

Exploring relational and coopetitive dynamics in interfirm strategic alliances

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A research report submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Philosophy (Corporate Strategy).

01 February 2021

ABSTRACT

Coopetition strategy implies simultaneous cooperation with competitors to create joint value and derive common benefits. The dualism, interplay, paradox, concept and theory of coopetition continues to evolve across literatures; primarily coopetition, strategic alliances and inter-organisational relations literatures. The simultaneity of coopetition can foster synergies as well as tensions, which need to be managed to optimise value creation and common benefits for strategic alliances. This research aimed to gain deeper insights into relational and coopetitive dynamics of interfirm strategic alliances; focusing on the antecedents for coopetition, processes to manage tensions between cooperation and competition and the outcomes of coopetition.

A qualitative, exploratory research methodology was applied. A total of 16 semistructured interviews were conducted with experts and managers of technology firms with established strategic alliances. The research participants were purposively selected to enable even cross-case analysis across three types of firms which were grouped according to specialisation.

The main outcome is a Coopetition Antecedents-Processes-Outcomes framework which highlights key aspects of the separate constructs, including key governance processes to manage the relational dynamics in coopetitive relationships. These findings contribute to coopetition literature in strategic management.

Keywords

Coopetition, relational view, tensions, value creation

DECLARATION

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

Signed:	Date:	

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CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1. Background to the Research Problem

The World Economic Forum (WEF) (2018) has long endorsed partnerships as an important strategy for synergising capabilities; to evolving customer needs and create new customer experiences and thereby enhance competitive advantage. Strategic partnerships enable scalability by improving expediency and efficiency through integration and leveraging of emerging technology without threatening firms' core business. Driving synergy requires a thorough appraisal of the partners' respective strengths and competencies, competitive advantages and new market opportunities.

The WEF (2018) has further stated that in the case of industry collaborations, the main challenge has remained as the shift from competition to collaboration. This necessitates the partners to adopt a partnership-first mindset, which implies disruption of traditional operating practices and traditional barriers of expansion and scale. Bloomberg (2019) suggests that aligning on the vision and objective enables the strategic partners to cocreate for mutual benefit. Such strategic alignment fosters open relationships and communication, which enable iterative solutioning.

INSEAD (2018) suggested that successful coopetition calls for specific processes to manage the tensions that may arise as partners cooperate and compete simultaneously; and thereby balance between collaborative and combative behaviours. They referenced four mechanisms which industry partners can use to manage the tensions of coopetition; organisational separation (creating buffers in organisational structures), temporal separation (timebound switching between collaborating and competing), domain separation (discrete domains for collaborating and competing) and contextual integration (synthesising and employing contextual mechanisms and routines to maintain coherence).

The need to accelerate coopetition has been recently highlighted by the COVID-19 pandemic, which has unfolded as a crisis of unprecedented proportions. Examples include collaborations in the life sciences sector for sharing proprietary knowledge, accelerating vaccine and treatment trials, and manufacturing of medical equipment, and also technology collaborations to track the public spread of the disease (The Guardian, 2020).

The WEF (2020) has also stated that global cooperation and collaborative innovation have been key to addressing the COVID-19 pandemic. This extraordinary global challenge has elucidated innovation as well as new innovation challenges for all sectors,

but particularly healthcare and biotechnology, retail and supply chains globally. For healthcare delivery, advances in collaborative research have been necessitated for diagnostics and vaccines (New York Times, 2020). Similar advances have been required to facilitate dissemination of scientific research, data sharing and repurposing of equipment, as well as manufacturing and distribution processes. The Global 500 companies have also deployed various resources and expertise towards the fight against COVID-19 (Fortune, 2020). These efforts also include many donations towards clinical research, data sharing, manufacturing of critical supplies, technological infrastructure, transportation and logistics, and also ensuring support and assistance for customers and workers.

1.2. Definition of Research Problem

Coopetition has been described as the "phenomenon of simultaneous cooperation and competition among organisations" (Hoffmann et al., 2018, p. 3033). The simultaneity of coopetition can foster synergies as well as tensions (Hoffmann et al., 2018; Jakobsen, 2020; Stadtler & Van Wassenhove, 2016). These tensions need to be managed as they can negatively impact value creation for firms (Bouncken et al., 2020; Gnyawali & Charleton, 2018; Hannah & Eisenhardt, 2018; Hoffmann et al., 2018; Jakobsen, 2020).

A relevant practical framework to assimilate the factors which apply to interfirm value creation is the relational view (Dyer et al., 2018). The framework has been extended with a dynamic perspective to better understand the factors that drive cooperation for value creation and competition for value capture over time. Strategic alliances integrate resources or utilise complementary resources to create value. As such, complementary resources are the most critical factor that determines the potential and pattern of value creation, but this can evolve over time. Other determinants such as "relation-specific assets (RSA), knowledge-sharing routines (KSR), and effective governance" play a supplementary role (p. 3141). In addition, the extended framework considers factors which drive partner interdependence to sustain value creation, as well as those factors which reduce partner interdependence and thereby increase competition for value capture. Managing the interplay between cooperation and competition is therefore essential to creating value and ensuring favourable outcomes for the partner firms (Hoffmann et al., 2018).

A literature review by Hoffmann et al. (2018) highlighted that previous inconsistent or negative findings on the outcomes of coopetition could be suggestive of "possible boundary conditions associated with the partner firms' abilities to manage the tension between competition and cooperation," (p. 3041). As such, one of the opportunities identified in this review is for exploration of how "competition and cooperation jointly drive organizational outcomes..." (p. 3035). It is therefore of interest to explore what relational and coopetitive dynamics are at play in interfirm alliances, and which approaches are followed to manage the tensions between cooperation and competition to create value and ensure favourable outcomes.

1.3. Research Aim

The research aim is to gain deeper understanding and insights into relational and coopetitive dynamics of interfirm strategic alliances; focusing on the antecedents of coopetition, processes to manage tensions between cooperation and competition and

the outcomes of coopetition. An existing conceptual framework was adapted to illustrate antecedents to coopetition, processes to manage coopetitive interfirm relationships, and outcomes of coopetition.

1.4. Research Scope

The scope of this research will cover interfirm alliances and exclude alliances with other types of organisations, such as academic or non-profit organisations. The sample selected for this study will explore interfirm strategic alliances in technology firms; thereby limiting the scope of this study to a single sector. Although the setting is in South Africa, the global nature of most of these firms and their processes should enable applicability beyond the geographical scope.

1.5. Research Contribution

This research will contribute to coopetition and strategic alliance literature by extending coopetition strategy and the relational view, and by adapting an existing a conceptual framework to map the antecedents, processes and outcomes of coopetition.

1.6. Conclusion

This chapter has outlined the significance of the current study; highlighting the relational and coopetitive dynamics of interfirm strategic alliances, and the opportunity to further explore how to manage these tensions to ensure favourable outcomes.

1.7. Roadmap

The research is reported over seven chapters. Chapter 1 has outlined the significance of the current study, as well as the background and the research problem. Chapter 2 presents a review of the recent academic literature which supports the basis for the study. Insights into established theories and concepts, the academic conversation and research opportunities that direct the research questions are presented in a logical flow. Chapter 3 introduces the research question, its sub-questions and the aims thereof, which emanated from the literature review in Chapter 2. Chapter 4 accounts for the research design and methodology chosen for this study and Chapter 5 presents its comprehensive findings. Chapter 6 discusses a comparative analysis of the current study with the literature. Finally, Chapter 7 outlines the conclusion, which includes a synthesis of the research outcomes, implications for management, limitations of the research and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The importance of exploring deeper understanding and insights into managing interfirm coopetitive relationships was discussed in the Section 1.2. The extant literature in the study of coopetition uncovers a need to explore comprehensive approaches to manage tensions between cooperation and competition. Approaches to managing these tensions have been underscored as pivotal to driving value creation in strategic alliances to ensure favourable outcomes; and highlighted as opportunities for further research. The revised relational view is a relevant framework to apply to this research as it considers the simultaneous factors that drive cooperation for value creation.

The structure of the literature review is outlined below in Figure. 1 and starts with broad concept definitions and the theoretical background on coordination, cooperation and collaboration, coopetition and the relational view. Antecedents for coopetition will be presented, followed by a focus on managing tensions between cooperation and competition; and finally an evaluation of some outcomes of coopetition.

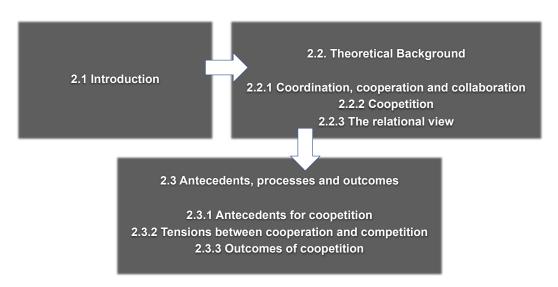


Fig. 1 Roadmap for the Literature Review

2.2. Theoretical Background

2.2.1. Coordination, cooperation and collaboration

Castañer and Oliveira (in press) state that collaboration, coordination and cooperation are pivotal to the implementation of interorganisational activities planned towards achieving common goals. In their recent review of inter-organisational relations (IOR) literature, new goal-orientated definitions for coordination, cooperation and collaboration have been suggested; based on attitudes, behaviours and outcomes. According to these new definitions, coordination refers to the "joint determination of common (IOR) goals, while cooperation refers to the implementation of those goals" (p. 20). Collaboration is proposed to be more than merely the sum of coordination and cooperation but as "voluntarily helping other partners to achieve IOR (common) goals or one or more of their private goals" (p. 22). The joint development of technology may be one of the common goals agreed to by strategic partners.

2.2.2. Coopetition

Collaboration between firms can be influenced by coopetition, which has been described as the "phenomenon of simultaneous cooperation and competition among organisations" (Hoffmann et al., 2018, p. 3033). It is seen as a unique strategy which benefits from collaboration between and among competitors; hence most collaborations have historically been within the same industry (Gnyawali & Park, 2011). Coopetition may emerge is simple dyadic interfirm relationships or in more complex multilateral interfirm relationships (Gnyawali & Park, 2011).

The concept, theory (Gnyawali & Charleton, 2018; Gnyawali & Park, 2011), dualism (Bouncken et al., 2020), and paradox (Stadtler & Van Wassenhove, 2016) of coopetition have gained much interest in recent studies. Its interplay of simultaneous cooperation and competition between organisations has been characterised in terms of its antecedents, processes and outcomes (Hannah & Eisenhardt, 2018; Hoffmann et al, 2018). Managing the interplay between cooperation and competition is essential to creating value and ensuring favourable outcomes for the partner firms (Hoffmann et al., 2018).

2.2.3. The relational view

Interfirm value creation from collaboration can be framed in the relational view, which suggests that value creation and relational benefits are determined through: "complementary resources and capabilities, relation-specific assets (RSA), knowledge-sharing routines (KSR), and effective governance," (Dyer et al., 2018, p. 3141).

Complementary resources are the most critical factor which determines how quickly alliances can cooperate to create value, but the benefit from complementarity can wane over time, due to diminishing complementary resources and increasing relational inertia between partners. Simultaneously, competition can be increased by asymmetrical power and reduced interdependence (Dyer et al., 2018). Value creation is further driven by informal trust, and investments into effective governance, knowledge sharing and customised assets. When interfirm cooperation is centred around intangible resources, such as knowledge, effective routines and processes for sharing knowledge and absorbing new knowledge should be developed.

The relational view therefore considers how investments into partner interdependence can subsequently determine how private and common benefits are distributed. These benefits would be derived from the achievement of individual firm and joint goals, respectively. The recent extension of the relational view to incorporate a dynamic perspective enables better understanding of what "drives cooperation for value creation and what leads to competition for value capture" (Dyer et al., 2018, p. 3141). The relational view also emphasises complementarity as the most important antecedent which determines the potential for interfirm cooperation and subsequent coopetition.

2.3. Antecedents, Processes and Outcomes

2.3.1. Antecedents for coopetition

In addition to the relational view highlighting complementarity as a critical variable for coopetition, the importance of environmental or contextual, organisational and managerial antecedents will be further outlined. Considering the relational view and goal-orientated definition of cooperation and collaboration, recent literature was reviewed to compare key antecedents for coopetition.

2.3.1.1. Environmental antecedents

The environmental antecedents for coopetition are summarised in Table 1 below:

Key Themes	Key Contributions	References
Environmental Antecedents	Complex interdependencies in technology platforms necessitate shift to ecosystems	Ansari et al., 2016
	Core knowledge vs complementary assets and cooperative dynamics following technical discontinuity	Cozzolino & Rothaermel, 2018
	Ecosystems pursuing mutual interests and joint benefits in bottleneck crowdedness	Hannah & Eisenhardt, 2018
	Environmental: technology convergence, industry decline or maturity	Hoffmann et al., 2018
	Platform compatibility as an enabler	Mantovani & Ruiz-Aliseda, 2016

Table 1: Environmental antecedents of coopetition

These results have similarities in that Hoffmann et al. (2018) found convergence of technologies as an environmental or contextual antecedent to interfirm coopetition, which was further supported by Cozzolino & Rothaermel (2018). Ansari et al. (2016) had also previously described how digitisation disrupted and transformed the media industry. Their findings similarly highlighted the complex interdependencies in technology platforms and the necessitous shift to ecosystems, a similar finding to that of Their findings similarly highlighted the complex interdependencies in technology platforms and the necessitous shift to ecosystems, as did Hannah and Eisenhardt (2018). Furthermore, in their study of innovation ecosystems, Mantovani & Ruiz-Aliseda (2016) also focused on platform compatibility as an enabler. This shows some differences in the nuance of the interrelated factors that were assessed.

2.3.1.2. Organisational antecedents

The organisational antecedents for coopetition are summarised in Table 2 below:

Key Themes	Key Contributions	References
Organisational Antecedents	Asymmetries in size and assets as drivers of resource interdependence Commitments to access knowledge and skills as the basis for cooperative relationships	Hoffmann et al., 2018 Gnyawali & Charleton, 2018
	Smaller firms must pursue coopetition in order to learn from bigger firms, and thereby complement their knowledge and resources	Chiambaretto et al., 2018

Table 2 Organisational antecedents of coopetition

These results are similar in their common theme of organisational antecedents. They are, however, different in their nuance of what was assessed. Hoffmann et al. (2018) regarded firm asymmetries in size and assets as drivers of resource interdependence and therefore important organisational antecedents for coopetition. Gnyawali & Charleton (2018) further suggested that commitments to access knowledge and skills as the basis for cooperative relationships. Chiambaretto et al. (2020) also found that smaller firms must pursue coopetition in order to learn from bigger firms, and thereby complement their knowledge and resources.

2.3.1.3. Managerial antecedents

Finally, Czakon et al. (2020), examined behavioural antecedents for coopetition and identified strategic rationale as a key driver, where managers perceived benefits and a strategic fit with a potential alliance partner. Their findings were similar to those of Seepana et al. (2020) who found that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally.

