The role of dynamic capabilities in the strategic management of payment disruption in the South African banking industry

Ricci-leigh Castleman

A research report submitted to the Wits Business School, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies.

October 2018

DEDICATION

This report is dedicated to Paul. You still found the capacity to support me whilst fighting your own battles. I will be forever grateful.

DECLARATION

I declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Management in Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.
WBS Master of Management in Innovation Studies

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Ricci-leigh Castleman

ABSTRACT

As digital disruption alters industry environments and business practices across the globe, many incumbent organisations face the threat of obsolescence or diminished competitive advantage. However, digital disruption equally represents an opportunity for incumbent firms. Thus, it is integral for incumbent organisations to adopt a strategic approach to tackle the associated opportunities and threats. Success in this regard will be the determinant of sustainable competitive advantage and long-term survival.

Researchers have identified that dedicated strategic and organisational approaches to disruption are required, underpinned by capabilities which facilitate response. It is the nature of these capabilities which is the broad interest area of this study.

The theory of dynamic capabilities proposes that there are particular firm capabilities which are difficult to replicate, and which allow the firm to successfully adapt to changing customer and technological opportunities, such as those presented by digital disruption. The presence of these capabilities allows an organisation to reorientate resources and alter practices in response to changing environments.

Firms are considered to undertake a number of strategic approaches in response to digital disruption. The formation of alliances and the internal development of new services are the approaches considered in this study. The purpose of the study is to gain insight into the role of these approaches and the dynamic capabilities which underpin the success of these strategic management decisions, namely: alliance management capability and new service development (NSD) capability. This is explored within the context of payment disruption occurring in the South African banking industry.

This study investigated how five incumbent South African banking firms strategically managed the opportunities and threats of payment disruption through alliances and NSD and the role of dynamic capabilities in the success of these approaches.

LIST OF ABBREVIATIONS AND ACRONYMS

DC	Dynamic Capability
DCs	Dynamic Capabilities
DCV	Dynamic Capabilities View
IP	Intellectual Property
IRB	Institutional Review Board
IT	Information Technology
KPIs	Key Performance Indicators
POS	Point of Sale
NSD	New Service Development
RBV	Resource Based View
RPV	Resources, Processes and Values

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CHAPTER 1 INTRODUCTION

1.1 CONTEXT OF THE STUDY

1.1.1 THE IMPACT OF TECHNOLOGICAL DEVELOPMENTS

As technological advancements become more accessible, the nature of societal functioning shifts in accordance with these developments (Bradley & O'Toole, 2016). Digital technologies such as cloud-based solutions, mobile, social networks, Internet of Things, artificial intelligence and big data analytics, have been deployed more rapidly into mainstream society than the progressive developments of previous decades (Bradley & O'Toole, 2016; World Economic Forum, 2016). This rapid democratisation of digital technology has growing implications for business functioning, as organisations attempt to remain relevant in the dynamic, evolving environment. Technology is no longer a feature of the organisation but a core strategic asset and an enabler of innovation and business relevancy (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; World Economic Forum, 2016; Westerman, Calmejane, Bonnet, Ferraris, & Mcafee, 2011)

Digital technological innovation and the associated implications have been deemed to be disruptive in nature. Digital disruption is considered to be the developments in digital technology which enable the rapid transformation of value creation strategies, social interactions and business models, as well as fundamental changes in individual perception, thinking and understanding (Karimi & Walter, 2015; Riemer, Gal, Hamann, Gilchriest, & Teixeira, 2015).

Digital disruption challenges established business operations, strategies, customer engagement and the means of creating and capturing value (Hassana & Lowry, 2016). It is both an opportunity and a threat and business leaders are challenged in evaluating the risks and potentially significant value afforded by digital technology and associated business innovations (Bharadwaj et al., 2013; Fitzgerald, Kruschwitz, Bonnet, & Welch, 2013; World Economic Forum, 2016).

1.1.2 THE NEED FOR STRATEGIC MANAGEMENT

The landscape of competition has intensified: as start-up organisations have increased access to funding, adopt advanced technologies and implement progressive digital strategies, they are able to scale rapidly and threaten traditional markets (Westerman et al., 2011; World Economic Forum, 2016). As the dynamism of business environments accelerates and digital technologies disrupt conventional practices, incumbent organisations need to adopt a pragmatic approach for dealing with the resulting uncertainty and changes (Bradley & O'Toole, 2016).

Organisations require a digital disruption strategy. The strategic response to the opportunities and threats afforded by digital disruption is the interest context of this study. An incumbent organisation's ability to identify early signals of potential disruption and rapidly respond, is considered an integral determinant of success (Knickrehm, Berthon, & Daugherty, 2016).

1.1.3 INDUSTRY SELECTION: THE BANKING INDUSTRY

The possibility of digital disruption is deemed to be present in all industries. This study will address the concept within the banking industry, where the entire banking value chain is deemed to be at risk of digital disruption "especially in lending, payments and financial consulting" (Villeroy de Galhau, 2016).

This industry was selected based upon three characteristics:

- The historically conservative nature of the firms within the sector;
- The varied nature of players entering the market;
- The perception that the impact of some significantly dynamic disruptors (e.g. virtual currencies) is still to occur.

Nature of firms in the sector

The banking environment has changed substantially over the last decade. There is a drive towards digitalisation which impacts delivery, marketing and service usage (Bradley & O'Toole, 2016). Competition has intensified as new players and non-banks enter the market with new technologies and innovations. Digitally astute customers and their associated behavioural changes and demands, require a different approach than traditionally offered by incumbent banking firms (Krstić & Tešić, 2016; Ley, Foottit, & Honig, 2015; McKinsey, 2015).

The banking sector is well established and typically conservative in nature (Tornjanski, Marinković, Săvoiu, & Čudanov, 2015) There is a heritage orientation, structural bureaucracy and legacy systems which are thought to hamper the ability of firms in this sector to be innovative and respond aggressively to disruptive threats. The culture of these organisations does not support an agile approach to change and most banks struggle to attract digital talent who seek innovative and modern working environments (McKinsey, 2015; Ley et al., 2015). Traditional banking operational infrastructure and processes do not support digital services (McKinsey, 2015). As a result of the inherent nature of firms in this sector, they are considered susceptible to disruption. The consequence of these internal barriers is a slow response to disruptive threats and opportunities. However, a significant asset is the wealth of data which banks already have at hand. Leveraging this information affords the opportunity for disruption (McKinsey, 2015).

New players, of a varied nature, entering the market

The banking ecosystem has evolved to include a variety of participants. These participants include incumbent banks, large digital organisations such as Facebook, Google, Apple, Microsoft, IBM & Amazon (with troves of customer data) and Telco's (with the vast majority of the population as customers and their mobile telephony capabilities). Furthermore, there are start-up disruptive FinTech companies eating into market share (Villeroy de Galhau, 2016).

As new players have entered the sector, there has been an impact on traditional banking models and the functioning of the financial system. These competitors offer a new range of services, less product orientated and more aligned with the needs of the customer (Bradley & O'toole, 2016; Tornjanski et al., 2015). These disruptive players are designed from the ground up to provide customer centric integrated services, with 24-hour, multi-channel services baked in. (Villeroy de Galhau, 2016)

Disruptive forces

The impact of digital disruption on the banking industry has yet to unseat market dominating incumbents, however the risks are perceived to be growing (McKinsey, 2015; Krstić & Tešić, 2016; Ley et al., 2015). Regulation adjustment lowers the entry barrier for new providers, new providers are developing and improving their offerings. Furthermore, customers are becoming more comfortable with financial interactions occurring outside of traditional channels. The widespread adoption of virtual currencies, such as bitcoin, will revolutionise banking and place incumbents in a precarious position (McKinsey, 2015; Ley et al., 2015). The forthcoming digital disruption potential of the industry is perceived to be significant.

Based on the above-mentioned characteristics, the banking industry is considered to be a particularly interesting context within which to consider digital disruption.

1.1.4 PAYMENT DISRUPTION FACING THE BANKING INDUSTRY

The banking industry has faced, and continues to face, several disruptive elements. For the purposes of this study, the specific case of payment disruption within the banking industry will be considered. This will allow for a more focused reference case than the general concept of digital disruption. This sector is selected as it is of particular value to the banking business model and it is appropriate for the study objectives. Disruptive activities have occurred, allowing for familiarity and post hoc understanding and in addition, disruptions are predicted to continue in this domain, thus the research findings have some relevance.

The payment sector has rapidly evolved towards digital (online and mobile) channels and banks are required to confront significant risks in the payments market (World Economic Forum, 2017) Traditionally, payment systems were owned or controlled by banks, however FinTech players and digital companies, offering simplified payment experience, as well as the latest regulatory reforms, opening up the market to new entrants, have accelerated the options and opportunities for disruption within the payment sector (McKinsey, 2015).

The value of payment systems extends beyond a revenue stream and is significant for banks to anchor client relationships and as a means of selling additional products (Ley et al., 2015). In addition, after establishing themselves in the payment space, FinTech companies may extend operations to other banking services, leveraging off their newly established payments customer base (Ley et al., 2015).

Conventional banking payment systems are characterised by substantial fee models and complex, standardised transactions. Disruptive options offer simplified user experiences with low-cost solutions and "more practical applications are emerging: mobile, contactless and instant payments; account information and payment initiation services; asset management; investment advice; data management and information storage, etc." (World Economic Forum, 2017).

Further disruption is anticipated in this sector as an increasing number of players continue to enter the market, some with established brand loyalty and the opportunity to offer innovative solutions through a hybrid of their existing services and payment system options. In addition, as banks transition to digital payment channels, they will be forced to reconfigure associated processes and practices, and this overhaul has the potential to unlock new innovation opportunities (McKinsey, 2015). Finally, as discussed with regard to bitcoin, non-monetary payment solutions may gain traction, altering the payment systems landscape once again. The compounding effect of these various disruptive elements portends for a significant modification of the payment industry. This disruption will have significant effects on the revenue and profitability of various services. (McKinsey, 2015).

The banking industry in South Africa is not exempt from the digital disruption taking place in the global industry. The South African context is particularly turbulent as new banking licenses have been distributed (Discovery Bank, Post Bank, Bank Zero and Tyme) and FinTech companies, and other digital players, continue to enter the space. In accordance with strategic recommendations outlined above, firms are responding through strategic alliances and through service innovation. Specifically, within the payment solution space, eCommerce players (e.g. PayPal) and point-of-sale (POS) solution providers (e.g. SnapScan) have entered the market and some of the prominent banking institutions have partnered with these providers as a means of addressing their disruptive potential (FNB, 2017). In addition, banks have integrated their own innovative payment solutions such as “tap and go” and money transfer via cell phone.

1.2 PURPOSE OF THE STUDY

As discussed, digital disruption is altering businesses across the globe and thus it is integral that incumbent organisations adopt a strategic approach to tackle the associated opportunities and threats. Success in this regard will be the determinant of sustainable competitive advantage and long-term survival.

The purpose of the study is to gain insight into the role of alliances and NSD in response to digital disruption and the dynamic capabilities which underpin the success of these strategic management decisions, namely: alliance management capability and NSD capability. This is explored within the context of payment disruption occurring in the South African banking industry.

1.3 SIGNIFICANCE OF THE STUDY

The peer reviewed literature acknowledges the need for a strategic approach to the management of digital disruption. Numerous theories have suggested the value of particular strategic approaches. However, the practical application of these theories tends to be underdeveloped and unresearched, particularly within the context of digital disruption. This study will attempt to expand upon the limited existing academic research, specifically, within the context of the South African banking industry and payment services. These findings could direct management initiatives and potentially provide strategic insight as to how organisations can develop capabilities that lead to competitive advantage (Pisano, 2015). This research also has the potential to contribute to dynamic capability theory.

1.4 PROBLEM STATEMENT

The overarching objective of this study is to determine how incumbent South African Banking firms strategically manage the opportunities and threats of payment disruption.

As technological innovation threatens to disrupt established practices, incumbent firms are faced with difficult and unfamiliar decision variables. The adoption of advanced technologies and technological capabilities is not sufficient for providing sustained competitive advantage. Many large established organisations have been unable to maintain their market leadership or have become obsolete, as disruptive innovations have entered their markets (Paap & Katz, 2004). However, some have succeeded in the face of disruption. The success or failure of firms in responding to disruption is of intense interest in strategy research. These findings are relevant to determining managerial practices which incumbents should adopt (Chiaroni, Chiesa, Franzò, Frattini, & Urbinati, 2016).

Broadly speaking, researchers have determined that dedicated strategic and organisational approaches to disruption are required, underpinned by capabilities which facilitate response. It is the nature of these approaches and associated capabilities which are the interest area of this study. Organisations need to develop capabilities to rapidly sense and respond to disruptive digital innovations, as well as identify opportunities for digital innovation, ahead of their competitors.

The South African banking industry is operating within a turbulent environment and the potential for digital disruption is rife, particularly in the context of payment disruption. It has been determined that a strategic approach to the management of digital disruption is necessary and the strategic management theory of dynamic capabilities is valuable for its relevance to disruption. Owing to the nature of the banking industry, which is deemed to lag behind in capabilities typically associated with digital innovation, it is essential to determine whether these can be overcome through strategic alliances. In addition, developing innovative services is deemed essential.

In order to address the problem statement, this study seeks to establish the role of alliances and NSD in how South African banking firms are responding to payment disruption and the capabilities which underpin the success of these strategic management approaches.

1.5 RESEARCH QUESTIONS

Strategic management of the opportunities and threats of payment disruption by incumbent South African banking firms:

- Research Question 1: What role do alliances and NSD play in managing the opportunities and threats of payment disruption?
- Research Question 2: How do firms strategically manage their alliance and NSD capabilities?
  - *In the face of disruption, what are the inherent aspects of the firm which act as enablers and barriers to a successful response through alliances and NSD?*
  - *What is the role of alliance management dynamic capability and NSD dynamic capability?*

1.6 DELIMITATIONS OF THE STUDY

The research is subject to the following delimitations:

- The research is limited to the five prominent banking firms in South Africa and will not include all banking institutions.
- The study is limited to payment disruption as it is defined for the purposes of this study. Other potential factors of disruption in the payments market have not been considered owing to scope limitations and the need to provide a particular context.
- The study considers only two potential responses to payment disruption: alliances and NSD. Literature has documented a third, acquisitions. During preliminary discussions with multiple industry practitioners, they noted that all acquisitions are managed by a central structure within the bank and thus the approaches are not specific to payments services. With NSD and alliance strategies, decision-making is housed within the payments orientated division. In order to garner insight specific to acquisitions, different respondents would be required. In addition, through a review of literature the dominant considerations refer to NSD and alliances, with fewer studies considering the acquisition context. Thus, owing to time and scope limitations and reflections by industry practitioners that this is not regular

practice in the payment services context, acquisitions will not be considered in this study.

- The study is limited to considering only the internal organisational perspective as it relates to whether a firm successfully responds or fails to respond to disruptive innovation. Perspectives not considered include: the external context and environment perspective; the customer orientated marketing perspective and the technological strategic perspective.
- The dynamic capabilities framework is complex, with multiple layers of capabilities and conceptualisations. This study is concerned with the first/higher-order capabilities as well as the micro foundations which underpin them, excluded from consideration are ordinary capabilities.

1.7 ASSUMPTIONS

The following are assumptions are made:

- Alliances and NSD are the most prominent practices that play a role in response to payment disruption.
- Participants are knowledgeable of payment disruption threats and opportunities, as well as related firm practices and strategies.
- Respondents will provide answers to questions which are accurate, and a subjective measure of competitive advantage has a degree of accuracy.
- It is assumed that the previous dynamic capability research has relevance to this research and is an appropriate lens with which to analyse and discuss the topic.
- There is a relationship between dynamic capabilities and response to payment disruption.
- Payment disruption may be considered a turbulent environment and thus the research outlining the connection between dynamic capabilities and turbulent environments has relevance.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

There are incumbent firms who have managed to identify and exploit a potentially disruptive technology before being disrupted by others (Christensen & Bower, 1996; Paap & Katz, 2004; Yu & Hang, 2010). Various theories have been applied in an attempt to understand what determines whether a firm successfully responds or fails to respond to disruptive innovation. Researchers have located their research within the following four different perspectives:

- The internal organisational perspective
- The external context and environment perspective
- The customer orientated marketing perspective
- The technological strategic perspective.

For the purposes of this research, the literature exploring the internal organisational view is considered relevant. The reason for selecting this perspective is the nature of the research question, as well as the context in which it is undertaken. The research question considers the strategic management of disruption, which implies a consideration of innovation achieved through organisational functioning. The marketing and technological capabilities are deemed to not be the focus area of this study, which is concerned with organisational behaviour and strategic management principles. The external and environmental factors are outside of the organisation's control and thus not considered in an attempt to contribute to strategic management practices.

Organisations are operating within a particularly turbulent time, as technological developments rapidly change the face of competition and destabilise established modes of operation. Incumbent organisations face challenges which cannot solely be solved by the adoption of technology and associated technological capabilities. In order to sustain competitive advantage, firms must rapidly sense and respond to developments ahead of their competition and this requires specific capabilities.

Whilst there are many incumbent firms which have faltered in the face of disruptive innovations entering their industry, there are a number of examples of those who have succeeded under the circumstances (Paap & Katz, 2004). As a result, there is considerable investment in attempting to understand this occurrence and the underlying factors which enable the success or failure of incumbent firms. This understanding is useful for the development of managerial practices and is the broad interest area of this study (Chiaroni et al., 2016).

Research in this area has identified the need for a strategic approach to disruption, underpinned by capabilities which enable the response. Capabilities provide a useful lens to view strategic management, as it pertains to the degree of success of an organisation to modify and deploy organisational skills, resources and functional competencies, particularly as it relates to a shifting environment. Furthermore, since the environment is shifting the ability to shift competencies unblock step is a fundamental (Assink, 2006). It is these capabilities which are the interest area of this study. The need for technological adaptation and digital capabilities is well-documented. The purpose of this research is to go beyond the inevitable need for technological competencies and systems and to consider a wider range of capabilities.

The relevance of disruptive innovation and associated theories has increased, as the enabling effect of digital technology is believed to have intensified the magnitude and frequency of occurrence. This form of disruption is referred to as digital disruption.

Few research studies have addressed digital disruption specifically, thus this review of literature spans *digital disruption, disruptive innovation, firm performance and competitive advantage within turbulent environment*s. The literature on these topics is considered within the context of *incumbent firms, alliances* and *NSD* and *strategic management, strategic approach, enablement and response.* Prior to discussing the existing research, the integral concepts of disruptive innovation and disruption will be explained.

2.2 THE CONCEPT OF DISRUPTIVE INNOVATION

One of the earliest attempts to understand disruptive innovation was the theory of S-curves developed by Foster in 1986 (cited in Sood & Tellis, 2011). He considered technology to advance along successive s-curves and that incumbent organisations would fail if they neglected to adopt new technology which superseded the incumbent's existing technology in terms of performance. Tushman and Anderson (1986) further developed this notion by considering changes which were either competence-enhancing or competence-destroying (cited in Sood & Tellis, 2011). They deemed failure to have occurred when the expertise of the incumbent firm was extinguished by the new technology. Alternative explanations are presented from a demand-side perspective, where disruption was deemed to occur when a new technology developed for use in one area transitioned to a new area where there is amplified demand and additional resources. The theory which has garnered the most traction is Christensen’s (1997) theory of disruptive innovation. Disruption is deemed to have occurred when a new entrant deploys novel technology to the point that it acquires mass adoption (Sood & Tellis, 2011).

The term disruptive innovation is frequently used to describe any industry destabilisation or situation where incumbents lose competitive advantage, this broad consideration is not congruent with the theorisation of early researchers. The seminal research was conducted by Christensen (1997) and this formed the foundation of subsequent studies in the initial development of this field. The disruptive innovation classification is not predicated on breakthrough industry changes (Christensen, Raynor, & McDonald, 2003). The definition and intended use of disruptive innovation conceptualised by Christensen, entails two integral considerations: disruptive innovations occur in the low-end or in new market areas and mainstream customers do not adopt the new offerings until the quality meets existing expectations (Christensen, McDonald, Altman, & Palmer, 2017). Disruptive innovations are often associated with characteristics of affordability, convenience and accessibility (Christensen, Grossman, & Hwang, 2009). Uber is an example of an innovation which is frequently cited as a disruptive however, it does not meet the two aspects outlined above and is thus incorrectly categorised (Christensen et al., 2017).

Some researchers have approached disruptive innovation research in accordance with the broader consideration and as such deem disruptive innovation to be the introduction of novel products, services and value propositions, which require consumers to change conventional behaviours and habits in order to use them (Karimi & Walter, 2015).

2.3 THE CONCEPT OF DIGITAL DISRUPTION

The concept of digital disruption stems from the concept of disruptive technology and disruptive innovation (Møller, Gertsen, Johansen, & Rosenstand, 2017).

Digital disruption refers to developments in digital technology which enable the rapid transformation of value creation strategies, social interactions and business models, as well as fundamental changes in individual perception, thinking and understanding (Riemer et al., 2015; Karimi & Walter, 2015). Digital disruption has weakened established business practices, allowed new entrants to become market dominators, brought about the era of customer-centricity and fostered the requirement for new capabilities (Tornjanski et al., 2015)

This disruption entails innovation which redefines norms and established business practices, affects markets, changes the competitive landscape and occurs across societal levels (Molla, Cooper, & Karpathiou, 2016; Weill & Woerner, 2015).

Skog, Wimelius and Sandberg (2018) define digital disruption as “the rapidly unfolding processes through which digital innovation comes to fundamentally alter historically sustainable logics for value creation and capture by unbundling and recombining linkages among resources or generating new ones.”

From an individual perspective, social networks and mobile devices are associated with a disruption of work-life balance. For businesses, social media and analytics allow for the development of real-time customer insights and the opportunity for personalised experiences. User-generated digital content impacts traditional industry practices and at a societal level, digitally disruptive technologies have altered the access, and speed of access, to information, creating a larger source of public opinion. (Riemer et al., 2015; Molla et al., 2016).

Digital disruption is enabled by the development of technologies which facilitate connectedness, personalised information and efficiency. These are the foundation of digital disruptive innovation and are deemed to include: cloud-based solutions, mobile, social networks, wearable technology, big data, advanced analytics, Internet of Things, artificial intelligence, and ubiquitous computing (Tornjanski et al., 2015; Molla et al., 2016). As an example, social networks have evolved from a service to a facet of many organisational business models and they are an opportunity for value creation through their intrinsic elements of collaboration and information sharing.

Adopting digital technologies or digitising an existing business model is not sufficient to constitute digital disruption. The potential for digital disruption entails harnessing these technologies, potentially in combination, and providing novel solutions. (Molla et al., 2016)

Digital disruption is both an opportunity and a threat and should be managed accordingly. Organisations should seek to be the disruptors or to self-disrupt by being at the forefront of digitally linked innovation (Molla et al., 2016). The threats associated with digital disruption include: unforeseen and unfamiliar competition, market dominance by a single player, existing talent lacking competencies and increased competition to hire and retain individuals with the necessary skills, pressure to decrease prices and the associated impact on margins. Most industries are deemed to be at risk of digital disruption (McKinsey, 2015; Knickrehm et al., 2016). Typically quoted examples of organisations which have disrupted industry incumbents include: Amazon, Netflix, Facebook, Uber and Airbnb. These cases have brought widespread awareness of the fundamental role of digital technologies and set an example of the risks of not embracing technological development and innovation.

As mentioned, digital disruption can also be perceived as an opportunity. Digital technologies often lower entry barriers and offer the potential for entrants to develop innovative value propositions to compete with established firms. Incumbents also have the opportunity to compete in non-traditional areas of business as well as engage in self-disruption strategies to entrench market positioning. Digital technologies allow for faster and more efficient development, superior products and services, more integrated customer relationships and enables new operating models. Examples of this would be peer to peer product innovation or customer service (Molla et al., 2016)

Given the highly impactful nature of digital disruption, offering both risk and reward, researchers have suggested that “abilities to either instigate digital disruption and induce systemic change or exploit accompanying changes in core conditions are crucial for successful firms in the age of digitalization” (Skog et al., 2018).

2.4 DISRUPTIVE INNOVATION RESEARCH

Table 1 (below) summarises the prominent research with regard to disruptive innovation. Some studies consider the enablement and response to disruptive innovation, whilst others focus on either the associated threat or the opportunity.

