation.

Respondent R14 expanded on this by highlighting the talent challenges:

> *"The challenges of doing stuff in-house is skills. You need the right people doing that stuff. There is a scarcity of certain skill sets, and you know, they're quite expensive to employ. And you've got to do that calculation whether you do employ them or you do work with a consulting firm. That can also become very expensive. So I think those are the things people grapple with — what's going to deliver the right thing in the least expensive way, the quickest. And it's different for everybody."* (R14)

This reflects a pragmatic approach to readiness, which recognises both he scarcity and cost of digital talent, which prompts organisations to balance between internal development and strategic outsourcing.

Finally, respondent R10 linked skill building to the growing intersection of technology and non-financial risk awareness:

> *"Yes, it's a combination. So the one is how to use interactive AI. The other one is… basic understanding of like programming and things to look out for and how things work. And then there's like, if you then eventually want to go into programming. And I think there's a layer of like non-financial risk and the impact AI has on non-financial risk."* (R10)

This perspective shows that organisational readiness now includes not only the technical skills but also a deeper understanding of the ethical, operational, and risk implications of fintech disruption. The findings indicate that successful fintech integration depends on a dual foundation of leadership that drives it and a workforce that is equipped with the knowledge and adaptability to maintain it.

Table 7 summarises the coding.

Table 7

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Leadership buy-in • Digital culture • Skills availability • Change management • Adoption • Adaptation	**Strong leadership with a digital-forward mindset**	Leaders driving a culture that supports digital change	**Organisational Readiness**
Training • Knowledge sharing • Adaptability • Internal communication	**Building skills and sharing knowledge**	Helping staff adapt through training and collaboration	**Organisational Readiness**

5.5.2.3 Trust and collaboration across organisations

While organisational readiness determines whether institutions possess the internal leadership and skills to embrace digital transformation, the next step lies in how they can extend these capabilities beyond their organisational boundaries. Fintech disruption has blurred the traditional industry lines, compelling economic organisations, fintechs and intermediaries to collaborate in new ways, thus readiness within an organisation must be matched **by trust and collaboration across organisations**, which is the next theme which emerged.

The coding in Table 8 process showed that collaboration, partnerships, ecosystem maturity and knowledge exchange converge into the cluster *working together across organisations*, while competition, access and client experience form the complementary cluster *managing market relationships*. Together these clusters formed the underpin for the final theme of ***trust and collaboration***, which reflects the transformation of competitive dynamics into cooperative systems.

Table 8

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Collaboration • Partnerships • Ecosystem maturity • Knowledge exchange	**Working together across organisations**	Sharing ideas and building joint solutions	**Trust and Collaboration**
Competition • Access • Client experience	**Managing market relationships**	Balancing rivalry with cooperation to serve clients better	**Trust and Collaboration**

Findings and respondent perspectives

Respondents described the fact that no single institution can manage the pace or complexity that comes with digital transformation. Respondent R13 captured this sentiment:

> *"We partner a lot with fintechs and our strategy is that we're a economic organisation, we can't do everything. And so for us, it's very key to partner with strategic partners, which would be the fintechs that would allow us to provide certain solutions to our clients."* (R13)

This highlights a pragmatic shift from exclusivity to independence and the recognition that fintech partnerships expand an economic organisation's capacity for innovation and further help it meet the clients' needs more efficiently.

Respondent R7 reinforced this:

> *"There's much more collaboration between fintech and economic organisations than ever before, and I can only see it becoming stronger because all the major economic organisations have a digitalisation KPI. Not one of them doesn't."*

Here, collaboration is framed as not just the ability to cooperate but has become an embedded performance metric, which signals that partnerships are expected in economic organisations. Beyond these partnerships, the data also indicated a growing awareness of the need for broader ecosystem maturity and open dialogue between the various stakeholders. Respondent R14 identified the lack of formal industry forums as a barrier to progress:

> *"There's a gap in our industry in terms of collaboration… there's a massive gap for a forum that represents the fintechs, the economic organisations, and the tier twos like us to get around a table and have those conversations."* (R14)

This observation suggests that while individual partnerships are flourishing, systematic collaboration remains fragmented. The absence of a shared forum for knowledge sharing and a policy dialogue can limit the collective capacity of the trade influence ecosystem for scale.

By contrast, respondent R11 describes how collaboration has already become the norm in certain segments:

> *"We definitely find that collaboration is paramount, and it's completely taken over to the point where almost every commercial economic organisation now approaches us to help them with their programs… I don't think the economic organisations anymore are concerned about us breaking their relationships."* (R11)

This perspective marks a clear cultural shift, which was once guarded by competition and has now evolved to a cooperative ecosystem which is grounded in mutual benefit and trust.

However, the findings also revealed that collaboration must coexist with regulatory and reputational caution. Respondent R14 indicated:

> *"It's a trust factor. Economic organisations don't want to get fined; they operate within strict guardrails. But fintechs are faster and looser. So there's got to be collaboration, everyone's got to be responsible and balance innovation with responsible lending."* (R14)

The tension between wanting to be agile but also still needing to be accountable shows the delicate balance that is needed for fintech collaboration. Economic organisations operate under stringent compliance obligations, whilst fintechs thrive on experimentation and speed. Successful partnerships require mutual trust and the boundaries of innovation.

These boundaries, further developed into data from the respondents, led to looking at the structural and organisational barriers to innovation. Despite the increased cooperation and shared goals, many organisations continue to face collective constraints that slow down he pace of adoption. These constraints stem from both internal and external factors.

5.5.2.4 Barriers to adoption

The theme of ***barriers to adoption*** emerged across interviews, showing that even as fintech disruption accelerates transformation, there are other factors which can stand in the way of the rate of transformation. The data indicated that while respondents recognised the benefits of innovation, progress was often constrained by entrenched systems, regulatory ambiguity and the organisation itself.

The first group of codes (Table 9), being regulatory ambiguity, cybersecurity, legacy systems, risk management and uncertainty, formed the cluster *outside rules and system limits*, which reflected the external environment, which was shaping fintech disruption. Respondents consistently described how regulatory frameworks and outdated systems impose delays and discourage experimentation

Respondent R9 described the impact of different regulation across African markets:

> *"Yeah, incredibly difficult. The regulatory world, I think, is also, and in each market, it's different. There's Reserve Economic organisation capital restrictions all over Africa, dollar shortages and the like. A lot of commodities around Africa are tightly regulated and controlled."* (R9)

This highlights how regional inconsistencies and central economic organisation controls can introduce issues for fintech integration, especially for cross-border trade activity. The result is a financial ecosystem where the technological capacity exists but cannot always be deployed due to conflicting policy environments.

Similarly, Respondent R7 contrasted the agility of fintech with the procedural burden faced by traditional economic organisations:

> *"To build the way we build, for example, you can't have the level of regulation that a economic organisation is subject to. You can't have the number of different committees they have to go through. If we were subject to that, there's absolutely no way we could have got to the level of maturity we have."* (R7)

This observation reveals how the governance structures that protect economic organisations from risk can stifle innovation. The layered approval processes, which are designed to ensure compliance, often result in missed opportunities for technological advancement and slow response times to the market.

Regulation restrictions also impacts in a technical form through legacy systems, as noted by Respondent R1:

> *"Those formats, those columns, those things are locked in… there is some hesitation definitely from a regulatory requirement that then hinders how people innovate or how people think of different products. It's small regulations, but then they have an impact on what you do and what you're able to do."* (R1)

This once again highlights how minor compliance or formatting standards can lock in legacy systems that keep processes inefficient.

A second cluster of codes, complexity, cost reduction pressures, scepticism, truth and control, reveals that many barriers originate within he organisation itself. This cluster, internal attitudes and challenges, captured how psychological, cultural and procedural hesitancy often undermines technological readiness and adoption.

Respondent R12 proved an example of internal resistance:

> *"The difficulty… is that you're selling into an organisation that has many stakeholders — finance, logistics, IT — and many times people are just not*

interested because it's so much effort. They've got their spreadsheets, they've got their systems, and it's very easy to lose the audience because there's so much to it." (R12)

In addition to cultural resistance, Respondent R8 point out the bureaucratic nature of large economic organisations:

"There's bureaucracy that goes from pillar to post. Lots of red tape. That just makes it difficult… it's not as easy as just switching over from one system to another." (R8)

This highlighted an internal barrier, which is how organisations work in silo, and processes can slow down the decision-making process. For many economic organisations, the challenge is not a lack of access to technology, but the inability to change internal systems and governance fast enough to match the external innovation.

Table 9

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Regulatory ambiguity • Cybersecurity • Legacy systems • Risk management • Uncertainty	**Outside rules and system limits**	Regulations, old systems and security issues that slow down progress	**Barriers to Adoption**
Complexity • Cost reduction pressures • Skepticism • Trust • Control	**Internal attitudes and challenges**	Organisational hesitation and lack of confidence in change	**Barriers to Adoption**

5.5.3 Summary of findings for RQ 3: How are traditional economic organisations responding to fintech disruption in trade finance?

While the preceding section explored the enablers and challenges of fintech adoption within organisations, the analysis also revealed that readiness alone is not sufficient for long-term success. As fintech disruption continues to define trade finance, the key question then becomes how the traditional economic organisations are responding to this disruption.

Rather than competing directly, many are embracing strategic partnerships to leverage the speed and innovation of fintechs, while also trying to retain their institutions' strength and regulatory expertise.

5.5.3.1 Strategic partnerships and collaboration

The first major theme under RQ3, ***strategic partnerships and collaboration,*** highlights how economic organisations are responding to fintech disruption, not by revisiting it, but rather by forming partnerships which take a economic organisation's large balance sheet and resources, with the agility and technological sophistication of a fintech. The date revealed a strong movement towards co-development, ecosystem integration, and knowledge exchange as a competitive strategy.

The raw codes being economic organisation-fintech alliances, vendor integration, co-development, ecosystem partnerships, access, competition, innovation, trust and economic organisation response, converge into two clusters. The first, *working together to innovate*, captured how economic organisations view collaboration as a means to remain competitive and sustain innovation. The second, *competing while cooperating*, reflects the understanding that collaboration does not eliminate competition, but rather that it becomes more constructive for both parties. Table 10 shows the coding table.

Together, these clusters formed the overarching theme of ***strategic partnerships and collaboration***, illustrating a change in how the financial services industry sees dependency with a drive to shared innovation.

Respondents consistently described how economic organisations are now leveraging partnerships to enhance their digital capabilities and accelerate their own internal transformation.

Respondent R7 articulated this clearly:

> *“Collaborators, 100% collaborators. They’re not built to innovate… they need to collaborate definitely. Integrate the technology across their processes and ensure that they’re using it in the most efficient way possible.”* (R7)

This reflects a recognition that traditional economic organisations, which are often constrained by governance structures and legacy systems, are now depending on fintech collaboration to sustain competitiveness. Fintechs provide the innovation at

speeds economic organisations cannot replicate, while the economic organisation has the ability to make sure that compliance, trust and the financial muscle are there.

Respondent R2 echoed this sentiment, emphasising the balance of capabilities that is important to understand in these partnerships:

> *"We label ourselves as collaborators… for us, it's about collaboration. In future, do we foresee fintechs bypassing the economic organisations? There is a possibility of that, but what we do have is the financial muscle and the reach."* (R2)

This illustrates how economic organisations are positioning themselves as equal partners in the arrangement, once again leveraging the scale and capital strength of their balance sheets. Collaboration between the fintechs and economic organisations is not merely transactional; it reflects a deep ecosystem-based model where each of the players contributes unique strengths to achieve shared outcomes.