2.3.2. Tensions between cooperation and competition

The variety of antecedents points to a variety of tensions that may arise. The key contributions from recent studies on how to manage tensions between cooperation and competition have been summarised below in Table 3.

ey Themes	Key Contributions	References
Tensions	Corporate profiling, knowledge sharing and role conflicts	Stadtler & Van Wassenhove, 2016
	Knowledge leakage, instability, opportunism and lack of commitment	Hoffmann et al., 2018
	Knowledge sharing and appropriation	Jaliahaan 0000
	Value creation and/or value capture	Jakobsen, 2020
		Hoffman et al., 2018 Hannah & Eisenhardt, 2018 Bouncken et al., in press; Gnyawali & Charleton, 2018;
Managing ensions	Integrative approaches and behavioural processes	Stadtler & Van Wassenhove, 2016
ensions	Mutual pursuits, resource leverage, safeguarded resources and relevant commitments	Gnyawali & Charleton, 2018
	Separation strategies and contextual integration	Hoffmann et al., 2018
	Structural (knowledge sharing) and psychological dependence (trust and generosity) processes	Jakobsen, 2020
	Coopetition in crowded bottlenecks	Hannah & Eisenhardt, 2018

Table 3 Tensions and managing tensions of coopetition

This literature highlights similar tensions related to knowledge management (Jakobsen, 2020; Hoffmann et al., 2018; Stadtler & Van Wassenhove, 2016) and value creation and/or value appropriation (Bouncken et al., in press; Gnyawali & Charleton, 2018; Hannah & Eisenhardt, 2018; Hoffman et al., 2018). Another similarity is that of behavioural tensions such as corporate profiling and role conflicts (Stadtler & Van Wassenhove, 2016), as well as instability, opportunism and lack of commitment (Hoffmann et al., 2018). While the similarities in the approaches and processes to managing coopetition tensions are not directly apparent, there are similarities that can be correlated with the determinants for value creation according to the relational view, such as leveraged and safeguarded resources (Gnyawali & Charleton, 2018), knowledge sharing routines (Jakobsen, 2020) and relation-specific assets (Gnyawali & Charleton, 2018; Hoffmann et al., 2018; Jakobsen, 2020).

Some differences in the literature reviewed include the recommendation of specific behavioural processes such as integrating and demarcating behaviour, which can be used by managers and employees to address behavioural tensions (Stadtler & Van Wassenhove, 2016). Another difference is the suggestion of cooperative innovation as a process to resolve the tension between value creation and value capture in crowded ecosystems (Hannah & Eisenhardt, 2018). It is evident from this literature that some of the coopetitive tensions that arise and how they are managed can be understood from the relational view. However, it is yet unclear how best to manage these tensions, as there are yet different views in the literature.

2.3.3. Outcomes of coopetition

2.3.3.1. Value creation

Bicen et al. (2021) have suggested a strong alliance focus on creating customer value through employing synergy. They further suggested that the allocation of dedicated alliance resources suggests strong alliance competence. This result was similar to that of Bouncken et al. (2020) also focused on the market domain for value creation. Their findings also indicate that coopetition can create value for all partners as well as the market by leveraging knowledge and resources between partners. Santos (2021) further suggests that joint value creation increases in the setting of balanced coopetition.

These studies further that partner value is created through the synergy of complementary resources, which supports notions of the revised relational view which emphasise the critical role of interdependent and complementary resources in sustaining alliance value creation over time (Dyer et al., 2018).

2.3.3.2. Common and private benefits

There are similarities in the description by Hoffmann et al. (2018) of common benefits as those benefits which are interrelated and interdependent to that by Arslan (2018) regarding joint outcomes as those that are based on highly interdependent tasks between alliance partners. Bicen et al. (2021) has further confirmed a positive relationship between alliance performance and the alliance's market orientation. Therefore, while the allocation of common and private benefits may cause tensions in strategic alliances, these are also important outcomes.

2.3.3.3. Innovation

Managing coopetitive tensions is pivotal to interfirm innovation, with interdependence and trust, as well as knowledge sharing having been suggested as key to advancing innovation (Hoffmann et al., 2018). Certainly, some research has been conducted to look specifically at how coopetition can foster interfirm innovation (Fernandez et al., 2017; Ritala et al., 2017). The similarities in these studies point to requisite knowledge processes to resolve coopetition tensions (Ritala et al., 2017); and including formal knowledge protection processes to balance value creation and value appropriation (Ritala et al., 2017). Similarly, Bouncken et al. (2020) related to how alliance firms to seek joint outcomes for technological innovation and value creation through the alliance to improve product offerings; thereby increasing their customer base and market share. All these studies similarly point to innovation as a positive outcome of coopetition.

2.4. Conclusion

The literature indicates a variety of dynamics pertaining to the phenomenon of coopetition. There are numerous and diverse environmental, organisational and managerial antecedents for interfirm coopetition.

The importance of managing the tensions between cooperation and competition is evident; particularly as relates to value creation and value appropriation and as a condition to ensure favourable outcomes. There are yet many views on how to manage these tensions, yet it is possible that the relational view is a useful framework to consider; more so that the processes to build relational trust and knowledge sharing routines have been recommended more consistently. The literature review by Hoffmann et al. (2018) highlighted that previous inconsistent or negative findings on the outcomes of coopetition could be suggestive of "possible boundary conditions associated with the partner firms' abilities to manage the tension between competition and cooperation," (p. 3041). As such, one of the opportunities identified in this review is for exploration of how "competition and cooperation jointly drive organizational outcomes..." (p. 3035). It is therefore of interest to explore what relational and coopetitive dynamics are at play in interfirm alliances, and which approaches are followed to manage the tensions between cooperation and competition to create value and ensure favourable outcomes.

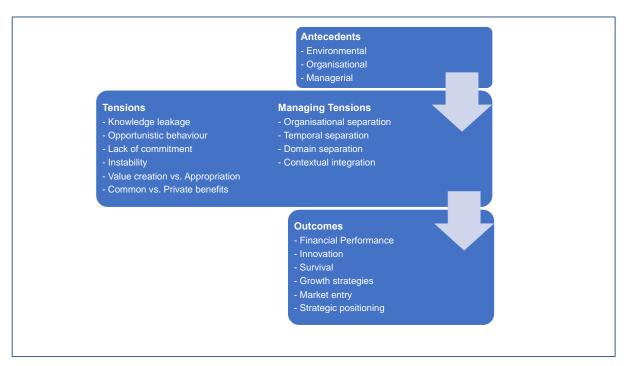


Fig 2. Conceptual framework for the Antecedents, Processes and Outcomes of Coopetition Source: Author's own, adapted from Hoffmann et al. (2018)

CHAPTER 3: RESEARCH QUESTIONS

The research aimed to answer a central research question with three sub-questions. The

research question and related sub-questions are derived and adapted from the literature

review by Hoffmann et al., (2018), according to the "promising themes and directions for

future research" suggested (p. 3045).

Research Question - What are the antecedents, processes, and outcomes of interfirm

coopetition?

The research question aimed to broadly understand the current processes, and

outcomes of coopetition. The research question was divided into three sub-questions, in

order to facilitate deeper exploration of each construct.

3.1. Sub-Question 1

What are the antecedents for coopetition?

This question was adapted to understand the participants' views on the antecedents for

interfirm alliances. The specific focus on interfirm relationships enabled exploration of

alliance partners as possible competitors, and therefore the basis for coopetition.

3.2. Sub-Question 2

What are the processes for managing coopetitive relationships between firms?

This question was adapted to understand the participants' views on the processes for

managing coopetition dynamics in interfirm alliances. This was assessed by enquiring

into the processes to manage cooperation, relational and competitive dynamics and

tensions that emerge, as well as processes to manage these dynamics.

3.3. Sub-Question 3

How do firms collaborate and compete to accomplish outcomes?

This question was adapted to understand the participants' views on how alliance partners

accomplish and measure outcomes of coopetition.

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CHAPTER 4: RESEARCH METHODOLOGY

This chapter summarises the research methodology and design which were applied to answer the research question and sub-questions presented in Chapter 3. A qualitative research strategy was used to explore deeper understanding and insights into relational and coopetitive dynamics of interfirm strategic alliances, focusing on technology firms with established strategic alliances. Data were collected through semi-structured interviews which were conducted at expert and/ or management level.

4.1. Choice of Research Methodology and Design

The main research question aimed to explore the antecedents, processes, and outcomes of coopetition with other firms. As posed in the sub-questions; relational and coopetitive dynamics were explored specifically; to deepen the understanding of processes to manage tensions between competition and cooperation, and ultimately gain insights into the outcomes achieved as a consequence of coopetition. The research questions were explored through the philosophical paradigm of constructivism, as the research aimed to explore a deeper understanding of how these relational and coopetitive dynamics are experienced and viewed by the research participants (Bryman et al., 2019; Creswell & Creswell, 2018).

A qualitative research strategy was followed in accordance with the constructivist philosophical paradigm (Bryman et al., 2019), and the researcher pursued an interpretive understanding of the meaning of the phenomena from the participants' views (Creswell & Creswell, 2018). Phenomenological research was selected as the most appropriate design to enquire into the lived experience of participants about the phenomena (Creswell & Creswell, 2018) and thereby capture the essence of these experiences "for several individuals who have all experienced the phenomenon" (p. 13).

The recent literature reviewed on these phenomena has been largely conceptual; utilising systematic review (Castañer & Oliveira, in press; Cozzolino & Rothaermel, 2018; Dyer et al, 2018; Gnyawali & Charleton, 2018; Hoffmann et al., 2018) and qualitative approaches. Most of the qualitative research has been conducted using in-depth longitudinal case studies (Hannah & Eisenhardt, 2018; Jakobsen, 2020; Stadtler & Van Wassenhove, 2016) and other qualitative studies (Bouncken et al., in press; Ritala et al., 2017). Indeed, Hoffmann et al. (2018) also recommended process research with case studies for in-depth exploration of this suggested theme in their framework, however, a

phenomenological study design would also enable a meaningful contribution in beginning to address the research question. Therefore, based on the design of the qualitative study by Ritala et al. (2017), the proposed study also focussed on strategic alliances as an organising framework, and the relational and coopetitive dynamics as the phenomena under exploration.

The research primarily followed an inductive approach. However, based on the literature review, some deductive analyses had already been applied in determining key patterns and themes to the phenomena under study (Creswell & Creswell, 2018). On the basis of the exploratory nature of the proposed research, new data inductively led to the emergence of additional themes and concepts (Denzin & Lincoln, 2018).

Data were collected through semi-structured interviews conducted with individuals at expert and/ or management level. A standardised interview protocol with standard questions and sub-questions and/or probes was utilised (see Appendix A). In-depth semi-structured interviews were appropriate for this study design as they allowed latitude for the participants to describe their experiences and views in their own words and meanings (Onwuegbuzie et al., 2010). All interviews were audio recorded and transcribed, with participant consent (see Appendix B). As far as software application permissions and connectivity allowed, some interviews were video recorded as well.

4.2. Population and research setting

Interfirm strategic alliances have been studied extensively in the technology industry; including from the perspective of coopetition (Hoffmann et al., 2018). Certainly, the cited literature is largely based on technological industries as a setting (Bouncken et al., in press; Cozzolino & Rothaermel, 2018; Gnyawali & Charleton, 2018; Hannah & Eisenhardt, 2018).

Therefore, the target population for the research was technology firms with established strategic alliances. Due to the COVID-19 pandemic, remote working became the natural setting for most organisations. The data gathering was therefore conducted across virtual audio-visual platforms for the entire data collection period.

4.3. Unit and level of analysis

The research explored the antecedents, processes, and consequences of cooperating with other firms, by focusing on a deeper understanding of the relational and coopetitive

dynamics of interfirm strategic alliances. The research was therefore not particular to or limited to any organisation.

Hence, the unit of analysis of this study is individual participants within organisations that fit the sampling criteria, with the level of analysis at processes within the organisations.

4.4. Sampling method, sampling frame and size

Purposive sampling was used, in order to obtain information-rich insights and in-depth understanding of the phenomena, and key cross-cutting themes identified from individual experiences (Patton, 2002). Purposive snowball sampling was permitted, based on additional participants across the respective alliances who were identified as key informants as the study progressed (Denzin & Lincoln, 2018). The following sampling criteria applied: experts and/ or managers working for technology firms with established strategic alliances. In addition, the individuals had had personal experience working with at least one strategic alliance for a minimum period of six months. The sampling criteria yielded a degree of diversity among the participants, given the number of technology firms, the varying product and service focus across the technology industry, as well as varying levels of individual expertise and experience of individuals working within such strategic alliances. However, the sampling criteria were not designed to yield a maximum variation sample (Guest et al., 2006; Patton, 2002).

As the study was qualitative, there was no finite or ideal sample size as the objective was not to have a representative sample. A total purposive sample of a minimum of twelve participants would suffice for phenomenological research (Creswell & Creswell, 2018). However, a larger sample size than twelve was more likely to enable data saturation, which was difficult to predetermine, given the inexperience of the researcher (Guest et al., 2006; Mason, 2010). As such, a minimum of sixteen interviews of a maximum of one hour were planned; targeting six participants per firm across three firms, or four participants across four firms as illustrated in Table 4 below. The lower and upper boundaries was set at twelve and twenty interviews, respectively, provided that the depth of the data gathered in response to the research questions would not be compromised.

SCENARIO A	SCENARIO B
FIRM A x 4 FIRM B x 4 FIRM C x 4 FIRM D x 4	FIRM A x 6 FIRM B x 6 FIRM C x 6
Total = 16	Total = 18

Table 4 Planned sampling scenarios

However, neither of these scenarios materialised in field, as the researcher soon discovered that strategic alliances in the local setting of the technology industry were not purely dyadic, but rather with multiple dyadic partnerships with an alliance ecosystem. The ecosystem comprised of at least four types of firms: hyperscaler (HS), independent software vendor (ISV), global system integrator (GSI) and local system integrator (LSI). Hence, scenario C emerged, and a total of sixteen participants were interviewed across the ecosystem as depicted in Table 5 below:

SCENARIO C	SCENARIO B	SCENARIO A
HS/ISV x 6 GSI x 5 LSI x 5	FIRM A x 6 FIRM B x 6 FIRM C x 6	FIRM A x 4 FIRM B x 4 FIRM C x 4 FIRM D x 4
Total = 16	Total = 18	Total = 16

Table 5 Actual sampling scenario

The recruitment strategy was primarily through personal, academic and professional networks (Josselson, 2013).

4.5. Measurement instrument

An interview protocol was designed as a data gathering tool which was used by the researcher. As the researcher proceeded to gather and interpret the data during the

process, both the researcher and the interview protocol therefore served as data gathering instruments (Creswell & Creswell, 2018).

The semi-structured interview protocol served as a guide to standardise data gathered in conversation and open dialogue with different participants (Josselson, 2013). Standardised topics and open-ended questions were drafted to explore the relational and coopetitive dynamics of interfirm strategic alliances; as experienced and viewed by the participants in their daily work. These exploratory questions were based on the research questions (see Appendix A). Care was taken to avoid leading and closed questions, and to allow for further probing and clarification as necessary.

The interview protocol was piloted in full to check for quality, process and other practical considerations, such as the functioning of recording devices. One pilot interview was conducted with an individual familiar with the subject matter. No adjustments were made to the protocol, and as the individual fulfilled all the sampling criteria, the pilot interview was included as part of the analysis data set.