TABLE 1: SUMMARY OF DISRUPTIVE INNOVATION RESEARCH

Author	Assink (2006)	Vriens & Solberg Søilen (2014)	Garrison (2009)	Bergek, Berggren, Magnusson and Hobday (2013)
Theme/ Category	Disruptive Innovation	Disruptive Innovation	Disruptive Innovation	Disruptive Innovation
Topic	*Inhibitors of disruptive innovation capability: a conceptual model*	*Disruptive Intelligence - How to gather Information to deal with disruptive innovations*	*An assessment of organisational size and sense and response capability on the early adoption of disruptive technology*	*Technological discontinuities and the challenge for incumbent firms: destruction, disruption or creative accumulation*
Main findings	Assink acknowledges and defines “disruptive innovation capability” and determined a number of factors which may inhibit this potential. These include: legacy systems and difficulty unlearning established practice, the presence of a very successful product or	Focus was placed on the role of disruptive intelligence in responding to disruption potential. This is considered to be the ability to ascertain: whether there is potential for disruption for example if customer needs have shifted and offerings are no longer	In this study it was determined that the size of the organisation impeded the ability of smaller organisations to adopt disruptive technology despite being more capable than larger firms at sensing the technological opportunity.	“Creative accumulation” is a way of conceptualising the innovative capacity of incumbents that appear to master the turbulence which follows technological discontinuities. According to researchers, “creative accumulation” entails

	service which dominates business functioning, risk-aversion, a lack of innovation process management, poor execution of innovative ideas and the lack of supportive infrastructure.	relevant or whether a disruption is already occurring.		deciding whether to invest internally in developing competencies or sourcing these abilities through alliances. In the case of alliances, these are only effective if the firm is able to institutionalise knowledge generated in these partnerships by creating or expanding capabilities that facilitate this knowledge transfer.
Theories applied	Disruptive Innovation Theory	Disruptive Innovation Theory	Disruptive Innovation Theory	Disruptive Innovation Theory, creative destruction and creative accumulation
Geographical context	n/a	n/a	n/a	n/a
Sectorial context	n/a	n/a	Across industries, Fortune 1000 or INC 500 firms	The gas turbine industry and the car industry
Methods used	Review of literature	Analytical and descriptive based on literature	Survey 73 senior executives	Comparative case study
Author	Sandström, Magnusson and Jörnmark (2009)	Enders, Konig, Jelassi and Hungenberg (2006)	Yu and Hang (2010)	Christensen (1997)
Theme/ Category	Response to Disruptive Innovation	Disruptive Innovation67u8978	Enabling Disruptive Innovation	Disruptive Innovation
Topic	*Exploring Factors Influencing Incumbents' Response to Disruptive Innovation*	*The relativity of disruption: e-banking as a sustaining innovation in the banking industry*	*A reflective review of disruptive innovation theory*	*The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*
Main findings	Researchers determined that disruptive innovation challenges and solutions are	It was determined that in the banking industry the development of solely e-banking institutions was	The authors sought to determine the enabling factors of disruptive innovation including the	When a new innovation emerged it improved performance on dimensions that

	specific to each firm. In addition, researchers note the role of alliances and acquisitions as a means of responding to the threat and opportunity of disruption.	unlikely to disrupt the industry.	role of open innovation practices, alliances and customer engagement. The potential inhibitors and enablers of disruptive innovation can be considered from the following perspectives: internal organisational aspects, external environmental context, marketing and technology.	customers historically valued incumbents.
Theories applied	Disruptive Innovation Theory	Disruptive Innovation Theory	Disruptive Innovation Theory	Disruptive Innovation Theory
Geographical context	Sweden	Scandinavia	n/a	n/a
Sectorial context	Manufacturing	Banking Industry	n/a	Disk Drive Industry
Methods used	In-depth case study Hasselblad, manufacturer of professional cameras	In-depth case study of Nordea Bank	Review of existing literature	Multi-method

Author	Kaplan (2008)
Theme/ Category	Disruptive Innovation
Topic	*Cognition, capabilities and incentives: assessing firm response to the fiber optic revolution*
Main findings	Kaplan determined that the cognitive capabilities of the CEO, organisational capabilities and incentives are integral to supporting the changes required in disruptive

	environments. When these dimensions are aligned this allows for the most successful outcome.
Theories applied	Managerial cognition and capabilities to navigate radical technical change, resource dependence theory, absorptive capacity
Geographical context	Traded on U.S. stock exchanges
Sectorial context	Communication technology industry
Methods used	Longitude data from 71 firms

Christensen (1997) conducted the seminal research on the disk drive industry and developed the theory of disruptive innovation, which is the foundation of the majority of subsequent studies. Researchers have determined that incumbents are less successful in introducing radical innovations to market than their smaller and newer competitors, instead these firms tend to favour incremental innovations (Assink, 2006). Many of the studies, Bergek et al. (2013); Kaplan (2008); Garrison (2009) and Sandström et al. (2009), specifically set out to research the capabilities which underpinned disruption, either in executing the opportunity or surviving the threat. Yu and Hang (2010) and Assink (2006) review the literature on disruptive innovation theory and conclude that there are inhibitors and enablers for success. Assink (2006) draws from existing literature, the characteristics which constrain a firm's disruptive innovation capability.

According to Assink (2006), incumbent firms are plagued by their own achievement. The comfort of their existing successful products or services limits the drive to innovate and firms fall into the familiarity trap. In addition, there tends to be an aversion to risk, particularly with regard to cannibalising these existing value propositions (Yu & Hang, 2010). As firms consider themselves to have invested in heavily in traditional practice, the preservation of the status quo is preferred (Assink, 2006). Owing to strategic legacy and limited resources, organisations may be conflicted between sustaining current practices and innovating for the future. Thus, it can be said that legacy systems and competing priorities may inhibit disruptive innovation potential.

An associated potential barrier outlined by Assink (2006) is excessive bureaucracy. The rules and procedural orientation of these firms frustrates creativity and incumbent organisations with highly bureaucratised structures tend to be slower at decision making, and thus sluggish in responding to change. Kaplan (2008) also acknowledges the limitations of rigidity for incumbent organisations, which does not allow for a swift response to a new context. The mismanagement of the innovation process, a lack of market sensing and foresight, an absence of supportive infrastructure and an inability to unlearn and replace historical logic with a new approach, are additional barriers considered (Yu & Hang, 2010; Assink, 2006). Assink (2006) questions the role of traditional market research, as this is approached through a defined scope and typically a lens of current practice, thus deemed to be hampering truly innovative thought. It is suggested that it is integral for incumbents to address this propensity for familiarity as disruptive opportunities often lie outside of current markets, technologies and customers. Assink (2006) defined disruptive innovation capability as: “the internal driving energy to generate and explore radical new ideas and concepts, to experiment with solutions for potential opportunity patterns detected in the market’s white space and to develop them into marketable and effective innovations, leveraging internal and external resources and competencies.”

Yu & Hang (2010) also reflect on the potential of collaboration through open innovation practices. In their research, Paap & Katz (2004) and Sandström et al (2009) consider the role of collaboration and alliances. Sandström et al. (2009) concludes that incumbent firms can either alter the processes and values of the current organisation, form a separate entity, or acquire another organisation. Evidence supports the view that organisations that attempt to change the current organisation are unlikely to succeed. Thus, when faced with the option to change an organisation internally, create a new organisation or acquire another organisation; the options to acquire or create a new organisation are more likely to succeed. Both approaches have the consequences of ensuring the competencies required for disruption are incorporated into the organisation (Sandström et al., 2009).

The value of joint ventures, alliances and acquisitions, was also noted by Assink (2006). However, he acknowledged that these approaches often fail as the focus is on product acquisition as opposed to knowledge acquisitions. Bergek et al. (2013) in their discussion of creative accumulation noted the need for organisations to decide whether to invest in internal abilities and or to engage in alliances with those who already have the capabilities. In both cases the role of learning is deemed to be integral.

According to Kaplan (2008) senior managerial support for new endeavours is decisive in the success of innovations, and that this attention may be sufficient to overcome other organisational barriers such as bureaucracy. His study suggests that the organisational capabilities are a key underpinning of the ability of a firm to respond to disruption. Specifically, these capabilities are required to ensure that management cognition has the ability to change and sustain these changes (Kaplan, 2008).

Vriens & Solberg Søilen (2014) discusses the practice of information gathering to produce “disruptive intelligence” to determine whether there is disruption potential. In a similar vein, Garrison (2009) considers sensing disruptive innovations. He deems the increasing size of the firm to impact positively upon identifying disruptions however, it was found to have a negative impact on response.

The majority of research undertaken is through case studies and the dominant theory applied is disruptive innovation theory. Enders et al. (2006) conducted research within the banking industry, where their research priority was to establish whether e-banking technology could be classified as disruptive and thus less consideration was given to the internal firm capabilities from a response perspective.

2.5 DIGITAL DISRUPTION RESEARCH

Research in the area of digital disruption has predominantly focused either on digital disruption as an element of disruptive innovation (Molla et al., 2016) or considers digital disruption in the context of societal transformations. In this case, the former will be the focus of the review of literature.

Table 2 summarises the literature related to digital disruption. There is minimal research specifically related to digital disruption. Of the few studies undertaken, many reflect upon the technological enablers associated with digital disruption, which is not the focus of this study (Tan et al. 2015).

TABLE 2: SUMMARY OF DIGITAL DISRUPTION RESEARCH

Author	Karimi and Walter (2015)	Sia, Soh and Weill (2016)	Molla et al. (2016)	Utesheva, Simpson and Cecez-Kecmanovic (2015)
Theme/ Category	Strategic Response to Digital Disruption	Strategic Response to Digital Disruption	Strategic Approach to Digital Disruption	Strategic Response to Digital Disruption
Topic	*The role of dynamic capabilities in responding to digital disruption: A factor-based study of the newspaper industry*	*How DBS Bank Pursued a Digital Business Strategy* How it perceived threats and opportunities of digital disruption and built capabilities.	*IT Managers' perception and Response to Digital Disruption: An exploratory study*	*Identity metamorphoses in digital disruption: a relational theory of identity*
Main findings	Dynamic capabilities enable digital platform capabilities which in turn impact the ability to respond to digital disruption. The determinants of first-order dynamic capabilities identified in this study include: dedicated financial and human resources, senior management support, the staged allocation of resources, autonomous growth group, an innovative culture, common language and multimedia mindset.	Researchers note the role of a digital innovation strategy, the key components required in order create a strategy include: structure, process, people and technology	IT managers were found to prioritise the issue of resources, processes and value when faced with disruption. Thereafter preparations were made for future disruptions by developing the required dynamic capabilities.	In response to disruption researchers argue that firms need to reassess the roles and responsibilities and overarching strategy with regards to all stakeholders.

Theories applied	Dynamic Capabilities and Disruptive Innovation Theory	Digital Capabilities & Organisational Elements	Disruptive Innovation Theory RPV Theory Situational Awareness Theory	Disruptive Innovation Theory, organisational identity
Geographical context	United States	Asia	Australia	United States
Sectorial context	Newspaper Industry	Banking Industry	Education/ University	Newspaper Industry
Methods used	Survey- 158 senior execs newspaper companies	Case Study	Case Study of Senior IT Managers in Australian University	Ethnographic
Author	Tripsas and Gavetti (2000)	Lucas and Goh (2013)	Weill and Woerner (2015)	Gawer and Cusumano (2014)
Theme/ Category	Strategic Response to Digital Disruption	Strategic Response to Digital Disruption	Strategic Response to Digital Disruption	Strategic Response to Digital Disruption
Topic	*Capabilities, cognition and inertia: evidence from digital imaging*	*Disruptive technology: how kodak missed the digital photography revolution*	*Thriving in an Increasingly Digital Ecosystem*	*Industry Platforms and Ecosystem Innovation*
Main findings	Through a case study analysis of Polaroid, researchers ascertained the importance of “managerial cognitive representations” in directing scanning and industry recognition in a disruptive environment and the capabilities which allow for the organisational adaptation.	Through a case study analysis of Kodak, it was determined that the organisations inability to respond to the disruptive effects of new technology, was as a result of the middle management mindset, organisational culture and bureaucratic structure.	Within the context of digital disruption, the organisations who focused more broadly on their value offering and enabled this through an ecosystem mentality, were at an advantage over those with a narrow value chain.	Using platforms as the lens with which to consider innovation, it is clear that the ability to innovate and create an ecosystem with external firms is critical to a firm’s ability to stimulate technological innovation & extend services / products. The ability of platform custodians to leverage the innovation of third parties is critical. Typically, this goes hand-in-hand with and open & modular architecture of the

				platform. Furthermore, careful management of these third-party relationships are key to creating a vibrant ecosystem.
Theories applied	Dynamic capabilities, managerial cognition	Theory of Disruptive Innovation and considerations of organisational change, and culture	Disruptive Innovation Theory	Theory of Disruptive Innovation and platform leadership
Geographical context	United States	United States	Global	United States
Sectorial context	Digital Imaging	Digital Photography	Across industries	Information Technology
Methods used	In-depth case study of the response of the Polaroid Corporation	Case Study of Kodak	Multi Case Study	Case study of Intel

One of the more prominent studies is the research of Karimi and Walter (2015), which recognises the presence of dynamic capabilities that enabled firms in the newspaper industry to successfully respond to digital disruption. This research summarised prior literature and outlined the base factors of first-order dynamic capabilities for responding to digital disruption. The allocation of financial and human resources specifically to innovative projects which address disruption, was found to limit the issue of competing priorities, where typically core value projects take precedent over future orientations. Senior management support and buy-in is considered integral, as is staging the allocation of resources and thus allowing a "learning from failure" mentality and a degree of risk mitigation. In addition, researchers note the need to define specific and relevant processes for innovation teams which are composed of employees of various functional units and collaborations; the functioning of these group differs from the traditional business practice, and as such they require their own processes and practices. Beyond the scope of this study is Karimi and Walter's (2015) consideration of culture and values.

Sia et al. (2016) emphasise the need for a strategic approach and explore the capabilities which underpin the execution of the strategy. In their view the shifting landscape of digital disruption necessitates a continuously evolving and adapting organisation. This requires capabilities which underpin the ability and enthusiasm to experiment and devise strategic responses to disruption.

Sia et al. (2016) gave specific consideration to the banking sector and noted that banks need to consider which aspects of their business should remain in-house as opposed to areas where they could collaborate with strategic partners. The basis of this decision is a combination of a gap analysis, to understand how many resources would need to be dedicated to this capability development, as well as whether such capabilities could have a broader role in the organisation. Researchers noted that banks are often hampered by cumbersome legacy processes and the burden of stringent industry regulation and compliance requirements. Sia et al. (2016) provided specific conceptualisations of pertinent routines for the success of banks within the digital disruption context. The identified routines included: lean thinking, a customer service orientation, entrepreneurial mindset, training and incentive compatibility, strategic incubation, hackathons and internal crowdsourcing, start-up collaboration, technology road mapping workshops, enterprise governance and coordination, unified communication platforms, process streamlining, customer journey lab, human centred design and customer service framework development.

In their consideration of responding to digital disruption, Gawer and Cusumano (2014) and Weill and Woerner (2015) advocate for deeper customer understanding through customer- centricity and “amplifying the customer’s voice within the organisation.” Potential routines included: utilising insight from customer data and social media sentiments, as well as other customer satisfaction metrics.

In addition, Weill and Woerner (2015) note the need to offer customers an ecosystem of value, facilitated through partnerships. Offering clients complementary products and services in an integrated and convenient manner extends the value proposition beyond the firm’s core capabilities and solidifies customer buy-in.

Lucas and Goh (2013) undertook a post-hoc analysis and determined that the middle management mindset, organisational culture and bureaucratic structure of Kodak inhibited the firm's ability to respond and survive the disruptive threat. Tripsas and Gavetti (2000) and Molla et al. (2016) also consider the role of managerial reasoning and buy-in. In their research, Molla et al. (2016) highlight the strategic approach of IT managers who in their decision-making prioritise available resources, current processes and existing value propositions and thus have a conservative approach when faced with disruption. Danneels (2004) considered the relationship between digital disruption and connectivity and the way in which digital disruption impacts established business models. The majority of studies in this area are characterised by a case study research approach.

2.6 CAPABILITIES FOR FIRM PERFORMANCE IN / COMPETITIVE ADVANTAGE IN TURBULENT ENVIRONMENTS

There has been much interest in developing an understanding of, defining, predicting and measuring the relationship between organisational capabilities and competitive advantage, with many proposing a capability-based approach to strategy (Pisano, 2015). The literature speaks to the role of capabilities (specifically dynamic capabilities) in achieving competitive advantage or successful firm performance in turbulent environments.

TABLE 3: SUMMARY OF CAPABILTIES UNDERPINNING PERFORMANCE/ COMPETITIVE ADVANTAGE IN TURBULENT ENVIRONMENTS RESEARCH

Author	Li and Liu (2014)	Wu (2010)	Lin and Wu (2014)	Osisioma, Nzewi and Mgbemena (2016)
Theme/ Category	Capabilities and Competitive Advantage	Capabilities and Performance in turbulent environments	Capabilities, Improved performance and competitive advantage	Capabilities and Competitive Advantage
Topic	*Dynamic capabilities, environmental dynamism and competitive advantage: Evidence from China*	*Applicability of the resource-based and dynamic capability views under environmental volatility*	*Exploring the role of dynamic capabilities in firm performance under the resource-based view framework*	*Dynamic capabilities and performance of selected commercial banks in Awka, Anambra State, Nigeria*
Main findings	The presence of dynamic capabilities within the firm has a positive impact on competitive advantage and the ability to navigate environmental turbulence. In turn, this turbulence encourages the development of DCs. This study categorises dynamic capabilities into three dimensions: "strategic-sense-making capacity, timely decision-making capacity and change implementation capacity."	The DCV and associated theories offers a better explanation for the ability of firms to maintain or achieve competitive advantage in turbulent environments, than the RBV.	Both the resources of the firm and dynamic capabilities facilitate firms competitive advantage. The "valuable, rare, inimitable and non-substitutable (VRIN) resources" allow for the development of integration capability, learning capability and reconfiguration capability.	Sensing capability had a positive influence over the performance of First Bank Nigeria Plc and United Bank for Africa Plc in Awka.
Theories applied	Dynamic Capabilities	RBV and Dynamic Capabilities	RBV and Dynamic Capabilities	Dynamic Capabilities
Geographical context	China	Taiwan	Taiwan	Nigeria
Sectorial context	Across industries	Across industries	Across industries	Banking Industry
Methods used	Survey	Survey 253 Taiwanese firms	Survey to CEOs and senior executives from the top 1000 companies	Survey

Li and Liu (2014) in their research of capabilities which are relevant to a turbulent environmental context, considered the role of “strategic-sense-making capacity, timely decision-making capacity and change implementation capacity.” Strategic sense-making capacity entails the processes which enable the firm to extract and analyse pertinent information. With this information firms are able to assess resource gaps and benchmark against competitors. Timely decision-making capacity, as the term implies, is the process of selecting actions in a timely manner which respond to environmental shifts, this requires an appropriate information system. The ability to execute corporate changes in a flexible manner and align strategic decisions, is considered by these researchers as indicative of change implementation capacity.

Lin and Wu (2014) divide dynamic capabilities into three dimensions: dynamic learning, dynamic integration and dynamic reconfiguration capability. Internal dynamic learning is enabled through workshops and training facilitation, the creation and use of a knowledge database and by means of structured knowledge sharing. External learning capability is achieved through engaging with industry communities and seminars. Dynamic integration capability refers to the coordination of internal and external resources. The ability to utilise resources in a flexible orientation is encapsulated in the third dimension, dynamic reconfiguration capability (Lin & Wu, 2014).

Osisioma et al. (2016) examined the relevance of sensing dynamic capabilities in selected commercial banks in, Nigeria. Researchers operationalised this capability to include: a system which assists in the identification of opportunities; the periodical assessment of technological ability and existing technology use; customer assessment; monitoring competitors’ products and the industry practices and technology trend analysis;

The research by Wu (2010) concerned the relevance of the RBV and dynamic capability theoretical frameworks in the context of environmental volatility, capabilities were considered in a general sense.

2.7 ALLIANCES: THE ROLE OF THE STRATEGIC APPROACH AND THE INTERNAL CAPABILITIES/ ROUTINES WHICH ACT AS ENABLERS AND BARRIERS

The growth in the strategic recommendation and practice of utilising alliances to obtain competitive advantage has encouraged researchers to consider the factors which facilitate alliance success, these factors are often bundled into the terms “alliance management” and “alliance capability”. Empirical research has established that firms which achieve greater alliance success are those with superior alliance capabilities (Russo, 2017). Appropriate alliance management is deemed essential for organisations to achieve competitive advantage and generate value (Kohtamäki, Rabetino, & Möller, 2018; Schilke & Goerzen, 2010; Zollo, Reuer & Singh, 2002). For the purpose of this research, the literature of relevance are studies which consider the role of alliances in response to disruption and turbulent environments. In addition, research which considers the internal organisational capabilities or routines, or lack thereof, which facilitate or hamper alliance success. Table 4 is a summary of the studies found, which can be considered relevant.

TABLE 4: SUMMARY OF CAPABILITIES WHICH ACT AS FACILITATORS ENABLERS AND BARRIERS: ALLIANCES

Author	Ireland (2002)	Russo (2017)	Wang and Rajagopalan (2014)	Kale and Singh (2007)
Theme/ Category	Enablers of alliance success	Enablers of alliance success	Enablers of alliance success	Enablers of alliance success
Topic	*Alliance Management as a Source of Competitive Advantage*	*Alliance management as source of a successful strategy*	*Alliance Capabilities: Review and Research Agenda*	*Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success*
Main findings	Alliance management is associated with a potential source of competitive advantage- a successful collaboration in which complementary resources are integrated to create value.	The analysis of “alliance management at Eli Lily & Co” show evidence that a successful alliance is enabled by: prior experience, a dedicated alliance function and the learning process.	Through their review of literature. Researchers determined the alliance enabling capabilities to include “information search and processing; codified routines and processes, including partner evaluation techniques	Researchers found that alliance learning capabilities enabled overall alliance success of firms. Researchers recognise the value of a dedicated alliance function which supports the alliance

	The firms that systematically created more value from alliances than did others had a dedicated strategic alliance function. Capabilities identified include: determining the alliance scope; the ability to help the firm internalise learning; building effective interpersonal ties; establishing governance mechanisms to monitor and control the alliance and managing information flows."		contract design capability; governance capability; negotiation capability; coordination and communication; intrafirm routines for learning and knowledge transfer, problem solving, and conflict resolution; updating/revision of contractual and governance mechanisms; intrafirm routines for learning and knowledge transfer; relative absorptive capacity; monitoring capability; governance capability."	learning specifically and alliance success in general.
Theories applied	Resource-based approach; Social network theory	Alliance management capability as extension of dynamic capability theory	Resource-based view, organisational learning, knowledge-based view, and dynamic capabilities; transaction cost economics (TCE), property rights, and agency theory	'knowledge-based view of the firm' 'dynamic capabilities'
Geographical context	n/a	USA		USA
Sectorial context	n/a	Pharmaceutical – Eli Lilly & Co		computer, telecommunications, pharmaceutical, chemical and electronics
Methods used	Review of literature	Organisation analysis	Review of literature	Survey
Author	Zollo et al. (2002)	Kale, Dyer and Singh (2002)	Kohtamäki et al. (2018)	Schilke (2013)
Theme/ Category	Enablers of alliance success	Enablers of alliance success	Enablers of alliance success	Capabilities and Competitive Advantage

				in turbulent environments
Topic	*Interorganisational Routines and Performance in Strategic Alliances*	*Alliance capability, stock market response, and long-term alliance success: the role of the alliance function*	*Alliance capabilities: A systematic review and future research directions*	*On the contingent value of dynamic capabilities for competitive advantage: the nonlinear moderating effect of environmental dynamism*
Main findings	Established the role of interorganisational coordination and cooperation in enhancing the success of alliances. Information gathering, communication, decision making conflict resolution & governance of the collaborative process were all seen to have a significant impact on enabling interorganisational co-ordination. The role of learning processes are also noted for their enablement of capability development.	Alliance experience and a dedicated alliance function allows for greater success with alliances. It was noted that the value of the alliance function may be attributed to specific learning and coordination activities.	Through the reviews of literature, the empirical findings, with regard to alliance capabilities, were organised into the categories of: alliance management capability, alliance integration capability and alliance learning capability.	The degree of turbulence in an environment has an effect on the impact of alliance management capability and new product development capability. These are more effective within moderate turbulence, than within the extremes.
Theories applied	Evolutionary economics and dynamic capabilities	Organisational learning, dynamic capabilities, evolutionary economics	n/a	Dynamic Capabilities
Geographical context	n/a	North America	n/a	Germany
Sectorial context	Biotechnology	Computers, telecommunications, pharmaceuticals, chemicals, electronics, and services	n/a	Firms in the chemicals, machinery, and motor vehicle industries

Methods used		exploratory fieldwork Empirical study of 78 firms and their 1572 alliances.	Review of literature	Qualitative field interviews and survey of 279 firms

Author	Schilke and Goerzen (2010)
Theme/ Category	Enablers of alliance success
Topic	*Alliance management capability: An investigation of the construct and its measurement*
Main findings	Researchers developed the alliance management capability construct which is shown to enable the success of the alliance portfolio.Routines which support this capability include: “interorganisational coordination, alliance portfolio coordination, interorganisational learning, alliance proactiveness, and alliance transformation.”
Theories applied	Dynamic Capabilities
Geographical context	Europe
Sectorial context	Multi-industry
Methods used	Survey

Researchers outline the need for strategic alliances as an integral source of competitive advantage (Russo, 2017). In the context of intense competition and the potential for disruption, firms cannot compete solely with their own resources. Alliances tend to allow for more rapid market entry, considered to be vital in the context of disruption (Schilke, 2013).

Alliances are a means of obtaining necessary knowledge skills and resources, which a firm lacks internally, from outside the organisational boundaries, and thus extending a firm’s available resources base (Schilke, 2013). Alliance partners make use of each other’s core competencies and specialisations (Kohtamäki et al., 2018).