Respondent R11 explained:

> *"There is absolute collaboration between the likes of a fintech and the economic organisations… the economic organisations have the capital, but don't have the experience around the technical interface. When you bring these two components together, you start to have the holistic solution."* (R11)

This was echoed by respondent 14:

> *"Economic organisations have realised that they've got to add value… that's why private companies like ours exist. We fill a gap because we zero in on niches and understand the risks in those niches better than the economic organisations do. There's got to be synergy and collaboration."* (R14)

These statements demonstrate that collaboration has evolved beyond the outsourcing of technology and that it now represents the merging of complementary competencies to deliver a better service or product to the client. It also shows that fintech partnerships allow economic organisations to penetrate niche segments and improve how quickly it is able to address clients' needs, whereas historically it has been difficult to act quickly inside the economic organisation.

The data also found that collaboration does not eliminate competition; rather, it drives a rivalry where innovation and market differentiation coexist with shared objectives. Respondent 13 offered a practical example:

> *"We partnered on the supply chain finance. We've partnered with XYZ. We've partnered with ABC. Those are the two main ones that we utilise. We also have our own in-house platform called Trade Online… So we partner a lot with fintechs and our strategy is that we're an economic organisation. We can't do everything. And so for us, it's very key to partner with strategic partners… We partner a lot with the fintechs, and where we can, we develop our own."* (R13)

This dual strategy, combining external partnerships and internal innovation, illustrates how economic organisations are aiming to control the core systems whilst still drawing on fintech expertise to accelerate new products.

Respondent 16 reinforced this:

> *"I think given our capital base, we should be innovators… But because of our governance structures and regulatory obligations, we're not as nimble as a fintech… So although we should be innovators, we probably should be able to come up with ideas and probably look to collaborate with fintechs to enable those ideas."* (R16)

This underscores the central finding that collaboration has become a strategic necessity for economic organisations, allowing them to concentrate on institutional constraints while delivering innovation. The resulting financial ecosystem is neither purely competitive nor cooperative, but rather a hybrid of collaboration.

Table 10

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Economic organisation–Fintech alliances • Vendor integration • Co-development • Ecosystem partnerships	**Working together to innovate**	Forming partnerships as a way to stay competitive	**Strategic Partnership and Collaboration**
Access • Competition • Innovation • Trust • Economic organisation response	**Competing while cooperating**	Building trust and sharing innovation even amongst rivals	**Strategic Partnership and Collaboration**

Although partnerships and collaboration have become a central way that economic organisations are responding to fintech disruption, the data also reveals that equally significant focus has been on developing internal capabilities. The shift represents a dual strategy of collaborating while transforming internally.

5.5.3.2 Internal innovation and digital transformation

The theme of ***internal innovation and digital transformation*** captures how economic organisations are strengthening their own technological capabilities in response to fintech disruption. The findings revealed that while collaboration remains important, many economic organisations are also building their own internal platforms, automation systems and innovation labs to improve their own digital capabilities. This theme highlighted two central dynamics: the development of in-house technological solutions and the cultural shift toward digital thinking and adaptability.

The coding process, per Table 11, revealed two interconnected clusters. The first, *building and testing new ideas,* included codes such as innovation labs, in-house AI platforms, process automation, and data management. This cluster reflected how economic organisations are experimenting more and more with new technologies and are seeking to improve internal systems to become less reliant on external vendors.

The second cluster, *changing the organisational mindset,* brought together codes such as culture change, leadership vision, digital strategy and automation. This reflected how leadership-driven digital transformation is encouraging innovation, strategic alignment and a shift in the culture of the organisation. Together, these clusters form the overarching theme of ***internal innovation and digital transformation.***

Respondents described varying degrees of internal innovation, from developing platforms to API based solutions that enhance client integration.

Respondent R6 illustrated this internal experimental model:

> *"Our philosophy is always to try see if we can first rent, then buy, then build. We've been looking at APIs and building API-first so we're always ready. We've released APIs around our payments and logistics systems so clients*

can absorb into their systems — it's about being ready to scale and integrate more easily." (R6)

This reflects a strategic shift towards scalability, where economic organisations develop infrastructure that supports both internal efficiency and external connectedness. Respondent R3 took this further, explaining that innovation efforts are now deeply integrated:

> *"There's a massive strategic intent to make the system support configurability — it's a joint strategy between business and tech. As we're mostly in-house developed, it's less about buying new tech and more about modernising existing platforms, processes, and digital strategy. There's a philosophy of API-first — build the API so clients can get the data, then the screen."* (R3)

This statement demonstrated how innovation is no longer confined to IT departments but is becoming embedded in organisational strategy. The focus has shifted from acquisition to co-creation. Respondent R5, however, highlights that many economic organisations still adopt a pragmatic approach of balance:

> *"I think economic organisations typically leave that to the fintechs to innovate and then sell those ideas to the economic organisations. Economic organisations would rather leave that to the fintechs, they've got the time, they've got the money, they've got the people who understand trade very well. We leave it to them, they can innovate and sell those products and ideas to us. If we don't like it, we'll challenge them to fix or improve it."* (R5)

This shows that while internal innovation is growing, economic organisations continue to rely on fintech partners for rapid experimentation, treating external innovation as an extension of internal research and development.

The findings also revealed that technology alone cannot drive transformation without strong leadership and cultural commitment. Leadership vision and organisation alignment were consistently identified as key factors in enabling sustainable digital change.

Respondent R13 emphasised:

> *"When we were building our own platform, Trade Online, leadership at company A was very direct — as we build, we decommission old systems. One front-end, one workflow, one processing engine. That's been our guide*

from leadership for five years now, and we're finally reaching that target. The leadership vision was clear, aligned, and consistent across all levels." (R13)

This quote shows how leadership consistency and long-term strategic direction is very important for successful internal transformation. Similarly, respondent R15 reinforced the importance of alignment between strategy and operational integration:

"When I joined the economic organisation, the first question I asked was, what is the IT technology strategy for the business? For us, it is to collaborate with fintechs where we can, but also to build our own and utilise our own technology and intelligence. Our strategy is one system, one workflow, one processing engine. We collaborate where we can't build, but where we can, we build in-house. We also decommission anything legacy that doesn't work for us." (R15)

These perspectives indicate that internal innovation is not merely technical, but that it also represents a cultural and strategic shift. Economic organisations are increasingly aligning their digital strategies with the leadership vision to create an environment that will encourage experimentation. The findings illustrated that competitiveness lies in a hybrid approach of combining the creativity and speed of fintech partnerships with the discipline of internal innovation.

Table 11

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Innovation labs • In-house AI platforms • Process automation • Adaptability • AI	**Building and testing new ideas internally**	Experimenting with technology and improving internal systems	**Internal Innovation and Digital Transformation**
Culture change • Leadership vision • Digital strategy •Automation	**Changing the organisational mindset**	Encouraging innovation through leadership and digital thinking	**Internal Innovation and Digital Transformation**

As the economic organisations strengthened their internal capacity, it became clear that the technological transformation cannot succeed without the right people and

skills to support it. As a result, a major element of banks' response to fintech disruption has involved building digital capability and realigning talent structures.

5.5.3.3 Capability acquisition and talent realignment

The next theme, ***capability acquisition and talent realignment***, explored how economic organisations are improving their workforce for the digital era, through reskilling, recruitment and the integration of fintech expertise into traditional teams.

This theme emerged as a key finding under RQ3, which highlighted how economic organisations are also responding to fintech disruption by transforming their human capital base. As technological innovation reshapes trade finance, economic organisations also recognise that they can gain these skills by either developing existing employees or by recruiting new talent.

The raw codes, shown in Table 12, of reskilling, training, upskilling, and digital literacy converge in the cluster *developing people for the digital era*, which reflects economic organisations' growing emphasis on the capability of its workforce. The second cluster, *hiring and blending new expertise*, emerged from codes such as fintech recruitment, hybrid roles, cross-functional teams and acquisition. Together, these clusters formed the larger theme of ***capability, acquisition and talent realignment.***

Table 12

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Reskilling • Training • Upskilling • Digital literacy	**Developing people for the digital era**	Helping employees build the skills needed for new technologies	**Capability, Acquisition and Talent Realignment**
Fintech recruitment • Hybrid roles • Cross-functional teams • Acquisition	**Hiring and blending new expertise**	Bringing in fintech talent and mixing skills across teams	**Capability, Acquisition and Talent Realignment**

Respondents consistently describes how economic organisation are formalising strategies to build their internal capability. Respondent R9 emphasises the importance:

> *“We do have a team and a mandate and a strategy currently to look at these types of innovations. So it is there, but it has to be a strategic priority, I think. Otherwise, traditional players are just going to get pushed out of the market because the world is heading that way.”* (R9)

This demonstrated that talent development is increasingly viewed as a strategic endeavour rather than merely a supportive function. Respondent R11 explained that people transformation often works hand in hand with system transformation.

> *“When we decided to decommission legacy systems, it wasn’t just a tech decision, it became a people transformation exercise. We had to retrain operations teams, realign how product and tech collaborate, and make sure the same message came from leadership down to execution. That alignment made a massive difference because people started to understand why we were doing it.”* (R11)

This quote shows that digital transformation is as much a human change process as it is a technical one. Beyond upskilling existing employees, economic organisations re bringing in external expertise as described by respondent R7:

> *“Previously, economic organisations had a preference to build everything internally because they had strong tech and data science teams. But that’s changed — now we’re far more open to bringing in fintech talent and external partners who specialise in specific niches.”* (R7)

However, the process of acquiring and integrating new talent is not without challenges. Respondent R6 explains:

> *“With the investment that we were given, we had to double our tech team. And so obviously finding talent was one of the things. And something I really underestimated was the amount of time that people take to integrate and understand how to work with each other in a project to gain momentum and cadence. It’s not just plug and play — more hands in the pot don’t make you go faster.”*

This emphasises the complexities of scaling and blending teams, as well as the reality of dealing with people culture alignment —a deliberate change that is vital to this process.

While fintech disruption may accelerate how economic organisations are advancing their own technology and people, the same technology also introduces new vulnerabilities to the system, with a focus on data integrity, regulatory exposure and cybersecurity. Subsequently, economic organisations are not only investing in innovation but also reinforcing the defensive system to ensure operational stability and trust.

5.5.3.4 Defensive and risk management responses

The theme of ***defensive and risk management responses*** takes into account how economic organisations have to balance innovation with caution, as they are accustomed to financial stability. The analysis revealed that the organisations are advancing technological systems to strengthen their control systems, implementing oversight mechanisms, replacing manual checks and ensuring regulations are adhered to.

The raw codes governance controls, regulatory alignment, and risk containment formed the cluster *following the rules to stay secure,* representing the systems and governance structures designed to maintain stability and compliance. A second cluster, checking and monitoring for safety, emerged from the codes manual checks, cyber risk oversight and audit mechanism. Together, these clusters establish the theme of ***defensive and risk management response.*** The codes can be seen in Table 13 below.

Respondents described how fintech-driven tools have enhanced risk management capabilities by improving visibility and detection. Respondent R7 noted:

> *"I think from a risk management side, clients have found transactions that they would have otherwise let pass through their systems that may have had certain heightened risk to them, that now they are able to identify and remediate appropriately. We've had quite a few transactions that clients never realised the full risk of, that now using the solution they can identify and address."* (R7)

Respondent R3 reinforced this cautious approach:

> *"Trade finance, because you have to control the application of funds and things like that, has always been quite manual. We're moving to a world where clients can make payments themselves, but we still protect that it's for goods and the correct use of funds. Financial crime is still a big consideration, so*

> *while new systems are developing, we remain cautious about things like blockchain and digital currencies."* (R3)

These observations show how technology is enabling proactive risk identification and remediation, which is a significant shift from traditional approaches seen in trade finance operations. Fintech applications are able to use machine learning and AI to detect anomalies and strengthen oversight. It also ties into the conservatism that defines trade finance, where innovation is met with caution to ensure that new technology and systems do not compromise the security and purpose of financial transactions.