4.6. Data gathering process

The data gathering process entailed sixteen virtual semi-structured interviews with experts and managers across technology ecosystem. The participants were selected according to criteria specified in Section 4.4, on the basis of their expertise and experience with strategic alliances as part of their current scope of work. As purposive snowball sampling was permitted, relevant participants were included from alliance partner firms. Interviewing a variety of participants enabled the researcher to gather rich data across a variety of experiences of the same phenomena (Patton, 2002).

As highlighted in Section 4.2, all interviews were conducted and recorded by the researcher across virtual audio-visual platforms, including Google Meet, Microsoft Teams, Skype, Webex and Zoom, with participant consent. Additional recording was conducted using a mobile application for transcription purposes. The interview structure started with a brief description of the context of the study; followed by open-ended, non-leading questions (Josselson, 2013). Participants were encouraged to respond in an open and comprehensive manner, based on their past and present experiences. Probing questions were posed by the researcher as needed for clarification purposes. Bearing the research design and the business context in mind, each interview was scheduled for a maximum of one hour. However, some participants were able to engage for longer interviews, as summarised in Table 6 below:

	Position	Firm Type	Platform	Length
Par 1.	Senior Manager	GSI	Video conference	56 minutes
Par 2.	Senior Manager	ISV	Video conference	51 minutes
Par 3.	Senior Manager	HS	Video conference	46 minutes
Par 4.	Executive	ISV	Video conference	53 minutes
Par 5.	Operations	GSI	Audio conference	36 minutes
Par 6.	Executive	GSI	Video conference	50 minutes
Par 7.	Executive	GSI	Video conference	53 minutes
Par 8.	Operations	HS	Audio conference	34 minutes
Par 9.	Senior Manager	GSI	Video conference	42 minutes
Par 10.	Executive	LSI	Video conference	84 minutes
Par 11.	Executive	HS	Video conference	38 minutes
Par 12.	Executive	LSI	Audio conference	31 minutes
Par 13.	Executive	LSI	Video conference	52 minutes
Par 14.	Senior Manager	HS	Video conference	48 minutes
Par 15.	Executive	LSI	Video conference	80 minutes
Par 16.	Senior Manager	LSI	Video conference	61 minutes

Table 6 – Sample of participants for data gathering

Verbatim transcription was done based on a mobile transcription application. The researcher opted to use an additional transcription service for three of the sixteen interviews.

4.7. Analysis approach

A phased process of thematic analysis was used to review, synthesise, and organise the data into codes, categories and themes (Braun & Clarke, 2006). In line with the inductive approach chosen for the research, conventional content analysis was used, and codes were developed directly from the participant data (Hsieh & Shannon, 2005). A descriptive coding method was applied; primarily utilising nouns and short phrases from the participants' language (Hsieh & Shannon, 2005) so as to capture the essence of the textual data (Saldaña, 2015). However, as highlighted in Section 4.1 above, some deductive analyses were applied to further determine key patterns and themes to the phenomena under study (Creswell & Creswell, 2018), based on the ongoing literature review of existing theory.

Using the process described by Braun & Clarke (2006), the first phase started during the data gathering as the researcher gained familiarity with the data during transcription and reiteration back to subsequent data gathering. Secondly, an iterative process was followed, with regular data checks and reviews to systematically generate first level

codes in short descriptive phrases using the participants' language. The idea was to start comparative analyses of similarities and differences as they emerged and categorise them in the participants' language. Thirdly, these first level codes were consolidated into descriptive first level categories and deciphered into conceptual themes. Fourthly, the themes were reviewed and checked, to create a thematic map of the analysis, which was refined through ongoing analysis. Finally, theoretical categories or constructs were established according to the research questions, as depicted in Fig 3. Atlas.ti software was used for coding through to thematic mapping. This process was also influenced by the "Gioia methodology" for theory building, as far as it highlighted the importance of depicting the progression "from raw data to first-order codes to second order theoretical themes and dimensions," to demonstrate the rigour of the research (Gehman et al., 2018, p. 286).

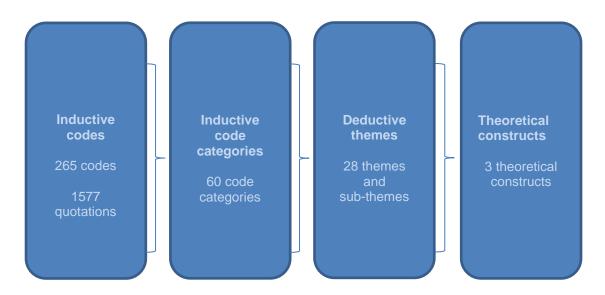


Fig. 3 Thematic analysis illustration

Although interpretative phenomenological analysis would be the primary method for analysis in phenomenology, thematic analysis is still a valid practical tool which is applicable across many methods. This was indeed relevant for this research, which although theoretically influenced by phenomenological epistemology, requires flexibility of inductive analysis which can fit the selected constructivist philosophical paradigm (Braun & Clarke, 2006).

4.8. Ethical considerations

As aforementioned in Section 4.3, the phenomena under study were not specific to any individual organisation. As such, the names of individuals and organisations were anonymised, and data were reported without identifiers. Hence, individual quotes used to support the findings are also anonymised. All electronic data have been stored

securely as password protected documents in duplicate discs. One data disc set will be stored by GIBS and another will be stored in an accredited secure data facility such as Metrofile. Both may be retrieved as mandated for a minimum of ten years.

As aforementioned in Section 4.4, virtual interviews of a maximum time of one hour were facilitated through personal, academic and professional networks. No incentive was offered for participation, and the participants could withdraw at any time without penalty. An informed consent statement was signed or emailed prior to all interviews (see Appendix B). As aforementioned in Section 4.6, the researcher used an additional transcription service, and a non-disclosure agreement will be signed prior to any data exchange (see Appendix C).

4.9. Quality and validity criteria

As the researcher is a novice in qualitative research and particularly because of the researcher's background post-positivist worldview of natural science, it was important to consider multiple aspects of qualitative rigour for this study. Thus, multiple strategies were employed to increase the validity and reliability of the study, as well as to limit bias (Maxwell, 1992; Morse, 2015).

To ascertain the validity of the study, accuracy was ensured by using the recordings to verify the transcripts, and consistent documentation. Furthermore, coding quality was ensured by using the participants' descriptive language for first-order codes, and an audit trail was maintained in Atlas.ti. Theoretical validity was further enabled by using thick descriptions and data triangulation. Based on the anticipated diversity across participants aforementioned in Section 4.4, cross-case analysis was used to facilitate triangulation across the entire data corpus, allowing for analysis of each individual interview in comparison to others (Hsieh & Shannon, 2005). This facilitated the exploration of "different levels and perspectives of the same phenomenon" (Fusch & Ness, 2015, p. 1411).

To enhance reliability, the data collection techniques and protocols were standardised as described in Section 4.6. An audit trail was maintained to preserve accurate documentation of the data collection process.

To limit bias, the specified selection criteria for purposive sampling were strictly adhered to and documented for each participant. Extreme care was taken to keep interviewees

open, by limiting extensive explanations and leading questions from the interviewer (Montgomery & Bailey, 2007).

4.10. Limitation of the design and methods

Qualitative research can be affected by a number of different biases, including personal biases (Creswell & Creswell, 2018). The open and exploratory structure of the interview helped to limit interviewer bias. The researcher's inexperience might have impacted how the research was conducted. Experience was gained through the course of the research, by constantly reflecting on the transcripts and this was supplemented by formal and informal continuous learning.

As the sample was purposive, the number of individuals with the relevant experience was finite, and as this research as conducted towards the end of an unprecedented year, access became increasingly challenging. It was, however, still critical to continue data collection until data saturation could be demonstrated. Saturation was reached when no new codes could be generated from the raw data (Fusch & Ness, 2015). The time horizon was a possible limitation, hence the selection phenomenological research design instead of a process study.

CHAPTER 5: RESULTS

5.1. Introduction

This chapter presents the main findings addressing the research question, according to the sub-questions framed in Chapter 3. These findings are formulated from summarising and analysing the data collected from 16 individual, semi-structured qualitative interviews with participants who were selected based on their knowledge and expertise of strategic alliances in the technology industry. As four types of firms were identified during the data gathering process described in Chapter 4, comparisons were made across the types of firms for all the sub-questions, with hyperscaler and ISV participant views combined in one group, as these are global firms who provide platform and/or software. The findings are presented for each sub-question, highlighting similarities and differences across the main themes identified, across firm types.

The presentation of the main research findings is preceded by a description of the interview participants and the technology industry context in South Africa, according to the descriptive qualitative data collected from the interview participants.

5.2. Interview participants

Table 7 below depicts a summary of the interview participants, their respective positions and functions, ranging from the operational to the executive levels.

	Position	Firm Type	Function	
Par 1.	Senior Manager	GSI	Technology advisory and support	
Par 2.	Senior Manager	ISV	Digital sales and customer experience	
Par 3.	Senior Manager	HS	Regional partnerships for cloud solutions	
Par 4.	Executive	ISV	Responsible global strategic partners	
Par 5.	Operations	GSI	Managing a hyperscaler partnership	
Par 6.	Executive	GSI	Systems implementation and strategic advisory	
Par 7.	Executive	GSI	Ecosystem and alliances	
Par 8.	Operations	HS	Consulting services	
Par 9.	Senior Manager	GSI	Managing an ISV business practice	
Par 10.	Executive	LSI	Local digital transformation business	
Par 11.	Executive	HS	Channel partner ecosystem	
Par 12.	Executive	LSI	Local strategic IT and digital transformation business	
Par 13.	Executive	LSI	Local strategic IT business	
Par 14.	Senior Manager	HS	Global digital transformation	
Par 15.	Executive	LSI	Local digital transformation business	
Par 16.	Senior Manager	LSI	Local strategic IT business	

Table 7: Summary of interview participants according to function

5.3. Context of the firms reviewed

Most of the interviewees referred to the local technology industry as an ecosystem within which at least four broad types of alliance partners were identified: namely, hyperscalers, ISVs, GSIs and LSIs. A fifth group was identified as technology partners, which include hardware providers as well as historically non-technology industries such as telecommunications and banking. These partners have been excluded from the scope of this research as primary respondents.

Each of the four stated firm types was reported to specialise in a discrete pivotal function within the partnership ecosystem, however, significant overlaps were also highlighted. Hyperscalers were described typically as global technology firms which enjoy dominant global scale and reach and provide cloud platforms and data centre infrastructure. While the cloud platform enables integration of compatible solutions from ISVs and LSIs, hyperscalers may also offer competing software solutions.

ISVs were characterised as typically offering software solutions, which are built to be compatible with either onsite customer infrastructure or integrated into a cloud platform, and the integrated solution is implemented by the system integrators (GSIs and LSIs).

Par 3, Hyperscaler: "So, we think of our cloud as the sort of platform, the engine for innovation and transformation right, the routes to market can come in many ways. One of these is a vehicle called independent software vendors, ISVs, right? And those are organisations that create software that runs our cloud."

GSIs are global consulting firms which specialise in strategy consulting as well as implementing solutions. They are often described within the ecosystem as trusted advisors because of their role in giving neutral advice.

Par 6, GSI: "We're trying to be product agnostic, we've got multiple skill sets and practices. We don't push a certain solution to a client."

LSIs, on the other hand, are smaller local implementation partners who may also be designated as channel resellers or offer their own boutique or niche software solutions. The LSIs are also viewed by the large global firms as important empowerment partners to drive local industry empowerment.

Par 13, LSI: "The partnership with the global companies is more in line with software and selling. So, we become a software reseller of their products. So, we go and do the marketing, they assist us in terms of preparing the technical proposals, and then we sell their products."

5.4. Findings: Research Question

Research Question - What are the antecedents, processes, and outcomes of interfirm coopetition?

As formulated in Chapter 3, the research question was divided into three sub-questions, in order to facilitate deeper exploration of each construct.

5.5. Findings: Sub-Question 1

Sub-Question 1 - What are the antecedents for coopetition?

This question was adapted to understand the participants' views on the antecedents for interfirm alliances in the technology industry. The specific focus on interfirm relationships enabled exploration of alliance partners as possible competitors, and therefore the basis for coopetition. The researcher was thus able to evaluate the possible motivations for establishing such interfirm alliances.

To explore Sub-Question 1, standard interview questions from the Discussion guide in Appendix A were posed to all the interviewees as follows:

Think broadly about some of the alliances you are involved in. Based on your experience and knowledge, what led to the establishment of these alliances? What is the overall purpose of these alliances?

A high-level view of the themes related to antecedents can be found in Figure 4 below:



Fig. 4 Overview of Findings – Sub-Question 1

5.5.1. Environmental antecedents

The first 'antecedents' theme to be described points to environmental antecedents for coopetition; in this instance, reference to the environment pertains to the industry context.

5.5.1.1. Evidence – description of participant views

The main second order categories derived from participant views on environmental antecedents for interfirm alliances were digitisation, industry trends and industry ecosystem, as shown in Table X below:

	Digitisation	Industry ecosystem	Industry trends
Par 1 - GSI	✓		
Par 2 - ISV	✓	✓	✓
Par 3 - HS	✓	✓	
Par 4 - ISV	✓	✓	✓
Par 5 - GSI	✓		
Par 6 - GSI	✓	✓	✓
Par 7 - GSI	✓	✓	✓
Par 8 - HS			✓
Par 9 - GSI	✓		✓
Par 10 - LSI	✓	✓	✓
Par 11 - HS	✓	✓	✓
Par 12 - LSI	✓		✓
Par 13 - LSI			✓
Par 14 - HS	✓	✓	✓
Par 15 - LSI	✓		
Par 16 - LSI	✓		✓

Table 8 Environmental antecedents - categories across participants

Most participants highlighted digitisation as a leading reason for the establishment of interfirm alliances. According to their descriptions, digital transformation and platform integration drive strategic business integration, with digital technology as the pivotal enabler in the transformation of business processes, business models and indeed entire organisations.

Par 15, LSI: "By tapping into that (digital service or platform) you are becoming more agile, more innovative, you know? And some of the systems you don't have to... you can bring them to your customer to say - based on your business and your business case and operating model, these are the platforms that you might need to enable you."

In addition to digitisation, other industry trends were also mentioned by most participants, such as the fourth industrial revolution (4IR) and the platform economy. These trends are seen to be changing industry requirements and shifting associated market factors such as market dominance and market saturation.

Par 6, GSI: "We tend to really understand what the client wants to achieve, what's the best fit. And it could be anything from a business application, to a full-blown solution with IoT players at the edge. And many of these products provide an equivalent, but we feel that a specific company might be more relevant to the industry."

Lastly, the shift to an industry ecosystem has already been described in detail in Section 5.3.

5.5.1.2. Analysis – in-case and cross-case comparison

All the categories were mentioned across firm types, albeit by not all participants, as shown in Table X below:

	GSI	HS/ISV	LSI
Industry ecosystem	✓	✓	✓
Digitisation	✓	✓	✓
Industry trends	✓	✓	✓

Table 9 – Environmental antecedents - categories across firm types

As digitisation was mentioned by most participants across firm types, including all GSI participants, this emerged as the most prominent antecedent for strategic alliances in the technology industry. Furthermore, there were no differences in the sentiments or views expressed about the importance of each category, across the different groups.