Researchers outlined the following as possible motivations for entering into an alliance: easier entry into markets; costs and risks are shared; there is the potential for increased efficiency through economies of scale and blocking the alliance partner as a potential competitor. Alliances allow access to additional expertise, brand reputation, new and vital resources and knowledge (Schilke, 2013; Russo, 2017; Kohtamäki et al., 2018, Møller et al., 2017, Kale & Singh, 2007). According to Kale and Singh (2007) gaining knowledge is one of the most beneficial aspects of entering into an alliance.
A strategic alliance occurs between two independent organisations where information exchange and/or development of capabilities to the mutual benefit of both organisations (Kohtamäki et al., 2018).

In terms of the enablement or barriers to alliance success, these studies addressed the capabilities which are considered to contribute to success. In the review of literature this researcher was not able to find or access literature specifically positioning barriers to success which were not supplemented by capabilities. Any mention of barriers was dominated by the corresponding capability discussion and thus the discussion below approaches this in the same manner.

Ireland (2002), Russo (2017), Kale et al. (2002), Kohtamäki et al.(2018) and Kale & Singh (2007) all spoke of a management function whose responsibility was to capture and disseminate the alliance related know-how and to establish best practice. In addition, their role would be to implement, coordinate and oversee the processes and routines associated with this best practice and alliance success. The authors utilised various terms for this, termed as either an alliance management function, dedicated alliance structure or a dedicated alliance function.

In their review of literature Kohtamäki et al. (2018) organised their findings into three dimensions to alliance success, these researchers gave consideration to the practices which underpin alliance capabilities, similar to Schilke and Goerzen (2010) who reflected on the routines/ micro foundations. Each of the three dimensions are considered to be underpinned by first order sub themes as well as second order sub themes. The second order sub themes are routines, processes, factors which support the first order capabilities. In the case of alliance management capability, one of the three dimensions, first order sub themes were deemed to include:

- alliance target setting (second order sub themes: setting targets and process configuration)
- task implementation (second order sub themes: alliance task execution, alliance control and alliance development tools)
- alliance evaluation (second order sub themes: relationship scorecard, alliance measurement development and follow-up).

Some of these elements are considered by other researchers in accordance with alternative capability definitions (Kohtamäki et al., 2018).

The integral role of interorganisational learning (also referred to as knowledge transfer) is considered by all researchers and studies summarised above. The nature of this learning or transfer of knowledge should be systematic and codified (Ireland, 2002; Kale & Singh 2007; Kohtamäki et al., 2018; Schilke, 2013). Kale and Singh (2007) focus on this dimension and go as far as to document alliance learning as a primary means of alliance success. Kale et al., (2002) associate the worth of an alliance function with the degree to which it facilitates learning activities. Kohtamäki et al. (2018), consider the first order sub themes of alliance learning to include:

- Knowledge creation (second order sub themes: alliance experience; knowledge acquisition and articulation; knowledge sharing)
- Knowledge assimilation (second order sub themes: knowledge codification; knowledge combination and sensemaking)

- Knowledge internalisation (second order sub themes: organisational memory and knowledge stores and development of routines).

All researchers are also in agreement concerning the need for interorganisational coordination. Whilst the perceived value of alliance coordination is universal, researchers differ in what they consider falling within this capability. A common view refers to these broadly as patterns of interaction outlined in routines and processes regarding communication, cooperation and integration, However, researchers Zollo et al., (2002) were more specific in their consideration and encapsulated this capability to include "information gathering, communication, decision-making, conflict resolution, and the overall governance of the collaborative process." Schilke and Goerzen (2010) also noted the need for integrated workflow management. Other researchers considered some of these sub elements, such as governance, independently of interorganisational coordination. Kohtamäki et al. (2018) considered alliance integration capability to be another dimension with sub dimensions to include: improvement of relational embeddedness (process of communication and interaction and bonding and trust development) and the development of alliance structures (institutionalising mechanisms, inter-firm councils and joint meetings).

Schilke & Goerzen, (2010) noted the value of alliance proactiveness, which entails the identification and of potential alliance partnerships. In order to do this firms would need to actively monitor the industry and proactively approach potential firms.

The flow of information is an important consideration for both interorganisational learning and interorganisational coordination. Ireland (2002) noted the challenge of managing the flow of information. Specifically, that it is a delicate balance between releasing enough information such that the alliance is as productive as possible and exhibits high levels of organisational learning without releasing any key intellectual property. (Ireland, 2002).

Wang and Rajagopalan (2014) and Ireland (2002) specially mention governance mechanisms. According to Ireland (2002) alliance success is hampered by highly bureaucratised alliance governance structures. The governance structures are responsible for monitoring and controlling the alliance. As mentioned above, other researchers have attributed this consideration to be a part of the alliance management function.

Additional capabilities, routines, processes mentioned include:

- alliance scope
- interpersonal relationships
- interest-aligning incentive plans
- contract design, negotiation
- partner evaluation
- monitoring
- problem solving
- conflict resolution
- absorptive capacity

(Wang & Rajagopalan, 2014; Ireland, 2002).

It should be noted that there is variability in how researchers perceive routines/ processes to be indicative of which capabilities, as pointed out in specific instances in the above paragraphs. The differential grouping of capabilities is consistent with the view that there is considerable research to be done in the area. Researchers Schilke and Goerzen (2010) and Kohtamäki et al. (2018) provided the most thorough and logically presented discussion.

2.8 NSD: THE ROLE OF THE STRATEGIC APPROACH AND THE INTERNAL CAPABILITIES/ ROUTINES WHICH ACT AS ENABLERS AND BARRIERS

NSD is increasingly recognised as a means of obtaining competitive advantage, particularly in turbulent environments. The regular introduction of new services (or products) allows a firm to remain relevant whilst addressing changing customer requirements (Kindström, Kowalkowski, & Sandberg, 2013; Hertog, 2010; Without regular NSD, the long-term survival of a service-oriented firm cannot be guaranteed (Storey; Cankurtaran; Papastathopoulou & Hultink, 2015). For the purpose of this research, the literature of relevance includes studies which focus on the strategic value of NSD as well as the internal organisational capabilities or routines, or lack thereof, which act as enablers or barriers to NSD success. Table 5 is a summary of the studies found, which can be considered relevant.

TABLE 5: SUMMARY OF CAPABILITIES WHICH ACT AS ENABLERS AND BARRIERS: ALLIANCES

Author	Agarwal and Selen (2009)	den Hertog (2010)	Smith, Collins and Clark (2005)	de Jong and Vermeulen (2003)
Theme/ Category	NSD Capabilities, customer collaboration	NSD Capabilities	NSD Capabilities	NSD Capabilities
Topic	*Dynamic Capability Building in Service Value Networks for Achieving Service Innovation*	*Managing service innovation: firm-level dynamic capabilities and policy options*	*Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms** (The study included new services)	Organising Successful NSD: A Literature Review
Main findings	Within the service industry, dynamic capabilities, developed through collaboration, facilitate opportunity exploration and the anticipation of competitor	The development of a framework suggesting the following as service innovation capabilities: Signalling user needs and technological options;	The role of knowledge creation capability in NSD was articulated. The capability to leverage existing and new knowledge in NSD.	Researchers identified that there are three key areas of influencers of NSD. Firstly people-related characteristics. This includes co-workers having frequent external contacts, sharing

	threats. The key higher order capabilities for developing service innovation are customer engagement, collaborative agility, entrepreneurial alertness and collaborative innovative capacity and collaborative organisational learning.	conceptualising; unbundling and bundling; co-producing and orchestrating, scaling and stretching; learning and adapting.		information and securing co-workers' autonomy. Secondly, structure-based characteristics. Structure based characteristics such as: strategic focus, training and education, task rotation and information technology are all influencers of NSD. Lastly, organisational characteristics such as: employees, management support structure and tools, multifunctional teams and availability of resources are all key influencers of NSD.
Theories applied	Dynamic capabilities	RBV and DC	Organisational learning, Dynamic Capabilities	n/a
Geographical context	N/A	Europe	n/a	n/a
Sectorial context	Telecommunications	Across sectors	72 technology firms	n/a
Methods used	Survey - 380 employees telecommunications service provider and its partnering organisations	Sectoral and case study analyses.	Field study- questionnaires, interviews and company records.	Review of literature
Author	Fischer; Gebauer; Gregory; Ren and Fleisch (2010)	Liao, Kickul and Ma (2009)	Storey; Cankurtaran; Papastathopoulou and Hultink (2015)	Janssen, Castaldi & Alexiev (2015)
Theme/ Category	NSD Capabilities	Innovation Capabilities	NSD Capabilities	NSD Capabilities
Topic	Exploitation or exploration in service business development? Insights from a dynamic capabilities perspective	Organisational Dynamic Capability and Innovation: An Empirical Examination of Internet Firms	Success Factors for Service Innovation: A Meta-Analysis	Dynamic capabilities for service innovation: conceptualisation and measurement

Main findings	Researchers identified the sensing, seizing and reconfiguring activities for successful NSD. A cast number of capabilities were outlined. Those relevant to this research are discussed below.	An organisation requires more than resources to compete, it is how these resources are altered to fit the environmental context that allows for success. Integrative capability, (opportunity-recognising and opportunity-capitalising) was determined to be enable this reconfiguration of resources.	The capabilities which enable service innovation are not the same as those that enable product innovation. The value of customer integration and absorptive capacity is recognised.	Researchers provide specific considerations of the routines (activities and processes) which underpin the NSD dynamic capability. These are operationalised as: sensing user needs and technological options; conceptualising; co-producing and orchestrating and scaling and stretching.
Theories applied	Dynamic capabilities	RBV and DC	Dynamic capabilities	Dynamic capabilities
Geographical context	Switzerland and Germany	n/a	n/a	Netherlands
Sectorial context	Various capital goods industries with different firm sises	Internet-based organisations	n/a	Multi-industry
Methods used	Interpretative multiple-case study approach to develop themes around the key dynamic capabilities	Survey	Review of literature	Two multi-industry subsamples from a dataset of 391 Dutch firms

Research suggests that what is integral in the context of disruptive environments is the speed at which new services are developed and deployed. When a service firm decides that their key competitive advantage is innovation they are constantly required to develop more effective NSD methods & make efficient use of resources to deliver a competitor beating service offering. (Froehle & Roth, 2009). The key difference with service innovation is that R&D is not the most applicable model. Innovation in the service industry springs from the delivery of this service and hence the development of capabilities within the organisation are considered to deliver better results than R&D. (Janssen et al., 2015).

NSD is considered to be one of the determinants of long-term success of the firm. Which results in activities being reworked into increasing return on effort rather than decreasing return on effort (Kindström et al., 2013).

As in the case of alliances, researchers have approached NSD from the perspective of the capabilities for success. Barriers to successful NSD are considered in terms of the characteristics of enablement and a search for literature with the dominant perspective of barriers or inhibitors was not fruitful. Whilst at times mentioned, barriers were considered in support of a capabilities perspective. Again, the discussion below will follow the same approach and will focus on the enablement.

Agarwal and Selen (2009) had a particular focus on the role of customers as co-creators of value in the development, idea sourcing and testing. They considered customer engagement to have immense strategic value; as such the ability of a firm to encourage participation, interpret and reason customer insight and to respond in an agile and innovative manner, Agarwal and Selen (2009) termed this customer engagement capability. This is congruent with the findings of the majority of the studies, as they too noted the value of managing customer input as integral in developing successful value propositions (Agarwal & Selen 2009; Kindström et al., 2013; den Hertog, 2010; Storey et al., 2015; Janssen et al., 2015) This co-producing can also include other partners or stakeholders. den Hertog (2010) and Janssen et al. (2015) refer to this capability as co-producing & orchestrating which requires the ability to initiate and maintain partnerships whilst managing NSD processes across firm boundaries.

Smith et al. (2005) were concerned with the role of knowledge in the creation of new services and products and considered the ability of the firm to "manage, maintain, and create knowledge" to be aligned with its innovation success. This knowledge creation capability is considered to be the degree to which firms have access to the know-how of fellow employees and stakeholders, are able to gather information and thereafter filter, integrate and exploit this knowledge (Fischer et al., 2010). Storey et al. (2015) termed this "absorptive capacity". Absorptive Capacity is the ability to acquire and assimilate knowledge from other organisations. Agarwal and Selen (2009) utilised the term entrepreneurial alertness which is deemed to include strategic foresight and systemic insight. Strategic foresight focuses in identifying opportunities in the market, in particular as it relates to opportunities created by information technology. Systemic insight allows innovation to spring from the internal knowledge & competitive actions as it relates to the external environment (Agarwal & Selen, 2009).

den Hertog (2010), Janssen et al. (2015) and Kindström et al. (2013) noted the need for sensing to obtain knowledge as the foundation of strategic direction, this entailed scanning industry and competitor practice and recognising opportunities. Kindström et al. (2013) also noted the need for service system sensing and internal service sensing in order to understand the whole system. Liao et al. (2009) utilised the term "integrative capacity" which requires a constant outwardly focused assessment of the environmental and business opportunity changes as it relates to the internal ability to leverage these opportunities. Furthermore, internal resources are required to be shifted to align with these external opportunities. In addition, these sensing practices identify opportunities related to the integration of products and services, this is similar to den Hertog (2010) bundling capability dimension. This can result in bundling of services into combinations that cater for most of the customers' needs or striping down services to their core essential elements such that they are high specialised (den Hertog, 2010).

Other researchers framed knowledge from a learning perspective (den Hertog, 2010; Agarwal & Selen, 2009; Fischer et al., 2010; Kindström et al., 2013). den Hertog (2010) and Fischer et al. (2010) outlined the value of intentionally reflecting on and learning from current practice through regular benchmarking, gap assessment and seeking out potential improvements. de Jong & Vermeulen (2003) integrated communication capabilities into the learning aspect with information sharing as the precursor. In addition, the value of cross function teams and training and development programs were noted as learning enablers.

Goal setting is a routine reflect on by de Jong & Vermeulen (2003) and Fischer et al., (2010). They argue that clear goals for NSD aid in strategic focus and that new service offerings need to be aligned with the broader strategic direction of the firm.

Fischer et al. (2010) also noted the need for orchestrating internally, for example establishing routines for efficient decision-making.

den Hertog (2010) and Agarwal and Selen (2009) outlined a conceptualising capability (termed collaborative innovative capacity by Argarwal and Selen (2009)). This is concerned with service design and the development of an idea into a new offering. A strong concept and prototyping capability with a practical underpinning will result in innovative service development (Agarwal & Selen, 2009). de Jong & Vermeulen (2003) noted that autonomy provides an open environment where opportunities can be explored, and new ideas generated.

Janssen et al. (2015) and den Hertog (2010), noted the role of scaling and stretching capability. This entails: stretching a successful new service across the organisation; taking into account branding strategy; the active promotion of new services; service introduction via marketing plans and the ability to scale up a successful new service.

All researchers were in agreement that the capabilities for service innovation differed from those applicable to product innovation.

2.9 IDENTIFIED LITERATURE GAPS AS RELATED TO THE TOPIC OF INTEREST

From the review of literature, it is evident that the traditional decisions to invest in R&D, introduce new products, implement best practices and deliver quality are not solely sufficient for the long-term success of the firm in the context of disruption (Teece 2007; Ambrosini & Bowman, 2009).

Prior literature has made a strong case for the significance of strategic decision- making specific to disruption. In addition, whilst researchers took varied approaches, capabilities were found to be integral to success. Thus, the broad approach of this study to consider the strategic management of digital disruption from the perspective of enabling capabilities can be deemed relevant. Furthermore, the literature has highlighted two specific dynamic capabilities deemed to be relevant to the research on payment disruption (as a type of digital disruption), namely: alliance management capability and NSD. As discussed previously, insight from industry practitioners and other non-academic references such as industry reviews and consultancy articles, have highlighted that banking firms have, and continue, to implement strategies concerning alliances and NSD as approaches to payment disruption.

There has been minimal research into the area of digital disruption and the work of Karimi and Walter (2015) is from a global north perspective as well as specific to the newspaper industry. Osisioma et al. (2016) have considered dynamic capabilities within the banking industry and the associated competitive advantage within an African context, however this was not specifically considered in the context of digital disruption. In addition, although this research is African based it is specific to the Nigerian context and not considered to be generalisable and applicable to the South Africa. Nigeria is predominantly a cash-based economy, whilst South Africans have more widely embraced payments services ("Nigeria vs South Africa: Africa's Biggest Economies are Very Different | Calleo", 2018). In addition, the South African banking industry is more regulated than in Nigeria. Most other research is from the perspective of general disruption and not specific to digital disruption.

In light of the above, it can be determined that there is an existing gap in literature, generally as it relates to responding to the threats and opportunities of digital disruption and specifically in the context of payment disruption in the South African banking industry, where no previous research was found to exist.

2.10 THEORETICAL FRAMEWORK

This section outlines the theoretical concepts relevant to this study based upon the review of literature. Those of relevance include: disruptive innovation theory, resources processes and values theory (as a subset of disruptive innovation theory), dynamic capabilities theory and open innovation.

2.10.1 DISRUPTIVE INNOVATION THEORY

The concept of disruptive technology was first introduced by Bower and Christenson (1996). Disruptive technologies differ from the traditional technologies in their value offerings. In the initial development stage, the offerings would only serve the needs of a few, less-demanding, customers. New entrants offer these lower-end customers more suitable or focused functionality and often at a lower price. Mainstream customers would deem them inferior along their established expectations of performance and remain loyal to the old products or services. With further development the new technology could elevate performance standards to appeal to mainstream consumers until the point where it dominates the market and established providers become obsolete (Yu & Hang, 2010; Kohtamäki et al., 2018; Møller et al., 2017; Čiutienė & Thattakath, 2014; Vriens & Solberg Søilen, 2014).

Disruptive technology later evolved into the concept of disruptive innovation (Christensen, 1997; Christensen, 2006; Christensen & Eyring, 2011Christensen, Grossman & Hwang, 2009; Christensen & Raynor, 2003*)*. Disruptive innovation is aligned with the broader applicability of the theory, beyond a singular technology orientation, towards the inclusion of "competition, market and business models." (Kohtamäki et al., 2018); Čiutienė & Thattakath, 2014).

Disruption is not to be considered a singular event, but a process which occurs over time. It may occur in completion and at a rapid pace, or incrementally and be incomplete (Wessel & Christensen, 2012). "Disruptive innovation plots the trajectories of product performance provided by firms and demanded by customers for different technologies and market segments and shows that technology disruptions occur when these trajectories intersect." (Yu & Hang, 2010). Integral to the distinction between other forms of innovation and disruptive innovation, is the capacity for the technological or business model value to scale. Disruptive innovations move along a trajectory towards "more demanding customers" (Raynor, 2011). The value extends beyond price competition and orientates around the core advantages termed the "extendable core" (Raynor, 2011). Swift disruption occurs when the disruptor addresses the needs of the consumer with supplementary advantages and negligible or no disadvantages. When there is a trade-off between effectively meeting the consumers' needs and fringe advantages or significant disadvantages the disruption will occur more slowly and or be ineffectual (Wessel & Christensen, 2012).

The needs of the consumer vary over time: “identifying what jobs people need done and how they could be done more easily, conveniently, or affordably” is the basis for the how disruptive innovations compete and usurp established offerings (Wessel & Christensen, 2012).

A distinction was established by Christensen and Raynor (2003), between ‘low-end disruption’ and ‘new-market disruption’. ‘Low-end disruption’ refers to an inferior performing product or service at a lower price point appealing to a lower segment of the established market. ‘New-market disruptions’ establish new alternative markets based on individuals who were previously non-consumers (Kohtamäki et al., 2018; Yu & Hang, 2010). A disruptive innovation may exhibit elements of both categories.

Integral to the notion of disruptive innovation is the approach of the incumbent firms. In many situations they neglect to identify the threat of the disruptive innovation, due to their heavy focus on their mainstream customer base. They overlook the less profitable customers or non-consumers. The result is that when the disruptive innovation has moved along the trajectory and is valued by the mainstream market, it is too late for the incumbents to react and they remain stuck in legacy offerings. This results in them being less competitive and potentially obsolete (Vriens & Solberg Søilen, 2014; Kohtamäki et al., 2018; Møller et al., 2017)

Scholars from a variety of disciplines have criticised or challenged the Disruptive Innovation Theory. A common pushback is the perceived failure to fully conceptualise what a disruptive technology actually is (Yu & Hang, 2010). Christensen’s definition has been criticised for lacking measurability and deemed to only be valuable in hindsight (Čiutienė & Thattakath, 2014). In an attempt to define disruptive innovation more precisely, Danneels (2002) redefined it as: “a disruptive technology is a technology that changes the bases of competition by changing the performance metrics along which firms compete”.

Another definition by Gilbert and Gilbert (2012) “a new technology that unexpectedly displaces an established one”, accounts for the important consideration of disruption being unforeseen. However, none of the definitions presented allow for the determination of whether an innovation is likely to become disruptive (Čiutienė

& Thattakath, 2014). A dominant criticism is the lack of predictive value of the theory. It is suggested by researchers that by looking at the notion retrospectively, one can create a rationale which may not hold true. Christensen has maintained that disruptive innovation was defined post hoc, and that the definition is not dependent on outcomes. He asserts that not every disruptive innovation results in the incumbent firm becoming obsolete and not every incumbent replacement is as a result of disruptive innovation.

2.10.2 OPEN INNOVATION THEORY

The establishing insight behind open innovation, as the term implies, is the opening of the innovation process (Huizingh, 2011). Chesbrough (2003) first introduced the concept of open innovation. He defined it as “a paradigm that assumes that firms can, and should, use external ideas as well as internal ideas, and internal and external paths to market, as the firm looks to advance their technology” (Chesbrough, 2003; West, Vanhaverbeke, & Chesbrough, 2006).

Prior to the consideration of open innovation practices, many firms engaged in the contrasting closed innovation model. In this approach, firms would discover, develop, build, commercialise finance and support innovations internally (Van de Vrande, de Jong, Vanhaverbeke, & De Rochemont et al., 2009; Van de Vrande, Vanhaverbeke, & Gassmann, 2010).

Chesbrough (2006) considered open innovation to be a two-way process comprising of in-bound and out-bound open innovation (Chesbrough, 2006). Inbound open innovation entails the acquisition of external knowledge and outbound open innovation is the utilisation of internal knowledge externally. The intentional inflows and outflows of knowledge are perceived to fast-track the internal efforts and result in the expansion of markets (Chesbrough, 2006; Hossain & Kauranen, 2016; Huizingh, 2011). This two-way process allows organisations to acquire the resources (such as technology and ideas) that are required to develop their businesses and sell their own resources (Krause et al., 2012).

Enkel, Gassmann, and Chesbrough (2009) built upon the Chesbrough two-way interaction model and allowed for reverse flows of knowledge by introducing a third mode called the “coupled” practice. Based on the work of Enkel et al (2009), open innovation is now commonly considered to occur in three modes: outside-in, inside-out and coupled. Outside-in (also termed in-bound) includes sourcing external knowledge, which the organisation does not possess internally, to stimulate and further develop innovative ideas. (Hosseini et al., 2017; West & Bogers, 2014). Inside-out (out-bound) entails the intentional dispersion of internal knowledge and technology. (West & Bogers, 2014). Coupled, refers to partnerships where there is short-term/ project collaboration and the co-development of innovations, where knowledge is jointly leveraged. Collaborative networks and innovation communities are examples of this type of engagement. Each of these modes requires different open innovation practices and varied competencies (Hosseini et al., 2017; West & Bogers, 2014).

Open innovation practices are considered to include the following: platforming, idea competitions/challenges, venturing, outward IP or tech licensing, employee involvement, customer involvement/immersion, collaboration, innovation networks, innovation intermediaries, external networking, external participation, lead users, outsourcing R&D and Inward IP or tech licensing (Krause & Schutte, 2015; Krause et al., 2012; Van de Vrande et al., 2009). Other researchers have considered additional approaches that are not mentioned here. This list is not to be considered exhaustive but rather a reflection of those most commonly considered.

Open innovation is considered to benefit the innovation process through diversity, sharing of associated risks, providing access to additional resources and the opportunity for collaboration (Krause & Schutte, 2015). “Open innovation has framed a new way of understanding partnerships and alliances within innovation systems, both in terms of external collaboration practices and internal management decisions” (Gastrow, 2011).

Collaboration with suppliers, complementary firms and customers has been found to be beneficial in enabling and responding to disruptive innovation. Customers are often the first to recognise opportunities for applying new technology, tapping into and developing engagement with consumers allows access into this insight (Teece, 2017). Disruptive innovations are reflective of a deep understanding of customer needs. By keeping abreast of a supplier’s innovative activities, a disruptive innovation may be developed through adapting and supporting the innovations of suppliers. Open innovation can benefit both start-ups and established organisations. Whilst start-ups often possess the technology capabilities and innovative orientation required for disruptive innovation, they lack the organisational assets of established firms (Teece, 2017). Thus, through collaboration there is an exchange of competence to meet capability gaps. "Some researchers have empirically found that spin-offs, alliances, market transactions and acquisitions are comparatively optimal for corresponding points at different stages of disruptive innovation." (Yu & Hang, 2010)

Researchers Chesbrough and Crowther (2006) and Paap and Katz (2004) determined that Open Innovation Theory could be applied to the management of disruptive innovation (Yu & Hang, 2010). Macher and Richman (2004) found that HP, IBM and Kodak have engaged in Open Innovation as a means of creating disruptive innovations.