The findings further reveal that while fintech solutions increased automation and speed, economic organisations continue to do manual verification and compliance checks as a safeguard. Respondent R8 noted:

> *"The process itself has many areas that may require remediation or have issues with something not being compliant. That's where fintech has really brought the greatest efficiency gain to trade finance, but the process still needs multiple validation checks — anti-money laundering, trade-based money laundering, and document verification — to ensure everything stays compliant."* (R8)

This underscores that automation cannot eliminate the need for human oversight, but rather that it enhances it.

Respondent R9 took this further to explain how AI is being integrated within controlled parameters:

> *"When we use AI for dual-use goods screening, it's still guided by strict rule sets. The AI matches client inputs to export control laws and gives a risk score. It improves speed and accuracy, but compliance still requires oversight and manual checks where needed."* (R9)

The emphasis on 'rule set' and 'manual checks' highlights how economic organisations ensure they are meeting the regulatory standards whilst leveraging automation for operational gains.

The findings suggest that the evolution of trade finance is not characterised by disruption alone, but also an ecosystem where technological advancement and compliance coexist.

Table 13

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Governance controls • Regulatory alignment • Risk containment	**Following the rules to stay secure**	Keeping systems stable and under control	**Defensive and Risk Management Responses**
Manual checks • Cyber risk oversight • Audit mechanisms	**Checking and monitoring for safety**	Using both manual and automated checks for reliability	**Defensive and Risk Management Responses**

5.5.4 Summary of findings for RQ 4: What role do regulation and policy play in shaping fintech's impact on trade finance?

The earlier research questions explored how economic organisations are responding to fintech disruption. Partnerships, internal innovation and talent transformation are some of the themes which have come out; however, in order to sustain these efforts, economic organisations need to be aware of the regulatory and policy environment in which they operate.

As fintech continues to disrupt and reshape trade finance, regulation and policy emerge as both enablers and constraints, shaping how innovation is adopted, governed and scaled.

5.5.4.1 Regulatory enablement and innovation support

The theme of ***regulatory enablement and innovation support*** explores how regulatory frameworks, policy tools and public-private engagements influence not only the growth but also the direction of fintech in trade finance. The data and analysis revealed that while South Africa's regulatory environment is perceived to be cautious and highly controlled, there are emerging signs of regulatory adaptation, where the policy makers are beginning to recognise fintech's potential to drive efficiency, transparency and inclusion.

The raw codes, per Table 14, from the transcripts, fintech frameworks, innovation hubs, policy collaboration and sandboxes formed the cluster of supportive regulatory tools, which represent the controlled spaces in which the regulators allow experimentation and innovation. The second cluster, open communication between stakeholders, emerged from the codes engagement, regulator dialogue, and public-

private forums. Together, these clusters form the theme of ***regulatory enablement and innovation support.***

Table 14

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Fintech frameworks • Innovation hubs • Policy collaboration • Sandboxes	**Supportive regulatory tools**	Creating spaces where innovation and regulation work together	**Regulatory Enablement and Innovation Support**
Engagement • Regulator dialogue • Public-private forums	**Open communication between stakeholders**	Regulators working with the industry to encourage innovation	**Regulatory Enablement and Innovation Support**

Findings and respondent perspectives

Respondents described South Africa's regulatory environment as both protective and deterrent, a system that, whilst ensuring financial stability, can also slow down the pace of innovation.

Respondent R8 articulated this:

> *"South Africa's regulatory environment is very, very cautious. And I think that also protected us, even in the 2008 financial crisis. We've got one of the most robust economic organisation systems. Our bodies that oversee this industry are quite strict… But where fintech helps is that the information required to make decisions is a lot quicker. Regulators are starting to see the role of fintechs in closing the SME funding gap."* (R8)

This comment highlights how regulation serves as both a stabiliser and an evolving concept where caution has preserved financial integrity, but embracing fintech could also address the inefficiencies, such as the SMA finding gap. This reflects a broader global trend where regulators use innovation, sandboxing, and pilot frameworks to balance oversight with experimentation.

At the same time, Respondent R14 acknowledges the weight of compliance for established economic organisations:

> *"I mean, I stand under correction, but I think there's 173 pieces of legislation that a economic organisation's got to comply with in South Africa. It's probably more than that now. Fintechs maybe have to comply with one-tenth of that. Economic organisations don't want to get fined. They are generally law-abiding, especially South African economic organisations… What makes those guys successful is that they comply with all the regulations, they simplify processes, they understand what clients want."* (R14)

This underscores a structural imbalance where the playing fields are not the same for economic organisations and fintechs when it comes to regulatory obligations. Yet, the respondent implies that strict compliance when combined with the customer need also reinforces trust and legitimacy, which is a key advantage in the digital age.

Respondent R15 offered a contrasting view:

> *"The reality is environments that are too onerous can be avoided. South Africa with its Reserve Economic organisation, exchange control regulations, and a host of other edicts don't make it a very attractive destination for business. So we're a fund registered in the Cayman Islands, head office in Mauritius, and economic organisations from Mauritius. It would have been better to domicile everything in Johannesburg, but it's not a sufficiently business-friendly geography. Regulation enhances avoidance — if you're starting up a new business, you can very easily assess the best place to do this business."* (R15)

This illustrates how strict conditions can push investments offshore. The key tension in regulatory design is the level of innovation nd experimentation which is allowed. Respondent suggested that regulation should evolve toward flexible and proportionate, in order to foster innovation without compromising on integration.

In addition to formal regulation, the data also revealed that a growing emphasis on dialogue and cooperation between the regulators and market participants is needed. Responded to R7, provided a concrete example of regulatory boundaries, including the impact of the Internet disruption:

> *"We've tried to work directly with the SARB and SARS alongside great finance economic organisations to build out better interconnectivity between those three businesses… but that is not allowed according to SARB regulation. They cannot let us as a third-party vendor because we're not a financial*

services provider. I think that's completely understandable if you think about it from a bigger picture perspective." (R7)

This both reflects the constraints and the emerging willingness for dialogue within the regulatory landscape. While restrictions on third-party involvement remain, there is a recognition of collaboration between all the stakeholders going forward. The findings suggest that regulation is not merely a constraint, but a potential enabler that could foster stability and experimentation.

5.5.4.2 Compliance, risk and governance

While regulatory enablement explores how policy frameworks can foster innovation, the findings also reveal that regulations can function as a practical way to have control and accountability. The theme of **compliance, risk and governance** highlights how fintech innovation is reshaping the operational and technological infrastructure of companies within trade finance.

The first cluster, *protecting digital information,* emerged from the closed cybersecurity mandates, AML/KYC alignment, data protection and compliance. This cluster reflected a strong emphasis on safeguarding client information and ensuring adherence to the financial security regulations.

The second cluster, using technology for accountability, incorporated the codes auditability, transparency and explainable AI. Together, these clusters form the theme ***compliance, risk and governance,*** which represents a shift towards technology-enhanced oversight. Table 15 highlights the coding process.

Findings and respondent perspectives

Respondents consistently described compliance and data protection as fundamental to the design of fintech systems. Respondent R2 noted:

> *"The biggest driver would definitely be within the compliance side of things and the actual processing of transactions. The process itself has many areas that may require remediation or have issues with something not being compliant and then we have to start the process all over again. That's where fintech has disrupted — bringing the greatest efficiency gain to trade finance."* (R2)

This observation shows how digital solutions have reduced manual intervention, minimising human error and allowing faster remediation of errors as necessary.

Respondent R6 provided further insight into the balance between innovation and governance:

> *"We're looking at automating the FICA process. It's very important to get right. The act doesn't allow for the outsourcing of responsibility. Even if you're using a platform, the onus is still on the credit provider to be satisfied that the information is correct. So they can help, but governance is what slows down those initiatives."* (R6)

Technology has not only improved the speed and accuracy, but also changed the transparency and auditability of the company processes. Responded to R7 notes:

> *"Transaction turnaround times reduced from approximately 48 to 96 hours down to about two hours. And there's a massive difference as well within remediation events. If there are flags, and they need to go to financial crime and compliance, transactions that used to take up to five days now go through within one hour because my solution shadows the economic organisation's process and runs compliance simultaneously rather than sequentially."* (R7)

Respondent R14 also noted how AI was being used to improve insight and accountability.

> *"AI comes in quite handy. If you can build a model and train it correctly, you can pick up clues from management accounts, particularly around gross profit margins and shifts in the cash conversion cycle. That becomes quite helpful. We're experimenting with model training around those issues, but it's still very early days."* (R14)

This reflects the integration of compliant not transactional workflows, enhancing processes that were previously bottlenecked. It also reflects the emerging use of AI for predictive compliance in identifying anomalies before they snowball into breaches.

Table 15

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Cybersecurity mandates • AML/KYC alignment • Data protection • Compliance	**Protecting digital information**	Keeping data safe and ensuring compliance with security rules	**Compliance, Risk and Governance**
Auditability • Transparency • Explainable AI	**Using technology for accountability**	Automated checks and making the system transparent	**Compliance, Risk and Governance**

5.5.4.3 Regulatory fragmentation and uncertainty

Whilst the data shows that fintech disruption strengthens compliance and governance, it also shows that there are inconsistencies across international jurisdictions and overlapping regulatory systems that present significant barriers for fintech adoption. Trade finance, in nature, operates across borders and with differing interpretations of the rules, uneven digital readiness and policy lags, which can result in uncertainty and even limit the level of scale that can be achieved.

Two core clusters were revealed in the analysis of the transcripts, shown in Table 16. The first being, *the difference between countries,* from the codes, cross-border inconsistency, policy lag, and interpretative gaps. The second being, *complicated implementation processes, which were deri*ved from the code compliance duplication, operational overhead and regulation. These two clusters represent the disparity in fintech-related regulation across geographical regions and the internal inefficiencies created by repetitive or conflicting compliance obligations. Together, the clusters formed the theme of ***regulatory fragmentation and uncertainty.***

Findings and respondent perspectives

The respondents of the interviews discussed the practical implications of regulation and inconsistency across orders, especially for the economic organisations which operate in multiple geographies. Respondent R11 highlighted the requirements for cross-border transactions within South Africa's tightly controlled system:

> *"Of course, as you start growing these programs, a lot of these blue chips have foreign suppliers, which requires foreign payment, or you have local suppliers receiving payment in, for example, foreign currency. So you've got*

two South African residents receiving payments for foreign currency. That requires, obviously, SARB dispensation, SARB approval. So what we've done is we actually have essentially these dispensations in place and these regulatory frameworks with the economic organisations. So the economic organisations are able to use us to fund the program and that is all above board and accepted by SARS." (R11)

This demonstrates how compliance with local exchange control regulations needs simple levels of approval, which can create an administrative delay when there are no issues with the transactions. Although the frameworks are needed to ensure continuity, they can often slow down the process and reduce the agility that is required for fintech-enabled trade finance.

Respondent R12 described a contrasting situation:

"Across different jurisdictions, we're busy expanding into certain jurisdictions. I can't say specific names and jurisdictions, but we will be the first to launch an automated online supply chain finance program. This jurisdiction does not have any automated supply chain finance programs. Things are being done via email today. So when you can do that and you can introduce your client to their subsidiary in a certain jurisdiction and say, not only can you unlock value for your supply chain, but you can introduce the first automated program — it adds significant goodwill and reputation." (R12)

This situation shows the juxtaposition of mature markets facing overregulation, which can slow down fintech advancement, and then underdevelopment in meeting markets with a lack of foundational policies, which also slows down digital trade finance.

Respondent R16 brought in an interesting view, linking regulatory uncertainty to broader geopolitical factors:

"When there's a lot of disruption, global disruption in markets and tariff wars and the like, I think that is where there might be a bit of hesitancy in terms of adopting these types of things or these types of technologies and revert to the traditional ways of doing things — because if there are major tariff wars and even global uncertainty in terms of physical wars, IT infrastructure, who is actually behind the development of these technologies, is it based out of the East or is it based out of the West? The world's quite polarised." (R16)

This statement further hits home that regulatory inconsistency between various countries, where different governments have competing priorities and differing views on technological control and data governance.