It is apparent, however, that digitisation is a top-of-mind consideration for GSIs, which is likely related to their dominant role in the creation and implementation of digital transformation strategies. Also, the industry description as an ecosystem is the least mentioned across all participants, with the exception of the HS/ISV group. This suggests that the ecosystem shift may be more critical for providers, which would indeed be in line with increasing digital transformation and platform integration. It is surprising that system integrator groups would make less reference to the ecosystem of which they are such a

vital component. This indicates that different firm types have different priorities, and therefore appreciate external factors differently.

5.5.1.3. Theme conclusions

The local technology industry is an ecosystem within which at least four broad types of alliance partners were identified: namely, hyperscalers, ISVs, GSIs and LSIs. Hyperscalers are global technology firms with global scale and reach, which provide cloud platforms and data centre infrastructure. While the cloud platforms enable integration of compatible solutions from ISVs and LSIs, hyperscalers may also offer competing software solutions. ISVs offer software solutions, which are built to be compatible with either onsite customer infrastructure or integrated into a cloud platform, and the integrated solution is implemented by the system integrators (GSIs and LSIs). GSIs are global consulting firms which specialise in strategy consulting as well as implementing solutions. LSIs are smaller local implementation partners who may also be designated as channel resellers or offer their own boutique or niche software solutions.

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of digitisation and industry trends such as the 4IR, as important environmental antecedents for coopetition in the technology industry. There is also an apparent positive interrelationship between the two. Consequently, digitisation is driving transformation in the industry, with GSIs playing a dominant role in creating and implementing the relevant transformation strategies. However, the industry ecosystem is a compelling priority for the HS/ISV group who are driving platform integration and therefore interdependence within the industry, even though the same sentiment is not consistently translated to the system integrator groups in this study.

Digitisation and industry ecosystem will be further analysed in Chapter 6, based on the divergent degree of consistency between firm types in their perception of contextual drivers for coopetition and the descriptions already presented in Section 5.3 about the context of the firms reviewed, see Fig 6 for illustration for Chapter 6 analysis:

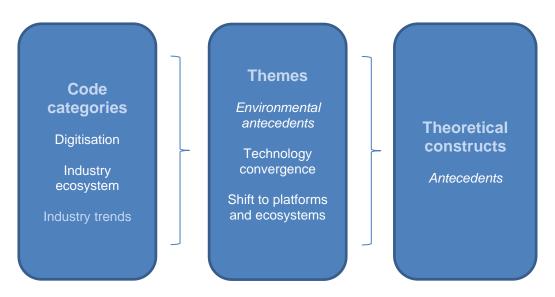


Fig 6 Environmental antecedents of coopetition categories and themes

5.5.2. Organisational antecedents

The second 'antecedents' theme to be described points to organisational antecedents for coopetition.

5.5.2.1. Evidence: description of participant views

The main second order categories derived from participant views on organisational antecedents for interfirm alliances were leverage, skills transfer, enterprise development, organisation characteristics and shared risk, as depicted in Table 10 below:

	Enterprise development	Leverage	Organisation characteristics	Shared risk	Skills transfer
Par 1 - GSI		✓			
Par 2 - ISV	✓	✓			✓
Par 3 - HS	✓	✓			✓
Par 4 - ISV		✓			✓
Par 5 - GSI		✓			✓
Par 6 - GSI	✓	✓			✓
Par 7 - GSI	✓	✓			✓
Par 8 - HS	✓	✓			✓
Par 9 - GSI		✓			✓
Par 10 - LSI		✓	✓	✓	✓
Par 11 - HS		✓	✓		✓
Par 12 - LSI	✓	✓	✓	✓	✓
Par 13 - LSI	✓	✓			✓
Par 14 - HS	✓	✓	✓		✓
Par 15 - LSI		✓	✓	✓	✓
Par 16 - LSI		✓			✓

Table 10 Organisational antecedents - categories across participants

The global firms in this ecosystem are typically large multinational companies with global alliance strategies which can be localised per region or country. Through strategic alliances, global and local partners are able to leverage the size, scale, dominance and brand reputation of these global firms. Alliance partners are empowered to build and scale new solutions on global platforms, leverage existing partner infrastructure such as cloud data centres, and reach more customers, while also benefiting from existing customer relationships.

Par 2, ISV: "What we could do is we could leverage the hyperscalers; ... the platform, cloud companies of the world, because they already have the reach. All we have to do is make sure that our platforms technically work with their platforms, so that we could connect. And the purpose there is once again, it's the reach."

As the technology industry is highly technical, specialised knowledge and skills, technical capability and delivery capability are required. However, these are not uniformly distributed, hence skills and knowledge transfer through cross-skilling and training was seen as an imperative across all but one participant, and thus an important antecedent for interfirm alliances. In addition, qualification mechanisms are utilised to certify and accredit partner training, which boosts the partner's credibility and eligibility for future projects. One participant considered that partnering is even more critical to the niche areas, such as artificial intelligence and data analytics, which require limited niche skills. The transfer of skills and knowledge is also essential for GSIs in their customer advisory and consulting capacity, and for joint marketing and sales alliances, to enhance the expertise of the partner sales teams and equip them to support customers.

Par 4, ISV: "It (overall purpose) is to make sure that the SI partner has enough knowledge, information and alignment to my brand."

Parallel to skills transfer, global firms are also mandated by local legislation to empower local small and medium enterprises (SMEs) by coaching and mentoring them. This boosts local job opportunities and builds local businesses, thereby benefiting the economy. Furthermore, enterprise development enables local SMEs to invest in ongoing efforts towards developing more niche solutions.

Par 11, LSI: "There's a lot of lessons learned from that partnership. They've also registered us as a vendor, meaning that we are part of their enterprise supplier development. So, meaning they will assist us in terms of, how do we manage big

projects, ... how do we train our consultants, how do we engage them, and so on."

Although less consistently cited by the participants, sharing financial, project and reputational risks was also a key consideration in alliance discussions, while openness to partnering and disruptive innovation, organisational agility and cooperative leadership were seen as key enabling organisation characteristics which foster compatibility between partners.

5.5.2.2. Analysis: in-case and cross-case comparison

Participants across all the firm types cited the various leverage advantages as reasons to establish alliances between firms. Similarly, the need to transfer knowledge and skills and develop local SMEs was also identified as an important purpose for interfirm alliances across all firm types. See Table 11 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Enterprise development	✓	✓	✓
Leverage	✓	✓	✓
Organisation characteristics		✓	✓
Shared risk			✓
Skills transfer	✓	✓	✓

Table 11 Organisational antecedents - categories across participants

No differences were noted across the firm types with respect to the views conveyed regarding the importance of leverage, knowledge and skills transfer and enterprise development in necessitating interfirm alliances. However, the participants from global firms (GSIs, ISVs and hyperscalers) were also well aware of their dominant position in the alliance ecosystem. Correspondingly, the LSI participants generally acknowledged their receiving position across all categories.

Shared risk was only cited by LSI participants, whereas organisation characteristics were cited by LSI and hyperscaler participants. Risk is likely most critical to LSIs given that these are small businesses who cannot afford to fail and enabling organisation characteristics would also determine their ability to grow from partnerships and alliances. With hyperscalers, on the other hand, being the primary drivers of platform integration also means that such organisational characteristics from partners would be crucial in facilitating the same.

5.5.2.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of leverage, knowledge and skills transfer and enterprise development, as important organisational antecedents for coopetition.

Global and local partners are able to leverage the size, scale, dominance and brand reputation of larger and more dominant global firms. Alliance partners are empowered to build and scale new solutions on global platforms, leverage existing partner infrastructure. Skills and knowledge transfer through cross-skilling and training was seen as an imperative across all firm types. Furthermore, global firms are also mandated by local legislation to empower local SMEs by coaching and mentoring them.

Leverage, knowledge and skills transfer, and enterprise development are typically relative to asymmetries in size, skills and resources, and are therefore interrelated. This asymmetry is also apparent in the unidirectional trend of terms of partnership dominance.

Leverage, skills transfer, and enterprise development will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of organisational antecedents for coopetition. See Fig 7 for illustration for Chapter 6 analysis:

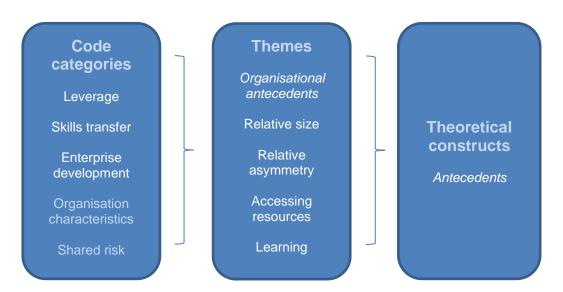


Fig 7: Organisational antecedents of coopetition

5.5.3. Managerial antecedents

The third 'antecedents' theme to be described relates to managerial antecedents for coopetition.

5.5.3.1. Evidence: description of participant views

The main second order categories derived from participant views as managerial antecedents for interfirm alliances were strategic rationale, strategic intent and changing business models.

	Strategic rationale	Strategic intent	Business models
Par 1 - GSI	✓	✓	
Par 2 - ISV	√		
Par 3 - HS	✓		
Par 4 - ISV	✓	✓	
Par 5 - GSI	✓	✓	
Par 6 - GSI	✓	✓	
Par 7 - GSI	✓	✓	
Par 8 - HS	✓	✓	
Par 9 - GSI	✓	✓	
Par 10 - LSI	✓	✓	✓
Par 11 - HS	✓		
Par 12 - LSI	✓	✓	✓
Par 13 - LSI	✓	✓	✓
Par 14 - HS	✓	✓	✓
Par 15 - LSI	✓	✓	✓
Par 16 - LSI	✓	✓	

Table 12 Organisational antecedent themes across participants

The strategic rationale for interfirm alliances was pertinent to all participants, and this was described over three broad categories: joint go-to-market, transformation and innovation programmes. These programmes are designed to drive profitable revenue growth and create mutual value across the alliance, and for the customer.

The goal of joint go-to-market strategies is to increase market share by expanding customer reach, i.e., new customers or new categories of spend, which may include geographical expansion. The alliance partners often create a joint customer value proposition by means of joint solutions and/or services, such that joint marketing would subsequently include driving joint awareness, readiness and demand generation.

Par 11, HS: "You've got to create demand in your customer base. And likewise, you can do it yourself, your own marketing programs or you can do it with your partners, you know? How do you help your partners create demand for themselves, which then drives demand for your platforms?"

Most global firm participants described how their strategic intent to work with strategic partners is defined and established globally, and subsequently communicated to various regions for local adaptation. For local firm participants, strategic differentiation from what is already available in the market was underscored as crucial.

Par 8, HS: "As our company, we are mandated that we have to work with partners, we're more a partner-driven organisation."

Furthermore, some participants highlighted how the firm's strategy and business model can be transformed by the rapidly evolving trends in business models, such as start-up models.

Par 12, LSI: "The next one is to partner with the fintechs. This is your kind of alliance model, where you kind of partner with them, and you know, you want their secret sauce to kind of come through into your organisation... If it rubs off, that's kind of how you get your organisation transformed without the high cost and high risk."

5.5.3.2. Analysis: in-case and cross-case comparison

Strategic rationale and strategic intent were cited across all firm types as drivers to establish alliances between firms. Less consistently so, changing trends in business models were also mentioned. See Table 13 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Strategic rationale	✓	✓	✓
Strategic intent	✓	✓	✓
Business models		✓	✓

Table 13 Managerial antecedents - categories across firm types

Sentiments and views regarding the strategic rationale were complementary among the global firms, with the HS/ISV participants emphasising added value by expanding the market, while GSIs focused on leveraging the hyperscaler infrastructure to accelerate effective implementation. The LSIs, on the other hand, focused on differentiating their role as channel and implementation partners, or being providers of niche solutions who are also able to get to market quicker and more cost-effectively. The strategic intent

differs significantly between global and local firms because of the dominance of the former, which makes strategic differentiation for local firms an imperative.

Another difference is that LSI participants were the only group that felt strongly about the influence of business model trends, and how business models can be optimised to enhance innovation and accelerate speed to market.

5.5.3.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent acknowledgement of strategic rationale and strategic intent as important managerial antecedents for coopetition.

The strategic rationale for interfirm alliances was described over three broad categories: joint go-to-market, transformation and innovation programmes, which are designed to drive profitable revenue growth and create mutual value across the alliance, and for the customer.

The goal of joint go-to-market strategies is to increase market share by expanding customer reach. Alliance partners often create a joint customer value proposition by means of joint solutions and/or services,

Sentiments and views regarding the strategic rationale were complementary among the global firms, with the global firm participants emphasising added value by expanding the market through leveraging the hyperscaler infrastructure to accelerate effective implementation. The strategic intent differs significantly between global and local firms because of the dominance of the former, which makes strategic differentiation for local firms an imperative.

These dominant categories both relate to the fundamental strategic reasons for establishing alliances. The role complementarity and role differentiation according to firm type is highlighted, which also emphasises interdependence between alliance partners, however with the joint orientation of creating customer value.

Strategic rationale and strategic intent will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of managerial antecedents for coopetition. See Fig 8 for illustration for Chapter 6 analysis:

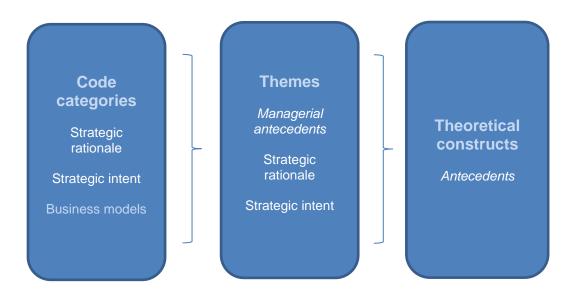


Fig 8 Managerial antecedents of coopetition

5.5.4. Summary of the Findings of Sub-Question 1

Key insights include the consistent recognition of digitisation and industry trends such as the 4IR, as important environmental antecedents for coopetition in the technology industry. However, the industry ecosystem is a compelling priority for the HS/ISV group who are driving platform integration and therefore interdependence within the industry, even though the same sentiment is not consistently translated to the system integrator groups in this study.

Global and local partners are able to leverage the size, scale, dominance and brand reputation of larger and more dominant global firms. Alliance partners are empowered to build and scale new solutions on global platforms, leverage existing partner infrastructure. Skills and knowledge transfer through cross-skilling and training was seen as an imperative across all firm types. Leverage, knowledge and skills transfer, and enterprise development are typically relative to asymmetries in size, skills and resources, and are therefore interrelated. This asymmetry is also apparent in the unidirectional trend of terms of partnership dominance.

Sentiments and views regarding the strategic rationale were complementary among the global firms, with the global firm participants emphasising added value by expanding the market through leveraging the hyperscaler infrastructure to accelerate effective implementation. The strategic intent differs significantly between global and local firms because of the dominance of the former, which makes strategic differentiation for local

firms an imperative. The role complementarity and role differentiation according to firm type is highlighted, which also emphasises interdependence between alliance partners, however with the joint orientation of creating customer value.

5.6. Findings: Sub-Question 2

Sub-Question 2 – What are the processes for managing coopetitive relationships between firms?