2.10.3 RESOURCES, PROCESSES AND VALUES (RPV) THEORY

Christensen and Overdorf (2000) developed a framework for managing disruptive change which focuses on resources, processes and values (RPV). The RPV theory identifies the building blocks of capabilities for responding to disruption as outlined in the Disruptive Theory of Innovation (Christensen & Overdorf, 2000). This theory provides insight into the success or failure of firms in responding or enabling disruptive innovation. The resources, processes and values determine the strengths, weaknesses and gaps.

Resources

"Resources are things or assets that organisations can buy or sell, build or destroy" (Christensen & Overdorf, 2000). The literature documents the key value of human resources in responding to digital disruption. Human resources encompass management competency and employee competency.

Processes

"Processes are the established patterns of work by which companies transform inputs into outputs—products or services—of greater worth." (Christensen & Overdorf, 2000). These include the way in which employees communicate, make decisions and coordinate in order to generate service or products from available resources (Christensen & Overdorf, 2000).

Values

“Values are the criteria by which prioritisation decisions are made in terms of the allocation of resources.” (Christensen & Overdorf, 2000). Organisational culture and structure are key expressions of values.

The RPV theory considers an organisation’s ability to take advantage of opportunities, to be based on the presence of: the required resources, processes to ensure action and values to discern opportunity priorities within the context of competing demands. “Incumbent firms fail in the face of disruptive innovations because their values will not prioritise disruptive innovations, and the firm's existing processes do not help them get done what they need to get done.” (Christensen & Overdorf, 2000).

2.10.4 DYNAMIC CAPABILITIES THEORY

The theory of dynamic capabilities is an extension of the resource-based view (RBV) of the firm. The RBV theory is concerned with the firm’s current resources and the choice of resource combinations, whilst dynamic capabilities theory is orientated around resource renewal and how these resources can be reconfigured (Schilke, 2013; Pavlou & El Sawy, 2011)

The dynamic capabilities theory highlights the presence of particular firm capabilities, which are difficult to replicate, and which allow the firm to successfully adapt to changing customer and technological opportunities. They are thought to be the required competences of entrepreneurial management, which are distinct from typical managerial actions. These capabilities entail the sensing and recognition of opportunities, initiation and the novel arrangements of existing and new resources (Teece, 2007; Zollo & Winter, 2002).

Schilke (2013) noted that “the core underlying premise of dynamic capabilities is the capability to interact with the resource base to ‘reconfigure’ and ‘refresh’ existing resources and ‘create’ new ones.” Thus, the presence of these capabilities allows an organisation to re-orientate resources and alter practices in response to changing environments. (Schilke, 2013). These activities are future focused with new strategic and decision- making considerations, to ensure that opportunities can be recognised, implemented and the accompanying business elements and internal competences can be altered to respond to or inspire changes in the business environment (Teece, Pisano, & Shuen, 1997; Teece, 2007).

There have been a variety of conceptualisations of dynamic capabilities and a large array of definitions. For the purpose of this research, dynamic capabilities are defined as “the ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments” (Teece, Pisano & Shuen, 1997). Dynamic capabilities are thought to be supported by organisational routines and managerial skills.

An organisation is considered to have a set of ordinary (operational) capabilities and a set of dynamic capabilities. Dynamic capabilities are theorised to exist at different levels, namely second-order (at times referred to as micro-foundations) and first- order capabilities (at times referred to as higher-order capabilities) (Eisenhardt & Martin, 2000; Teece, 2007; Zollo & Winter, 2002).

Ordinary capabilities (substantive, or zero-order capabilities) enable the routines which utilise resources, in accordance with regular practice and current value propositions, in order to earn a living in the present (Teece et al., 1997). The capabilities which allow the firm’s fundamental competences and resources base to change, are commonly referred to as first-order dynamic capabilities, however these are considered to be quite abstract in nature (Eisenhardt & Martin, 2000; Teece et al., 1997). At a higher level of abstraction, are second-order dynamic capabilities, which are routines used to modify first-order dynamic capabilities (Schilke, 2013). Some scholars consider the distinction between first and second-order capabilities, integral to understating how firms can adapt and develop organisational change routines. Second-order dynamic capabilities are considered to enable first-order dynamic capabilities (Schilke, 2013).

Ordinary capabilities stem from the firm's HR, tangible and intangible assets, processes and administration. This is equated with technical competency and strength (Teece, 2007).

Scholars have had a varied approach to the categorisation of second-order dynamic capabilities. Initially, Teece et al. (1997) classified them as reconfiguring, learning, integrating and coordinating but later considered them to be sensing, seizing and reconfiguring (Teece, 2007). The latter three clusters are the most commonly considered in literature, with some variance in the use of reconfiguring or transforming.

Sensing is a scanning, creation, learning, and interpretive activity (Ambrosini & Bowman, 2009). Organisations must constantly identify, develop, co-develop and assess opportunities (or threats) in accordance with customer demands (Helfat, & Peteraf, 2014). Seizing are the routines whereby resources are harnessed to address the identified opportunities and threats (Helfat & Peteraf, 2014). Transformation/reconfiguring refer to the routines which enable the firm's resources to be recalibrated through enhancement or combination (Teece, 2007)

The dynamic capabilities framework provides an overarching perspective of the most critical capabilities required for sustained competitive advantage. Each capability grouping has different organisational and managerial processes, procedures, systems and structures (Teece 2007; Zollo & Winter, 2002).

2.10.5 THE CASE FOR USING THE DYNAMIC CAPABILITIES FRAMEWORK

The study is anchored in dynamic capability theory in understanding how firms adapt to digital disruption by modifying their underlying resources and capabilities.

"The dynamic capabilities perspective has emerged as one of the most influential theoretical lenses in the study of strategic management over the past decade." (Schilke, 2013). Disruptive innovation theory has been criticised for lacking managerial application, as the focus is typically around what is disruptive and there is minimal consistency in consideration of capabilities. Whilst open innovation theory is deemed to be highly relevant in the context of digital disruption, this is a far narrower capability consideration. It is deemed more beneficial to utilise the dynamic capabilities framework, which encapsulates open innovation considerations, as well as other strategically valuable capabilities. Whilst the RPV theory has some significance, it mostly speaks to ordinary capabilities which are easily replicated and commonly accepted practices. Thus, it is not considered as relevant to distinguishing the less obvious reasoning for successful response to digital disruption.

2.11 CONCEPTUAL FRAMEWORK

The conceptual approach for this study is based upon the dynamic capabilities framework. In this section the case for using two specific first-order capabilities will be discussed: strategic alliance management capability and NSD capability. In addition, the conceptualisation of these constructs for measurement purposes, will be outlined.

Conceptualisation of Dynamic Capabilities

Alliances and NSD have been identified as strategic approaches to maintaining competitive advantage. However, the establishment of an alliance or the development of a new service does not guarantee success, the successful performance of these approaches varies amongst organisations. Thus, owing to the implications for managerial practice, there is considerable interest in the capabilities, which act as enablers to the success of each of these strategic approaches (Schilke & Goerzen, 2010). From the perspective of Dynamic Capability Theory, the presence of first order-dynamic capabilities, in this case *alliance management capability and NSD capability*, offer an explanation for the successful change, adaptation, or extension of the organisation’s existing resources. These in turn result in successful alliances and NSD which have been found to enable competitive advantage in the context of disruption.

As discussed in the context of understanding the general theory of dynamic capabilities, first-order dynamic capabilities are underpinned by second-order dynamic capabilities, in their generic form these are sensing, seizing and transforming activities. As advised by dynamic capability theorists, in order to engage with first-order dynamic capabilities constructs at a practical level, research should consider the context specific second-order capabilities which enable *alliance management capability and NSD capability.*

Alliance management capability is defined as a 'type of dynamic capability with the capacity to purposefully create, extend, or modify the firm's resource base, augmented to include the resources of its alliance partners' (Schilke & Goerzen, 2010). *Alliance management capability* was selected for the following reasons: Firstly, strategic alliances extend organisational competencies by allowing an organisation to tap into and take advantage of the capabilities which exist in the broader community or partners, suppliers and customers. This capability reflects the notion of open innovation practices, which have been found to positively impact a firm's ability to succeed. Thus, the study is accounting for another of the dominant theoretical considerations. Secondly, this capability is one of the more frequently cited, and researched, examples of dynamic capabilities in the literature (Helfat et al., 2009; Teece & Pisano, 1994). Thirdly, it has been determined through research and discussions with industry practitioners, that the formation of alliances is practiced in the context of payment disruption of the South African banking industry.

NSD capability is defined by Van Ark (2003) as "A new or considerably changed service concept, client interaction channel, service delivery system or technological concept that individually, but most likely in combination, leads to one or more (re)new(ed) service functions that are new to the firm and do change the service offered on the market." This capability was selected for the following reasons: firstly, service innovation is considered vital in the context of digital disruption where customer demands are shifting, and competitors offer new solutions based on newly developed technologies in order to service these changing needs. In addition, similar to alliance management, this capability is one of the more frequently cited, and researched, examples of dynamic capabilities in the literature, particularly over the last few years, as the integral notion of service, even in product contexts becomes widely perceived (Schilke, 2013). Finally, NSD has also been determined to be an approach to payment disruption.

Alliance Management Capability

Alliances are a means of obtaining necessary resources, which a firm lacks internally, from outside the organisational boundaries, thus extending a firm's available resources base. Strategic alliances have the potential to impact positively upon organisational performance and thus, are deemed to be an integral strategic tool (Schilke & Goerzen, 2010). Researchers have determined alliance success to be associated with alliance management capability, as a dynamic capability it is difficult to obtain or imitate. In order to acquire the potential benefits, the firm needs to manage the associated complexities and uncertainties of alliances (Sluyts, Matthyssens, Martens, & Streukens, 2011). For the purpose of this research, alliance management capability refers to the intentional and evolving processes which are underpinned by specific organisational routines encapsulated as second-order dynamic capabilities (Schilke & Goerzen, 2010; Sluyt). These routines facilitate the optimal functioning of alliances (Schilke & Goerzen, 2010; Schilke, 2013).

As discussed previously, second-order dynamic capabilities are based on organisational routines. These broadly classified routines are: sensing, seizing and reconfiguring. Schilke and Goerzen (2010) specified these in the context of alliance management capability as: interorganisational coordination, alliance portfolio coordination, interorganisational learning, alliance proactiveness and alliance transformation. For the purposes of this research the conceptualisation of alliance management capability is inspired by the second-order capabilities (routines) outlined by Schilke and Goerzen (2010) in their research of alliance management capability.

Interorganisational coordination

This dimension refers to the presence of routines which encourage a coordinated approach to the activities and resources of alliance partners, including across the alliance portfolio. In their research Schilke & Goerzen (2010) considered this to include: making sure that work tasks fit with alliance partners, that there is combined decision-making and integrated workflow management.

Interorganisational learning

Interorganisational learning involves practices which encourage the transfer of knowledge between alliance partners. This entailed routines to analyse new information and the integration of existing knowledge with new knowledge (Schilke & Goerzen, 2010).

Alliance proactiveness

This refers to the proactive behaviour and routines which elicit the identification of potential alliance partnerships. These routines include: actively monitoring the industry with the intention of identifying potential partners, striving to pre-empt the competition and taking the initiative in approaching potential firms (Schilke & Goerzen, 2010).

NSD Capability

Service innovation is considered to be one of the determinants of ongoing success, "…without it, a firm risks becoming trapped in activities delivering ever decreasing returns" (Kindström et al., 2013). In order to achieve service innovation, through continuous development and the exploitation of the logic of service provision, firms require the dynamic capability of NSD (Teece, Pisano, & Shuen, 1997; den Hertog, van der Aa and de Jong, 2010).

As with alliance management, NSD capability is achieved through second-order routine capabilities. For the purposes of this research the second- order capabilities recognised by den Hertog et al (2010) are the basis of conceptualising NSD capability. den Hertog et al (2010) identified the following sensing, seizing and reconfiguring activities as specific to NSD: *signalling user needs and technological options; bundling and unbundling; conceptualising; coproducing and orchestrating; scaling and stretching and learning and adapting.*

Signalling user needs and technological options is refined for this study as s*ensing user needs and technological options*, this is more aligned with other work on dynamic capabilities and avoids confusion, as the construct definition is perceived to be more in accordance with sensing than signalling (Janssen et al, 2015). Another modification of approach is to not consider scaling and stretching, this is under advisement of industry practitioners who deem this category to lack relevance in the context of payment services. Coproducing and orchestrating capability is also excluded as this relates to alliance management and thus is redundant in this context. However, the notions of den Hertog (2010) are not ignored and are taken into account in conceptualising and measuring alliance management capability.

Sensing user needs and technological options

This capability refers to the routines enabling the identification of: new trends, hidden or explicit unmet customer needs and technological developments exhibiting potential. For example, environmental scanning for relevant technologies and the systematic observation of payment needs.

Conceptualising

Conceptualising entails the practices which allow for the conversion of a raw idea into an actual service provision. Examples include prototyping and experimentation.

Bundling and unbundling

This involves establishing new value by unbundling existing options or integrating service elements in a new way. For example, allowing for customisation of payment service packages or incorporating value options from other services.

Learning and adapting

Learning and adapting entails the routines which allow for learning from experience and applying the knowledge garnered. As examples: reflecting on current practices and applying the insight and assimilating new information and learnings.

2.12 PROPOSITIONS

Strategic management of the opportunities and threats of payment disruption by incumbent South African banking firms:

RESEARCH QUESTION 1

What role do alliances and NSD play in managing the opportunities and threats of payment disruption?

It is proposed that these are strategic approaches undertaken in an attempt to extend the firm's existing resource base and respond to the threats and opportunities associated with payment disruption. In addition, it is proposed that the most commonly practiced strategic approach would be NSD, followed by alliances.

RESEARCH QUESTION 2

How do firms strategically manage their alliance and NSD capabilities in the provision of payment services?

RESEARCH QUESTION 2.1

In the face of disruption, what are the inherent aspects of the firm which act as enablers and barriers to a successful response through alliances and NSD?

Based on the literature it is proposed that the following will be considered as either enablers, or in their absence, barriers to alliances: alliance learning activities; coordination; knowledge management; communication; cooperation; information gathering; collaborative decision- making; governance; conflict resolution; workflow management; councils and joint meetings; industry monitoring; proactiveness; management of the flow of information.

Based on the literature it is proposed that the following are considered to either be enablers, or in their absence, to be barriers to NSD: customer engagement; knowledge management; learning; scanning industry and competitor practice; internal scanning; benchmarking; goal setting; decision- making; conceptualising, bundling and idea generation.

These lists are based on the more frequently mentioned capabilities/ routines or processes mentioned in the literature. It is likely that the exact terminology will not be utilised but that considerations will be along the same theme.

RESEARCH QUESTION 2.2

What is the role of alliance management dynamic capability and NSD dynamic capability?

It was proposed that alliance management capability and NSD capability play a role in response to disruption, in that they facilitate the associated alliance and NSD success. This proposal is in turn based on the proposition that interorganisational coordination, interorganisational learning and alliance proactiveness are important for alliance success and sensing user needs and technological options, conceptualising, bundling and unbundling, learning and adapting are deemed integral to NSD success.

CHAPTER 3: RESEARCH STRATEGY AND METHODOLOGY

This chapter describes the research methodology and strategy employed in answering the defined research question and sub-questions. This chapter introduces: the research approach; data collection; data analysis; limitations; and ethical considerations.

3.1 THE RESEARCH STRATEGY

In order to answer the research question, this study seeks to understand the role of the identified strategic approaches (alliances and NSD), how each is managed and the perceived success of the firm in response to payment disruption. For the purpose of this research, a qualitative approach will be used to understand the particulars of the capability constructs.

Qualitative research is "an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not frequency of certain more or less naturally occurring phenomena in the social world" (Cooper and Schnidler, 2011).

The use of qualitative research is based upon the perception that for the particular research case, further insight and a more complete understanding of the research question will be gained by utilising this approach. This research method allows for exploration beyond whether or not the firm incorporates a capability routine into their practices and includes the manner in which this is done (or in the respondent's opinion how they could do this). Qualitative research is considered an appropriate method when attempting to understand the individual's point of view (Leedy and Ormrod, 2005). In addition, qualitative engagement allows for insights outside of structure, which is useful for understanding how something is done, thus this is relevant for the exploratory nature of this research in understanding "how" firms are responding. Qualitative research also aids in future research development. From the responses, questions can be rephrased and gaps in questioning may be identified. As this area is under researched, this is deemed to be particularly beneficial (Silverman, 2010)

The research strategy includes a quantitative representation, which does not amount to a rigorous quantitative analysis. This representation is used to garner comparable insights between firms by determining the subjective perception of firm competitive advantage (response success). The "level of agreement" questions are approached through numeric analysis and the visualisation applied to the results allows for consistency.

3.2 DATA COLLECTION

Data will be collected by means of a close-ended questionnaire administered during an interview. Interviews will be conducted at a location chosen by the respondent, based on their own convenience. Once consent is acquired from the individual, the interview will be recorded, and written notes taken to assist in the event that recording gaps occur.

Population of The Study

The population of the study is comprised of eighteen business executives working in a payment orientated role within one of the established banking firms in South Africa. Respondents have roles within strategy; business analytics; payment innovation and technology, the job titles vary by organisation. Respondents represented a diverse level of hierarchical organisational roles. The reasoning for this was to garner diverse viewpoints. Top level executives who are accountable for the organisations strategic orientation may respond in accordance with what happens in theory vs. actuality.

The "big five" South African banks are represented in the study. There are five participants from Standard Bank, four participants employed by FNB, three representing Nedbank, three from Capitec and finally two representatives from Absa.

The selection of these banks was based upon the desire to get a representation from the incumbent firms dominating the South African banking industry. Whilst Capitec is a newer entrant compared with the others, public perception holds that it has moved beyond a disruptor and solidified its position as an established competitor.

The respondents were selected through purposive convenience sampling, this is appropriate owing to the exploratory nature of this research and the specific knowledge required in order to provide the information. Criteria for selection was established through advisory conversations with industry practitioners. These conversations elicited both the types of roles which are likely to be knowledgeable about the subject matter, as well as contacts to target. Established relationships and networks, as well as the online resource, LinkedIn, were utilised to identify potential respondents.

The purposive convenience sampling, number of firms selected to participate as well as the number of respondents, were also a factor of the time limitations posed by master's research completion date.

Instrument Design

A draft questionnaire was created and then tested with industry professionals in order to ascertain relevance and understandability.

The instrument is a combination of questions which require a response according to a 7-point Likert scale (respondents will be asked to rate from "strongly disagree" to "strongly agree" or "has no relevance to success" to "is integral to success"); yes-no questions and structured open-ended questions.

The content of the draft questionnaire was informed by previous instrument items utilised by Schilke (2013), Janssen et al (2015), Pavlou and El Sawy (2011) The draft questionnaire had three question categories: general information; alliance management capability and NSD. The development of items will be discussed in accordance with the category.

General Information

This section entails the particulars of the respondent in terms of name; organisation and title.

Alliance Management Capability

The research instrument of Schilke (2013) was originally used to quantitatively investigate alliance management capability. Some items were selected as relevant and were summarised and rephrased into qualitative questions. For simplicity purposes, an amendment is made to group interorganisational coordination and alliance portfolio coordination under the term interorganisational coordination, as this eliminates redundancy in the research instrument.

NSD

Janssen et al (2015) adapted the constructs identified by den Hertog et al. (2010) to inform his measurement of NSD. Many of their overarching categories were selected, again there was qualitative rephrasing and summarisation of the underlying questions. The category of coproducing and orchestrating was not included under NSD as these are considered repetitive of the alliance management concepts. Janssen et al. (2015) did not include bundling and unbundling and learning and adapting in their instrument. For learning and adapting, these items were modified from the study of Pavlou and El Sawy (2011), where these were originally considered in accordance with new product development. For bundling and unbundling, these items were developed as are reflection of the definition and conceptual explanation provided by den Hertog et al. (2010).

3.3 DATA ANALYSIS

Descriptive statistical analysis will be undertaken for the quantitative portion of the research.

The analysis of the qualitative data will be based on interview transcripts. The process will follow the steps outlined by Creswell (2014):

1. Organising and preparing for data analysis
2. Read through all data
3. Coding the data
4. Establishment of themes/ trends
5. Interpretation of themes
6. Comparison between firms
7. Selection of quotes

3.4 LIMITATIONS OF THE RESEARCH STRATEGY AND METHODOLOGY

The following are considered to be inherent limitations of the chosen research strategy and methodology:

- The limited number of firms and interviews as well as purposive convenience sampling, means that the results may not necessarily be representative of all firms in the industry.
- The use of industry practitioners to provide research direction; they may have inherent bias or be incorrect in their understanding and recommendations.
- Owing to purposive convenience sampling the results may not be extrapolated to being representative of all incumbent firms in the industry
- Potentially the "Hawthorne effect" may come into account, whereby participants provide answers that they deem to be what the researcher is seeking (Creswell, 2014).
- The measurement instrument was developed as a combination of instruments from other research studies. Some items were altered from quantitative to qualitative phrasing.

3.5 ETHICAL CONSIDERATIONS

Creswell (2014) considers the broad classification of ethical issues to include: "informed consent procedures, deception of covert activities, confidentiality towards participants, benefits to participants and requests that go beyond social norms". The researcher has and will continue to exercise due diligence and be conscious of ethical considerations. The following has been done in accordance with ethical sensitivity: every attempt has and will be made to correctly cite and give credit to researchers, participants and advisors; approval for this research will be sought from the Institutional Review Board (IRB); research procedures will be adhered to and data will not be manipulated in order to ensure legitimate and reliable findings; full disclosure will be made to participants regarding the purpose of the study and how their responses will be used and respondents will be informed that their specific responses will remain anonymous.

3.6 CONCLUSION

This chapter outlines the strategy and methodology that will be employed for this research study. It provides reasoning for the chosen approach, the sampling procedure, the target population as well as a discussion of the associated limitations and ethical considerations.

CHAPTER 4: PRESENTATION OF DATA

4.1 INTRODUCTION

This chapter outlines the findings of the study obtained through the methods and techniques outlined in Chapter 3: Research methodology. The participants are the primary sources of data and key informants. The interviews were face to face at a place of the respondents choosing. The findings are organised in accordance with the research questions and formulated conceptual framework outlined in Chapter 3. Each research question is identified, and the corresponding results presented in accordance with the themes of the conceptual framework.

The results are presented utilising numerical, narrative and graphical formats. Direct quotations are presented as close to verbatim, however the “ums” etc. were removed. These quotes were extracted from the interview transcripts. Graphs and figures are utilised to illustrate the responses to the quantitative styled questions.

4.2 DEMOGRAPHIC PROFILE OF PARTICIPANTS

A total of eighteen interviews were conducted with employees from Capitec, Absa, Standard Bank, Nedbank and FNB. Respondents are considered to have the required knowledge and experience based upon their job role within the organisation. Respondents have roles within strategy; business analytics; payment innovation and technology. The job titles associated with these roles vary by organisation and respondents represent a diverse level of hierarchical organisational roles (e.g. business analysts and department heads).

4.3 PRESENTATION OF RESULTS

This section presents the findings collected from the interviews. This is guided by the research questions and the conceptual framework. Thus, the two major themes are alliances and NSD. The dynamic capability sub-themes include:

- Alliance Management Capability
    - Interorganisational Coordination

- Alliance Interorganisational Learning
  - Alliance Proactiveness
- NSD Capability
  - Sensing user needs and technological options
  - Conceptualising
  - Bundling and unbundling
  - Learning and adapting

4.3.1 RESULTS PERTAINING TO RESEARCH QUESTION 1

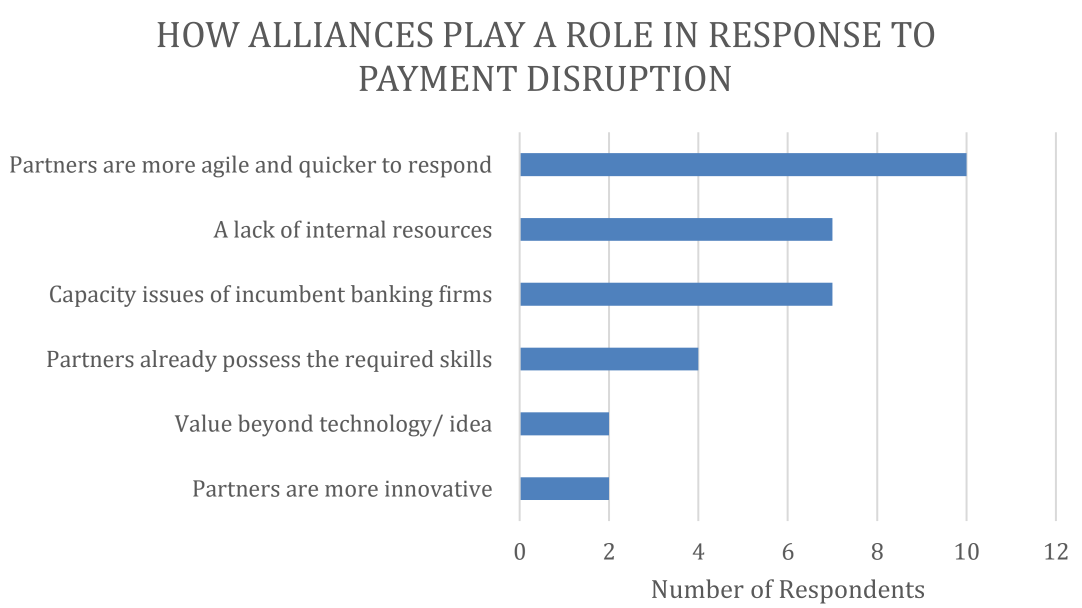
What role do alliances and NSD play in managing the opportunities and threats of payment disruption?