The findings of the interviews further found that even within jurisdictions, compliance duplication and ambiguity of information increase operational issues. Respondent R8 discussed:

> *"There's a lot of regulation around Africa in particular. And if there is a way — if there is an AI product that is able to take in your problem statement and be able to plug into various different regulations around Africa, the world, and certain markets and solve for that problem, that is incredibly valuable. And that's something that I would need."* (R8)

The quotes from the respondents highlight how the regulatory system drives demand for technology solutions. The evidence also suggests that without regulatory alignment, even the most advanced technologies will be constrained due to the outdated regulations, which do not speak to the advancement of technology and the future. As a consequence, the future of fintech and trade finance depends not only on the innovation in technology and the organisations, but also on the global capacity to increase regulatory connectivity.

Table 16

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
Cross-border inconsistency • Policy lag • Interpretive gaps	**Differences between countries**	Uneven rules and delays in policy alignment	**Regulatory Fragmentation and Uncertainty**
Compliance duplication • Operational overhead • Regulation	**Complicated implementation processes**	Extra work and delays caused by overlapping regulations	**Regulatory Fragmentation and Uncertainty**

5.5.4.4 Future regulatory trajectories

The current situation of regulatory fragmentation might be slowing down the advancement of technology, but the data also reveals that there is a growing optimism about the future direction of regulation. Respondents suggested that as policymakers, regulators and economic organisations become more aware of the

advancement in technology, there needs to be a shift towards a proactive and active regulator.

The theme of future regulatory trajectories explores how regulators and industry stakeholders are beginning to envisage the next phase of governance for fintech in trade finance.

The findings revealed a strong belief that the future regulation will need to be more flexible, risk-based and informed by technology. Respondents also highlighted other opportunities and responsibilities associated with the advanced technologies such as AI, data analytics, and automation, which emphasise that regulatory frameworks must also balance innovation with ethical systems that still safeguard the consumer.

The codes (Table 17) AI oversight, proactive supervision and collaboration models cluster under flexible and modern regulatory practices, representing the anticipation towards a future state of regulation. A second cluster, forward-thinking policy and ethics, emerged from the codes of ethical AI, data governance, predictive supervision and impact, which highlighted how there is an expectation on regulators and policymakers to develop ethical and adaptive frameworks going forward.

Findings and respondent perspectives

The respondent expresses confidence that the future of regulation lies in proactive and collaborative supervision. Respondent R7 articulated this:

> *"So a country like South Africa as well — try and get people to understand it and create a regulatory framework that is attracting talent, is attracting investment as opposed to deterring it. But it's an exciting time. I think, for me, being maybe a little bit more of a traditionalist from the credit side of things, stick to the fundamentals of credit, but use technologies going forward to streamline the process in terms of getting the best decision out possible with the best quality data to make that decision."* (R7)

This perspective not only reflects an awareness that the future regulation should not forget the principles of being financially cautious, but also that there is a need to modernise them through technology. The emphasis on quality data and streamlined processes signals a move toward data-driven oversight.

Respondent R8 further emphasises the importance of regulatory capacity and foresight:

> *"The big thing I say is the most important thing maybe going forward is ultimately regulation — it's getting the right people in government that understand what's coming because there is going to be significant or major disruption."* (R8)

This further underscores the critical human impact, where policymakers need to have the knowledge and understanding of future technological trends. The call for the right people in government points to the need for regulatory literacy to ensure that those in the decision-making seats have all available information to make the next decisions going forward.

The findings also suggested that AI and automation become more widespread, ethical governance and data integrity are crucial. Respondent R13 indicated:

> *"I think AI is a game-changer. We're utilising bits and pockets of it — I don't think the use case for AI has been explored in depth. It's still new. So we are also trying to see how to utilise it to its full capacity as economic organisations. But when I look at AI and what it can do and what we are utilising it for, that is a game-changer. I don't think it's oversold."* (R13)

Here, AI is being positioned not merely as a tool for efficiency, but as a force for reshaping the foundations of trade finance. The respondents' emphasis on exploration and capacity building is a recognition that policy must develop in conjunction with the innovation.

Respondent R14 expanded this idea by stressing the ethical and data-driven piece:

> *"Just my experience with the AI, it's about the quality of data. So if you have a solution that gives you quality of data, you can use AI for a lot of different purposes. Fraud is another one. And the processing of those transactions is probably the third. Maybe in five years' time, I think that's where you'll see quite a lot of AI being evident. And I think you're only going to be replaced by someone who's using AI versus AI itself."* (R14)

This observation puts the quality of data as the foundation of ethical use of AI. Ultimately, the findings suggest that the sustainability of fintech in trade finance depends not only on technological advancement but also on regulatory evolution, which includes building systems that are flexible, data-driven and ethically grounded. As the innovation progresses, the future of trace finance governance will be

contingent on the regulations that can both enable and anticipate future disputes to ensure that innovation can happen without losing the element of trust.

Table 17

Atlas.ti Codes (Raw)	Category (Cluster)	Sub-Theme	Theme (Final)
AI oversight • Proactive supervision • Collaboration models	**Flexible and modern regulatory practices**	Using risk-based and proactive supervision to guide innovation	**Future Regulatory Trajectories**
Ethical AI • Data governance • Predictive supervision • Impact	**Forward-thinking policy and ethics**	Developing rules that evolve alongside technology	**Future Regulatory Trajectories**

Chapter 6: Discussion of Results.

This chapter seeks to interpret and critically discuss the results presented in Chapter 5, in relation to the research question, theoretical framework and existing literature that has been reviewed in Chapter 2. The purpose is to provide analytical depth and theoretical insight into the findings, and to demonstrate how they confirm, extend, or challenge the prior knowledge on fintech disruption in trade finance.

As set out in Chapter 2, core debates look at efficiency and reduction through digital intermediation (Ashta & Herrmann, 2021; Gomber et al., 2018; Thakor, 2020), organisational responses and capability building (Barney, 2001;Wernerfelt, 1984), and evolving regulatory and cyber risk regulations as discussed by Vives (2019), Doerr et al. (2022) and Aldasoro et al. (2025).

The discussion integrates the transaction cost economics (TCE) and resource-based view (RBV) theoretical lens to explain how fintech innovation reshapes efficiency, cost, risk management, organisational structures, and regulatory engagement in the trade finance ecosystem.

Specifically, TCE helps explain observed reductions in matching, verification and coordination efforts (Thakor, 2020; Williamson, 2010), whilst RBV clarifies why data, analytics, API connectivity and human capital speak to valuable hard to replicate capabilities (Barney, 2001; Wernerfelt, 1984).

The chapter is organised into four research questions, maintaining a clear relationship between the empirical findings and the theoretical concepts and foundations that were established in the earlier chapter.

6.1 Research Question 1: How does fintech disruption impact efficiency and cost in trade finance?

The findings revealed that fintech disruption has significantly enhanced operational efficiency and reduced costs in trade finance, particularly through AI, automation and data-driven platforms. The outcome supports the literature asserting that fintech introduces fundamental change to operations by enhancing speed, transparency and scalability. This confirms Thakor (2020) who argues that digital technologies lower verification and coordination costs and adds to the evidence that digitisation raises the throughput while improving the consumer surplus (Ashta & Herrmann, 2021; Gomber et al., 2018).

The respondents' descriptions of automation, strategy through processing and AI-driven document verification also strongly confirm the positive relationship between digital transformation and operational productivity, which has been established in the research.

In particular, AI-enabled intelligent document processing and workflow digitalisation, as described by the respondents, align with Olan et al. (2024), Ronchini et al. (2024) and Cao (2023) on faster onboarding, fewer manual errors and higher quality of decision-making.

In looking at these findings, it becomes clear that fintech disruption is not only an operational enhancement but also a shift in terms of how value is created in trade finance ecosystems. The hard part is capturing the value that is created. The efficiency gains that are derived from automation extend beyond just the reduction in manual processes, but also bring to light how the market is able to use the technology for instant verification, and thus build trust. This ties in with transaction cost economics (Williamson, 2010), which identifies that innovation has the ability to reduce the friction when parties are contracting or in an exchange, which is trade finance. The automation of documentary trade processes, smart contracts and AI to help in risk assessment of potential clients also helps reduce uncertainty and the costs associated with negotiation, aligning economic organisations to use those resources for more strategic activities (Guo et al., 2022).

Operational efficiency and automation

Respondents repeatedly emphasised that automation and digital integration removed administrative bottlenecks and reduced manual processes. This maps directly onto blockchain-led reductions, document cycles, and increased integrity in LCs reported by Chang et al. (2019) and related trust-enhancing properties noted by Kowalski et al. (2021) and Dahdal et al. (2020).

Similarly, Lee et al. (2022) and Murinde et al. (2022) found that automation in trade finance environments reduces process times and also improves the competitiveness of economic organisations. The coming together of these insights with the literature demonstrates how fintech is transforming operational models from paper-intensive towards a digital nature.

At the same time, persistent onboarding/KYC overheads for organisations, as identified by OECD (2021) and Trade Finance Global (2022), give meaning to the

immediate nature of savings, which is consistent with the respondents' view that benefits take time to accrue and do not happen overnight.

From a TCE perspective, these findings reinforce Williamson's (2010) The principle that technological innovation reduces coordination and monitoring costs by streamlining transactions and reducing uncertainty in transactions. Fintech technologies, such as intelligent document processing and AI verification, directly address information differences and provide an opportunity to reduce the costs that have traditionally inflated the cost of trade finance. This is also the mechanism that Lee et al. (2022) alluded to when showing that faster information flows cut the deadweight loss in trade finance. Respondents' examples of reduced administrative intervention and integrated client-facing systems also illustrate precisely the transaction cost reduction that TCE speaks to.

However, the research also highlights that automation is also changing how economic organisations are interacting with external parties. In TCE, the economic organisation internalises activities to reduce market uncertainty, but with the disruption, the economic organisation is able to expand into the external market whilst keeping costs down (Williamson, 2010; Zalan & Toufaily, 2017). This suggests a hybrid organisational model where coordination happens digitally, rather than hierarchically. Respondents also spoke of an environment where data is shared, which also indicates that efficiency is no longer just reliant on internal systems, but also on collective digital infrastructure (Chang et al., 2019; Guo et al., 2022).

In relation to RBV, the development and integration of fintech capabilities represent valuable organisational resources that enhance competitiveness. Barney (2001) emphasised that sustainable advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (VRIN). The ability of the economic organisation to use digital systems and AI talks to this model, suggesting that fintech transformation not only improves efficiency but also entrenches unique competencies which will be difficult for competitors to copy. The API first, data integration philosophy from the respondents speaks to the 'resource position barrier' by Birger Wernerfelt (1984) and also aligns with platform development through open APIs (Zalan & Toufaily, 2017).

This also reveals a critical insight, in the fact that forms that achieve the most significant costs and efficiency benefits are those that not only look to technological

investment but also investment in people and organisational learning to complement the technology. The RBV also implies that technology alone does not create an advantage, but rather that firms need to possess complementary assets such as governance frameworks, a culture that is willing to adapt and leadership that is willing to champion the change (Barney, 2001; Wernerfelt, 1984; Khalil et al., 2025). Respondents refer to cultural alignment and internal training also speak to this argument.

Hence, the findings both confirm and extend RBV by showing how technological and data infrastructure have become central strategic assets in trade finance, in collaboration with the complementary assets such as culture, leadership and enabling frameworks.