This question was adapted to understand the participants' views on the processes for managing coopetition dynamics in interfirm alliances. This was assessed by enquiring into the processes to manage cooperation, relational and competitive dynamics and tensions that emerge, as well as processes to manage these dynamics. The researcher was thus able to explore the governance mechanisms for managing cooperation in interfirm relationships, possible tensions that may arise from coopetition, and participants' views on how these are managed.

To explore Sub-Question 2, standard interview questions from the Discussion guide in Appendix A were posed to all the interviewees as follows:

What processes have been used to manage cooperation within the alliances?

Please share some examples of what has worked well and what has not.

What tensions do you experience when working with alliance partners?

What processes have been put in place to manage competing tensions within the alliance?

Please share some examples of what has worked well and what has not.

What would you propose in the alliance processes that could lead to improved outcomes in the future?

A high-level view of the results can be found in Figure 9 below:



Fig. 9: Overview of Results – Sub-Question 2

5.6.1. Formal governance

The first 'processes' theme to be described relates to formal governance.

5.6.1.1. Evidence: description of participant views

The main second order categories derived from participant views regarding formal governance of interfirm alliances were contract agreement and terms of reference, as depicted in Table 14 below:

	Contract agreement	Terms of reference
Par 1 - GSI	√	
Par 2 - ISV	✓	
Par 3 - HS	✓	
Par 4 - ISV		
Par 5 - GSI	✓	
Par 6 - GSI		
Par 7 - GSI	✓	✓
Par 8 - HS	✓	✓
Par 9 - GSI	✓	
Par 10 - LSI		
Par 11 - HS		
Par 12 - LSI	✓	✓
Par 13 - LSI	✓	✓
Par 14 - HS	✓	
Par 15 - LSI	✓	✓
Par 16 - LSI	✓	✓

Table 14 Formal governance categories across participants

Several types of alliance agreements are negotiated and formalised to govern interfirm relationships: ranging from non-disclosure agreements (NDAs) or confidential disclosure agreements (CDAs), licensing, master services, service level and teaming agreements, to commercial agreements. Alliance agreements should ideally be preceded by a due diligence process as a risk mitigation measure, but also as part of the vetting process. Diligent contract analysis is also crucial, not only to understand the rules of engagement, but also to mitigate risk exposure upfront.

The global firms are typically able to rely on existing global agreements for both best practice and strategic alignment. However, additional local agreements still need to be signed to comply to local requirements and partner needs.

Par 5, GSI: "From an NDA perspective, that's signed on the global level. And to be honest, we don't have much say on that as our two head offices would have agreed on some terms and they've signed that off. But from a local delivery capability perspective, the subcontracting needs to be signed locally."

The most optimal agreements were described by participants as those which clearly outline the contractual obligations for each alliance partner and articulate the prime or lead partner, yet with a mutual undertaking of a mutual partnership relationship. The agreement should define how the alliance partners will engage, what roles and responsibilities will be assigned, how performance will be measured and how revenue will be allocated. The terms of reference should be finite pertaining respective control of the budget, pricing and resources. Most importantly, the agreement should be explicit about managing breaches and exit terms for the respective parties. Local SMEs, however, tend to lack legal expertise internally, and also do not have the benefit of global best practice.

Par 12, LSI: "If you look at big partners, there they have lawyers that get a salary, we cannot afford to have a lawyer. So, legal is part of the value chain of any business. Initially we thought no we don't need any engagement with the lawyers but it's important to have all the contracts within the company to be read by an expert and get an opinion on it, and then you can sign it."

5.6.1.2. Analysis: in-case and cross-case comparison

Both categories were cited across all firm types as critical factors to consider in the formal governance of interfirm alliances, to manage cooperation and coopetitive relationships between alliance partners. See Table 15 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Contract agreement	✓	✓	✓
Terms of reference	✓	✓	✓

Table 15 Formal governance categories across participants

While the views on the importance of contract agreements and unambiguous terms of reference are consistent among the three firm types, there are some nuances of difference. The global firms have an advantage in terms of their ability to leverage global

expertise when it comes to contract content as well as contract analysis and management.

It stands to reason, therefore, that their limited internal expertise would be of significant concern for LSIs, as these are local SMEs who are by definition small and therefore have limited resources and expertise, and also do not have the benefit of global reference or global best practice.

5.6.1.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, the key insights include the consistent acknowledgement of the contract agreement with clear terms of reference as important formal governance processes for managing interfirm relationships.

Interfirm relationships are governed by formal agreements or contracts which should be comprehensive in their scope and terms of reference. The formal contract specifies the lead partner and the respective contractual obligations of each partner. The contract defines terms of reference related to roles and responsibilities, performance targets, resources and revenue allocation, as well as budget and pricing.

The contract agreement process should be preceded by a due diligence and vetting process, followed by thorough analysis of the terms of reference, to ensure that risks are mitigated. The process may lend itself to power asymmetry between partners. In addition to stipulation of a lead partner, larger firms may also have more resources supporting the content and analysis of the contract. It is essential, therefore, for partners to ensure the mutual undertaking of a mutual partnership relationship, where these asymmetries may not be exploited through opportunism.

A robust contractual agreement process is essential governance for the governance of interfirm relationships. While the process itself indicates relative asymmetry between firms with respect to size and accessing resources, it is central to the mutual undertaking of a mutual partnership relationship.

Contract agreement and terms of reference will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of formal relational governance processes. See Fig 10 for illustration for Chapter 6 analysis:

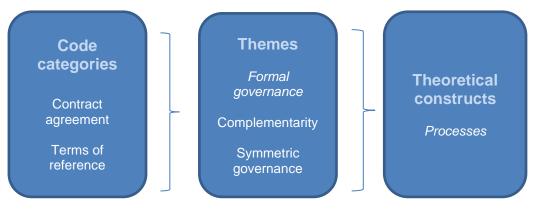


Fig 10 Formal governance

5.6.2. Relational governance – joint actions

The second 'processes' theme to be described relates to the role of joint actions in relational governance. The findings for relational governance have been sub-classified into two: joint actions and mutual trust. Section 5.6.2 discusses joint actions, followed by mutual trust mechanisms in Section 5.6.3.

5.6.2.1. Evidence: description of participant views

The main second order categories derived from participant views regarding joint actions to align corporate objectives were: joint activities, partner alignment, partner interests, joint strategy and joint projects, as depicted in Table 16 below:

	Joint	Joint	Joint	Partner	Partner
	activities	projects	strategy	alignment	interests
Par 1 - GSI	✓			✓	√
Par 2 - ISV	✓		✓	✓	✓
Par 3 - HS	✓		✓	✓	✓
Par 4 - ISV	✓		✓	✓	
Par 5 - GSI	✓			✓	✓
Par 6 - GSI	✓	✓	✓	✓	✓
Par 7 - GSI	✓	✓		✓	√
Par 8 - HS	✓			✓	
Par 9 - GSI	✓		✓	✓	
Par 10 - LSI	✓	✓	✓	✓	✓
Par 11 - HS	✓		✓	✓	✓
Par 12 - LSI	✓	✓	✓	✓	✓
Par 13 - LSI	✓	✓		✓	✓
Par 14 - HS	✓	✓	✓	✓	✓
Par 15 - LSI	✓	√	√	√	√
Par 16 - LSI	✓	✓		✓	

Table 16 Joint actions categories across participants

All participants highlighted key joint activities and partner alignment, based on the partner's interests, as mechanisms to manage cooperation within alliances. Joint activities varied from various joint meetings to workshops, events and campaigns. Formal joint strategies and joint projects were cited less consistently by participants.

Alliance partners typically convene at the beginning of each financial year for joint planning around priority accounts. This planning platform further determines how pipeline opportunities will be managed in terms of joint proposal or joint campaigns. Regular operational project team meetings are then convened, ranging from daily standups to weekly and monthly meetings or calls, depending on the phase of the project. Steering committee meetings are convened on a regular basis to focus on strategic issues, as well as regular business reviews to apprise senior leadership of the status across alliance projects.

Par 11, HS: "We build joint business plans, we agree on joint targets of what we're gonna drive together. And, and we work towards those goals on an annual basis."

Partner alignment is critical across multiple parameters, starting with managing current and pipeline opportunities. Having determined the key accounts, alliance partners should be aligned on the goal, how value will be created for each partner and the customer, and the strategy to be followed to achieve that goal. Furthermore, the partners should also be aligned on all practical considerations prior to and during the course of project implementation. Where possible, this is accomplished through project teams dedicated to support the partnership.

Par 12, LSI: "My goal is his goal, there's no other goal. And his goal and my goal is to get as many customers onboard."

As emphasised by most participants, alliance partners should uphold the other's best interests and take time to understand and meet the partner's needs. Commitment to the partnership is also demonstrated through joint decision-making and co-investment in time and resources.

Par 6, GSI: "The second lesson is understanding each other's KPIs, understand the definition of success for both parties that form the alliance... and understand the investment of the other party."

5.6.2.2. Analysis: in-case and cross-case comparison

All the categories were cited across all firm types as important joint actions in the relational governance of interfirm alliances, to manage cooperation between alliance partners. See Table 17 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Joint activities	✓	✓	✓
Joint projects	✓	✓	✓
Joint strategy	√	✓	✓
Partner alignment	✓	✓	✓
Partner interests	✓	✓	✓

Table 17 Joint categories across firm types

There were no differences noted among firm types in the respective participants' views and experience of joint activities, such as joint meetings, proposals and campaigns. No differences were noted among firm types in the sentiments regarding partners' needs, commitment and co-investment. However, joint planning may not be the standard between the LSI and HS/ISV groups in cases where the LSI partner is considered as an unmanaged partner. Additionally, LSI participants have a greater need to build their strategy with their global counterparts than the inverse. There was a corresponding difference when it came to the global firms' alignment with LSI growth strategies. There were further differences related to firm size, such as dedicated partner support teams, which tend to be standard practice for global firms, where LSIs typically do not have complementary counterparts.

5.6.2.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, the key insights include the consistent acknowledgement of joint activities and partner alignment based on partner interests as joint actions which are pivotal relational governance processes for managing interfirm cooperation.

With the partnership interest at the core, partners align on their goal, business objectives and subsequent strategy. This alignment is driven by co-investment, joint decisions and joint actions, which include organisational routines such as regular joint meetings. The cadence varies according to the type of meeting and its objectives, as well as the phase of the joint proposal or project. Other joint activities include joint workshops, events and campaigns.

Partner commitment and alignment are further strengthened by complementary project teams dedicated to support the partnership on either side of the alliance, depending on resource availability. Such alignment may therefore not always be realistic for LSI partners.

Joint activities, partner alignment and partner interests will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of joint actions as relational governance processes, see Fig 11 below:

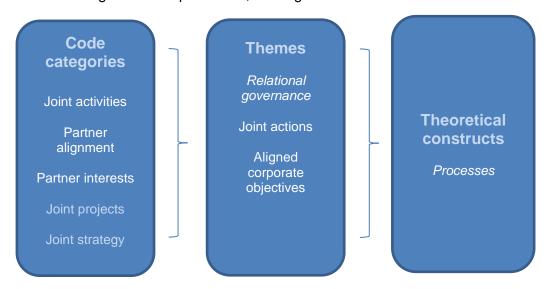


Fig 11 Relational governance - joint actions

5.6.3. Relational governance – mutual trust

The third 'processes' theme to be described relates to the role of trust in relational governance.

5.6.3.1. Evidence: description of participant views

The main second order categories derived from participant views regarding the role of trust in relational governance of interfirm alliances were building relationships, building trust, fostering predictability and negative relationship, as depicted in Table 19 below:

	Building	Building	Fostering	Negative
	relationships	trust	predictability	relationship
Par 1 - GSI	✓	✓	✓	✓
Par 2 - ISV		✓		
Par 3 - HS		✓	✓	
Par 4 - ISV	✓		✓	
Par 5 - GSI	✓			
Par 6 - GSI	✓	✓	✓	
Par 7 - GSI	✓	✓	✓	
Par 8 - HS	✓		✓	✓
Par 9 - GSI	✓	✓	✓	
Par 10 - LSI	✓	✓	✓	
Par 11 - HS	✓	✓	✓	
Par 12 - LSI	✓	✓	✓	
Par 13 - LSI	✓	✓	✓	
Par 14 - HS	✓	✓		✓
Par 15 - LSI			✓	
Par 16 - LSI	✓	✓	✓	✓

Table 18 Mutual trust categories across participants

The majority of participants consistently highlighted the importance of building trust and fostering predictability as means of building mutually beneficial relationships, and as imperative to managing cooperation interfirm alliances. These relationships facilitate informal communication and open engagement at a personal level. As a result, regular informal exchanges often occur on the basis of gentlemen's agreements which are shaped as relationships deepen. However, such should not be in breach of formal contractual agreements.

Par 7, GSI: "It's about the communication and about the relationships. It's all relationships; the paper governs, but you deal with people, and the conversations you have. That's where the success of alliances happens."

Openness is seemingly broadened by the depth of relationship and extent of personal networks. Furthermore, trust and predictability are built and fostered on the basis of open communication, honesty and transparency. Partners should be transparent about the other's definition of success and performance expectations, their respective levels of commitment and investment, as well as engagements with the customer which are relevant to the alliance. As trust grows and the threat of opportunistic behaviour diminishes, the informal exchanges enable partners to openly share market intelligence, such as information about customer opportunities and incumbent partners. Supportive leadership also plays a vital role in nurturing trust, especially when leaders are engaged upfront and regularly, before any issues emerge.

Par 14, HS: "I think so, leadership, and then really open communication, is critical. Ja. And, of course then, as that evolves it will develop trust, but until you have that it requires a lot of open communication and as I say, very strong leadership."

Another mechanism for building trust is proven success, which is also strongly linked to increasing predictability. Predictability is further enhanced by deliberately and proactively managing the partner's expectations, such internal limitations and constraints to outcomes.

Par 12, LSI: "The first one (ingredient) is on trust, right? So, I don't rush into a relationship, it's, it's got to be off the bat of having done some work first."

A few participants re-counted how a long-lasting adverse impact on the alliance can result from breaches of trust and difficult personalities. Supportive leadership would also need to be instrumental in managing such instances.

5.6.3.2. Analysis: in-case and cross-case comparison

All the categories were cited across all firm types as important factors to role of trust in managing cooperation between alliance partners. See Table 19 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Building relationships	✓	√	✓
Building trust	✓	√	✓
Fostering predictability	✓	√	✓
Negative relationship	√	√	√

Table 19 Mutual trust categories across firm types

The three dominant categories, building relationships, building trust and fostering predictability, were more consistently mentioned among the GSI and LSI groups, and slightly less so for the HS/LS group. However, there were no differences in the views expressed regarding the critical importance of the role of trust in relational processes for managing interfirm relationships.

There were slight nuances of difference presented which were unique to each group as related to their unique capability, mechanism or role. The GSI group highlighted the pertinence of implementation success to all partners involved, the LSI group highlighted how trust drives new business development and the HS/ISV group considered their use of transparent partner tools and partner tiering criteria as a trust-building mechanism.

5.6.3.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of building relationships, building trust and fostering predictability as fundamental to the role of trust in relational governance processes for interfirm coopetition.