THE ROLE OF ALLIANCES IN RESPONSE TO PAYMENT DISRUPTION

Do alliances play a role in response to payment disruption?

All 18 respondents agree that alliances play a role in response to payment disruption

How do alliances play a role in response to payment disruption?



The key themes which emerged in accordance with how alliances play a role in response to payment disruption are:

Partners are more agile and quicker to respond

> *"They provide flexibility that your own systems or processes can't cater for, so alliances help with ubiquitous solutions and quicker speed to market."*

> *"Alliances help in providing scaling options to our solutions and also enable quicker adoption and/ usage of emerging technology."*

> *"They play a significant role. With all the FinTech's that are coming up, you can't do everything. The banks take time to evolve so the FinTech's can do it quicker."*

Capacity issues of incumbent banking firms

> *"We tend to only enter into an alliance if we have exhausted all of our internal avenues and say, okay, we can't do this ourselves and alliances are the way forward. This may be because of capacity and competing priorities."*

> *"You can't do everything. Alliances allow us to do more than our capacity."*

A lack of internal resources

> *"We partner with organisations that possess the skills and capabilities that we don't have in house."*

> *"Retaining and finding the right skills is difficult for banks, people with those types of skills want to work in dynamic environments and become frustrated with the slow, cumbersome banking processes."*

Partners already possess the required skills

> *"Alliances help in that you can partner with someone who either has the idea or the skills already or they can deliver faster."*

> *"By leveraging their expertise, it speeds up the process of product development rather than building all the capabilities internally."*

Partners are more innovative

> *"These organisations are at the forefront of innovation, they are built on it. We leverage their innovativeness."*

> *"They are more innovative, they don't have the legacy issues we have."*

Value beyond technology/ ideas

> *"I think both parties need to bring something to the table. We need to identify what is being brought to the equation, if it's just new tech it can be copied, if it's just a new way to pay, there's nothing really innovative at the end of the day. It can be built, it can be rolled out by anyone with the capability. If we look at the services over and above that's where it gets interesting. What value are they adding to the actual payment itself?"*

> *"Partnerships should add to the whole value ecosystem."*

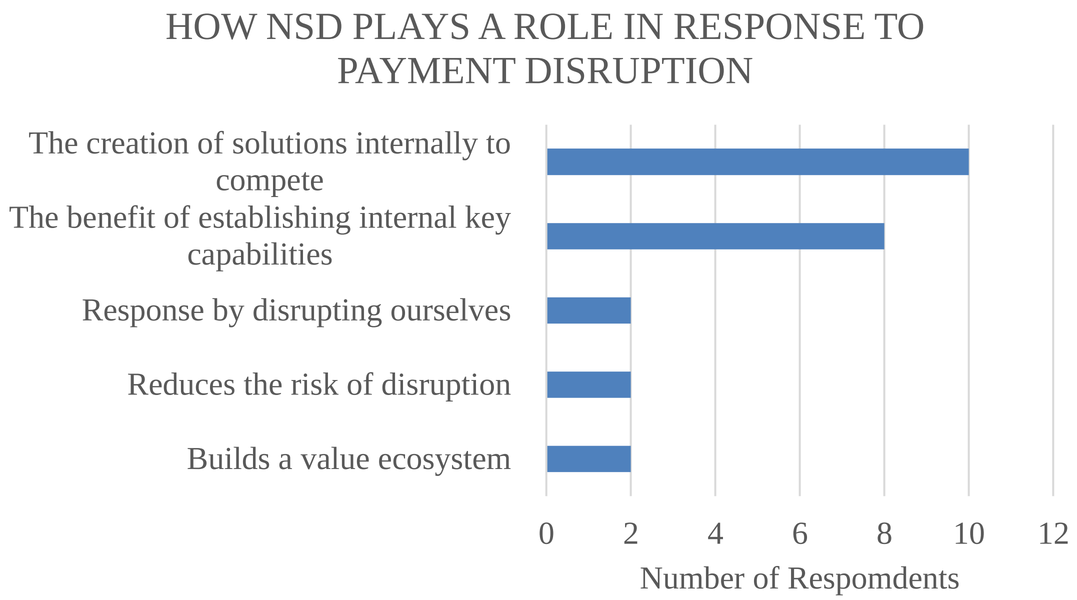
<u>We successfully manage alliances</u>

THE ROLE OF NSD IN RESPONSE TO PAYMENT DISRUPTION

<u>Does NSD play a role in response to payment disruption?</u>

All 18 respondents agree that NSD plays a role in response to payment disruption

How does NSD play a role in response to payment disruption?



The key themes which emerged in accordance with how NSD plays a role in response to payment disruption are:

The creation of solutions internally to compete

- *"We continue to look to develop new services internally to compete with potential payment disruptors."*
- *"Helps us refine or design old/existing payment solutions."*
- "*New services help improve our value propositions as they would inevitably be built to address client needs."*

The benefit of establishing internal key capabilities

- *"For some key capabilities which we deem to be a key value differentiator going forward, we will aim to develop these internally."*
- *"We prefer to build capabilities internally, we can then utilise these for other projects or uses, it's an investment in long term capability."*

Builds a value ecosystem

- *"Traditional payments really service one component of a transaction, so it is really important to understand new services being developed that include pre and post customer experiences. Just think of Uber."*

- *It is not enough to offer a convenient product; the entire ecosystem needs to enable convenience and good customer service."*

Reduces the risk of disruption

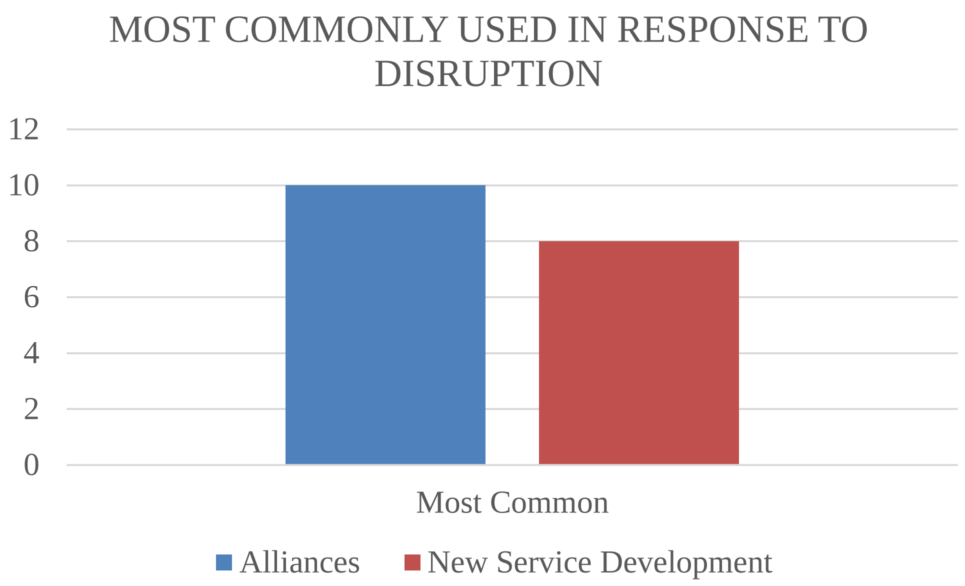
- *"Developing new methods of payment reduces the risk of disruption."*

Response by disrupting ourselves

- *"Allows the business to respond to new entrants and disrupt itself first."*

<u>We successfully manage NSD</u>

The most commonly used in response to payment disruption



4.3.2 RESULTS PERTAINING TO RESEARCH QUESTION 2

How do firms strategically manage their alliance and NSD capabilities in the provision of payment services?

These results are discussed in accordance with sub research questions 2.1 and 2.2.

4.3.3 RESULTS PERTAINING TO RESEARCH QUESTION 2.1: ALLIANCES

In the face of disruption, what are the inherent aspects of the firm which act as enablers and barriers to a successful response through alliances and NSD?

ENABLERS OF THE SUCCESSFUL PERFORMANCE OF ALLIANCES

The key themes which emerged in accordance with what respondents consider routines as enablers of successful alliances:

Regular Communication

- *"Regular stand-up meetings (daily if possible), weekly planning meetings."*
- *"Regular engagement with current partners, clear communication with honest and candid feedback. I think knowledge sharing workshops are greatly beneficial."*
- *"Frequent interactions and meetings."*

Policy and guideline definition

- *"There should be some form of alliance management policy and the policy defines a few things: defines the methodology of how you take the partners on and how you onboard them into your business and how you actually manage them on a day to day basis. Who the responsible business officer is, who is actually going to represent these guys if something goes wrong and a clear exit strategy."*
- *"Specific onboarding routines need to be in place and utilised."*
- *"You need procedures and guidelines for introducing new partners and for facilitating the relationship ongoing."*

Governance structures/ Stakeholder management

- *"Having a person who takes complete sponsorship and ownership for the relationship…. You can't just let them fumble along on their own."*
- *"You need dedicated relationship manager."*
- *"There should be a partnership team."*

Autonomy enablement

- *"Letting them have autonomy but having a very focused ownership."*
- *"It's about leaving the alliance to do what they do best and not completely swamping them in the bank. So, I tend to run the alliances separately. So that means that they retain their identity, which is what we brought them on for."*

Clear contracts and agreements

- *"Legal contracting to ensure clear ownership of intellectual property and appreciation value of the product being developed."*
- *"Clear scope of work agreements and KPIs that mandate the relationship between the parties."*

Joint planning and decision making

- *"I think that co-development is important you need to plan, decide and develop together."*
- *"You need to develop solutions together; this integration of knowledge and skills is essential to offering solutions which are relevant to the Banks customers and compatible. Otherwise you risk having solutions which are more aligned with what the alliance can do and not compatible with the bank."*

Strategic Alignment

- *"Knowing your counter parties and aligning on strategy to bring disruption to the market."*
- *"Identifying shared benefits and strategic alignment very early during engagement."*

The key themes which emerged in accordance with what respondents consider barriers in managing alliances:

Bureaucracy and associated slow pace of decision-making and change

- *"Bureaucracy and the complicated nature of integrations, internal speed of implementation.*
- *"Red tape."*
- *"The banks take too long to react or to respond. Partners often complain that the bank was difficult to do business with."*

Poor communication

- *"Any miscommunication and misunderstanding."*
- *"Without regular and honest communication, the alliance cannot succeed."*
- *"Communication structures need to be in place."*

Legacy systems

- *"Historic outdated processes."*
- *"Navigating policy large corporate."*
- *"Due to the processes there is a considerable amount required to tick all the boxes to be deemed to have sufficiently motivated for the value of the alliance."*

Expectations not clearly outlined/ not appropriate

- *"Unable to identify clear shared benefits. It should be collaboration that does not sacrifice competition."*
- *"Incorrect success measures."*
- *"Misaligned incentives."*

Inadequate ownership structure

- *"Without a proper ownership structure then it leaves very little commitment both ways."*
- *"If you don't allocate responsibility to internal team members to manage the alliance."*

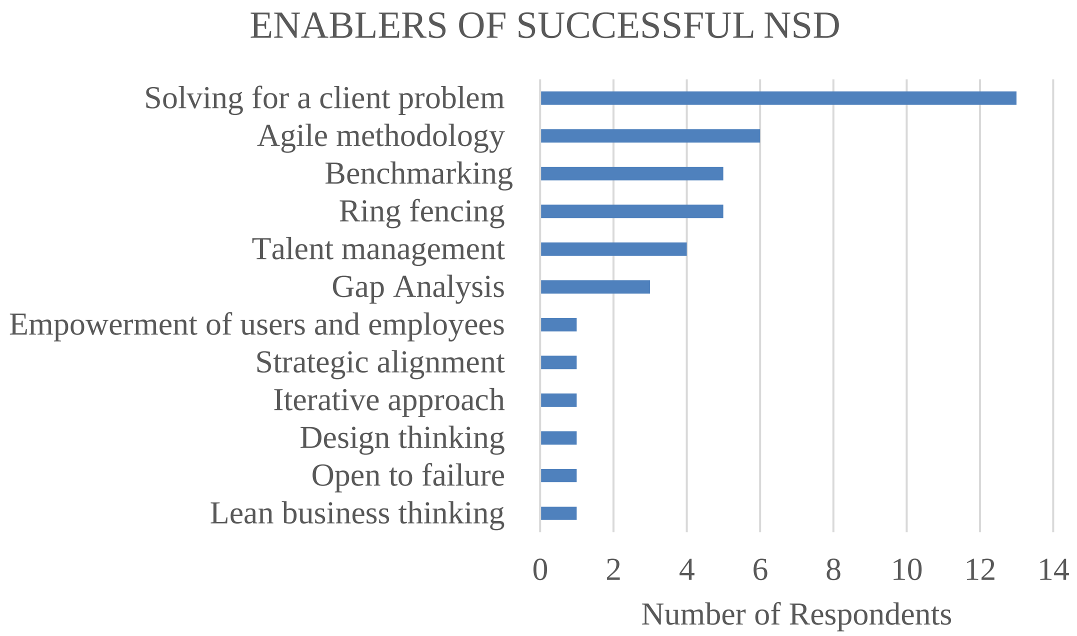
Stakeholders

- *"Not getting the right stakeholders involved."*

Loss of independence

- *"If you sacrifice the independence of the alliance you risk losing the value you originally sought."*

4.3.4 RESULTS PERTAINING TO RESEARCH QUESTION 2.1: NSD ENABLERS OF SUCCESSFUL NSD



The key themes which emerged in accordance with what respondents consider enablers of successful NSD:

Solving for a client problem/ understanding the need

- *"Solve for a client problem, environ scanning."*
- *"The most important is understanding the customer need you are trying to solve for and think broader than just the payment."*
- *"Clients input and validation before investment."*

Talent

- *"hiring the best talent in specific technical niches."*
- *"access to full stack developers."*

Agile methodology

- *"Agile-based project management to prototype quickly and create minimum viable products to test and then iterate upon."*
- *"Agile principles that you can use to manage the development process."*
- *"Agile project teams."*

Benchmarking

- *"You need to constantly map your product and offering against where the industry is and where the industry is going. Constant evaluation is required."*
- *"There needs to be constant assessment of the competition landscape and industry trends."*

Ring fenced

- *"We have a ring-fenced team of individuals actively trying to build new services for the Bank - these are incubated before being rolled into the traditional bank."*
- *"The creation of labs allows for improvement without breaking the bank."*
- *"One stream focuses on the current systems and infrastructure to optimise and improve the core banking systems and current products while another stream looks to accelerate development of new offerings and commercialise rapidly."*

Gap analysis

- *"Assess and check the offerings available. Where the industry is going and how far along we are."*
- *"Gap analysis."*

Empowerment of users and employees

- *"Empowerment of users and employees."*

Strategic alignment

- *"Ensure there is a business case and alignment to strategy."*

Iterative approach

- *"Iterative approach."*

Design thinking

- *"Design thinking."*

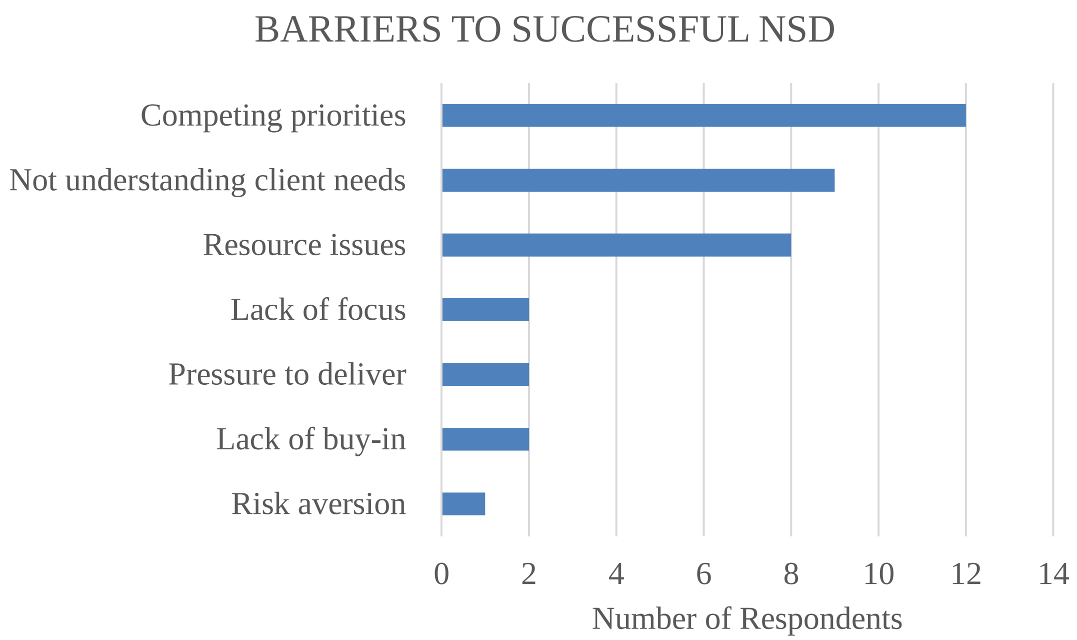
Open to failure

- *"Willingness to experiment and fail."*

Lean business thinking

- *"lean business thinking."*

<u>What do you consider the barriers to successful NSD?</u>



The key themes which emerged in accordance with what respondents consider the barriers to successful NSD:

Competing Priorities

- *"There are always changes or projects being logged from other areas. It's a constant juggle to say, well, what do you do and what do you drop."*
- *"Competing priorities and what we have to drop. Skills are required across projects and it boils down to competition for resources."*
- *"A lack of skills is not really a barrier issue it's more just volume and prioritisation. There are twenty big initiatives to be launched plus maintenance etc. It's a constant balance of how to use our resources between existing and new avenues. It's always a constant juggle."*

Not understanding client needs

- *"Lack of sufficient time applied to understanding the client problem."*

Resource issues

- *"Lack of resources or inefficient allocation of resources."*
- *"Resource scarcity not enough of the right skills and people."*

Lack of buy-in

- *"If the right people aren't committed there and convinced, success is unlikely."*

Pressure to deliver

- *"Premature deadlines or pressure to produce tangible results."*

Lack of focus

- *"lack of focus (trying to build too many things at once)."*

Risk aversion

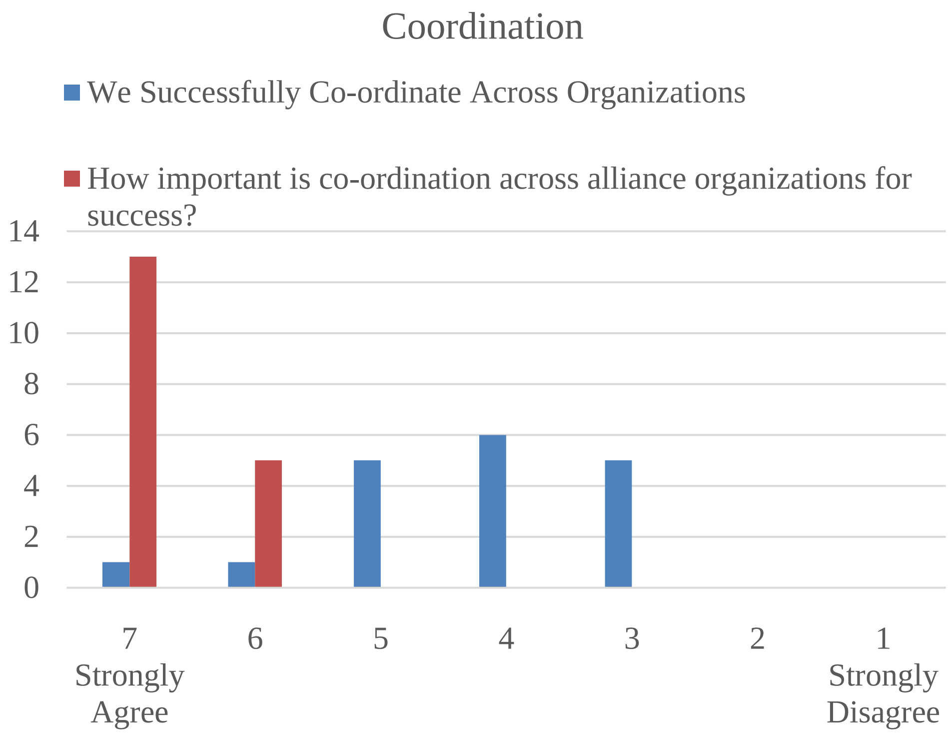
- *"Risk aversion (financial and otherwise)."*

4.3.5 RESULTS PERTAINING TO RESEARCH QUESTION 2.2: THE STRATEGIC MANAGEMENT OF ALLIANCES

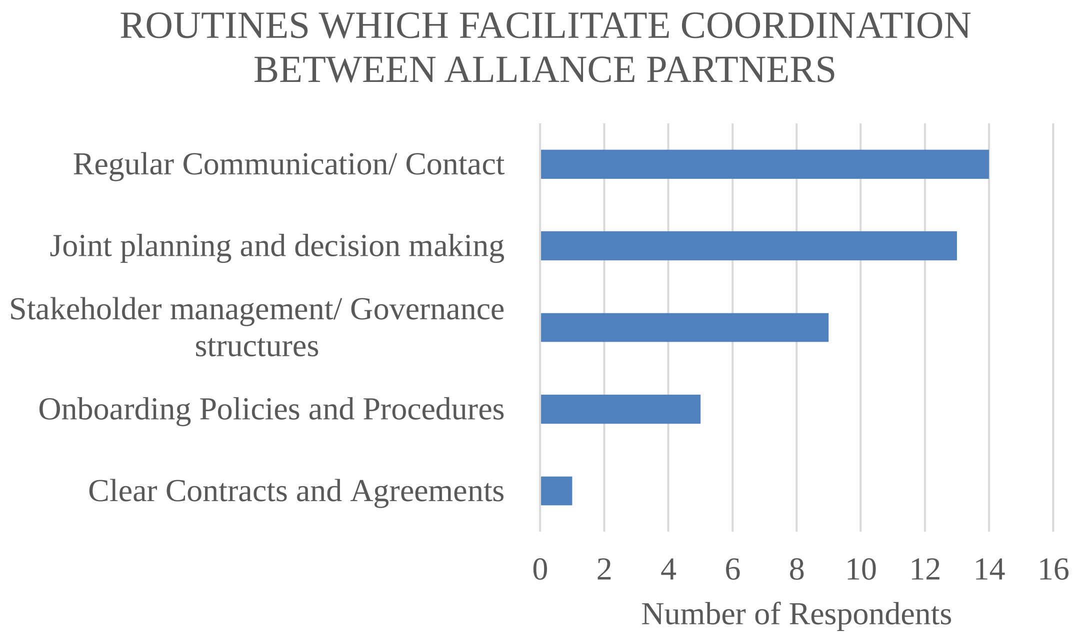
What is the role of alliance management dynamic capability and NSD dynamic capability?