Cost restructuring and decommissioning legacy systems

The research showed evidence that fintech drives cost reduction through automation, integration and the decommissioning of legacy systems. This aligns closely with Thakor's (2020) arguments that digital innovation can decrease the costs of information exchange between parties, improving resource allocation and reducing duplicate efforts. The findings further extend this position by demonstrating that cost advantages emerge progressively through technological consolidation and are gradual, as opposed to an immediate financial gain. This was a nuance that was observed by Murinde et al. (2022), which highlighted that early-stage fintech adoption often involves efficiencies which are transitional before resulting in sustainable cost efficiencies. Respondents' multi-year payback expectations also reflect the idea that there will be higher initial costs in line with Vives (2019) and Doerr et al. (2022).

Furthermore, the decision to decommission outdated systems and look towards a digital system validates Gulbrandsen et al. (2009) suggestion that integration choices are driven by how efficiency and resources complement each other. This shift from different IT platforms to a single platform ecosystem indicates a reallocation of organisational resources towards strategy, technological assets, and business assets, which are consistent with RBV. The emphasis on one system echoes Zalan & Toufaily (2017) who argued that API enables platforms to focus on capabilities and reduce internal coordination costs. Respondents' accounts of reduced headcount, process simplification, and streamlined cost structures, thus confirming prior

research but extending it by evaluating how these efficiencies affect the emerging market transaction finance ecosystem.

From a strategic perspective, restructuring demonstrates that fintech disruption intersects with both TCE and RBV. By decommissioning legacy systems, economic organisations effectively reduce the ‘sunk cost’ that constrains flexibility and increases complexity (Gulbrandsen et al., 2009; Vives, 2019). In TCE terms, digital consolidation reduces outdated technology whilst also enabling a smoother transition between internal adaptation, or external vendors, which can then lower governance costs (Thakor, 2020; Williamson, 2010). Meaning from the RBV point of view, the adoption of a unified digital system creates a central knowledge base of resources, which can then integrate not data pools, shared analytics and systems which can speak to each other, which will develop strategic value over time and if used correctly (Barney, 2001; Wernerfelt, 1984; Zalan & Toufaily, 2017).

In practical terms, this represents a move away from cost minimisation to looking at how costs can be optimised for the best results. Organisations are not just cutting expenses; they are reallocating the costs with a focus on both technology and human capital, which will enable them to develop high-value digital capabilities, which is consistent with dynamic capability building (Barney, 2001). Economic organisations are also leveraging strategic partnerships with fintech companies in order to balance efficiency, adaptability by being able to partner with various third-party services providers to mitigate issues with partnerships and reduce risk and exposure (Aldasoro et al., 2025; Doerr et al., 2022). This transition from legacy infrastructure to integrated fintech ecosystems shows a dual strategy, which is lowering costs whilst also building a foundation for future innovation (Lee et al., 2022; Murinde et al., 2022).

Risk management and control

A critical extension of the literature lies in how fintech advancements are, on the one hand, improving efficiency but, on the other, also reinforcing control. Respondents reported enhanced fraud detection, data visibility, and real-time monitoring capabilities, which echo Doerr et al. (2022) and Javaheri et al. (2024) who found that AI tools strengthen financial integrity through predictive analytics and anomaly detection. The integration of data-driven risk tools also supports Gomber et al. (2018) who observed that fintech increases trust in digital transactions by reducing human

error and providing transparency on transactions. Examples such as HS-code outlier detection and document forensics resonate with Guerar et al. (2020) on anti-fraud in invoice finance and Guo et al. (2022) on transparency in supply chain finance

However, the research's evidence introduces an important refinement, that automation cannot fully substitute human judgment. Respondent's insistence on retaining manual validation for high-risk transactions confirms Williamson (2010) who wrote about the concept of bounded rationality, which is the idea that technological solutions mitigate but do not totally eliminate uncertainty. The human presence of a human is also consistent with the supervisory expectations for explainability and governance around AI and financial ecosystems (Aldasoro et al., 2025). Hence, the research both confirms and extends the existing theory, suggesting that the optimal balance between automation and human oversight defines how trade finance will be used in the future.

These findings reinforce the hybrid nature of systems in an organisation that is adopting disruptive technology. From a TCE viewpoint, automated monitoring tools can substitute hierarchical oversight by reducing information asymmetry between the principal and the agents, with the ability to have manual intervention for high-risk cases (Williamson, 2010). Respondents were also cautious about this approach, which also shows that whilst automation and technology can reduce errors, it still introduces a new risk into the transactions in the form of cybersecurity (Doerr et al., 2022; Javaheri et al., 2024). Thus, having the ability to maintain a human layer that has the ability to step in can also maintain accountability and ensure compliance with the regulations, whilst also allowing efficiency and risk management objectives of the organisation (Aldasoro et al., 2025).

The RBV framework also provides insight into why some economic organisations manage this imbalance more effectively than others. The ability to design a system that is robust and maintains governance structures, allows employees to be trained and can be integrated into digital systems will enhance internal capabilities and build credibility and trust (Barney, 2001; Khalil et al., 2025). Organisations that entrench these competencies are better positioned to build trust with regulators and clients, which then look at using compliance and governance as a strategic asset, as opposed to just as a cost burden (Ashta & Herrmann, 2021; Gomber et al., 2018).

Summary

Fintech disruption has changed efficiency and cost structures within trade finance ecosystems by integrating artificial intelligence, automation, and data-driven systems. These technologies not only streamline document certification but also assist in accelerating decision-making, as well as having the ability to reduce administrative costs, which supports the view that fintech lowers verification and coordination costs, which also increases output (Ashta & Herrmann, 2021; Gomber et al., 2018; Thakor, 2020).

From a Transaction Cost Economics (TCE) perspective, these advances minimise information asymmetry and uncertainty by allowing automated verification, blockchain payments and smart contracts, reducing the need for manual oversight and allowing improved coordination (Chang et al., 2019; Kowalski et al., 2021; Williamson, 2010). Fintech disruption thus functions as both a driver of efficiency and innovation when it comes to governance, which enables faster and more reliable processing in trade finance (Lee et al., 2022).

The Resource-Based View (RBV) complements this by explaining why gains in efficiency can vary among different firms. Organisations that entrench fintech within the routines of the organisation and data systems develop unique, inimitable capabilities that help with competitive advantage (Barney, 2001; Wernerfelt, 1984; Zalan & Toufaily, 2017). This aligns with respondents' emphasis on API integration and cultural readiness, which also confirms that technology is becoming strategically valuable tool when used in conjunction with employee learning and leadership commitment (Khalil et al., 2025).

Cost reduction has also been achieved through the decommissioning of legacy systems, which lowers governance costs and allows systems to work and speak to other systems (Gulbrandsen et al., 2009; Murinde et al., 2022; Vives, 2019). However, the research also highlighted new risks, which include being locked into a single vendor and cybersecurity threats (Aldasoro et al., 2025; Doerr et al., 2022).

In summary, fintech disruption enhances efficiency and cost reduction by reducing transaction friction (TCE) and also enabling firm-specific capabilities (RBV). The greatest benefit is where the automation is merged with human judgment and continuous development, which puts economic organisations in a position where

sustainable advantage can be achieved in every evolving trade finance economy (Gomber et al., 2018; Murinde et al., 2022).

6.2 Research Question 2: What are the main drivers and barriers to fintech adoption in trade finance

The research found that the main drivers of fintech adoption included the advancement of digital tools, system compatibility, leadership commitment and workforce adaptability. The barriers included legacy infrastructure, regulatory ambiguity and organisational resistance. These outcomes confirm and elaborate on the literature whilst providing insight into the relationship between technology, culture and governance. They also give context to adoption within South Africa's evolving fintech ecosystem (Financial Sector Conduct Authority, 2025; South African Reserve Bank, 2024).

These findings align with Thakor (2020) who highlighted that fintech adoption happens when the innovation is met with organisational readiness and the support of the regulators. In the South African context, the FSCA and the SARB are showing an acceptance and understanding of regulations that are needed for cybersecurity and AI governance; however, the respondents noted that the implementation of this remains uneven across various organisations. This points to an uneven adoption of the technology, which can slow down he overall transformation.

Technology enablers and infrastructure integration

Respondents portray AI, blockchain and API integration as crucial for efficiency to be achieved. This aligns with Thakor (2020) who indicated that fintech transforms the financial intermediation process by lowering cooperation costs and improving accessibility. Likewise, Olan et al. (2024) demonstrated that AI increases transparency and adaptability in supply chain finance, a finding which this research confirms through direct accounts of digitisation and automation of the automated documentation process. Cao (2023) further explains these benefits through data-centric pipelines, whilst Zalan & Toufaily (2017) Highlight the importance of open APIs in integration and efficiency.

Chang et al. (2019) also described blockchain as an enabler of trust-free transactions, reducing the dependency on intermediaries, which corresponds with the respondents' experiences of decentralised verification of transactions. These parallels confirm that the mechanism identified in the literature, being automation

interoperability and digital trust, is evident within trade finance operations in South Africa. However, this research extends prior research by highlighting that the impact of these enablers is contingent on the readiness of local economic organisations and regulatory frameworks, which is less researched in existing global studies.

From an RBV lens, these technologies represent dynamic capabilities that allow organisations the ability to adapt and innovate faster than their competitors (Barney, 2001). The respondents' emphasis on scalable API integration and systems that are modular confirms that the technology has impacted the flexibility of the organisation, which validates Wernerfelt (1984) concept of resource position barriers. Gulbrandsen et al. (2009) Similarly, argue that capability trajectories will also influence which resource is prioritised under technological change.

The research further indicates that fintech adoption depends not only on the ability of the technology as a standalone, but also on its ability to be interoperable, so the ability to be compatible and integrate into various other organisations. Respondents made reference to fragment ecosystems, which echoes Neumeyer et al. (2021) who made note that the differences in infrastructure and literacy of the technology limit the ability to scale the innovation. This reinforces Williamson (2010), who argued that coordination depends on the way in which the technology is also aligned with internal governance mechanisms. In this regard, APIs act as a technological and organisational connection, which reduces the friction between economic organisations and fintechs as clients (Chan et al., 2022; Gomber et al., 2018).

Organisational readiness and human factors

The literature widely recognises that the success of technology adoption depends on leadership and culture, as expressed by Khalil et al. (2025) and Murinde et al. (2022). Respondents' accounts of strong executive alignment, consistent communication, and digital KPIs confirm these findings. However, the research extends them, demonstrating that readiness is not only limited to the top levels of management commitment, but also requires holistic employee upskilling and a need for a change in attitude. The examples of mandatory AI training and cross-functional knowledge show proactive integration of human capital development into digital strategy, an alignment which is consistent with RBV, which views human skills as a strategic resource. This mirrors sector-wide talent gaps and new hybrid roles, which have

been identified by Bell et al. (2025) and Bhutto et al. (2023). This also echoes the practical change enablement advice by Vuković et al. (2025).

Furthermore, responses acknowledged that there is a skills shortage and there is a need to recruit, which then comes with its own costs. This reflects Cieslak & Valor (2025) who identified digital talent scarcity as a key constraint to innovation. The confirmation of this barrier in the South African trade finance context adds a geographical and organisational addition to existing research. Collectively, the findings confirm that digital transformation is successful when technological infrastructure, leadership, and workforce capabilities co-create.

From an RBV perspective, the research also shows how human capital forms a valuable and inimitable organisational resource, which is crucial to ensure that the investment in technology is used effectively (Barney, 2001). Respondents' examples of leadership, internal innovation hubs, and mentorship programmes also show that fintech success depends on internal learning and culture in addition to the systems alone. Similarly, Khalil et al. (2025), and Bell et al. (2025) argue that leadership alignment and the development of internal skills are important for sustaining innovation. This integration of both the human and technical aspects ties into Williamson (2010) who had a view on bounded rationality, where decision-making improves once there is human understanding to complement the automation and technology.