Joint actions, as discussed in Section 5.6.2, are based on deliberate behaviours to build mutual trust and foster predictability. These behaviours facilitate mutually beneficial relationships in coopetitive alliances, by enabling informal interpersonal communication and open engagement through regular informal exchanges. Trust and predictability are built on the basis of open communication, honesty and transparency; to encourage information sharing and discourage opportunistic behaviour. Trust and predictability are also built on the basis of proven success and effective management of expectations among all stakeholders. It can be further suggested that the partner's specialised role in the alliance can be leveraged uniquely to foster trust and predictability in the alliance relationship. These processes are also interrelated, as commitment to the partner's interests drives partner alignment, which is in turn enabled by joint activities.

Building relationships, building trust and fostering predictability will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of the role of trust in relational governance processes, see Fig 12 below:

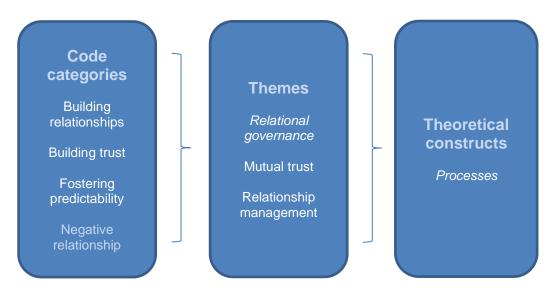


Fig 12 – Relational governance – mutual trust

5.6.4. Tensions

The fourth 'processes' theme to be described relates to tensions and relational dynamics that emerge as a consequence of simultaneous cooperation and competition in interfirm alliances. The researcher explored this theme as a prerequisite to understanding the processes to manage these coopetition tensions.

5.6.4.1. Evidence: description of participant views

The main second order categories resulting from participant views regarding common sources of tensions experienced in interfirm alliances were competition, partner selection, intellectual property and ethics, as depicted in Table 20 below.

	Competition	Ethics	Intellectual	Partner
			property	selection
Par 1 - GSI	✓			✓
Par 2 - ISV	✓	✓	✓	✓
Par 3 - HS	✓			
Par 4 - ISV	✓	✓		✓
Par 5 - GSI	✓			✓
Par 6 - GSI	✓			
Par 7 - GSI	✓	✓		✓
Par 8 - HS	✓		✓	✓
Par 9 - GSI	✓			✓
Par 10 - LSI	✓	✓	✓	✓
Par 11 - HS	✓			
Par 12 - LSI	✓	✓	✓	✓
Par 13 - LSI		✓		✓
Par 14 - HS	✓			✓
Par 15 - LSI	✓			✓
Par 16 - LSI	✓		✓	✓

Table 20 Tensions categories across participants

Competition was cited by almost all the participants as a source of tension among alliance partners. Participants reported opportunistic competitive behaviour in instances where partners have a competing product or service offering, or where the customer already has an incumbent partner. In these instances, customer ownership can also be a source of tension, depending on who deem themselves as primary owners of the customer relationship. Opportunistic was reportedly driven by the respective organisational cultures and prevalent levels of trust within the alliance.

Par 1, GSI: "The success or failure is largely dependent on - are we competing, are collaborating? Sometimes what happens with these strategic partners, yes, they also have got some sort of a competing offerings, where sometimes they want to pitch against us."

Partner selection was also cited by the majority of participants as a significant source of tension in alliance relationships. This is less of an issue in opportunity-based relationships, where the partnership is engaged for the limited duration of the partnership. For strategic alliances, competitive bidding processes such as a request for proposal (RFP), are often mandated, if not legislated. System integrators, usually GSIs, are the neutral and trusted advisors who empower the customer to ultimately select the most suitable product partner/s, but ultimately, the final decision lies with the customer. Many tensions arise from the competitive bidding and partner selection processes, as

the system integrators sometimes have to recommend, in the best interest of the customer, against their existing partnerships.

Par 9, GSI: "We've worked hard in that account, we unlocked opportunity. The partner then (says) sorry, the customer then releases an RFP, and then ... because they also have to be a bit agnostic, you know, they can't back a partner."

There were additional tensions identified which related to partner selection processes, such as partner exclusivity and the selection of unqualified partners, both of which would be deemed unethical. Other ethical considerations include inappropriate access to the customer, misappropriation of another's intellectual property (IP) and internal constraints for one partner's corporate governance, which may restrict the other's access to competition.

Par 2, ISV: "Exclusivity can be controversial because while I brought it to you first, I may not be the best person to help you succeed. But I still need something, because I've allowed you access to a deal, so, for that, you need to give me something back, so it's the exclusivity piece of it."

5.6.4.2. Analysis: in-case and cross-case comparison

Competition, partner selection and ethics were cited by participants across all firm types as common sources of tensions experienced in interfirm alliances. Competition was the most consistent category, while intellectual property was the least consistent. See Table 21 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Competition	✓	✓	✓
Ethics	√	√	√
Intellectual property		√	✓
Partner selection	✓	✓	✓

Table 21 Tensions categories across firm types

There were some differences among the firm types with the respect to the views expressed as well as participant experiences. Both the GSI and HS/ISV groups experienced tensions when dealing with competing offerings and incumbent partners, with GSIs possibly selecting partners with competing HS/ISV product offerings, as opposed to their existing partners, as well as displacing incumbents. HS/ISV participants

further experienced tensions during implementation of projects with competing or incumbent partners, where cooperation is encumbered by protection of intellectual property and revenue allocation.

LSIs, as implementation partners, also experienced tensions related to competing solutions and revenue allocation. However, they also conveyed tensions related to compatibilities of culture, trust and values of partners, as well as customer ownership.

It is noteworthy that although ethics and intellectual property were less dominant as cited categories, there were ethical considerations related to partner selection, such as partner exclusivity, and ethical considerations related to misappropriation of intellectual property and opportunistic behaviour.

5.6.4.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of competition and partner selection as important sources of tensions that emerge from interfirm alliance relationships.

Opportunistic competitive behaviour may ensue when partners have a competing product or service offering, or where the customer already has an incumbent partner. This is driven by organisational culture compatibility and prevalent levels of trust within the alliance. Tensions also arise from the competitive bidding and partner selection processes, as the system integrators sometimes have to recommend against their existing partnerships. Additional tensions could be related to unethical partner selection processes, including inappropriate customer access, opportunism and knowledge leakage.

Both the GSI and HS/ISV groups experienced tensions when dealing with competing offerings and incumbent partners, while LSIs, as implementation partners, also experienced tensions related to competing solutions and revenue allocation, compatibilities of culture, trust and values of partners, as well as customer ownership.

Competition and partner selection will be further analysed in Chapter 6, based on the dominant consistency between firm types, in their perception of tensions arising from interfirm relations, see Fig 13 below:

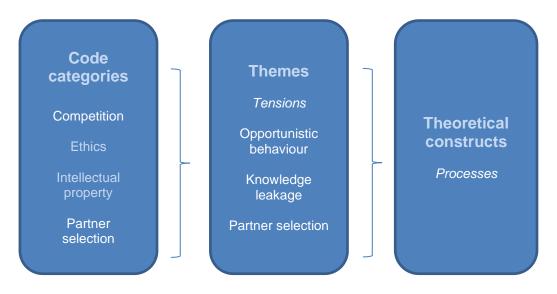


Figure 13 - Tensions

5.6.5. Managing tensions

The fifth 'processes' theme to be described relates to managing relational dynamics and coopetition tensions, as underlined in the preamble in Section 5.6.4.

5.6.5.1. Evidence: description of participant views

The main second order categories derived from participant views for managing tension in interfirm alliances were external conflict management, internal conflict management, system integration and mutuality, as depicted in Table 22 below:

	External conflict	Internal conflict	Mutuality	System
	management	management		integration
Par 1 - GSI	✓	✓	✓	✓
Par 2 - ISV	✓	✓		✓
Par 3 - HS	✓	✓	✓	✓
Par 4 - ISV	✓	✓		✓
Par 5 - GSI		✓	✓	
Par 6 - GSI	✓			✓
Par 7 - GSI	✓	✓		
Par 8 - HS	✓		✓	✓
Par 9 - GSI		✓		✓
Par 10 - LSI	✓	✓	✓	✓
Par 11 - HS	✓	✓		
Par 12 - LSI	✓	✓	✓	✓
Par 13 - LSI		✓	✓	✓
Par 14 - HS	✓	✓	✓	
Par 15 - LSI		✓	✓	✓
Par 16 - LSI				

Table 22 Managing tensions categories across participants

Participants described two broad approaches to managing conflict: with either an external or an internal partnership perspective. External mechanisms include compliance training, a healthy competition ecosystem and customer choice, while internal mechanisms include contract enforcement and joint discussions to resolve the conflict situation. Typically, a joint meeting is convened with the objective to reach alignment on a joint decision and solution. Once more, this requires open communication and transparency between the partners, including openness about the possibility of failure. Conflict revolution may be swifter for organisations who are inclined to collaboration, as they are more likely to be proactive in understanding their partner's needs and position.

Par 8, GSI: "If we need to go back to the client and apologize, jointly, let's do it. But you know, we definitely just try to have that meeting, you know, face to face or nowadays on Teams."

Mutuality was also highlighted by most participants as a fundamental factor in alliance relationships, to build trust and minimise tensions such as competitive behaviour. Alliances should be founded on mutual value which benefits all partners. Furthermore, trust is enhanced by mutuality in the partnership relationship, when partners can see the other as equals.

Par 12, LSI: "One of the fears in a partnership, and I've seen this in my own little company and even bigger ones is fear right, it's, it's fear of domination by the other party. It's a fear that you're getting a bit more out of this than we are."

Most participants further ascribed a unique role in managing coopetition tension to the system integrators and their managed service offering approach, especially with regards to partner selection for products and services. As system integrators are recognised as trusted advisors and consultants to customers, they are required to be neutral and inclusive, which means that they should not be biased towards any partner or product.

Par 1, GSI: "We do equal amount of business with everyone. So, it is going to be very difficult to justify why something is right and something is not possible. Almost all products can do a lot of things."

5.6.5.2. Analysis: in-case and cross-case comparison

External conflict management, internal conflict management, system integration and mutuality were cited by participants across all firm types as mechanisms to manage

tension experienced in interfirm relations. See Table 23 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
External conflict management	✓	✓	✓
Internal conflict management	✓	✓	✓
Mutuality	√	✓	✓
System integration	✓	✓	✓

Table 23 Managing tensions categories across firm types

Internal conflict management was the most dominant category across all firm types, while mutuality was the least dominant category for GSI, and external conflict management for LSI.

Across firm types, relational governance means, such as joint actions, predominated more than formal governance as a conflict management mechanism. Instead, the relational governance seemed better supported by organisational values and corporate governance structures.

For the LSI group, while external mechanisms to manage conflict were less prominent, mutuality was dominant. Both these findings are once more related to the relative asymmetry, where both sentiments centred on the dominance of the bigger global firms. There were also divergent sentiments about the role of system integrators, in that the bigger firms were better scoped for advisory and consulting, whereas smaller firms were mostly implementation partners.

5.6.5.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of competition and partner selection as important tensions that emerge from interfirm alliance relations.

Conflict management is supported externally by compliance, a healthy competition ecosystem and customer-centricity. Internal to the alliance, relational governance, supported by organisational values and corporate governance structures, tends to predominate more than formal governance as a conflict management mechanism.

Mutuality is fundamental to the success of alliance relationships, to build trust and minimise tensions such as opportunistic behaviour. Trust is enhanced by mutuality in the

partnership relationship and seems to limit opportunistic behaviour. However, such mutuality may be undermined by asymmetry within the alliance.

System integrators play a key role in managing interfirm tensions related to partner selection, as they are recognised as trusted advisors and consultants to customers. Internal conflict management, system integration and mutuality will be further analysed in Chapter 6, based on the dominant consistency and sentiment differences between firm types, in their perception of mechanisms to manage tensions arising from interfirm relations, see Fig 14 below:

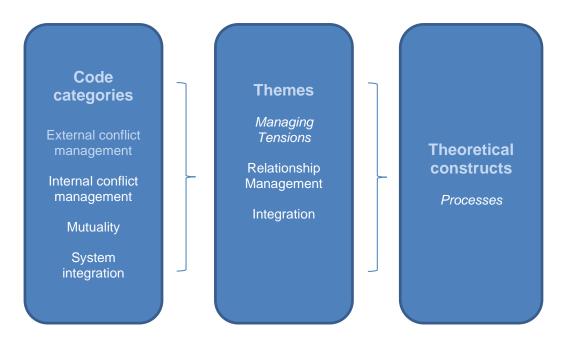


Fig 14 – Managing tensions

5.6.6. Summary of the Findings of Sub-Question 2

Interfirm relationships are governed by formal agreements or contracts which should be comprehensive in their scope and terms of reference. The formal contract specifies the lead partner and the respective contractual obligations of each partner. The contract defines terms of reference related to roles and responsibilities, performance targets, resources and revenue allocation, as well as budget and pricing. A robust contractual agreement process is essential governance for the governance of interfirm relationships. While the process itself indicates relative asymmetry between firms with respect to size and accessing resources, it is central to the mutual undertaking of a mutual partnership relationship.

With the partnership interest at the core, partners align on their goal, business objectives and subsequent strategy. This alignment is driven by co-investment, joint decisions and joint actions, which include organisational routines such as regular joint meetings. The cadence varies according to the type of meeting and its objectives, as well as the phase of the joint proposal or project. Other joint activities include joint workshops, events and campaigns. Partner commitment and alignment are further strengthened by complementary project teams dedicated to support the partnership on either side of the alliance, depending on resource availability. Such alignment may therefore not always be realistic for LSI partners.

Joint actions are based on deliberate behaviours to build mutual trust and foster predictability. These behaviours facilitate mutually beneficial relationships in coopetitive alliances, by enabling informal interpersonal communication and open engagement through regular informal exchanges. Trust and predictability are built on the basis of open communication, honesty and transparency; to encourage information sharing and discourage opportunistic behaviour. Trust and predictability are also built on the basis of proven success and effective management of expectations among all stakeholders. It can be further suggested that the partner's specialised role in the alliance can be leveraged uniquely to foster trust and predictability in the alliance relationship. These processes are also interrelated, as commitment to the partner's interests drives partner alignment, which is in turn enabled by joint activities.

Opportunistic competitive behaviour may ensue when partners have a competing product or service offering, or where the customer already has an incumbent partner. This is driven by organisational culture compatibility and prevalent levels of trust within the alliance. Tensions also arise from the competitive bidding and partner selection processes, as the system integrators sometimes have to recommend against their existing partnerships. Additional tensions could be related to unethical partner selection processes, including inappropriate customer access, opportunism and knowledge leakage.

Conflict management is supported externally by compliance, a healthy competition ecosystem and customer-centricity. Internal to the alliance, relational governance, supported by organisational values and corporate governance structures, tends to predominate more than formal governance as a conflict management mechanism. Mutuality is fundamental to the success of alliance relationships, to build trust and minimise tensions such as opportunistic behaviour. Trust is enhanced by mutuality in the partnership relationship and seems to limit opportunistic behaviour. However, such

mutuality may be undermined by asymmetry within the alliance. System integrators play a key role in managing interfirm tensions related to partner selection, as they are recognised as trusted advisors and consultants to customers.

5.7. Findings: Research Question – Sub-Question 3

Sub-Question 3 – How do firms collaborate and compete to accomplish outcomes?