ALLIANCE COORDINATION CAPABILTY

The importance of coordination across alliance organisations for alliance success



Routines to facilitate coordination between alliance partners



The key themes which emerged in accordance with what respondents consider the routines which facilitate coordination between alliance partners:

Regular Communication/ Contact

- *"Board meetings and business development meetings. We actively try to rope alliances into all levels of project implementation."*
- *"Regular engagement sessions."*
- *"Frequent contact through structured and scheduled interactions."*

Joint planning and decision making

- *"So, what will happen is we'll have the (bank name) team and the partner involved in planning sessions and decision making but again not in a way which entails micromanaging."*
- *"We operate within a federal model; every area of channel subscribes to a strategy and no decisions in these topics are taken in isolation. Specific forums and steercos are setup and all the areas and levels are represented including alliance partners.*
- *"During our forums and workshop sessions we investigate opportunities for continuous improvements and best practices with our partners input."*

Stakeholder management/ Governance structures

- *"We have a board and there is partner participation, ourselves and independent board members. So, it's a complete governance structure which enables the idea that they are operating within the right kind of rails and they've got the right equipment. If they don't have the right support, they'll die or basically die. This organisation is so huge that you have to have the right governance, the right focus."*
- *"Just like anything you need the right stakeholder management and you need the right objectives. It's very similar to running small business units, they just wear jeans all the time."*

Onboarding Policies and Procedures

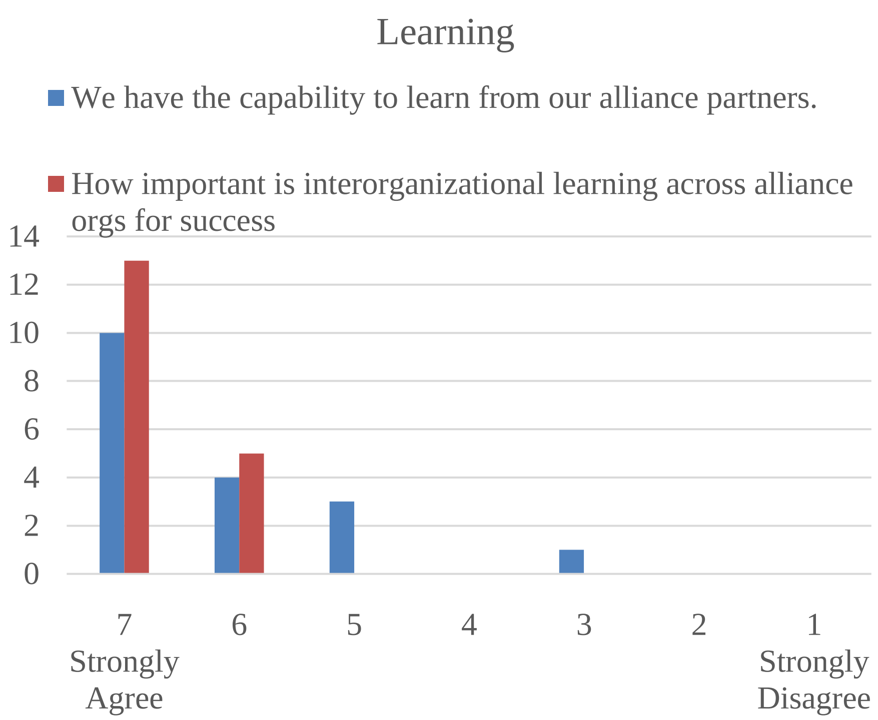
- *"Onboarding routines, training and facilitation."*
- *"Onboarding processes and procedures, non-disclosure agreements, third party information security assessment and use case analysis."*

Clear contracts and Agreements

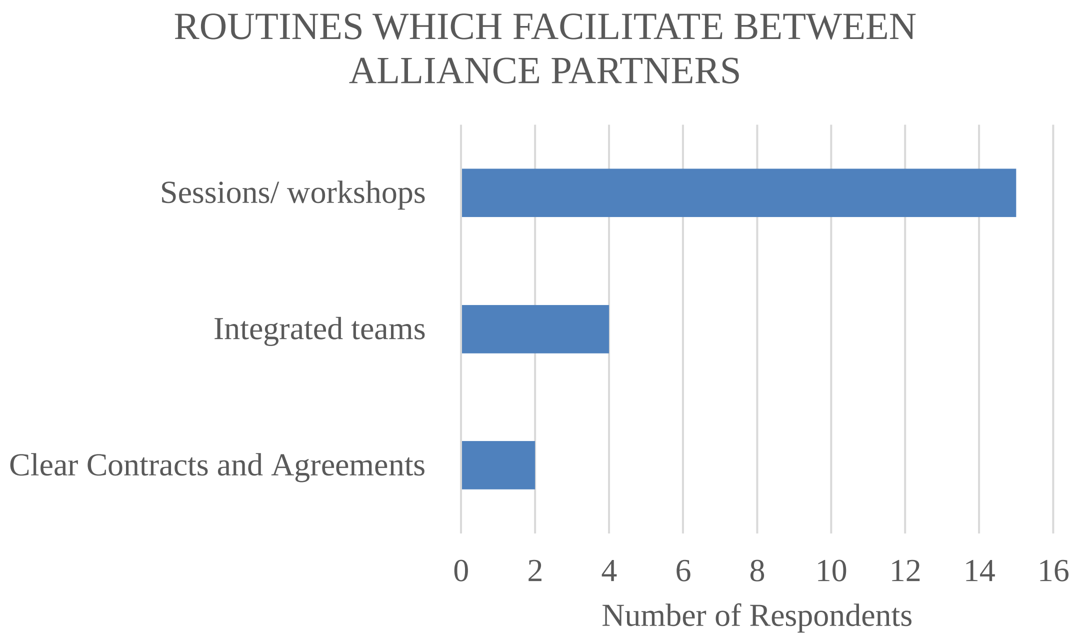
- *"Through service level agreements and in some cases revenue sharing agreements."*
- *"There is concrete value obtained through the deliberate sharing of information and through transparency. For this to happen the right agreements need to be in place."*

INTERORGANISATIONAL LEARNING

<u>The importance of interorganisational learning across alliance organisations for alliance success</u>



Routines to facilitate knowledge transfer between alliance partners



The key themes which emerged in accordance with what respondents consider the routines which facilitate knowledge transfer between alliance partners:

Sessions/ workshops

- *"Regular engagements and technical workshops sharing know how."*
- *"We have brainstorming sessions with all parties represented. The partner company CEO has become a real member of our team and I expect really deep insights from him and from us he gets a lot of the corporate knowledge."*
- *"Partners will host workshops to provide understanding of their technology or solutions."*

Integrated teams

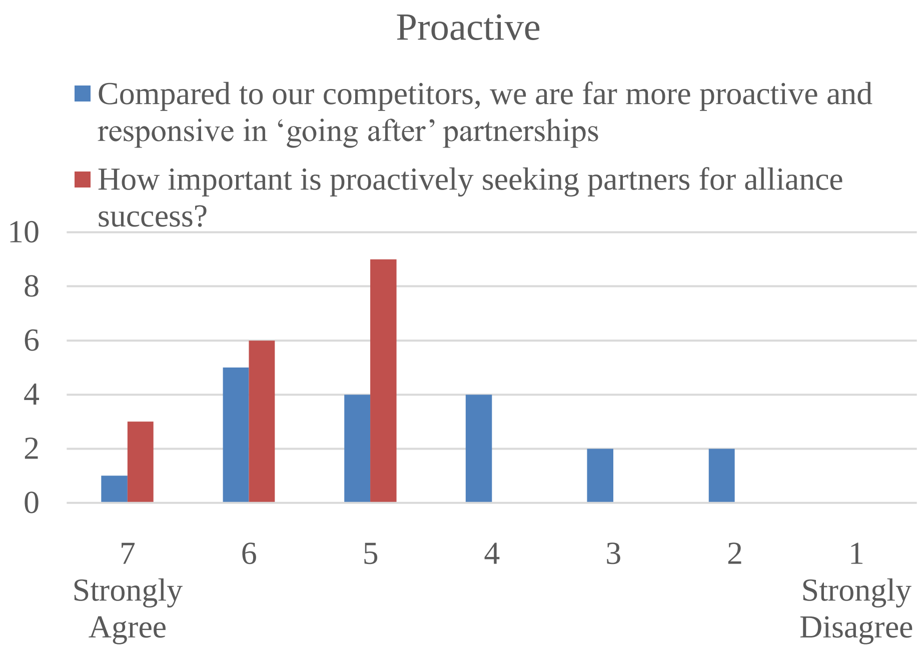
- *"Project teams include members of the bank as well as alliances, though interacting the knowledge is passed between individuals."*
- *"This happens organically as people work together in teams."*

Clear Contracts and Agreements

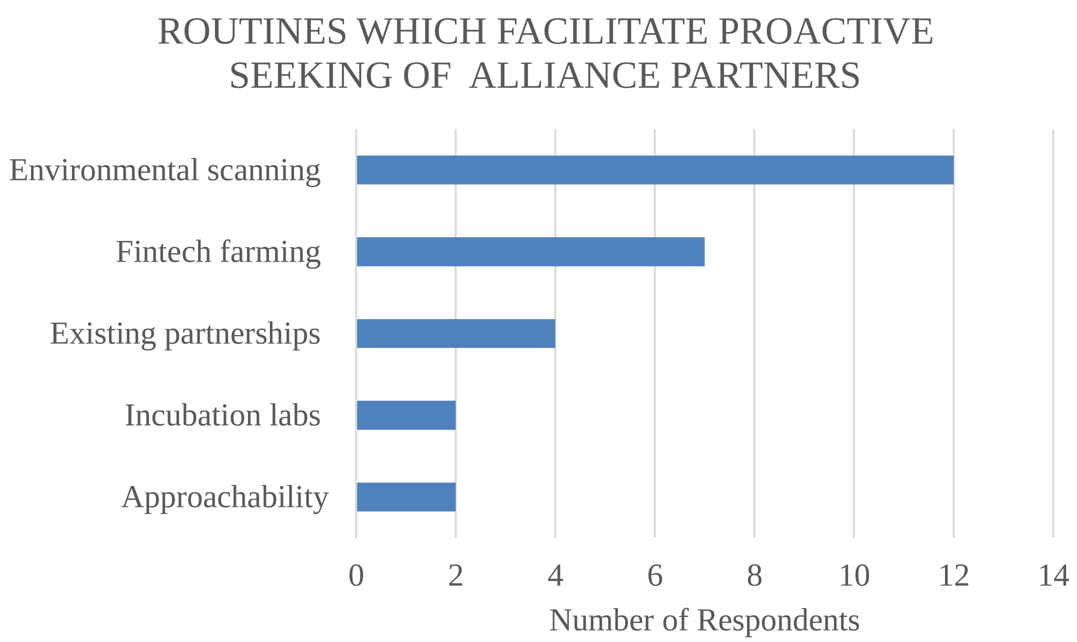
- *"Intellectual property management and protection policies."*
- *"If all parties have signed non-disclosure agreements people feel protected and are more willing to share information.*

ALLIANCE PROACTIVENENSS

<u>The importance of proactively seeking partners for alliance success</u>
<u>There is a proactive approach in seeking partners for alliance success in my organisation</u>



<u>Routines to facilitate the proactive seeking of alliance partners</u>



The key themes which emerged in accordance with what respondents consider the routines which facilitate the proactive seeking of alliance partners:

Environmental scanning

- *"By having a specific customer problem in mind and looking for an organisation whose products or services address that issue."*
- *"Environmental scanning both for what's being done and the who is doing it, with an eye for potential alliances."*
- *"Innovation scouting capabilities, dedicated resources looking at emerging payments."*
- *"Research and strategy teams always assessing and investigating best practices and the various providers in the market."*
- *"A lot of the FinTech scanning has fallen away as we've matured. Now we look to deal with a Mastercard or Visa or other big players in the payment space as our first port of call. There's not a hug amount of consideration given to farming for FinTech's."*
- *"Labs and Emerging Payments keeping an eye on the market. Strategic Investments department working closely with business."*

Fintech Farming

- *"We host events and run a co-working space which we invite the SA Fintech community to. Thus, we meet and connect with all the top Fintech's in the country and assess their offerings."*
- *"We scan the Fintech market, we call it Fintech farming.*

Existing partnerships

- *"We do look at existing partnerships, the skills held by these organisations and see how we could leverage these to address another identified client need."*

Incubation/innovation labs

- *"We went through a big phase of incubating, I'd say it's tapered off too much. Here, we would assist with the view of partnering with those with promising value offers."*

- *"The idea behind innovation labs is to create a mechanism for one, tracking these kinds of things or two, kind of, in housing them and incubating them away from the banking business itself."*

Approachability

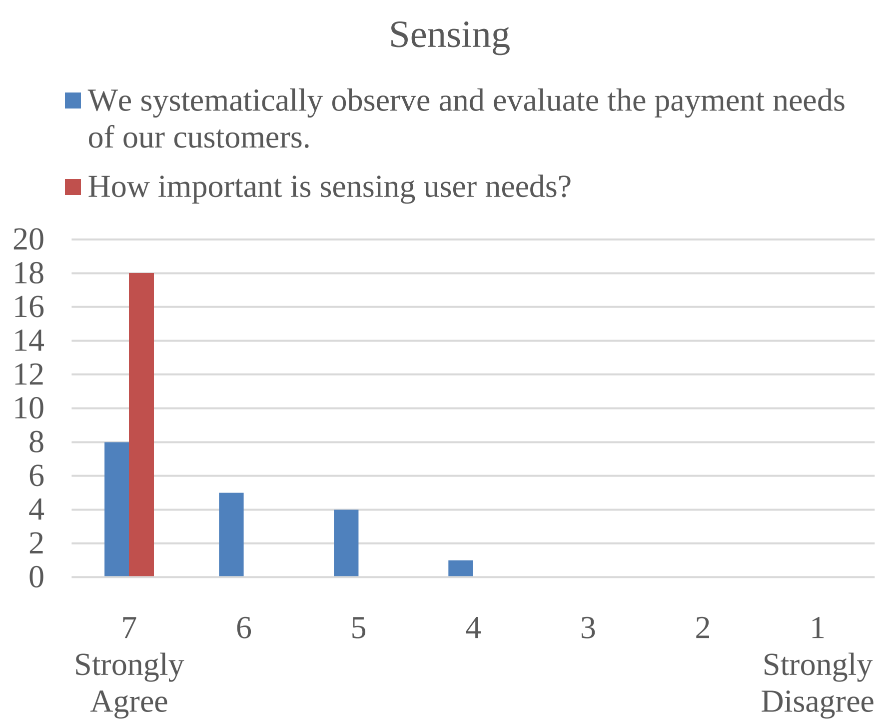
- *"We have the reputation of being open to considering those who approach us, our brand and our funding resources are attractive to those smaller firms looking to partner."*
- *"We have an easy structure for external parties to identify that this is the person to talk to."*

4.3.6 RESULTS PERTAINING TO RESEARCH QUESTION 2.2: NSD

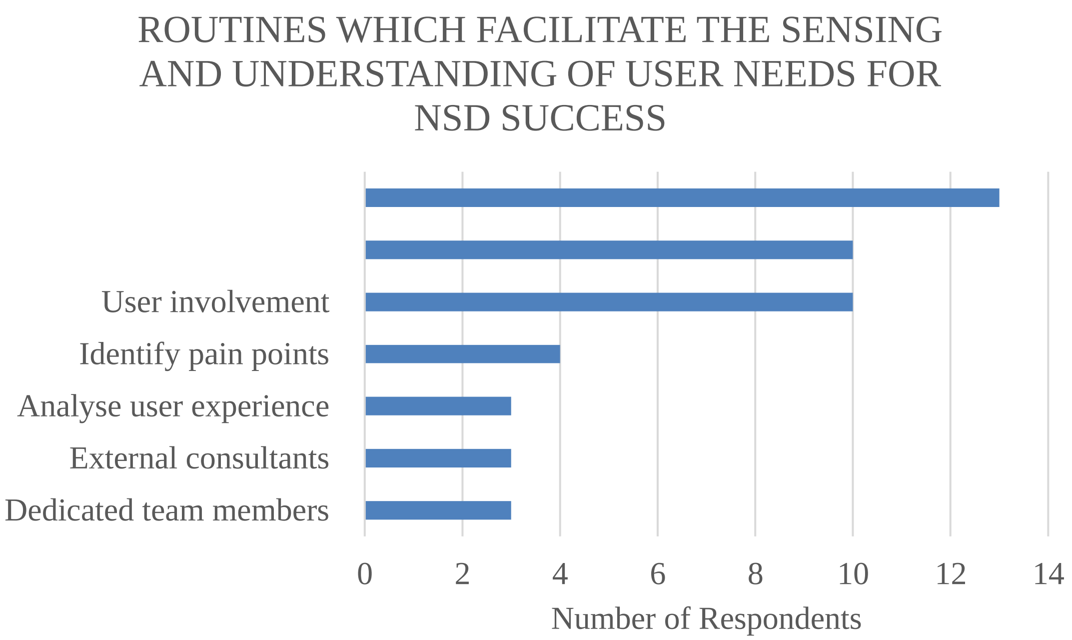
NSD DYNAMIC CAPABILITY

SENSING USER NEEDS

The importance of sensing user needs for NSD success



Routines to sensing and understanding user needs for NSD success



The key themes which emerged in accordance with what respondents consider the routines which facilitate the sensing and understanding of user needs for NSD success:

Traditional Market Research

- *"We do client surveys and customer interviews."*
- *"Customer research through in-person workshops, user interviews and customer panels"*
- *"We utilise independent market researchers to assist with understanding the customer needs and our product offerings in comparison to our competitors."*

Data collection and analysis

- *"Extremely focused on capturing and storing every piece of data- that at the time may seem relevant or not. We have an enterprise data warehouse. We are building excellent analytical capabilities to use the data. Through expert analysis we work with models to understand the picture and the story we are trying to tell."*
- *"Collecting data understanding the potential prioritisation of new features."*
- *"Data from online services (app, website, etc.), social media sentiment analysis."*

User involvement

- *"Heavily involve the users and validate requirements."*
- *"Start with customer engagement, work on putting value in the customers hands.*
- *"Working with software does not demonstrate value- working with clients directly does."*

Identify pain points

- *"We spend time through our research and development teams understanding existing customer pain points and proto-type solutions to remove this friction."*
- *"Sometimes customers do not understand the full implication and applications of technology. Rarely will they say, "I would really like this." The primary*

driver is to truly understand the customer's frustrations and address them with solutions."

Analyse user experience

- *"We have a UX team that run regular POC's and wireframes to show customers our intention for new payment solutions and enhancements."*
- *"UX and UI measurements."*

External consultants

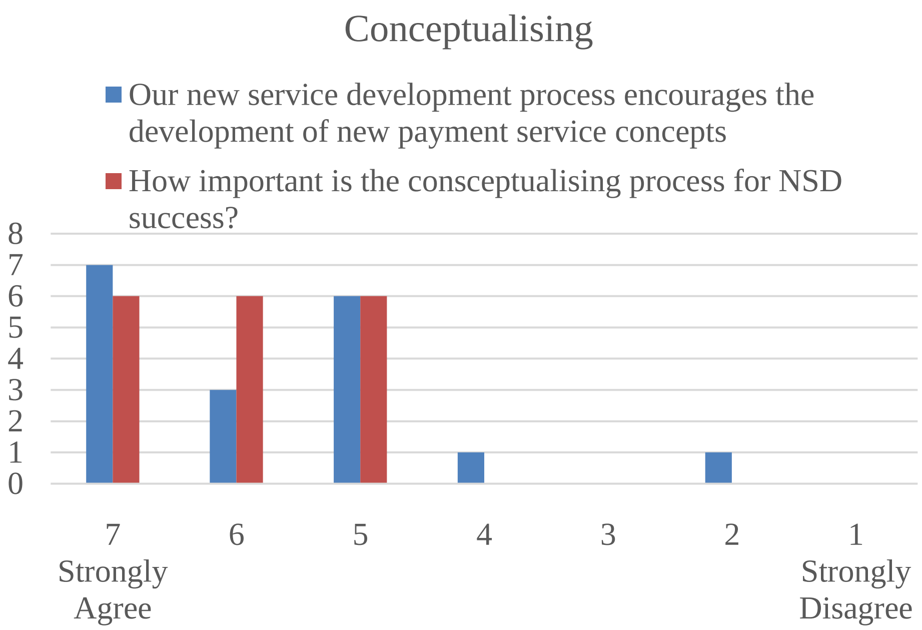
- *"We are advised on industry trends and recommendations, what we are doing well, what our competitors are doing well and what our users crave."*
- *"External consultants tell us where we should be going."*

Dedicated team members

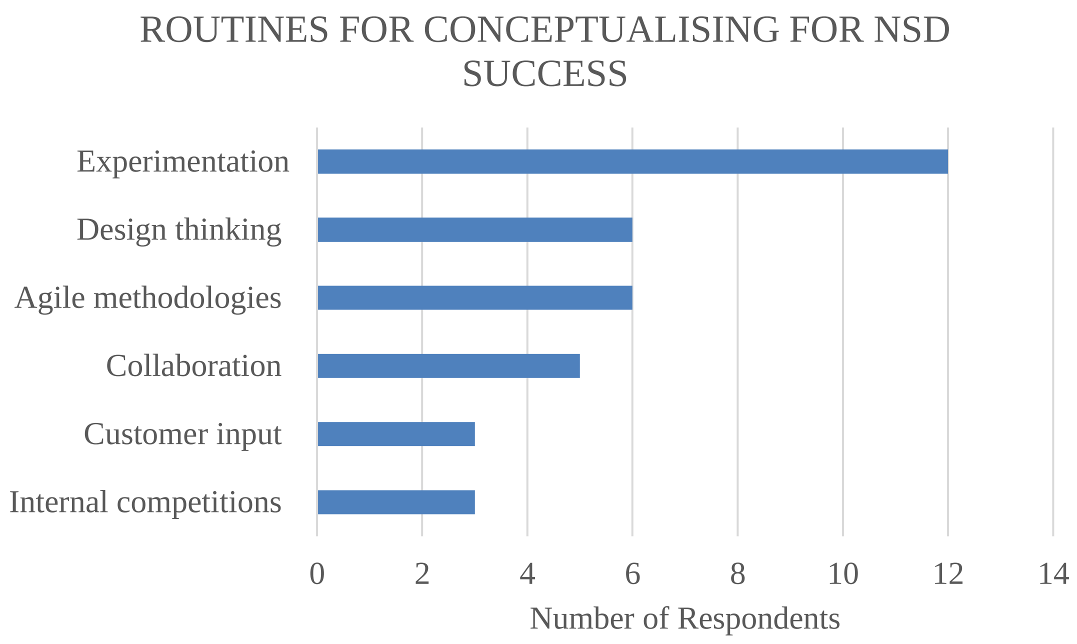
- *"Strong relationship managers to engage and understand client needs."*
- *"Dedicated emerging payments team and payments lab who sense needs of the customer."*

CONCEPTUALISING FOR NSD

<u>The importance of conceptualising for NSD success</u>



Routines for conceptualising for NSD success



The key themes which emerged in accordance with what respondents consider the routines for conceptualising for NSD success:

Experimentation

- *"Trial and error"*
- *"Prototyping and experimentation."*

Design Thinking

- "We utilize the design thinking method."
- "We have done a few workshops on design thinking and implement these practices."

Agile methodologies

- *"Along with agile principles."*

Collaboration

- *"Collaboration across business units is highly beneficial to innovation. We have a couple platforms to encourage collaborative innovation."*

- *"One of the key tenants is collaboration – can't drive any particular perspective because I own the channel I know what is delivered –*

Customer input

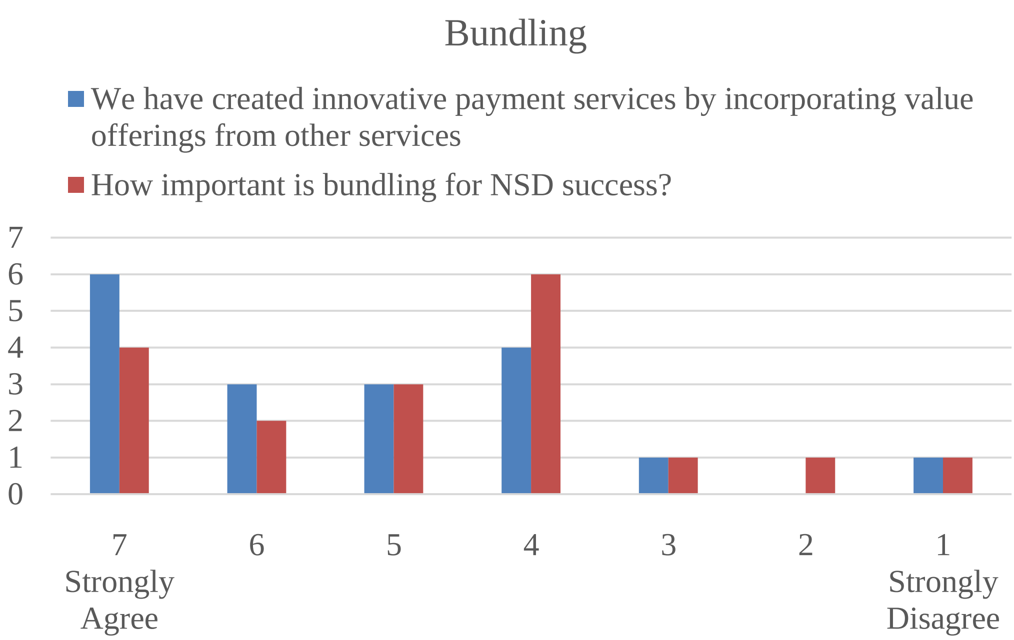
- *"Start with client engagement, work on putting value in the client's hands- working with software does not demonstrate value."*
- *"Understanding what clients need by working directly with them.*

Internal competitions

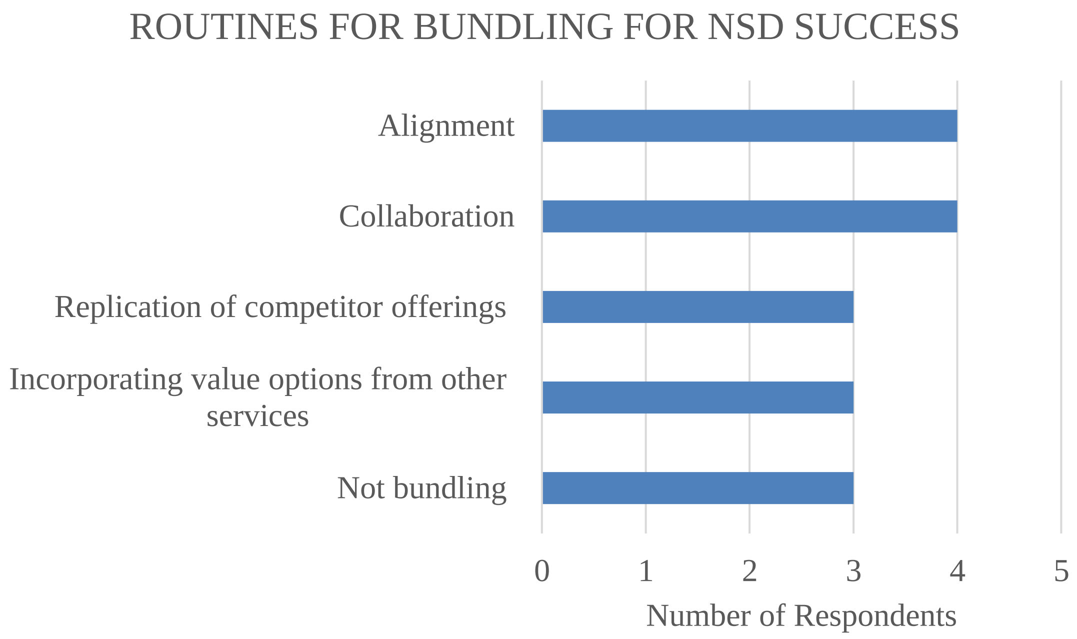
- *"We run an innovators program which creates teams of employees across different levels."*
- *"There is a competition-based program where a whole bunch of developers from across the business units come through for a weekend session where they tackle a problem that the bank has been struggling to solve for the past few months. There is a prize awarded for the best solution."*

BUNDLING FOR NSD

<u>The importance of bundling for NSD success</u>



Routines for bundling for NSD success



The key themes which emerged in accordance with what respondents consider the routines for bundling for NSD success:

Alignment

- *"Once you start bundling with another offering, it is essential to have alignment across the different practices."*

Collaboration

- *"We collaboration with internal business units to drive synergies."*

Replication of competitor offerings

- *"Some of our bundling approaches are a means of blocking off the competition. Say they offer a device plus a business bank account, we might go ahead and replicate that offer to block those guys from making significant headway in the market."*
- *"After assessing their success, we have followed our competitors approach to bundling in reward schemes."*

Incorporating value options from other services.