Barriers to adoption

The respondents' concerns about regulatory uncertainty, cybersecurity, and legal certainty are consistent with OECD (2021) and Neumeyer et al. (2021), who found that frameworks which are restrictive can, in fact, deter innovation. The defensive responses by the respondents around cybersecurity and AI-enabled threats are rationalised by Javaheri et al. (2024) and Doerr et al. (2022), who also raise this as a concern.

The persistence of the administrative nature of organisations and the siloed nature in which they work also confirms Williamson (2010), who indicated that hierarchical complexity can also raise the internal transaction costs. This research extends the literature by showing how these barriers operate together, where policies which are rigid can increase the resistance from within organisations, creating a dual constraint on adoption of the technologies.

This interplay between internal rigidity and external ambiguity supports Vives (2019) who argues that regulatory systems, which are complicated, can stifle innovation by increasing the level of caution that the organisations experience. Respondents' reflections on regulatory lag echo the findings of the Financial Sector Conduct Authority (2025) and Aldasoro et al. (2025) which shows that AI governance and cybersecurity are evolving at a quicker rate, as the organisations have the ability to implement them.

From a theoretical perspective, these findings reinforce TCE's prediction that firms facing high uncertainty tend to rely on internal governance rather than on external collaboration. However, Murinde et al. (2022) argue that fintech decentralisation has the ability to increase trust through digital transparency. The mixed experience of the respondents confirms that whilst there is efficiency potential, there is a contradiction between innovation speed and the internal structure of the organisation. In short, the results confirm TCE's caution under uncertainty, yet are able to extend decentralisation arguments by placing capacity and supervisory clarity at the forefront.

Summary

Fintech disruption and adoption in trade finance is shaped by a balance between the technological capability, leadership commitment and the readiness of the organisation, in conjunction with structural, equality and cultural barriers. The findings confirm that the main drivers of adoption include the advancement of digital tools, system compatibility and the alignment of leadership, whilst the barriers arise from legacy infrastructure, a shortage of skills and regulatory restrictions. These findings build on Thakor (2020) who notes that innovation in financial disintermediation depends on both the maturity of the organisations and the ability to integrate and align the technology with the governance.

From a Transaction Cost Economics (TCE) perspective, digital technologies such as AI, blockchain, and APIs reduce the verification and coordination costs, which enable faster, more transparent trade finance transactions (Chang et al., 2019; Gomber et al., 2018; Williamson, 2010). However, where there is uncertainty or different governance perspectives, the expected efficiencies are reduced due to the organisation's being risk-averse and cautious, which ties into Vives (2019).

Through the Resource-Based View (RBV), fintech adoption is also understood to be a process that looks at capability building rather than just implying looking to implement a new system. The integration of an Api which is scalable and data centric, helps to create a system which is valuable, inimitable and hard to substitute (Barney, 2001; Wernerfelt, 1984). Respondents also emphasise that leadership engagement, the adaptivity of employees and the literacy levels of the technology were also crucial for success and highlight that human capital is a critical resource that will complement the technology (Bell et al., 2025; Khalil et al., 2025).

At the same time, persistent regulatory ambiguity and cybersecurity risks continue to limit the level of fintech adoption, which confirms Javaheri et al. (2024) and Doerr et al. (2022) who argued that environments which are being driven by AI advancement require a strong environmental support system. The defensive approach that many organisations default to when there is uncertainty shows that firms will look to internal governance, and this echoes TCE, which predicts that governance centralisation increases with an increase in perceived risk (Williamson, 2010).

Overall, the research demonstrates that fintech adoption in rural areas is both a technological and organisational evolution. Successful adoption depends on the interaction between efficient governance structures (TCE_ and the development of firm-specific dynamic capabilities (RBV). The South African context reinforces this paradox; here, policy frameworks are maturing, but legacy systems, talent shortages, and differing levels of readiness are constraining the advancement.

6.3 Research Question 3: How are traditional economic organisations responding to fintech disruption in trade finance?

The findings revealed that economic organisations are adopting a dual strategy, of forming partnerships with fintechs and developing their internal innovation capabilities. This reflects a strategic synthesis of cooperation and competition, which is consistent with both TCE and RBV. It is also consistent with the evidence, which shows that inclusion, cost and access gains do not fully require full disintermediation (Ashta & Herrmann, 2021; Gomber et al., 2018; Murinde et al., 2022).

This duality confirms a shift towards the realisation that collaboration is needed to create extra value. The ability to partner and then innovate internally also suggests that economic organisations are repositioning themselves as more than

intermediaries but also as serious players in the new financial ecosystem. This suggests a maturity of economic organisations where integration and co-development are seen as more sustainable strategies as opposed to just competition (Thakor, 2020; Vives, 2019).

Strategic partnerships and collaboration

The respondents' accounts of partnerships between the fintechs and economic organisations directly confirm Murinde et al. (2022) who observes that collaboration between incumbents and innovators leverages mutual strengths, which are the capital stability of economic organisations and the agility of fintechs. Similarly, Gulbrandsen et al. (2009) demonstrated that firms pursue a hybrid when it comes to integration strategies to reduce coordination costs, although sacrificing control. These findings are strongly confirmed by the respondents' description of co-development and vendor integration models.

From a TCE perspective, these collaborations mitigate the risk of risk by reducing uncertainty and fostering trust. From an RBV perspective, partnerships enable access to complementary resources, which include data analytics, automation expertise, and innovation agility. This extends onto Barney (2001), who indicated that resource heterogeneity was what underpins competitive advantages. These fintech partnerships both confirm and extend the prior theory by illustrating how collaborative ecosystems can function. They also reflect Yang (2021) who looked at the incomplete contract view, which discussed that when capabilities evolve quickly, partnering can limit hold up, whilst also allowing the organisation to remain flexible.

In addition, the responses emphasise that strategic partnerships and the concept of hybrid governance structures echo Williamson (2010) who noted that coordination costs are optimised when there is selective outsourcing as opposed to full integration. These partnerships often rely on API frameworks and a certain understanding and agreement on how to share data, which will enable integration between organisations (Chang et al., 2019; Zalan & Toufaily, 2017). Such collaboration not only accelerates innovation but also changes the risk that is experienced internally.

This approach is particularly evident in South Africa, where economic organisations and fintechs are encouraged by the regulators to pursue cooperative innovation within secure sandboxes (Financial Sector Conduct Authority, 2025). These mechanisms reduce the costs and difficulties of transactions whilst also enabling

economic organisations to test emerging technologies safely (Aldasoro et al., 2025). The research further shows that this regulatory partnership enhances trust and adoption, which reflects TCE's principle of minimising coordination costs under uncertainty.

Internal innovation and capability building

The development of in-house AI platforms and digital systems overseen in this research aligns with Barney (2001) and Birger Wernerfelt (1984), who found that firms must cultivate internal resources for sustained advantage. Respondents' focus on innovation labs, modernisation of core systems and leadership-driven digital alignment also confirms Thakor (2020), who claimed that fintech not only reshaped inter-firm relationships but also transforms internal governance and strategy.

This research extends the literature by demonstrating that internal innovation is not a substitute for collaboration but rather a complementary mechanism which strengthens the economic organisation. Respondents' dual emphasis on external partnerships and internal experimentation further validates Gulbrandsen et al. (2009) assertion that organisational boundaries are fluid and changeable in response to the shifts in technology.

The evidence on workforce realignment and reskilling also confirms Bhutto et al. (2023) and Bell et al. (2025) who found that digital transformation requires a joint process of cultural change. Respondents' narrative here of leadership alignment, reskilling and integration of fintech talent shows that sustainable competition is reliant on human capital development, which is an extension of the RBV, where knowledge and adaptability are central intangible assets. The mandatory AI training and new cross-functional teams echo Doherty & Stephens (2023) and Vuković et al. (2025) on capability gaps and change enablement.

The findings further highlight that the internal ability depends on the level of technological and human resources that are available to the organisation. In RBV terms, these are known as dynamic capability, which is a blend of skills, processes and systems which enable successful adaptation (Barney, 2001; Wernerfelt, 1984). Respondents' accounts of internal AI development and the recruitment of talent tie in to Khalil et al. (2025), who argue that leadership buy-in and having a workforce that is confident with the technology are essential for success. As economic organisations change their legacy systems, they are not only upgrading the infrastructure, but also

creating new organisational routines that will enhance innovation in the daily operations (Bell et al., 2025).

Defensive and risk management responses

Consistent with Doerr et al. (2022) and Javaheri et al. (2024) The respondents emphasise that while fintech enables speed and automation, it also heightens the need for cybersecurity and regulatory vigilance. The finding that economic organisations retain manual checks for compliance and AML screening further confirms Williamson (2010) who proposed that high levels of uncertainty lead economic organisations to retain international governance processes. However, this research extends by showing that defensive responses are not regressive, but that they represent an adaptable integration of risks and compliance. Aldasoro et al. (2025), similarly, pointed to risk-based governance, explainability and coordinated supervision as an enabler of safe innovation.

This also suggests that economic organisations are engaging in what Vives (2019) calls ‘defensive innovation’, which is the act of adopting new technology whilst also reinforcing the level of oversight. The respondents mention dual verification systems with human oversight in compliance, which aligns with Aldasoro et al. (2025) who emphasises explainability and accountability in AI-driven finance. The combination of automation and manual control thus also reflects the TCE notion that advanced technology cannot fully reduce uncertainty (Williamson, 2010).

Summary

Overall, RQ3 confirms that economic organisations are not being displaced by fintech disruption, but rather that they are changing the way they operate to include collaboration and internal innovation. The findings reinforce the emergence of a hybrid governance structure where organisations can be agile with fintech partnerships, but also can retain the stability from in-house capabilities. (Gulbrandsen et al., 2009; Murinde et al., 2022). From a TCE perspective, this hybrid model reduced the coordination costs and manages uncertainty through selective outsourcing, whilst from an RBV view, it strengthens long-term competitiveness but nurturing unique technological and human capital that are difficult to imitate (Barney, 2001; Vives, 2019; Williamson, 2010).

The dual strategy identified in this research demonstrates that digital transformation within economic organisations is both a governance adaptation and a capability-

building process. Rather than organisations viewing fintech as a threat, they are positioning themselves to co-create within the evolving financial landscape and are evolving partnerships to accelerate innovation while also modernising their internal systems. In the South African context, this is reinforced by a regulatory environment that promotes safe experimentation through controlled collaboration (Financial Sector Conduct Authority, 2025).

In conclusion, economic organisations are moving towards a digitally enabled future that is collaborative. The ability to sustain competitive advantage depends on maintaining the balance between external partnerships and the ability to develop competencies internally. This balance, which is anchored in both TCE's efficiency logic and RBV's capability logic, shows that the evolution of trade finance, where cooperation, innovation, and governance now coexist which defines the new level of competitiveness (Aldasoro et al., 2025; Murinde et al., 2022; Thakor, 2020).

6.4 Research Question 4: What role do regulations and policies play in shaping fintech's impact on trade finance?

Regulation emerges as both an enabler and a constraint in the digital transformation of trade finance. This dual view aligns with Murinde et al. (2022) and Vives (2019) who argue that regulation must evolve from control-oriented regulation to one that supports innovation.

The research highlights that whilst regulation is there to ensure the integrity of the system, it also slows down innovation when the frameworks fail to keep up with the pace of technological advancement. This reflects the global dilemma which was identified by the Financial Sector Conduct Authority (2025) and the South African Reserve Bank (2024) where the delays from the regulators can limit an organisation's ability to be agile, whilst premature deregulation can also increase the level of risk in the system. As such, fintech regulation functions as a balancing act between technological advancement and financial stability.

Regulatory enablement and collaboration

Respondents' accounts of sandbox initiatives and policy dialogue align with what has been described by the Intergovernmental Fintech Working Group (2025), and Aldasoro et al. (2025), who put forward that adaptive regulation is critical in balancing the rate of innovation with system stability. The identification of cautious but evolving

oversight in South Africa also aligns with Vives (2019), who found that regulatory engagement must shift toward partnership-based supervision.