This question was adapted to understand the participants' views on how alliance partners accomplish and measure outcomes of coopetition. The researcher was thus able to evaluate how value is created and how outcomes are measured for alliance partners and for customers. As an area of focused interest, innovation outcomes were targeted for specific enquiry.

To explore Sub-Question 3, standard interview questions from the Discussion guide in Appendix A were posed to all the interviewees as follows:

What are the alliances trying to achieve as an outcome? And for whom?

Please tell me more about the outcomes related to innovation.

Based on your experience and knowledge, how is value created by the alliance? And for whom?

Please share examples of what works well and what does not.

How do you measure that the outcome has been achieved? And for whom?

A high-level view of the results can be found in Figure X below:



Figure 15: Overview of Results – Sub-Question 3

5.7.1. Value creation

The first 'outcomes' theme to be described relates to value creation.

5.7.1.1. Evidence: description of participant views

The main second order categories resulting from participant views on value creation were customer business value, partner value, firm value and customer product value, as depicted in Table 24 below.

	Customer	Customer	Firm value	Partner value
	business value	product value		
Par 1 - GSI	✓	✓	✓	✓
Par 2 - ISV	✓		✓	✓
Par 3 - HS	✓	✓		✓
Par 4 - ISV	✓			✓
Par 5 - GSI	✓	✓		
Par 6 - GSI	✓	✓		✓
Par 7 - GSI	✓			✓
Par 8 - HS	✓		✓	✓
Par 9 - GSI	✓			✓
Par 10 - LSI	✓		✓	✓
Par 11 - HS	✓	✓	✓	✓
Par 12 - LSI	✓		✓	✓
Par 13 - LSI	✓	✓	✓	✓
Par 14 - HS	✓		✓	✓
Par 15 - LSI	✓	✓	✓	✓
Par 16 - LSI	✓		✓	✓

Table 24 Value creation across participants

All participants were adamant about creating tangible customer business value as the main objective of any alliance, the basis of which should be defined by the customer needs analysis and subsequent business case. Most commonly, customer value was created through digital transformation, which increased efficiency by automating and optimising business processes. This customer business value is realised through cost-effective and timeous implementation, as any negative cost impact would undermine that value. Some customers also derive business value through pricing, cost incentives and revenue.

Par 3, HS: "The beauty of digital transformation is that we're trying to make your business run better, basically by unlocking money to make value."

Similarly, all but one participant mentioned various means by which value is created for alliance partners, which is generated from the synergy within the alliance. Value for the alliance partner is broadly derived from expanding the market and customer base, which also increases market awareness and drives future value. Partner value can also be created by leveraging pricing and cost incentives, and optimising margins to ultimately

increase the partner's profitable revenue. In addition, alliance partners derive value from empowerment and skills training, which is realised through credentials and references.

Par 1, GSI: "So, that means... as part of the deal, the revenue goes to the partner company, I'm okay for that large amount of benefit will be going to them, but I'm going to get implementation revenue or whatever the case may be. And so, both parties will be using that customer as a credential."

Customer value is further created through the new product offering, which may be a niche product or a new solution with enhanced functionality to improve the customer experience, which is essential to driving usage, which in turn augments the value for the customer.

Par 11, HS: "The reality is, it's like you're going to buy shelf-ware and leave it ... It's like a gym contract that you're going to pay for it and not use it, or are you going to use it? You derive value only when you use it."

5.7.1.2. Analysis: in-case and cross-case comparison

Customer business value, customer product value, firm value and partner value were cited by participants across all firm types as value creation outcomes of coopetition. See Table 25 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Customer business value	✓	✓	✓
Customer product value	✓	√	√
Firm value	✓	✓	✓
Partner value	✓	✓	✓

Table 25 Value creation categories across firm types

Customer business value and partner value were the most consistent categories across firm types, while customer product value and firm value were less consistent.

The sentiments regarding the customer value derived from digital transformation were similar across all firm types. There were, however, focus areas that differed according to firm type. The system integrators (LSIs and GSIs) prioritised customer orientation, while the HS/ISV group specified a focus on industry requirements. The GSI group were also more attentive to creating value through successful implementation of the customer strategy, while the LSIs were immediately aware of the cost impact.

Some differences were also noted regarding partner value creation, with the GSIs focused on implementation outcomes and references, and the HS/ISV group on growth and platform integration, while LSI measured partner value through empowerment and cost savings.

5.7.1.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, in relation to value creation for alliance partners and the customer, key insights include the consistent recognition of customer business value and partner value as key outcomes of coopetition.

Creating customer business value emerged as the main objective of any alliance, which should be based on customer needs. Customer value in this instance is created through digital transformation, which increases efficiency by automating and optimising business processes.

Customer business value is achieved when the customer need has been satisfied through the successful and timeous implementation of the alliance strategy. Customer value is further created through the new product offering, to improve the customer experience and usage. Partner value is created through synergy, market expansion, growth and empowerment. Synergy is created by the respective partners leveraging their individual strengths, in order to create value for the customer and the partner. Combining these insights, including the lower prioritisation of firm value, it can be suggested that there is greater orientation towards the customer and the alliance than the individual firm.

Customer value and partner value will be further analysed in Chapter 6, based on the dominant consistency and sentiment focus between firm types, regarding value creation in interfirm coopetition, as shown in Fig 16:

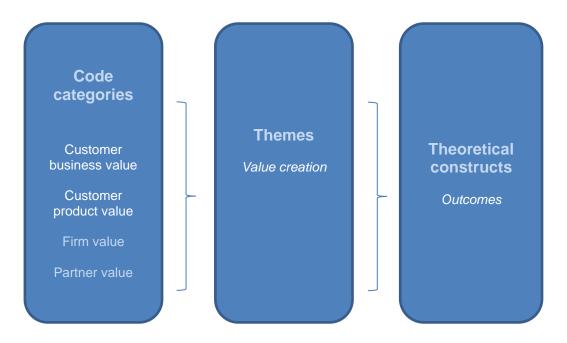


Fig 17: Value creation

5.7.2. Common and private benefits

The second 'outcomes' theme to be described relates to benefits, whether common to the alliance or private to a partner firm.

5.7.2.1. Evidence: description of participant views

The main second order categories resulting from participant views on common and private benefits of interfirm alliances were customer outcomes, alliance outcomes, revenue, customer measures and partner measures. See Table 26 below:

	Customer	Partner	Revenue	Alliance	Customer
	measures	measures		outcomes	outcomes
Par 1 - GSI	✓	✓		✓	✓
Par 2 - ISV			✓	✓	✓
Par 3 - HS		✓	✓	✓	✓
Par 4 - ISV	✓	✓	✓	✓	✓
Par 5 - GSI	✓	✓	✓	✓	✓
Par 6 - GSI	✓	✓	✓	✓	✓
Par 7 - GSI	✓		✓	✓	✓
Par 8 - HS	✓			✓	
Par 9 - GSI	✓		✓	✓	✓
Par 10 - LSI	✓	✓	✓	✓	✓
Par 11 - HS	✓	✓	✓	✓	✓
Par 12 - LSI		✓	✓	✓	✓
Par 13 - LSI	✓		✓	✓	
Par 14 - HS				✓	✓
Par 15 - LSI	✓		✓	✓	✓
Par 16 - LSI				✓	✓

Table 26 Outcomes across participants

All participants cited targeted customer and alliance outcomes that interfirm alliances were aiming to achieve. It was evident, however, that these outcomes differed across the alliance and for the customer. Overall, success for the alliance partners was defined as successful implementation or successful platform integration, whereas the customer defined their requirement as digital transformation to facilitate agile decision-making.

Par 14, HS: "It is about providing a framework ... a framework that allows them to be able to chop and change if they need to – because that is the whole thing about this digital ... I don't want to call it 'transformation' because everybody is using that word, but digital era, which says that clients have this ability, and the ability to move quickly."

Although the outcomes measured may differ across the alliance, sales revenue is a standard metric, be it direct sales, partner sales or joint sales. Revenue may also be measured in terms of influence, services and/or implementation revenue, and key to measuring customer usage is actual consumption revenue.

Par 4, ISV: "My software costs are going to be X and what their services bill will be, will be Y. And those are obviously not aligned, but my job is to try and pull them together and make a joint KPI."

Alliance partners aim for successful implementation on time and within budget. Furthermore, to determine success according to the customer, quality assessments of the solution can be conducted, in addition to customer adoption and customer satisfaction surveys. Ultimately, alliance partners aspire to share customer success stories.

Par 1, GSI: "The outcome of what has been achieved is measured in customer satisfaction. At the end of the day these strategic partnerships are targeted to make it valuable for the customer for whom it has been created."

5.7.2.2. Analysis: in-case and cross-case comparison

Customer measures, partner measures, revenue, alliance outcomes and customer outcomes were cited by participants across all firm types as private and common benefits of coopetition. See Table 27 below for the summary of mention across firm types:

	GSI	HS/ISV	LSI
Customer measures	✓	√	✓
Partner measures	✓	✓	√
Revenue	✓	√	✓
Alliance outcomes	✓	✓	✓
Customer outcomes	✓	✓	✓

Table 27 Outcomes categories across firm types

Revenue, alliance outcomes and customer outcomes were the most consistent categories across firm types, while partner measures and customer measures were less consistent.

The desired outcomes for the alliance partners and the customer differed across the different firm types. The GSIs were closely aligned to the hyperscaler objectives and drove platform integration and digital transformation, while the HS/ISV group viewed platform integration as a fulfilment of customer needs. For the LSI, it was fundamental to be aligned to the same outcome to meet customer requirements, and the same outcome for the alliance in terms of growth and skills transfer.

Still, revenue is the standard metric across the alliance, with different sources of revenue according to firm type. Furthermore, although individual firm targets were not always visible to partners, each firm type was aware of the partner's revenue measurement.

5.7.2.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, in relation to outcomes for alliances partners and the customer, key insights include the consistent recognition of revenue, alliance outcomes and customer outcomes as private and common benefits of coopetition.

Alliances pursue several private and common benefits as outcomes of coopetition, where success is defined as successful implementation of the alliance strategy, whereas the customer requires their need or business objective to be fulfilled. Revenue is measured as an indicator for financial performance for alliance partners and the alliance as a whole, and while partners may apply different targets, these targets are aligned to the primary role of each partner. The alliance derives interdependent common benefits when partners are orientated towards the customer and the alliance, by defining success through customer and alliance outcomes.

Revenue, customer outcomes and alliance outcomes will be further analysed in Chapter 6, based on the dominant consistency of these categories as private and common benefits of interfirm coopetition, as shown in Fig X below:

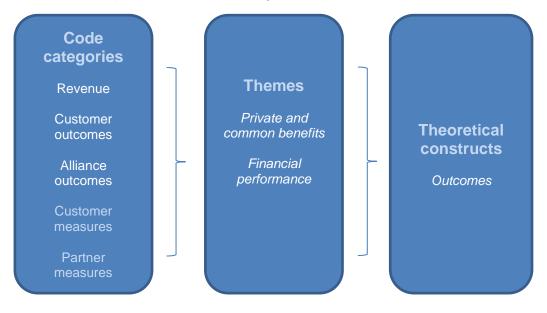


Fig 18 – Outcomes

5.7.3. Innovation

The third 'outcomes' theme to be described relates to innovation. As an area of focused interest, innovation outcomes were targeted for specific enquiry.

5.7.3.1. Evidence: description of participant views

The main second order categories resulting from participant views on innovation from interfirm alliances were joint innovation, product innovation and disruptive innovation. See Table 28 below:

	Joint innovation	Disruptive innovation	Product innovation
	IIIIOVation	IIIIOVation	IIIIOvation
Par 1 - GSI	✓		✓
Par 2 - ISV	✓		✓
Par 3 - HS	✓		✓
Par 4 - ISV			✓
Par 5 - GSI	✓		✓
Par 6 - GSI	✓	✓	✓
Par 7 - GSI	✓		✓
Par 8 - HS	✓		✓
Par 9 - GSI	✓		✓
Par 10 - LSI	✓	✓	
Par 11 - HS	✓		✓
Par 12 - LSI	✓	✓	✓
Par 13 - LSI	✓		✓
Par 14 - HS	✓		✓
Par 15 - LSI	✓		✓
Par 16 - LSI	✓		✓

Table 28 Innovation across participants

Whereas most participants described joint innovation and product innovation outcomes, there were varying experiences of the same. In some instance, improved solutions are jointly built on existing customer infrastructure, while new niche solutions may also be jointly developed for specific industry solutions. Platform integration was once again a dominant outcome, where new or existing products are integrated into cloud platforms to accelerate scale. The outcome for the respective partners is differentiated according to the role of the developer versus the certifier.

Par 11, HS: "We build with them, we give them support in terms of building a practice that is able to, to do and leverage their technology. Or we help them build, or even take what they've built already, let's say they adopt skills, we do skills enablement."

Joint innovation also occurs in dedicated incubation spaces, where the resultant IP would be jointly owned. Incubation spaces may also be owned by a dominant partner who would then avail resources to the rest of the alliance.

Par 16, LSI: "It can be maybe a demo, we want to go and demo... to a company, or one of our clients. It can take us forever to just put a simple demonstration... So, what we normally do, we go to our partner's innovation centre there... They just pull it and say - guys go and demonstrate to your client."

A few participants mentioned a specific focus on disruptive innovation outcomes such as open source and open standards, and embedded technologies.

Par 6, GSI: "And then your second tier would be more around emerging technologies, which is not that well known but is disrupting, some of the some of the areas."

5.7.3.2. Analysis: in-case and cross-case comparison

Joint innovation and product innovation were both consistent categories across all firm types, while disruptive innovation was cited by only a few participants. See Table 29 below:

	GSI	HS/ISV	LSI
Joint innovation	✓	✓	✓
Disruptive innovation	√		√
Product innovation	✓	✓	✓

Table 29 Innovation categories across firm types

There were no major differences in the views or sentiments conveyed by participants across the different firm types. There was, however, a significant difference noted in the experience of some LSI participants when it came to joint innovation as part of a joint venture or a consortium.

5.7.3.3. Theme conclusions

Triangulating the data gathered and analysed across firm types, key insights include the consistent recognition of joint innovation and product innovation as outcomes of coopetition.

Innovation is one of the outcomes of coopetition, whether this is incremental product innovation or radical innovation in a new niche solution, or indeed radical, and sometimes disruptive platform innovation. Incubation spaces are commonly used for joint innovation, with the outcome of joint IP, which could be jointly owned or jointly referenced according

the alliance partners' differentiated roles. Alliance partners, in particular LSIs, may also engage in joint innovation through joint ventures and consortia.