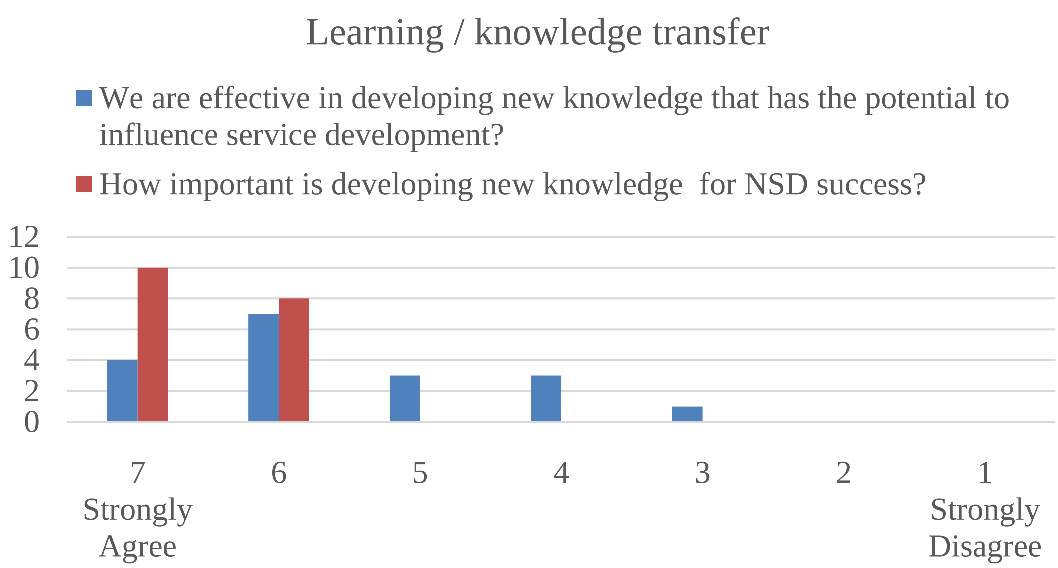
- *"We don't entirely discard existing services when developing new offerings. We try maintain existing options and through add on we aim to enhance customer experience."*

Not bundling

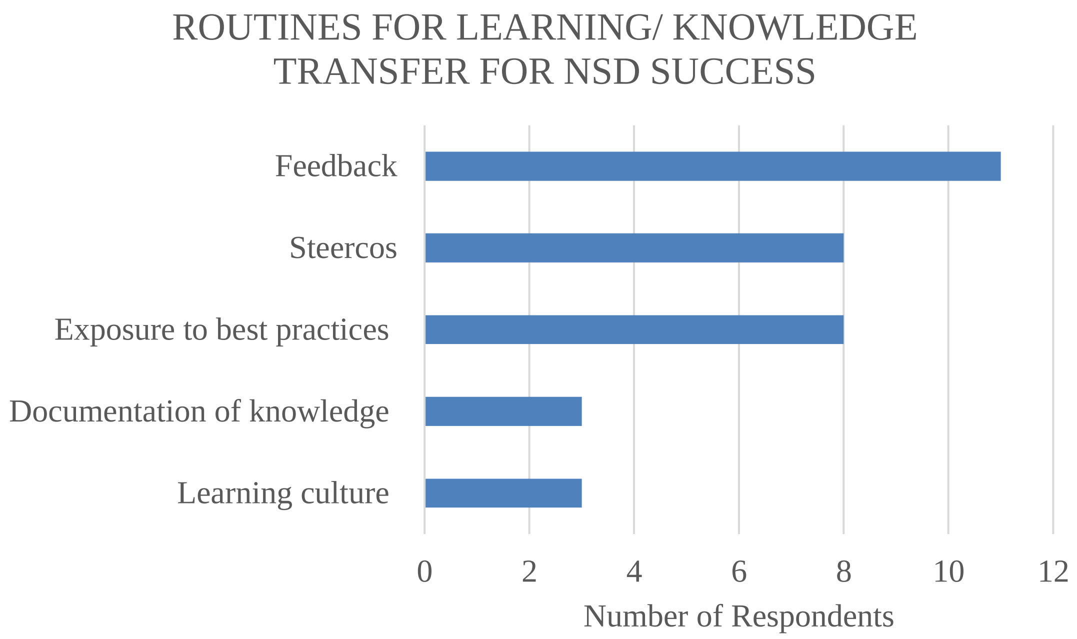
- *"We are keeping things simple. The issue with bundling is that customers never understand their bundles and what is in or out."*
- *"Clients sometimes don't understand the true cost, it should be obvious what they get and what they pay for. We prefer transparency without complex hurdles."*

LEARNING/ KNOWLEDGE TRANSFER FOR NSD

<u>The importance of learning/ knowledge transfer for NSD success</u>



Routines for learning/ knowledge transfer for NSD success



The key themes which emerged in accordance with what respondents consider the routines for learning/ knowledge transfer for NSD success:

Feedback

- *"Regular show and tells and shared learning through lessons learnt."*
- *"Regular stand-up meeting and feedback sessions."*

Steercos

- *"There is a lot of collaboration from a segment level. Steercos are key."*
- *"At the steercos we get together and share, what's on the roadmap, where's the market going, what we can do to partner with WhatsApp vs Facebook and all these things are considered at that level."*

Exposure to best practices

- *"We involve ourselves extensively in the banking network, especially internationally, to learn from their experiences."*

Documentation of learning

- *"We document knowledge and information and they are posted on internal wiki."*

- *"It is important to create internal briefs outlining things that have been learnt regarding customers, the market and things like that."*

Collaboration/ peer learning

- *"There is knowledge transfer through collaboration. When individuals work in teams they are equipping each other with knowledge."*
- *"Peer-learning and coaching plays a role."*

Presence of a learning culture

- *"The value of learning value is prioritised. Time, money and practices are made available to facilitate learning."*

  "There is a learning culture which directs the behaviour and processes."

<u>Additional Insights/ Important take away</u>

These are the responses to the free form question where respondents were asked given what had been discussed if they had any additional insights or reflections

The importance of a broad value offering

- *"We offer a lot more value offerings that support the payment piece, which is what makes the overall package for the customer."*
- *"What is important in the payment space is the value chain of customer experience pre/in/post the payment."*
- *"We know even globally payment revenues are slowly being eroded and thus it is unlikely that a business will survive solely on payment, it's what you are adding over and above."*
- *"I'm not convinced that one can be excessively competitive in this space as it has become commoditised, rather one needs to focus on value add."*

Choices in this context are driven by broader organisational strategy

- *"In the choice between alliances and new development and acquisitions, I think a lot of it hinges on strategy. We prefer to build capabilities internally, whereas some of our competitors don't."*
- *"It's all about the strategy, whether you just acquire or partner up and don't worry about the backend.*
- *"I think we've come through a strategic curve of maturity. We now have a nice mix of internal development and external partnerships."*
- *"Compared to other organisations there's a bit more rigor in assessing whether we really want to go into a partnership."*

Addressing legacy systems

- *"We are aware of the need to rework back end legacy systems if we are ever going to keep up, but it takes time and it's a massive undertaking. Those plans are in place, some are already happening but it's a lot harder for an operating bank to change the whole architecture vs a new bank that starts off with the latest stuff."*
- *We often miss the small opportunities, which could differentiate us further because we are too slow as a big corporate to move quick enough."*
- *"In the traditional space we are doing a lot of work around a payments modernisation program to get there but there is definitely work to be done."*

The role of regulation

- *"I would say regulation is big piece we all need to think about. In the case of alliances, you need to be careful that the industry does not perceive this as collusion."*
- *"The coming regulatory changes may change the landscape as smaller players aren't currently subject to the same regulations, if that changes it will be interesting to see the impact."*

Potential for further industry disruption

- *"I think this is an important area you are looking at. There is major potential for further disruption as new banks are being founded on digital platforms and on completely fluid structures where they can* *pivot quicker. We continue to be burdened by legacy stuff and banking systems are cumbersome to change."*

- *"We are less concerned about small Fintech's than what I would call the GAFS- the likes of Google, Apple and Facebook. We worry about big parties like Mastercard and Visa. The world is increasingly dominated by those digital giants."*

The role of an innovation culture

- *"It's important to have a clear innovative culture in the organisation so that then you can encourage the people on the ground to go beyond what they are expected to do and to consider the organisation as a whole."*

CHAPTER 5: DISCUSSION OF RESULTS

5.1 INTRODUCTION

The results presented in Chapter 4 will be discussed in this section as an analysis of the main findings. The discussion is organised by research question and is guided by the conceptual framework of the study. The existing theoretical findings obtained from the review of literature, which aided in the development of the conceptual framework and research propositions, will be discussed in accordance with the findings of this study. The interview results provide an opportunity to establish the relationship between the findings in the literature, and practice in the specific context of the incumbent firms in the South African banking industry.

5.1.1 RESEARCH QUESTION 1: DISCUSSION

What role do alliances and NSD play in managing the opportunities and threats of payment disruption?

The first research question intended to establish whether the formation of alliances and the development of new services, are strategic approaches undertaken by incumbent banking firms in South Africa, in response to the opportunities and threats of payment disruption. In addition, this question sought to establish how respondents deem these approaches to facilitate response. Lastly, to assess which of these approaches is more frequently used.

It was proposed that alliances and NSD are considered to play a role in response to disruption and that these are strategic approaches undertaken in an attempt to extend the firm's existing resource base and respond to the threats and opportunities associated with payment disruption, through innovative service offerings. In addition, it is proposed that the most commonly practiced strategic approach would be NSD, followed by alliances.

ALLIANCES

All respondents reported that alliances play a role in the response to payment disruption. This finding corresponds with the study proposition and the literature documenting the strategic benefit of utilising alliances in turbulent environments or specifically in the case of disruption. Researchers also noted the strategic benefit of alliances in obtaining competitive advantage (Russo, 2017; Paap & Katz, 2004; Sandström et al., 2009). This correlates with an incumbent firm's objective to maintain or further enhance competitive advantage, in the context of disruption.

In terms of the rational for utilising alliances, the literature spoke to the need to extend a firm's resource base beyond their own resources (Kohtamäki et al., 2018; Zamir, Sahar, Zafar, 2014; Schilke, 2013). Alliances allow access to additional competencies, specialisations, vital resources and knowledge (Zamir et al., 2014; Schilke, 2013; Russo, 2017; Kohtamäki et al., 2018, Kale & Singh, 2007). In the context of intense competition and without additional resources, a firm may struggle to compete or rapidly enter a market, as is required in the case of disruption (Zamir et al., 2014; Schilke, 2013).

Respondents mentioned the need for additional resources, both from the point of not possessing the required skills or competencies in house and owing to *capacity issues and competing priorities*. They also echoed the idea that utilising a partners existing expertise allows for a more rapid response than developing capabilities internally. Alliance partners are perceived to be more agile whilst banks are slow to evolve. An interesting perception of a minority of respondents was the nature of the value the alliance partner should bring to the firm. These participants sought value beyond technology and ideas, noting that technology can be copied, and that true innovations add value to the whole ecosystem.

The literature also made mention of the "shared" component existing in an alliance, meaning that risks, costs etc. are shared. The respondents in this study did not specifically address these considerations, nor did they acknowledge the potential to block the alliance partner as a competitor (Zamir et al., 2014; Schilke, 2013; Russo, 2017; Kohtamäki et al., 2018; Møller et al., 2017, Kale & Singh, 2007). According to

Zamir et al., (2014) gaining knowledge is one of the most beneficial aspects of entering into an alliance, respondents failed to address the learning/ knowledge dimension specifically in this context; however, when discussing capabilities there were resounding affirmations of the value of knowledge and learning gained through alliances.

NSD

As was the case with alliances, all respondents perceive NSD to play a role in the response to disruption. This aligns with the proposition of this study. Literature accounted for the role of NSD, both from an innovative offering perspective as well as in getting to market before one's competitors (Froehle & Roth, 2009). Without innovative NSD, firms (in particular service firms) would fail to meet the changing needs of their customers, which is cornerstone to industry disruption (Kindström et al., 2013).

The majority of respondents echoed the need to develop new services in order to compete. These NSDs improve the banks value proposition and by nature should address changing customer requirements. NSD ensures that incumbent firms do not stagnate in their perceived dominance, only to be unseated by a competitor's disruptive payment service innovations.

A minority of respondents reflected on the benefits of NSD as opposed to utilising an alliance. The value of investing in key NSD capabilities internally, is perceived to be the ability to leverage these in the future for other projects and in addition, this supports the drive towards a value ecosystem as opposed to an isolated offering.

An uncommon but interesting mention is the idea of NSD practices allowing a firm to disrupt itself, thereby circumventing being disrupted by others.

In the context of disruption, Sia et al. (2016) noted that banking firms would need to consider which capabilities should remain in-house and which should be sourced from strategic partners. When discussing important take-aways, a minority of respondents recognised that the broader organisational strategy is a motivator for the choice between alliances and NSD. Whilst one firm may have a preference for NSD, their competitors may favour alliances. Each firm would need to trade off the benefit of internal competencies to leverage across the organisation, or a more rapid response with less investment.

It was proposed that South African banking institutions would most frequently utilise alliances over NSD in their response to the potential for disruption. This proposition was based upon the feedback from industry experts as well as articles. The results of the study were congruent with this proposition. The majority of respondents perceive their firm to successfully manage NSD, whilst the majority were neither in agreement nor disagreement regarding the ability of their firm to successfully manage alliances. Thus interestingly, it appears that whilst firms are said to utilise alliances more than NSD, they were reported to manage NSD better than they do alliances.

5.1.2 RESEARCH QUESTION 2: DISCUSSION

How do firms strategically manage their alliances and NSD?

5.1.3 RESEARCH QUESTION 2.1: DISCUSSION

In the face of disruption, what are the inherent aspects of the firm which act as enablers and barriers to a successful response through alliances and NSD

The discussion with respondents regarding the general routines which act as enablers and barriers of alliance and NSD performance, was an attempt to establish whether interorganisational coordination, learning and proactiveness capabilities (in the case of alliances) and signalling user needs and technological options; bundling; conceptualising; and learning (in the case of NSD) would be considered important without prompting. Asking respondents to consider enablers and barriers was intended to evoke a different thought pattern and top of mind considerations, potentially eliciting alternate insights. These were unprompted responses, communicated prior to the discussion regarding the specific elements of the conceptual framework. In addition, this allowed for the potential to identify any routines which could correlate with other second-order dynamic capabilities, not addressed in the conceptual framework of the study, but specifically relevant to payment disruption in the banking industry.

ALLIANCE ENABLERS AND BARRIERS

In terms of routines which act as enablers, the most commonly mentioned response is the necessity for frequent *communication* through *regular interactions* and meetings. The majority of respondents also reflected on poor communication as one of the barriers to successful alliances. Scholars considered frequent communication to underpin *interorganisational coordination capability*. In addition, communication is associated with the flow of knowledge and thus is also a routine linked to *interorganisational learning* capability (Schilke, 2013)

A minority of respondents reflected on the need for policy and guideline development, including clear contracts, scope of work agreements and KPIs. Respondents also acknowledged that when expectations are not clearly outlined or agreed, this creates a barrier. The enabling role of strategic alignment was also recognised. Schilke and Goerzen (2010) noted the need for integrated workflow management as a consideration of *interorganisational coordination capability*.

The minority mentions of the need for *joint planning and decision making* are congruent with researchers Schilke, (2013); Zollo et al., (2002) and Kohtamäki et al., (2018) and their understanding of routines supporting *interorganisational coordination*.

Excessive bureaucracy and legacy systems were mentioned by the majority of study respondents as barriers to alliance success. Previous research had also acknowledged that firms are hampered by cumbersome legacy routines. The rules and procedural orientation of highly bureaucratised firms has been demonstrated to slow decision making and response to change. When discussing important takeaways, a minority of respondents also noted the need to be aware and capable of navigating the regulatory environment. In addition, it was by a small number of respondents that addressing legacy systems had become a priority for their firm. In his research, Assink (2006) reflected on the burden of stringent industry regulation and compliance requirements in the banking sector.

The literature review points to the need for a *dedicated alliance structure* as an enabler of alliance success. (Ireland, 2002; Russo, 2017; Kale et al., 2002; Kohtamäki et al., 2018 and Kale & Singh, 2007). Concurrent with the literature, many respondents recognised the need for specific governance structures and relationship owners to oversee the arrangement, in addition many respondents considered a barrier to be an inadequately defined governance structure. This dimension was not encapsulated in the conceptual framework of this study. In addition, respondents noted *autonomy enablement*, with focused ownership, and the loss of autonomy, as a contributor or hamper to success, this also wasn't considered within the conceptual framework. A minority of respondents mentioned that failing to involve stakeholders created a barrier, a dedicated alliance structure could circumvent this from occurring.

Respondents did not pre-emptively mention any enablers or barriers which this researcher could construe as related to alliance proactiveness.

NSD ENABLERS AND BARRIERS

Researchers gave particular focus to the *sensing of user needs* and the role of customers as co-creators of NSD, through input, idea sourcing and testing (Agarwal & Selen 2009; Kindström et al., 2013; den Hertog., 2010; Storey et al, 2015). Respondents considered solving for a client problem to be an enabler of NSD success and in turn not understanding client needs to be a barrier. Benchmarking and gap analysis were also considered by respondents, with recognition that these practices are a means of understanding the competition landscape and what customers are being offered by competitors in comparison to their own offerings, thus allowing for the determination of user needs to drive NSD.

Two of the most frequently mentioned barriers to NSD were competing priorities and a lack of resources. Researchers considered the allocation of financial and human resources specifically to innovative projects, a means of addressing the potential issue of competing priorities. Whilst the notion of *coproducing* was not included in the conceptual framework, this capability also has the potential to address competing priorities and a lack of resources, as discussed with regard to alliances.

Respondents individually made mention of the role of approaches such as lean business thinking, design thinking, an iterative approach and openness to failure. Agile methodology was reported by a number of respondents. One could conclude that these are related to the *conceptualising capability* as outlined by den Hertog (2010) and Agarwal and Selen (2009) to be concerned with NSD design routines. Fischer et al. (2010) noted the need for orchestrating internally, for example establishing routines for direction and efficient decision-making with relevant stakeholders and specific routines and processes relevant to NSD teams.

Barriers to NSD success mentioned by respondents included a lack of focus and managerial or stakeholder buy-in. Existing research also acknowledges the role managerial buy-in and decision-making (Tripsas & Gavetti, 2000; Molla et al., 2016; Lucas & Goh (2013). According to Kaplan (2008) senior managerial support is integral for NSD and that this buy-in assists in overcoming other organisational barriers.

The concept of ring-fencing is an interesting revelation. Respondents noted the need to separate the NSD activities from the core banking structure. The literature examined for this research did not specifically address this notion.

The role of learning capability and bundling were not mentioned or alluded to by respondents in the discussion of enablers and barriers to NSD success.

Assink (2006) and Yu & Hang, 2010 considered incumbent firms to be hampered by their own achievement. This past success creates an aversion to disrupt the status quo and the reliance on the familiar creates a barrier to responding to disruption potential. Respondents did not acknowledge this is their discussion of barriers.

5.1.4 RESEARCH QUESTION 2.2: DISCUSSION

What is the role of alliance management dynamic capability and NSD capability

Alliance Management Capability

As mentioned, researchers have identified alliance management capability as a driver of alliance success (Sluyts et al., 2011; Schilke & Goerzen, 2010; Schilke 2013). Interorganisational coordination, interorganisational learning and alliance proactiveness were found by Schilke and Goerzen (2010) in their research of alliance management capability, to be routines which enabled alliance management capability.

In order to determine the role of the alliance management dynamic capability in responding to payment disruption, this research sought to ascertain the perceived importance of interorganisational coordination, interorganisational learning and alliance proactiveness as second-order dynamic capabilities and the routines deemed to enable them.

It was proposed that alliance management capability does play a role in response to disruption, in that it facilitates alliance success. This proposal is in turn based on the proposition that interorganisational coordination, interorganisational learning and alliance proactiveness are important for alliance success.

INTERORGANISATIONAL COORDINATION

The results of the study, where respondents expressed strong levels of agreement, suggest that interorganisational coordination is a key dimension of alliance success and thus response to payment disruption in the context of the South African Banking Industry.

In terms of the routines which facilitate coordination, Schilke & Goerzen (2010) and Zollo et al., (2002) make specific mention of the need for combined decision-making. Respondents agree with their assertion and note the use of forums and planning sessions where stakeholders are represented.

The majority of respondents recognise the need for *regular engagement and communication*, through structured and scheduled meetings. This echoes the views of multiple researchers **(**Zollo, et al., 2002; Schilke & Goerzen, 2010; Sluyts et al., 2011). Kohtamäki et al. (2018), referred to this as relational embeddedness, a process of communicating and interacting, thus developing cohesion.

The need for governance routines was also frequently mentioned. These were noted to be particularly necessary within the incumbent banking firms as these organisations are large and difficult to navigate, requiring a focused support structure**.** This aligns with the literature findings regarding the role of governance structures in facilitating the collaborative process (Ireland, 2002; Russo, 2017; Kale et al 2002; Kohtamäki et al., 2018; Kale & Singh, 2007).

A minority of respondents mention routines to include onboarding policies and procedures and clear contracts and agreements. Karimi and Walter (2015) and Sia et al., (2016) acknowledge the need to establish specific procedures and policies for alliance teams. The team composition from different organisations and potentially different business units, necessities a novel operational approach.

Respondents provided diverse views with regard to the whether their firm successfully coordinate alliances, with the majority indicating they neither agree nor disagree.

INTERORGANISATIONAL LEARNING

In his research of inhibitors of disruptive innovation capability, Assink (2006) noted the value of alliances in addressing the potential for disruption. However, he acknowledged that these approaches often fail as the intention is to acquire products as opposed to knowledge. Interorganisational learning is one of the capabilities most widely accepted by researchers as necessary for organisational success (Ireland, 2002; Kale & Singh, 2007; Kohtamäki et al., 2018; Schilke, 2013; Singh, 2008). Kale and Singh (2007) focus on this dimension and go as far as to document alliance learning as a primary means of alliance success. Respondents were unanimous in their assertion of the importance of interorganisational learning, communicating strong levels of agreement. They outlined workshops and brainstorming sessions as a frequently used means of knowledge transfer between partner firms. A minority of respondents mentioned the use of knowledge databases and knowledge sharing platforms.

Results reflect that IP contacts and agreements, support the sharing of knowledge and thus alliance learning capability. In addition, respondents suggest that employees from both organisations work alongside each other in integrated teams. Through these interactions knowledge is exchanged.

Most respondents strongly agreed that their firm has the capability to learn from their alliance partners. Only a small proportion disagreed.

ALLIANCE PROACTIVENESS

Schilke & Goerzen, (2010) noted the value of alliance proactiveness capability, which entails the identification of potential alliance partnerships. Respondents agreed that there is value in proactively seeking partners to enable alliance success, however the level of agreement was more moderate than for interorganisational coordination and learning.

Environmental scanning routines were identified by respondents as a means of enabling alliance proactiveness capability. Scanning activities may be undertaken with a specific customer problem in mind or as a means of understanding what is being offered in the industry.

An industry specific mention is the notion of Fintech farming noted by a minority of respondents. This is a scanning activity which is specific to the Fintech market. Respondents mentioned the use of events and co-working spaces as accesses points. In a similar vein, respondents acknowledged incubation and innovation hubs for identifying alliance partners. Finally, respondents acknowledged routines to examine the possibility of leveraging established relationships across a different need.