These observations confirm that South Africa's regulatory ecosystem is progressively adopting a collaborative stance towards innovation. The introduction of fintech innovation hubs, joint standards on cybersecurity, and a national sandbox framework reflects that the regulators are encouraging responsible experimentation in a controlled environment (Financial Sector Conduct Authority & Prudential Authority, 2024). Respondents' descriptions of frequent consultations between regulators and industry participants align with the concept of 'regulatory co-creation', which is described by Aldasoro et al. (2025) as a dialogue-driven and evidence-based policy-making framework. This collaboration shows that the environment is moving away from reactive to proactive when it comes to regulations.

Thakor (2020) and Chan et al. (2022) also argue that regulation, which is innovation-friendly, stimulates competition and reduces the information asymmetry in the system, which then strengthens consumer trust in the digital platforms. The respondents recognised this as a role in building trust, and it further shows that adaptive regulation is not merely a measure to control, but also an enabler of fintech integration with trade finance.

Compliance, risk and governance

The evidence that fintech disruption is enhancing compliance through automation and transparency strongly supports Gomber et al. (2018) and Ashta & Herrmann (2021), who noted that fintech reduces human error and also strengthens traceability and auditability. The respondents' discussion on automated AML/KYC and explainable AI shows how the technology facilitates risk mitigation whilst also maintaining accountability. However, as respondent R6 indicated, the final responsibility still rests with the economic organisation, which confirms Williamson (2010), who indicated that core governance functions remain internal when contractual risk exists. This is the same accountability emphasis highlighted in Aldasoro et al. (2025) and Doerr et al. (2022) regarding model risk, documentation and incident response.

The digitalisation of compliance changes regulation from a reactive manual process to a proactive predictive governance model. Respondents' examples of AI-based monitoring, automated flagging and digital audit trails support Doerr et al. (2022),

who found that predictive analytics allow earlier detection of anomalies in the system, which then reduce regulatory and operational costs. Similarly, Aldasoro et al. (2025) emphasise that regulatory frameworks increase explainability and auditability, which aligns with the respondents' need for transparency and governance.

From an RBV point of view, the capacity to entrench compliance and regulation of automated systems represents a distinctive organisational capability, one which turns the burden of compliance into a competitive advantage (Barney, 2001).

Regulatory fragmentation and future trajectories

The respondents' references to inconsistent cross-border regulation validate Doerr et al. (2022) and Chan et al. (2022), who identified regulatory fragmentation as a primary barrier to scalability. This research further extends those insights by showing that fragmentation is particularly applicable to trade finance, where cross-country inconsistencies hinder the rate of automation. Nevertheless, respondents were optimistic about future adaptive, ethical and AI-aware policies, which align with Aldasoro et al. (2025) and Vives (2019), confirming that there is a global shift towards risk-based regulation, which is forward-thinking.

Respondents specifically mentioned the challenges that are faced in reconciling domestic compliance frameworks with those of international standards, a theme which is consistent with the OECD (2021) and the Financial Sector Conduct Authority (2025) who note that policy alignment is essential in order to be able to scale digital trade finance solutions. This once again reinforces Williamson (2010), who predicted that high coordination costs would lead to economic organisations internalising risk management and not wanting to outsource it. The respondents, however, showed optimism towards an emerging trend of globally aligned principles-based regulation, which emphasises ethical AI, transparency and calculated oversight (Aldasoro et al., 2025).

These forward-looking policies represent a shift from the normal control to a level of outcomes-based governance. As Thakor (2020) and Vives (2019) Suggest, this shift enhances innovation whilst also safeguarding the stability of the system, which is also visible in the South African context, where regulators have adopted a staged implementation of these policies.

Theoretical interpretation

From a TCE perspective, regulation determines the level of uncertainty and the governance level that organisations adopt. Strict, fragmented regulations increase transaction costs, which makes organisations internalise control. Conversely, adaptive and collaborative frameworks reduce costs and promote partnerships. RBV complements this by highlighting how having regulatory knowledge and compliance infrastructure becomes like a strategic resource that can differentiate organisations. Economic organisations that align with the regulatory requirements and technology gain a reputation and operational advantage, a dynamic that confirms the theory.

These findings extend both theoretical perspectives by showing that regulation operates in tandem as a governance mechanism (TCE) and as a strategic capability (RBV). Under TCE, a well-designed regulation reduces fraud, enhances trust and enables interorganizational coordination, whereas under RBV, regulatory competence, including data protection, ethical AI, and audit readiness, becomes a tangible asset which helps towards sustained competitive advantage (Barney, 2001; Wernerfelt, 1984; Williamson, 2010).

This integration is particularly relevant in emerging economies such as South Africa, where regulatory agility and institutional credibility act as a signal of trust in global markets (Financial Sector Conduct Authority, 2025; South African Reserve Bank, 2024). Thus, firms that invest in innovation-related compliance and policy technologies are positioned to be the pioneers in the future of digital trade finance.

Summary

In summary, RQ4 confirms that regulation and policy serve as both a catalyst and a constraint for fintech disruption and innovation. These findings affirm the existing literature on the need for regulations which are easy to adapt to and partnership-based (Murinde et al., 2022; Vives, 2019). The research extends this by providing context specific insights into South Africa’s evolving policy ecosystem. From a TCE point of view, effective regulation reduces the levels of uncertainty, coordination costs and enables cooperation across various organisations and geographical locations (Thakor, 2020; Williamson, 2010). From an RBV point of view, regulatory and compliance knowledge and infrastructure an be used a strategic asset in an organisation to enhance reputation, trust and competitiveness (Barney, 2001; Wernerfelt, 1984).

Overall, the findings show regulation as an important factor in the future of fintech disruption and transformation, where collaborative policy mechanisms, such as sandboxes, ethical AI standards and cybersecurity advancements, demonstrate how governance can coexist with innovation. In contrast, a fragmented or a framework that is rigid will hamper the level of scalability and cross-border collaboration (Chan et al., 2022; Doerr et al., 2022).

Chapter 7: Conclusions and Recommendations.

The study examines the impact of fintech disruption on trade finance within economic organisations. The particular technologies which emerged were Artificial Intelligence, blockchain, and open banking technologies. The research set out to understand how these technologies influence the efficiency, set governance and risk of trade finance instruments such as letters of credit, factoring and supply chain finance and how the incumbent economic organisations are adapting strategically and operationally to this disruption.

This subject is significant because trade finance supports more than 80% of global trade (Kowalski et al., 2021; United Nations Conference on Trade and Development, 2024), yet its core processes remain paper-intensive, sluggish and expensive. In emerging economies like South Africa, inefficiencies and restricted access to finance constrain small and medium enterprises (SMEs) and ultimately limit economic growth in the country (OECD, 2021; Trade Finance Global, 2022).

The growing influence of fintech innovation and disruption offers opportunities to increase transparency, inclusivity, and speed, but also presents regulatory, cybersecurity and ethical challenges (Javaheri et al., 2024; Vives, 2019). By researching this intersection, the research provides evidence of how AI and other fintech innovations reshaped not just operational efficiency, but also organisational behaviour, competitive advantage and regulatory dynamics. It therefore contributes to both academic understanding and managerial strategy in a rapidly changing economic environment.

Building on this foundation, the research was situated in a specific and dynamic national context that provides unique insights into fintech disruption within economic organisations.

The research was situated in South Africa's trade finance and financial services sector, which represents one of Africa's most advanced fintech ecosystems. South Africa accounts for around 40% of Africa's total fintech revenue, and 20% of all African startups (BDO South Africa, 2024). This environment brings together traditional economic organisations, agile fintech innovators and proactive regulatory bodies, including the South African Reserve Bank (SARB) and the Financial Sector Conduct Authority (FSCA).

The context matters for several reasons. Firstly, it shows how an emerging market works, where innovation exists in an environment with infrastructure limits, regularity complexity and a lack of digital skills (Murinde et al., 2022; Neumeyer et al., 2021). Secondly, it shows a proactive approach to regulation, with the new framework, such as SARB's 2024 cybersecurity directive and the FSCA's 2025-2028 governance strategy, showing regulators are ready for fintech disruption. Thirdly, the South African situation helps with understanding how developing economies can balance innovation with stability.

This contextual grounding provided the platform for identifying where knowledge existed and where there were still gaps, which set the stage for the research's theoretical and empirical contributions.

The existing literature has long recognised that fintech technologies have enhanced financial efficiency, transparency and accessibility. Studies such as Thakor (2020), Chang et al. (2019) and Murinde et al. (2022), have shown how automation, blockchain and AI can enhance operational efficiency and improve data accuracy in financial transactions. Similarly, Lee et al. (2022) demonstrated how fintech applications in trade finance can reduce delays and improve cash flow liquidity.

However, the literature also revealed key gaps. There was limited empirical evidence on how fintech disruption manifests specifically within trade finance, where there are multiple stakeholders, documents and jurisdictions which can complicate digital transformation as a whole. Most prior research has been conducted in developed markets, which has left an emerging market perspective unexplored. Additionally, studies had not sufficiently examined how economic organisations adapt internally, through culture, human capital, and capacity building, coexist and collaborate with fintech firms.

Finally, there was a theoretical gap linking Transaction Cost Economics (TCE) and the Resource-Based View (RBV) as complementary frameworks to explain fintechs' dual effect: reducing transaction inefficiencies and building sustainable organisational capabilities. This study addresses these gaps by integrating both theoretical lenses to interpret how fintech affects trade finance structures, cost, and resources.

These conceptual gaps informed the central focus of the research and shaped the analytical framework that guided the research questions.

The study addressed four central research questions that guided both its design and analysis:

a. How does fintech disruption impact efficiency and cost in trade finance?
b. What are the main drivers and barriers to fintech adoption in trade finance?
c. How are traditional economic organisations responding to fintech disruption in trade finance?
d. What role do regulation and policy play in shaping fintech's impact on trade finance?

Each question was explored through qualitative interviews with stakeholders representing banks, fintechs, regulators, and investors. Together, these inquiries built a comprehensive picture of fintech disruption that looked at operational, organisational and institutional dimensions, which then provided a strong foundation for the methodological approach that followed.

The research followed an interpretivist, qualitative and inductive methodology, suitable for exploring emerging phenomena in their natural contexts (Saunders & Lewis, 2018). An explanatory, cross-sectional design was adopted ot describe and interpret the mechanisms, perception and reliability of financial decisions in trade finance.

Primary data was collected through semi-structured interviews with 16 respondents, including C-suite executives, fintech founders, policy makers and trade finance experts. Respondents were selected using purposive and snowball sampling to ensure expertise and diversity of perspective (Hennink & Kaiser, 2022b).

The data was analysed using thematic analysis and qualitative coding using Atlas.ti software to identify key patterns and themes (Kiger & Varpio, 2020). Findings were interpreted through the theoretical lenses of Transaction Cost Economics (Williamson, 2010), and the Resource-Based View (Barney, 2001; Birger Wernerfelt, 1984).

Rigour wasn't maintained through detailed documentation, triangulation of cross-participants and attention to ethical standards of consent, confidentiality, and data integrity (Collingridge & Gantt, 2019). This methodology provided a rich, context-specific understanding of fintech's influence on trade finance processes, organisational strategies and the regulatory dynamics.

This approach not only provided a structured way to ask questions but also ensured that the insights were grounded in the respondents lived experience, which enables varied answers and nuances specific to the respondent.

The findings demonstrated that fintech disruption enhances operational efficiency and reduces transaction costs through automation, AI-based verification tools, and digital documentation. These results confirm Chang et al. (2019) and Lee et al. (2022)who argued that fintech-driven automation shortens processing cycles and increases transparency. Interpreted through TCE, these technologies reduce coordination and monitoring costs by simplifying transactions and improving trust between parties. Under RBV, digital capabilities and data analytics emerge as a strategic asset that strengthens economic organisations (Barney, 2001).

However, the study also found that full automation does not eliminate uncertainty. Respondents insisted that human oversight remains essential for high-risk or complex transactions, which confirms the principle of bounded rationality, where technological mitigants cannot fully remove uncertainty (Williamson, 2010).

The research further found that organisational readiness and leadership commitments are decisive drivers of fintech adoption. This aligns with Khalil et al. (2025) and Cieslak & Valor (2025) who emphasise the interplay between digital strategy and human capital. Barriers such as legacy infrastructure and regulatory ambiguity persist, but economic organisations that invest in cultural transformation and workforce upskilling tend to achieve more successful implementation.

Traditional economic organisations were also found to go with hybrid strategies, which combine partnerships with fintechs and internal innovation efforts. This supports Gulbrandsen et al. (2009) and Murinde et al. (2022) who highlighted that collaborative efforts are a form of balancing risk and control. From a TCE lens, partnerships reduce uncertainty and coordination costs, whilst from an RBV perspective, they allow access to competent resources, data expertise and technological agility.

Finally, regulation emerges as both an enabler and a constraint. A proactive framework, such as the SARB cybersecurity directive and the FSCA AI governance strategy, was viewed positively, but cross-border inconsistencies hinder the ability to scale, which echoes Doerr et al. (2022) and Chan et al. (2022). The overall

interpretation is that those first capable of aligning to technological innovation with regulatory expectations are better positioned to capture fintech's long-term benefits.

Drawing from these results, the research contributes to scholarly and professional debates in several key ways.

This research contributes to scholarly and professional debates in four major ways. First, it integrates Transaction Cost Economics and the Resource-Based View, showing that fintech transformation begins as a cost reduction exercise but then evolves into a strategic capacity-building process within economic organisations. This theoretical binding together both frameworks by demonstrating its ability to explain technological change.

Secondly, it adds empirical evidence from an emerging market context, where fintechs' potential is restricted by infrastructure gaps, resource limitations and the evolving regulatory landscape, which is often overlooked in the global South.

Thirdly, it advances the human and organisational dimensions of digital transformation, highlighting that successful adoption depends as much on leadership alignment and digital literacy as on the technology itself (Bhutto et al., 2023; Khalil et al., 2025).

Finally, it provides insight into the regulation innovation, illustrating how risk-based adaptive governance, as demonstrated by South African regulations, can both protect financial stability and foster innovation. Collectively, these contributions enrich academic research by connecting the theory to lived experience and policy relationships.

These academic contributions have a direct impact on businesses and policymakers, which reinforces the relevance of the research.

The research holds important practical implications for economic organisations, fintech companies and regulators. For economic organisations, the findings underscore the need to modernise legacy systems and embrace data-driven platforms to remain competitive. AI and automation should also be leveraged to reduce administrative inefficiencies, but not at the expense of human oversight, which remains critical in managing fraud, compliance, and high-risk trades.

For fintech firms, the research highlights the importance of building regulatory and governance capabilities early on in their development. This will assist in being

successful long term as the winning fintechs will have the ability to plug in to banks' systems, be transparent and maintain compliance, which is what the larger economic organisations are looking for in a fintech partner.

For regulators and policymakers, the results advocate for adaptive, collaborative oversight frameworks. Initiatives such as the Intergovernmental Fintech Working Group (2025) demonstrate that innovation hubs and sandbox environments can safely promote experimentation whilst still having the ability to protect the system. Regulators are also encouraged to try to sync cross-border policies to receive complaints and support seamless digital trade in the financial ecosystem.

In practice, the findings suggest that the future of competitiveness in trade finance will depend on how well stakeholders coordinate their technology, human capital and regulation.

Looking ahead, these insights naturally lead to the identification of future research opportunities that can extend the scope of the current study.

While this research contributed valuable insights, it also opened several avenues for further exploration. Future research should look to undertake comparative country studies to examine how contextual differences affect fintech adoption and regulatory policies. Quantitative or mixed-method research can provide measurable evidence of cost and efficiency gains associated with specific fintech tools such as AI, blockchain or smart contracts. Longitudinal studies would also add insight into how fintech and economic organisations' partnerships evolve over time.

Further inquiry could also focus on SME participation in digital trade financing, as similar organisations stand to benefit the most from improved access to trade finance. Ethical and governance aspects of AI-driven decision making also warrant academic attention.

Finally, research on organisational culture and workforce transformation could deepen the understanding of how digital change can reshape employee skills, motivation and performance in economic organisations.

This research concludes that fintech disruption is both a technological and organisational transformation that redefines how trade finance is conducted, governed, and experienced. The research confirms that while technologies such as AI and blockchain can dramatically enhance efficiency and transparency, their true

impact lies in how organisations can integrate human, strategic, and egalitarian frameworks. The interplay between technological innovation, human capital, and adaptive governance will determine not only the future of trade finance but also the broader trajectory of national inclusion and competitiveness in emerging markets.

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Appendix 1: Questionnaire

Section 1: Background and Role

1. Can you describe your role and experience related to trade finance and fintech within your organisation?
2. How would you characterise the current state of trade finance operations in your organisation?
3. What fintech solutions or innovations has your organisation adopted or engaged with about trade finance?

Section 2: Fintech Disruption and Mechanisms

4. In your view, how is fintech disrupting traditional trade finance processes?
5. What specific fintech technologies (e.g., blockchain, AI, digital payments) have had the most significant impact on trade finance?
6. How do fintech companies bypass or complement traditional banks in providing trade finance services?
7. Can you describe any new platforms or digital tools your organisation uses or has encountered that differ from traditional trade finance models?

Section 3: Challenges and Opportunities

8. What challenges has your organisation faced in adopting or integrating fintech solutions in trade finance?
9. How has fintech disruption affected operational efficiency, risk management, and cost structures in trade finance?
10. What opportunities has fintech created for your organisation or clients in terms of access to trade finance or market expansion?
11. How do regulatory frameworks impact your organisation’s ability to innovate or collaborate with fintech companies?

Section 4: Stakeholder Implications

12. How has fintech disruption changed the relationships between banks, fintech firms, and clients in trade finance?
13. What role do you see economic organisations playing in the fintech ecosystem—are they primarily innovators, collaborators, or competitors?
14. How do you perceive client trust and adoption of fintech-enabled trade finance solutions compared to traditional methods?

Section 5: Strategic Responses and Future Outlook

15. What strategies has your organisation implemented to respond to fintech disruption in trade finance?
16. Do you foresee fintech companies or traditional economic organisations leading future innovations in trade finance?
17. How do you expect the trade finance landscape to evolve in the next 3 to 5 years, especially in emerging markets like South Africa?
18. What role do you think AI and other emerging technologies will play in shaping the future of trade finance?

Section 6: Closing

19. Is there anything else you would like to share about fintech disruption and trade finance that we haven't covered?
20. Can you recommend other experts or organisations we should speak with for this research?

Appendix 2: Informed Consent

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA.

I am conducting research on the impact of fintech disruption on trade finance within economic organisations. Our interview is expected to last about an hour and will help us understand how economic organisations are affected by and responding to fintech disruption in trade finance. Your participation is voluntary, and you can withdraw at any time without penalty. All data will be reported without identifiers. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name:

Email:

Phone:

Research Supervisor Name:

Email:

Phone:

Name of Participant: _____

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

Appendix 3: List of codes

Research Question 1:

Atlas.ti Codes (Raw)	Category (Cluster)	Theme (Final)
Automation • Speed • Manual Processes • Digitization • AI • Decision-Making	Process Automation & Digitisation	**Operational Efficiency**
Accuracy • Data Utilization • Integration • Visibility	Data Quality & System Integration	**Operational Efficiency**
Collaboration • Partnerships • Client Experience	Workflow Collaboration & User Interface	**Operational Efficiency**
Scalability • Flexibility • Customization	Platform Scalability & Adaptability	**Operational Efficiency**
Cost Reduction • Manual Processes • Efficiency	Process Rationalisation	**Cost Structures and Decommissioning**
Innovation • Integration • AI	Technology Investment & ROI	**Cost Structures and Decommissioning**
Competition • Complexity • Disruption	Strategic Pressure for Consolidation	**Cost Structures and Decommissioning**
Risk Management • Fraud Prevention • Trust	Control & Governance Mechanisms	**Risk Management and Control**
Data Utilization • Visibility • Accuracy	Data-Driven Audit and Transparency	**Risk Management and Control**
Skepticism • Uncertainty • Complexity	Change Risk & Confidence Gap	**Risk Management and Control**

Research Question 2:

Atlas.ti Codes (Raw)	Category (Cluster)	Theme (Final)
AI integration • Automation • Blockchain • Data interoperability • Digitisation • Innovation	Emerging Digital Technologies	**Technology Enablers**
Integration • API connectivity • Visibility • Flexibility • Scalability	Systems Connectivity and Scalability	**Technology Enablers**

Leadership buy-in • Digital culture • Skills availability • Change management	Cultural and Leadership Capability	**Organisational Readiness**
Training • Knowledge sharing • Adaptability • Internal communication	Capability Development and Learning	**Organisational Readiness**
Collaboration • Partnerships • Ecosystem maturity • Knowledge exchange	Inter-organisational Trust Building	**Trust and Collaboration**
Competition • Access • Client experience	Market Relationships and Credibility	**Trust and Collaboration**
Regulatory ambiguity • Cybersecurity • Legacy systems • Risk management • Uncertainty	External Constraints	**Barriers to Adoption**
Complexity • Cost reduction pressures • Skepticism • Trust	Internal Resistance Factors	**Barriers to Adoption**

Research Question 3:

Atlas.ti Codes (Raw)	Category (Cluster)	Theme (Final)
Bank–Fintech alliances • Vendor integration • Co-development • Ecosystem partnerships	Collaborative Models	**Strategic Partnership and Collaboration**
Access • Competition • Innovation • Trust	Competitive Co-operation	**Strategic Partnership and Collaboration**
Innovation labs • In-house AI platforms • Process automation	Innovation Infrastructure	**Internal Innovation and Digital Transformation**
Culture change • Leadership vision • Digital strategy	Cultural Transformation	**Internal Innovation and Digital Transformation**

Reskilling • Training • Upskilling • Digital literacy	Human Capital Development	**Capability Acquisition and Talent Realignment**
Fintech recruitment • Hybrid roles • Cross-functional teams	New Talent Models	**Capability Acquisition and Talent Realignment**
Governance controls • Regulatory alignment • Risk containment	Compliance and Governance	**Defensive and Risk Management Responses**
Manual checks • Cyber risk oversight • Audit mechanisms	Operational Safeguards	**Defensive and Risk Management Responses**

Research Question 4:

Atlas.ti Codes (Raw)	Category (Cluster)	Theme (Final)
Fintech frameworks • Innovation hubs • Policy collaboration • Sandboxes	Enabling Regulatory Mechanisms	**Regulatory Enablement and Innovation Support**
Engagement • Regulator dialogue • Public-private forums	Stakeholder Engagement	**Regulatory Enablement and Innovation Support**
Cybersecurity mandates • AML/KYC alignment • Data protection	Regulatory Controls	**Compliance, Risk and Governance**
Auditability • Transparency • Explainable AI	RegTech and Accountability	**Compliance, Risk and Governance**
Cross-border inconsistency • Policy lag • Interpretive gaps	Jurisdictional Disparities	**Regulatory Fragmentation and Uncertainty**
Compliance duplication • Operational overhead	Implementation Complexity	**Regulatory Fragmentation and Uncertainty**

AI oversight • Proactive supervision • Collaboration models	Adaptive Regulatory Approaches	**Future Regulatory Trajectories**
Ethical AI • Data governance • Predictive supervision	Forward-looking Governance	**Future Regulatory Trajectories**