There were diverse responses as to whether the respondents' firm was more proactive and responsive in going after partnerships than their competitors.

NSD Capability

NSD capability is considered vital in the context of digital disruption where customer demands are shifting, and competitors offer new solutions based on newly developed technologies in order to service these changing needs (Schilke, 2013). In order to achieve service innovation, through continuous development and the exploitation of the logic of service provision, firms require the dynamic capability of NSD (Teece, Pisano, & Shuen, 1997; den Hertog et al., 2010).

In order to determine the role of NSD dynamic capability in responding to payment disruption, this research sought to ascertain the perceived importance of *signalling user needs and technological options; bundling and unbundling; conceptualising and learning and adapting* as second-order dynamic capabilities and the routines deemed to enable them.

It was proposed that NSD dynamic capability does play a role in response to disruption, in that it facilitates NSD success. This proposal is in turn based on the proposition that *sensing user needs; bundling; conceptualising and learning and adapting* are important for NSD success.

SENSING USER NEEDS AND TECHNOLOGICAL OPTIONS

The literature outlines the role of customers as co-creators of value in the development, idea sourcing and testing. Researchers considered customer engagement to have immense strategic value. As such the ability of a firm to encourage participation, interpret and reason customer insight and to respond in an agile and innovative manner is essential (Agarwal & Selen 2009; Kindström et al., 2002; den Hertog, 2010; Storey et al., 2015). Weill and Woerner (2015) referred to the amplification of the customer's voice within the organisation. All respondents strongly agree that sensing user needs is integral to NSD success.

The results indicate the routines which are relevant to incumbent banking firms include traditional market research, data collection and analysis, user involvement, identification of pain points, analysis of user experience, external consultants and dedicated team members. These routines are similar to those noted by researchers Gawer and Cusumano (2014) and Weill and Woerner (2015) who acknowledged the use of customer data and social media sentiments, as well as other customer satisfaction metrics. den Hertog (2010) noted the routine of identifying hidden or explicit unmet customer needs. Assink (2006) was sceptical of the value of traditional market research for NSD, he considered this approach to be more suited to current practice than innovation.

The majority of respondents indicate that their firm systematically observes and evaluates the payment needs of their customers.

CONCEPTUALISING

den Hertog (2010) and Agarwal and Selen (2009) outlined the value of a conceptualising capability. Respondents recognised the importance of this capability, however their level of agreement varied from strong to moderate.

Results indicated that the following routines underpinned conceptualising capabilities: experimentation and prototyping, design thinking, agile methodologies, collaboration, customer input and internal competitions. Most studies discussed in the review of literature were less specific with regards to the conceptualising routines and spoke more broadly of service design, ideation routines and service conceptualisation. Sia et al., (2016) mentioned hackathons and internal crowdsourcing in their research.

Respondents agree that their NSD process encourages the development of new payment service concepts.

BUNDLING AND UNBUNDLING

In their research, Weill and Woerner (2015) recognise the need to offer customers an ecosystem of value by offering clients complementary products and services in an integrated and convenient manner. This is a similar consideration to den Hertog (2010) who noted the potential of bundling capability, whereby one creates new value by unbundling existing options or integrating service elements in a new way.

The notion of bundling and unbundling evoked a diverse set of responses regarding the importance of this capability. Most respondents suggested that they neither agree nor disagree, with some having strong levels of agreement and others strongly disagreeing.

Those who expressed disagreement noted the strategic decision to maintain transparency in offerings. Bundling is perceived by a minority of respondents as incorporating hidden costs to the customer.

Of those who recognised the value of bundling: alignment, collaboration, replication of competitor offerings and the incorporation of value options from other services were outlined as key routines. The review of literature did not specify particular bundling routines beyond the broad consideration of incorporating different value elements. Unbundling was not discussed by respondents.

Some respondents held strong views with regards to having a broader value offering and mentioned this as their key take-away. Whilst for some respondents this entailed service bundling, others referred to a broader value chain which supported the payment component. One respondent noted that with the gradual erosion of payment revenues, the extended value offering would be the differentiator. Another suggested that the payment space was commoditised and thus innovation potential had stagnated therefore, the structure of the value-add houses the innovative opportunity.

Results regarding the respondent's perception of their firm having created innovative payment service by incorporating value offerings from other services are mixed. Some respondents indicated that their firms do not practice bundling which could account for the levels of disagreement.

LEARNING

Multiple researchers highlighted the role of learning in NSD capability, with some arguing this to be the most integral enabler of NSD. All respondents had strong levels of agreement regarding the importance of learning.

The majority of respondents noted the need for feedback routines and exposure to best practices. Specific examples included “show and tells”, stand-up meetings, seminars, steercos and integration into the banking network to learn from their experiences. den Hertog (2010) and Fischer et al. (2010) outlined the value of intentionally reflecting on and learning from current practice through regular benchmarking. This reflects the findings of Smith, et al. (2005) who noted the role of knowledge creation through access to the know-how of fellow employees and stakeholders, who are able to gather information and thereafter filter, integrate and exploit this knowledge. Additionally, researchers acknowledged that by attending seminars or joining industry communities, a firm can enhance its external learning capability.

de Jong & Vermeulen (2003) explained the value of cross function teams and training and development programs were noted as learning enablers. Respondents also mentioned collaboration and peer-learning aspects.

A minority of respondents reflected on routines which enable the documentation of learning. Lin & Wu (2014) noted the use of knowledge databases and knowledge sharing programs.

The majority of respondents agreed that their firm is effective in developing new knowledge that has the potential to influence service development.

5.1.5 CAPABILTIES OUTSIDE OF ALLIANCES AND NSD

Within the interview discussion points, a few participants acknowledged the role of competencies outside of alliance and NSD capabilities. These mentions included: capabilities which enable an organisation to have a broad value offering, the proficiencies in modernising legacy systems, capabilities associated with navigating regulatory changes and the competencies associated with the development of an innovation culture.

A few respondents made mention of acquisitions as an alternative strategic approach to alliances and NSD. Thus, the capabilities associated with this strategic approach would be pertinent to disruption response in the banking industry.

5.1.6 RESPONDENTS THOUGHT-PROVOKING INSIGHTS

Respondents provided some thought-provoking insights regarding important take-aways related to payment disruption. One insight, discussed by a minority of respondents, refers to the major potential for further disruption in the industry from new digital banks and digital giants such as Google, Apple and Facebook, as well as their existing partners such as Mastercard or Visa. Fintech disruption appears to be a lesser concern.

5.2 SUMMARY

This study aims to derive insight into how incumbent South African Banking firms strategically manage the opportunities and threats of payment disruption. To achieve this understanding, this study explores the role that alliances and NSD play in managing the opportunities and threats of payment disruption. Furthermore, this study examines the manner in which firms strategically manage their alliance and NSD capabilities in the provision of payment services. This study makes use of qualitative research.

Respondents acknowledged the use of alliances and NSD in responding to disruption. In addition, South African firms were found to be utilising an alliance strategy more often than NSD. However, respondents indicated that their organisations manage NSD better than they do alliances.

Alliances allow incumbent banking firms access to additional resources via the alliance partner firm. The management of alliances capability was found to play a significant role in response to disruption. The dimensions of interorganisational coordination and interorganisational learning are considered key to the successful management of alliances. Alliance proactiveness was deemed to be important for alliance success but not to the same degree as the other dimensions.

The routines underpinning interorganisational coordination, interorganisational learning and alliance proactiveness were discussed in relation to existing literature, with similarities and gaps outlined.

Several routines were determined by respondents to be enablers of alliance success including: communication and regular interactions, clear alliance policies and guidelines, joint planning and decision- making. These have been determined to correspond with the interorganisational coordination capability outlined in the literature and conceptual framework. Thus, providing further validation of the role of this capability for alliance success.

Whilst stressing the importance of interorganisational coordination, respondents had varying perceptions of how well the incumbent firms manage this coordination. In most cases banking firms appear to have enabled the capability to learn from their alliance partners. There were diverse views as to whether incumbent firms were proactive and responsive in going after partnerships.

The respondents consider NSD integral to remaining relevant to the firm's customer base and competitive in the payment services market. The results of the study indicate that the NSD capability does facilitate a positive response to disruption. Sensing user needs and technological options and learning capabilities were unanimously viewed as important by respondents. The conceptualising capability was recognised as important. However, not to the same strength of agreement as sensing user needs and technological options and learning capabilities. The consideration of bundling is the most controversial of the capabilities considered in this study, with strong levels of agreement and disagreement.

In this chapter the responses regarding the routines supporting the sensing of user needs and technological options, conceptualising, bundling and unbundling capability and learning and adapting were recognised and discussed.

Respondents to this study mostly perceived their organisation systematically observes and evaluates the payment needs of their customers. There is a further perception that the incumbent firms' NSD process encourages the development of new payment service concepts. There is no consensus on the value of bundling and unbundling capability. The majority of respondents agreed that their firm is effective in developing new knowledge that has the potential to influence service development.

Practices perceived to enable NSD included solving for a client problem (aligned to the sensing of user needs capability), agile methodologies (a component of conceptualising capability) and ring-fencing (an approach not specifically aligned to any of dynamic capabilities of NSD discussed).

For the most part, for the results discussed above, there are high degrees of correlation with existing literature. The deviations could be interpreted as considerations which are more specific to the South African banking context and payment services. Furthermore, these deviations point to areas which would benefit from future research. Similarly, the capabilities mentioned outside of alliances and NSD too warrant further study.

CHAPTER 6: CONCLUSION

6.1 INTRODUCTION

Digital disruption presents incumbent organisations with both an opportunity and a threat. The need for a strategic approach to manage disruption has been well documented, with the use of alliances and NSD as potential approaches. Researchers have recognised the role of dynamic capabilities in responding to business environmental turbulence, such as disruption. They have specifically identified dynamic capabilities as facilitators of alliance and NSD success, namely: NSD capability and alliance capability.

Whilst the peer reviewed literature acknowledges the role of alliances and NSD (and their associated capabilities), the practical application of the theory tends to be underdeveloped and unresearched, particularly within the context of digital disruption, the banking industry and South Africa. This study is an attempt to expand upon the limited existing academic research, specifically, within the context of the South African banking industry and payment services.

This research set out to explore how five incumbent South African banking firms strategically manage the opportunities and threats of payment disruption through alliances and NSD. With further research into the perceived role of NSD capability and alliance capability in responding to the potential for payment disruption.

To achieve this, the research objective was addressed through an exploration of:

1. What role do alliances and NSD play in managing the opportunities and threats of payment disruption?
2. How do firms strategically manage their alliance and NSD capabilities?
    i) In the face of disruption, what are the inherent aspects of the firm which act as enablers and barriers to a successful response through alliances and NSD
    ii) What is the role of alliance management dynamic capability and NSD dynamic capability?

Eighteen business executives working in a payment orientated role within the "Big Five" incumbent banking firms in South Africa, were interviewed.

6.2 MAJOR FINDINGS

It has been determined that congruent with recommendations from existing literature, the formation of alliances and the development of new services, are strategic approaches undertaken by incumbent banking firms in South Africa, in response to the opportunities and threats of payment disruption. In addition, South African firms were found to be utilising an alliance strategy more often than NSD. It is interesting to note that despite utilising alliances more frequently, incumbent firms are perceived to be stronger at managing NSD than alliances.

Alliances allow the incumbent banking firms access to additional resources which addresses the internal struggle of capacity issues and competing priorities. In addition, alliances enable a more rapid response to payment disruption and market demands, than internal development, as partners already possess the required capabilities which can be leveraged immediately.

NSD is considered integral in the context of payment disruption as this practice corresponds with developing services which address the changing needs of customers. In the context of a disruptive environment, customers may have additional needs currently not met, or the old manner of satisfying their needs may no longer be sufficient. Through NSD incumbent South African banking firms attempt to remain relevant and competitive.

In terms of how firms strategically manage their alliance and NSD capabilities, the results of the study supported the conceptualisation of alliance management dynamic capability and NSD dynamic capability. The second order capabilities outlined in the conceptual framework, which act as enablers of these capabilities, were perceived by respondents to be of importance in the successful management of alliances and NSD.

Alliance management capability was found to play a role in response to disruption, with the dimensions of interorganisational coordination and interorganisational learning given high priority whilst alliance proactiveness was deemed to be important for alliance success but not to the same degree as the other dimensions.

Interorganisational coordination was determined to be underpinned by: joint planning and decision-making, regular engagement and communication, governance routines and policies and procedures. There were varying perceptions of how well the incumbent firms manage their interorganisational coordination.

In most cases banking firms appear to have enabled the capability to learn from their alliance partners. The routines found to facilitate this include: workshops and brainstorming sessions, knowledge databases and sharing platforms, IP contacts and agreements and integrated teams.

For incumbent South African banking firms, alliance proactiveness entails routines of: environmental scanning, Fintech farming, attending industry events, scanning incubation labs and innovation hubs and leveraging established relationships.

Additional capabilities which were not included in the study but found to be highly relevant include a dedicated alliance structure and autonomy enablement. Excessive bureaucracy and legacy systems were deemed to be barriers to alliance success. These barriers relate to intrinsic or structural issues, which are often difficult to change. The opportunity here, is to consider capabilities which may help to overcome these barriers, as opposed to attempting to alter entrenched structures. The use of a dedicated alliance structure which still allows for alliance autonomy may facilitate overcoming bureaucracy and legacy systems.

The results of the study indicate that NSD capability does facilitate the response to disruption. Sensing user needs and technological options and learning capabilities were unanimously viewed as important by respondents. The conceptualising capability was recognised as important however not to the same strength of agreement as sensing user needs and technological options and learning capabilities. The consideration of bundling is the most controversial of the capabilities considered in this study, with strong levels of agreement and disagreement.

Sensing user needs and technological options, was determined to be characterised by: traditional market research, data collection and analysis, user involvement, the identification of customer pain points, analysis of user experience, external consultants and dedicated team members. Most incumbent firms in this study are perceived to appear to systematically observe and evaluate the payment needs of their customers.

According to respondents conceptualising routines include: experimentation and prototyping, design thinking, agile methodologies, collaboration, customer input and internal competitions. There is the perception that the incumbent firms' NSD process encourages the development of new payment service concepts.

Whilst there is no consensus on the value of bundling and unbundling capability. The routines considered to enable this approach include: alignment, collaboration, replication of competitor offerings and the incorporation of value options from other services.

Learning and adapting was determined to entail routines of: "show and tells", stand-up meetings, seminars, steercos (steering committees), cross functional teams, training and development programs and the interaction with other industry practitioners. The majority of respondents agreed that their firm is effective in developing new knowledge that has the potential to influence service development.

Competing priorities and insufficient resources were two additional barriers mentioned and not accounted for in the capability conceptualisations above. These can be addressed through the use of co-producing or alliances. Inadequate focus and a lack of managerial or stakeholder buy-in were also not incorporated in the conceptual framework. The capabilities which encourage focus and buy-in should be considered. As should the practice of ring-fencing, whereby NSD activities are separated from the core banking structure.

Some capabilities were recognised frequently across multiple dimensions of the discussion with participants. For example, the value of knowledge transfer and learning was noted with regard to both alliances and NSD. Environmental scanning routines were also considered for both NSD and alliances. In addition, the requirement to meet customer needs, be they unmet, hidden or outside of the specific scope of payment services, was acknowledged across the capabilities for NSD. In each case the necessity was related back to the needs or voice of the customer.

6.3 OVERALL RELEVANCE

The findings of this study offer direction for management initiatives by outlining the perceived value of the alliance and NSD approach and the routines and capabilities for their successful management. In addition, this research contributes to dynamic capability theory by ascertaining its relevance in the context of payment disruption in the South African banking industry.

6.4 RECOMMENDATIONS

The research outcomes discussed above have managerial implications for incumbent banking firms in South Africa.

- <u>The role of alliances in responding to payment disruption</u>
  The virtue of engaging in an alliance within the payment disruption context has been ascertained. If they are not doing so already, decision-makers should consider the potential offered by this approach for payment services and other revenue streams threatened by digital disruption. Particularly, if they are struggling with capacity issues and competing priorities, as alliances are deemed to address these issues.
- <u>The role of NSD in responding to payment disruption</u>
  NSD has been demonstrated to offer value in responding to payment disruption. If they are not doing so already, decision-makers should consider the potential offered by this approach for payment services and other revenue streams threatened by digital disruption.
- <u>Strength of management of alliances and NSD</u>
  It is recommended that whilst firms in this study were generally found to manage alliances and NSD successfully, firms undertaking both approaches should examine if the same degree of effort to enable their success, is being applied in both undertakings. In this study it was determined that incumbent

firms are perceived to be stronger at managing NSD than alliances, despite engaging in alliances more frequently.

- The development of alliance management capability

  As this capability has been demonstrated as enabling successful alliances, it is recommended that incumbent banking firms pay particular attention to their interorganisational coordination, interorganisational learning and alliance proactiveness practices.

  - Recommended routines to encourage interorganisational coordination

  It is recommended that firms utilise some or all of the following routines in order to facilitate successful interorganisational coordination: joint planning and decision- making, regular engagement and communication, governance routines and policies and procedures.

  - Recommended routines to encourage interorganisational learning

  It is recommended that firms utilise some or all of the following routines in order to facilitate successful interorganisational learning: workshops and brainstorming sessions, knowledge databases and sharing platforms, IP contacts and agreements and integrated teams.

  - Recommended routines to encourage alliance proactiveness

  It is recommended that firms utilise some or all of the following routines in order to facilitate alliance proactiveness: environmental scanning, Fintech farming, attending industry events, scanning incubation labs and innovation hubs and leveraging established relationships.

  - Additional capability development for alliance success

  It is suggested that firms create a dedicated alliance structure to adequately govern alliance functioning. However, this governance structure should not strip the alliance partners of their autonomy.

- The development of NSD capability

  NSD capability has been found to enable successful NSD, thus it is recommended that incumbent banking firms enable: sensing user needs and technological options, learning capabilities and conceptualising capability. It may be the case that bundling is a capability that suits some firms more than others and thus a strategic decision in this regard should be taken. However, for those who decide not to engage in this activity, it is recommended that these firms establish an alternative means of generating an ecosystem of value for customers.

- Recommended routines to encourage sensing user needs and technological options
- It is recommended that firms utilise some or all of the following routines in order to facilitate sensing user needs and technological options: traditional market research, data collection and analysis, user involvement, the identification of customer pain points, analysis of user experience, external consultants and dedicated team members
- Recommended routines to encourage learning capabilities

  It is recommended that firms utilise some or all of the following routines in order to facilitate learning capabilities: “show and tells”, stand-up meetings, seminars, steercos (steering committees), cross functional teams, training and development programs and the interaction with other industry practitioners.
- Recommended routines to encourage conceptualising capabilities

  It is recommended that firms utilise some or all of the following routines in order to facilitate conceptualising capabilities: experimentation and prototyping, design thinking, agile methodologies, collaboration, customer input and internal competitions. There is the perception that the incumbent firms’ new service development process encourages the development of new payment service concepts.
- Recommended routines to encourage bundling capabilities

  For firms who decide to engage in a bundling approach, it is recommended that firms utilise some or all of the following routines: alignment, collaboration, replication of competitor offerings and the incorporation of value options from other services.

- A broader service offering

  For those firms who do not engage in bundling, it is recommended that consideration be given to how they are addressing needs beyond payments. The notion of a broader value-add for customers, has been found in this study to be of integral importance. Even for those firms with bundling capability, reflection of these components in addressing customer needs is vital. Thus, there is further justification for the sensing of customer needs.

6.5 LIMITATIONS

- Owing to time and scope restrictions, the perspectives of eighteen individuals across five banks were considered. As such, with only a few representatives from each firm one cannot suggest this is representative of the firm. This is the reasoning for aggregating responses to provide an industry perspective as opposed to a firm perspective.
- The study was limited by the manner in which it was conceptualised. Routines and capabilities became evident in responses that were not accounted for in the framework such as coproducing in the case of NSD, autonomy enablement and governance in the case of alliances. These were not included due to scope requirements or the relevance being overlooked in the preliminary investigation.

6.6 RECOMMENDATIONS FOR FURTHER RESEARCH

- This researcher was unable to find sufficient research on the role of NSD and alliances as strategic responses to disruption. It is thus recommended that more research is undertaken within this particular context.
- In addition, whilst there have been studies considering the capabilities underpinning NSD and alliances, much of it is fractured and explored with varying dimensions and routines encapsulated. It is recommenced that additional research is undertaken in a more structured approach.
- No previous studies were found examining payment disruption within the South African banking industry. Further research in this area could provide context and insight into alternate theoretical frameworks which may be relevant.
- Furthermore, no previous studies were found which considered payment disruption in the South African Banking Industry from the perspective of alliances and NSD. Thus, additional research is required to compare and extend the findings of this research.

- While this study explored the approaches of incumbent banking firms as a collective, case studies examining differences between firms would allow for a greater understanding of the degree to which the strategic approach enables success. For example, an examination of the FNB Internet banking pivot or the inclusion of a WhatsApp banking service by ABSA
- A study utilising secondary data such as financial performance could offer more tangible and predicable insight for success measures.
- This study has highlighted the dissonance between incumbents investing significant effort in alliances, but respondents indicate a less optimal ability to execute. Further research into what failings underpin the ability to manage alliances better would be of great benefit.
- This study explored dynamic capabilities as outlined by the developed conceptual framework, additional routines and capabilities were discerned, a follow-up study to establish the validity of those results is required.
- The role of organisational culture was deemed to be beyond the scope of this study, however respondents reflected on the impact of an innovative culture in responding to the threat of disruption. Thus, this is recommended as an area to be explored in future research.
- Respondents acknowledged capabilities outside of alliances and NSD: capabilities which enable an organisation to have a broad value offering, the proficiencies in modernising legacy systems, capabilities associated with navigating regulatory changes. These should be considered in further research.
- Further studies should consider the role of acquisitions in this context.
- Research should be undertaken to examine the relevance of developments in the field such as D*iffusion* T*heory, Blue Ocean Strategy,* D*esign* T*hinking and Jobs-to-be-done.*

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APPENDICES

APPENDIX 1: Research Instrument

	Respondent Information	
	Date: Location: 1.1 Interviewee's Name: 1.2 Job Title:	
	Preamble: This interview should take approximately 15- 30 minutes of your time. For my dissertation, I'm looking at payment disruption within the context of the South African banking industry. Specifically considering how established firms manage the associated opportunities and threats of disruption in the payment space. Previous research studies have identified two dominant strategic responses: the formation of alliances and the internal development of new services The purpose of the study is to gain insight, into the role of these approaches in how South African banking institutions respond to payment disruption and the capabilities which underpin the success of these strategic management decisions. For the purposes of this questionnaire please consider the following questions as they relate to payment services and the associated practices in your firm. This study considers payment disruption as both an opportunity and a threat for established firms. Your responses will remain confidential and will not be discussed in accordance with the individual who stated them.	

Dynamic Capability	Question	Category
Alliance management capability	2.1.1 Do alliances play a role in your response to disruption 2.1.2 How do alliances play a role in response to payment disruption? 2.1.3 We successfully manage alliances (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.1.4 What do you consider the routines which act as enablers in managing alliances? 2.1.5 What are the barriers to alliance success?	*General Alliance Management*
	Alliance coordination is important for alliance success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.2.1 We successfully coordinate across organisations (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.2.2 What routines do you have in place to facilitate coordination between alliance partners?	*Interorganisational Coordination*
	Interorganisational learning is important for alliance success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.3.1 We have the capability to learn from our alliance partners. (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.3.2 What routines do you have in place to facilitate knowledge transfer between alliance partners?	*Alliance Interorganisational learning*
	Proactively seeking partners is important for alliance success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 2.3.3 Compared to our competitors, we are far more proactive and responsive in finding and ‘going after’ partnerships. (‘Strongly disagree’ [1] to ‘strongly agree’ [7])	*Alliance Proactiveness*

	2.3.4 What routines do you have in place to find and go after potential alliances?	
New Service Development Capability	3.1.1 Does new service development play in relation to your response to payment disruption? 3.1.2 We successfully manage new service development (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.1.3 What do you consider the essential routines in managing new service development? 3.1.4 What are the barriers to successful new service development?	*General New Service Development*
	Sensing user needs is important for NSD success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.2.1 We systematically observe and evaluate the payment needs of our customers. (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.2.2 What routines do you have in place to sense user needs and technological options?	*Sensing user needs and technological options*
	Conceptualising is important for NSD success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.3.1 Our new service development process encourages the development of new payment service concepts. (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.3.2 What routines do you have in place to facilitate the development of new payment services?	*Conceptualising*
	3.4.1 Bundling is important for NSD success (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.4.2 We have created innovative payment services by incorporating value offerings from other services (‘Strongly disagree’ [1] to ‘strongly agree’ [7])	*Bundling and unbundling*

	3.4.3 What routines do you have in place to bundle service offerings?	
	Learning is important for NSD success? (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.5.1 We are effective in developing new knowledge that has the potential to influence service development? (‘Strongly disagree’ [1] to ‘strongly agree’ [7]) 3.5.2 What routines do you have in place to facilitate learning and adapting?	*Learning and Adapting*
	4. Which is the more commonly used with regards to payment disruption: alliances or NSD?	
	5. Do you have any additional insights/ important take-aways?	