Joint innovation and product innovation will be further analysed in Chapter 6, based on the dominant consistency of these categories as innovation outcomes of coopetition, as shown in Fig 20 below:

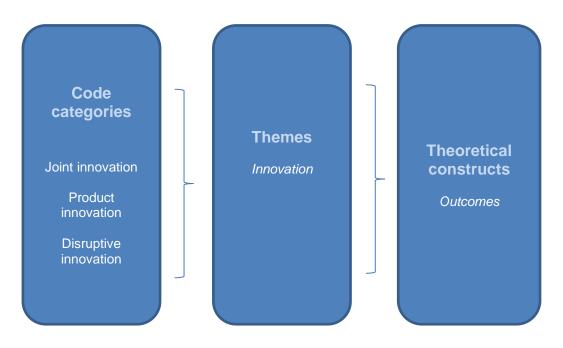


Fig 20 Innovation

5.7.4. Summary of the Findings of Sub-Question 3

Creating customer business value emerged as the main objective of any alliance, which is based on customer needs. Customer value, in this instance, is created through digital transformation, which increases efficiency by automating and optimising business processes. Customer business value is achieved when the customer need has been satisfied by means of the alliance strategy. Customer value is further created through the new product offering, to improve the customer experience and usage. Partner value is created through synergy, market expansion, growth and empowerment. Synergy is created by the respective partners leveraging their individual strengths, in order to create value for the customer and the partner. Combining these insights, including the lower prioritisation of firm value, it can be suggested that there is greater orientation towards the customer and the alliance than the individual firm.

Alliances pursue several private and common benefits as outcomes of coopetition, where success is defined as successful implementation of the alliance strategy. Revenue is

measured as an indicator of financial performance for alliance partners and the alliance as a whole. The alliance derives interdependent common benefits when partners are orientated towards the customer and the alliance, by defining success through customer and alliance outcomes. Innovation is one of the outcomes of coopetition, whether this is incremental product innovation or radical innovation in a new niche solution, or indeed radical, and sometimes disruptive platform innovation. Incubation spaces are commonly used for joint innovation, with the outcome of joint IP, which could be jointly owned or jointly referenced according the alliance partners' differentiated roles.

5.8. Conclusion

The participant data have been analysed according to the sub-questions to the explore the antecedents, processes and outcomes of coopetition. Key themes and sub-themes have been summarised in Fig. 21 below:

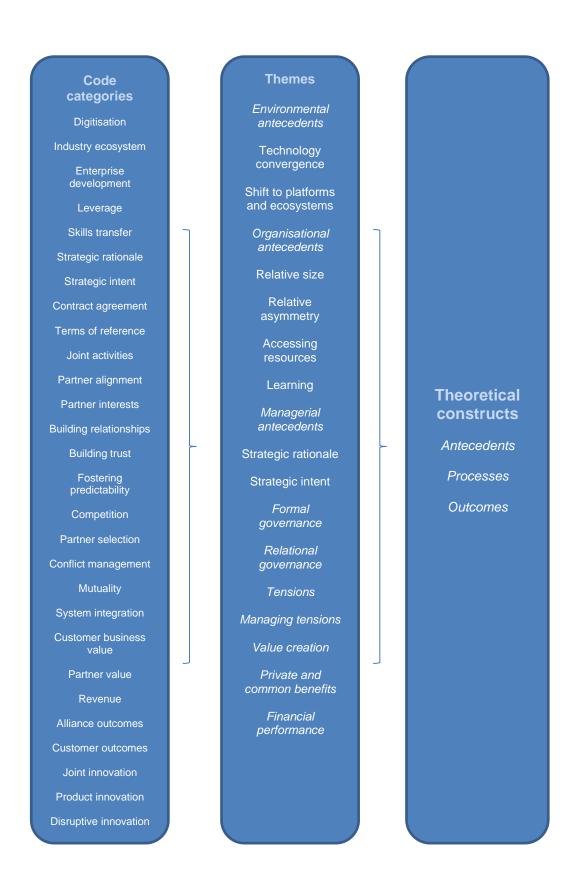


Fig 21 Summary of codes and themes

CHAPTER 6: DISCUSSION

6.1. Introduction

This chapter describes a comprehensive discussion of the research findings presented in Chapter 5, as compared to the literature review presented in Chapter 2. The key objective of this comparative analysis is to answer the research question by answering the sub-questions presented in Chapter 3, for the researcher to explore deeper understanding and insights into relational and coopetitive dynamics of interfirm alliances.

As presented in Chapter 5, the findings are discussed sequentially for each sub-question, highlighting similarities to and differences from the key themes and constructs derived from the literature reviewed. Fig 22 below depicts how the findings from each sub-question build onto the adapted conceptual framework. Firstly, the antecedents for coopetition are discussed to answer sub-question 1; corresponding to 'antecedents' as depicted in the framework. Secondly, the processes to manage coopetitive relationships between firms are discussed to answer sub-question 2; corresponding to 'tensions and managing tensions' as depicted in the framework, Finally, the outcomes of coopetition are discussed to answer sub-question 3; corresponding to 'outcomes' as depicted in the framework. The findings may support or negate extant theory, but also yield new insights which expand the current body of knowledge on the antecedents, processes and outcomes of interfirm coopetition.

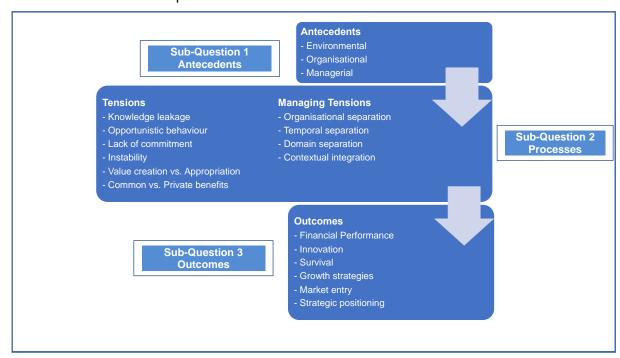


Fig 22. Conceptual framework for the Antecedents, Processes and Outcomes of Coopetition Source: Author's own, adapted from Hoffmann et al. (2018)

6.2. Discussion of the results

Research question – What are the antecedents, processes and outcomes of interfirm coopetition?

As presented in Chapter 5, the research question was divided into three sub-questions, in order to facilitate deeper exploration of each construct.

6.3. Discussion of the results for Sub-Question 1

Sub-Question 1 – What are the antecedents for coopetition?

This sub-question had aimed to understand the participants' views on the antecedents for coopetitive interfirm alliances. The discussion of the key findings is premised on the key themes interpreted from the data analysis.

6.3.1. Environmental antecedents

Whereas the participant data had yielded three main sub-themes as important environmental or contextual drivers of coopetition in the technology industry, including industry trends, only two sub-themes, digitisation and industry ecosystem will be discussed and analysed further, based on the divergent degree of consistency between firm types in their perception of contextual drivers for coopetition and the descriptions already presented in Section 5.3 about the context of the firms reviewed.

The local technology industry is an ecosystem with at least four types of alliance partners: namely, hyperscalers, ISVs, GSIs and LSIs. Hyperscalers are global technology firms with global scale and reach, which provide cloud platforms and data centre infrastructure. While the cloud platforms enable integration of compatible solutions from ISVs and LSIs, hyperscalers may also offer competing software solutions. ISVs offer software solutions, which are built to be compatible with either onsite customer infrastructure or integrated into a cloud platform, and the integrated solution is implemented by the system integrators (GSIs and LSIs). GSIs are global consulting firms which specialise in strategy consulting as well as implementing solutions. LSIs are smaller local implementation partners who may also be designated as channel resellers or offer their own boutique or niche software solutions.

Digitisation and industry trends such as the 4IR, were found to be important antecedents for coopetition across different firm types in the technology industry. There was also an

apparent interrelationship between the two, with digitisation as a prominent industry trend. Consequently, digitisation is driving transformation in the industry, with GSIs playing a supportive role in creating and implementing the relevant transformation strategies. However, the industry ecosystem is a compelling priority for the HS/ISV group, who are central in creating the solutions and driving platform integration. These interrelated roles suggest high interdependence within the technology industry.

These data underscored digitisation as fundamental to digital transformation, which enables integration of compatible products or solutions into digital platforms. This platform integration facilitates business model transformation, which is a key driver in technology convergence. Because of the interdependent knowledge assets, expertise and skills contributed by the specialised firm types, coopetition in this setting is not limited to dyadic interfirm alliances but follows at the ecosystem level of hyperscalers, ISVs, GSIs and LSIs.

These findings are similar to those of Hoffmann et al. (2018) in their literature review which found convergence of technologies as an environmental or contextual antecedent to interfirm coopetition, which was further supported by Cozzolino & Rothaermel (2018). Ansari et al. (2016) had also previously described how digitisation disrupted and transformed the media industry. Their findings similarly highlighted the complex interdependencies in technology platforms and the necessitous shift to ecosystems, as did Hannah and Eisenhardt (2018). Furthermore, in their study of innovation ecosystems, Mantovani & Ruiz-Aliseda (2016) also focused on platform compatibility as an enabler.

6.3.2. Organisational antecedents

Whereas the participant data had yielded five main sub-themes as important organisational antecedents for coopetition, including organisation characteristics and shared risk, only three sub-themes, leverage, skills transfer, and enterprise development will be discussed and analysed further, as these were the most dominant categories cited by participants.

Global and local partners are able to leverage the size, scale, and brand reputation of larger and more dominant global firms. Alliance partners are then empowered to build and scale new solutions on global platforms, leveraging existing partner infrastructure. Skills and knowledge transfer through cross-skilling and training is an imperative across all firm types, especially global firms, who are moreover mandated to empower local SMEs. All these factors are interrelated, as smaller partners need to leverage size, skills

and resources from the bigger and more dominant partners. This empowers and develops smaller firms, who also benefit from learning through knowledge and skills transfer, and accessing resources from the bigger and more dominant firms.

These data emphasise the importance of leverage, skills transfer, and enterprise development as antecedents for coopetition. However, leverage, skills transfer, and enterprise development are typically relative to asymmetries in size, knowledge, skills and resources. This asymmetry is also apparent in the unidirectional trend of terms of partnership dominance, which introduces further asymmetries when it comes to size and power.

These findings are consistent with those of Hoffmann et al. (2018) who regarded firm asymmetries in size and assets as drivers of resource interdependence and therefore important organisational antecedents for coopetition. These findings are also consistent with the notion that Gnyawali & Charleton (2018) suggested regarding commitments to access knowledge and skills as the basis for cooperative relationships. Chiambaretto et al. (2020) also found that smaller firms must pursue coopetition in order to learn from bigger firms, and thereby complement their knowledge and resources.

6.3.3. Managerial antecedents

While the participant data had yielded three main sub-themes as important managerial antecedents for coopetition, including business models, only two sub-themes, strategic rationale and strategic intent will be discussed and analysed further, as these were the most dominant categories cited by participants.

Alliances design joint go-to-market, transformation and innovation strategies to drive profitable revenue growth and create mutual value across the alliance, and for the customer. The goal of these strategies is to increase market share by expanding customer reach. Alliance partners typically create a joint customer value proposition by means of joint solutions and/or services, leveraging the global hyperscaler infrastructure to accelerate effective local implementation. The strategic intent differs significantly between global and local firms because of the dominance of the former, which makes strategic differentiation for local firms an imperative. The strategic rationale and strategic intent both relate to the fundamental strategic reasons for establishing alliances. The role complementarity and role differentiation according to firm type is highlighted, which also emphasises interdependence between alliance partners, however with the joint orientation towards customer value.

These data highlighted strategic rationale and strategic intent as important managerial antecedents for coopetition. The partner complementarity and differentiation within the alliances is also highlighted. This further emphasises interdependence between alliance partners, however with joint orientation towards customer value. The strategic intent differs significantly between global and local firms because of the dominance of the former, which makes strategic differentiation for local firms an imperative.

These findings support those of Czakon et al. (2020), who examined behavioural antecedents for coopetition and identified strategic rationale as a key driver, where managers perceived benefits and a strategic fit with a potential alliance partner. These findings also support those of Seepana et al. (2020) who found that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. It is noteworthy that additional data may be needed to assess the impact of the power asymmetry resulting from market dominance on either the strategic intent or rationale of smaller firms.

6.3.4. Conclusive findings for Sub-Question 1

Table 30 below highlights the theoretical comparison for Sub-Question 1, on the antecedents for coopetition.

	Theory	Findings	Similarity
6.3.1.	Hoffman et al. (2018) and	Digitisation is driving	Ø
	Cozzolino & Rothaermel (2018)	transformation in the industry,	
	found convergence of	with GSIs playing a supportive	
	technologies as an	role in creating and	
	environmental antecedent to	implementing the relevant	
	technological interfirm	transformation strategies.	
	coopetition.	However, the industry	
		ecosystem is a compelling	
		priority for the HS/ISV group,	
		who are central in creating the	
		solutions and driving platform	
		integration.	
6.3.1.	Ansari et al. (2016) described	Digitisation and industry trends	Ø
	how digitisation disrupted and	such as the 4IR, were found to	
	transformed the media industry.	be important antecedents for	
	Their findings similarly	coopetition across different	

	highlighted the complex	firm types in the technology	
	interdependencies in	industry. The local technology	
	technology platforms and the	industry is an ecosystem with	
	necessitous shift to	at least four types of alliance	
		• •	
	ecosystems, as did Hannah	partners: namely,	
	and Eisenhardt (2018).	hyperscalers, ISVs, GSIs and	
		LSIs.	
	Theory	Findings	Similarity
6.3.1.	Mantovani & Ruiz-Aliseda	Digitisation is fundamental to	Ø
	(2016) found platform	digital transformation, which	
	compatibility to be an enabler.	enables integration of	
		compatible products or	
		solutions into digital platforms.	
		This platform integration	
		facilitates business model	
		transformation, which is a key	
		driver in technology	
		convergence.	
6.3.2.	Hoffmann et al. (2018)	Global and local partners are	
	regarded firm asymmetries in	able to leverage the size,	
	size and assets as drivers of	scale, and brand reputation of	
	resource interdependence and	larger and more dominant	
	important organisational	global firms. Alliance partners	
	antecedents for coopetition.	are then empowered to build	
	,	and scale new solutions on	
		global platforms, leveraging	
		existing partner infrastructure.	
6.3.2.	Gnyawali & Charleton (2018)	This empowers and develops	
	suggested that commitment to	smaller firms, who also benefit	
	access knowledge and skills is	from learning through	
	the basis for cooperative	knowledge and skills transfer,	
	relationships. Chiambaretto et	and accessing resources from	
	al. (2020) found that smaller	the bigger and more dominant	
	firms must pursue coopetition in	firms.	
	order to learn from bigger firms,		
	and thereby complement their		
	knowledge and resources.		

6.3.3.	Czakon et al. (2020) examined	Alliances design joint go-to-	Ø
	behavioural antecedents for	market, transformation and	
	coopetition and identified	innovation strategies to drive	
	strategic rationale as a key	profitable revenue growth and	
	driver, where managers	create mutual value across the	
	perceived benefits and a	alliance, and for the customer.	
	strategic fit with a potential	The goal of these strategies is	
	alliance partner.	to increase market share by	
		expanding customer reach.	
		Alliance partners typically	
		create a joint customer value	
		proposition by means of joint	
		solutions and/or services.	
	Theory	Findings	Similarity
6.3.3.	Seepana et al. (2020) found	Strategic rationale and	Ø
6.3.3.	Seepana et al. (2020) found that strategic intent was a	Strategic rationale and strategic intent both relate to	Ø
6.3.3.		G	Ø
6.3.3.	that strategic intent was a	strategic intent both relate to	<u> </u>
6.3.3.	that strategic intent was a significant enabling antecedent	strategic intent both relate to the fundamental strategic	Ø
6.3.3.	that strategic intent was a significant enabling antecedent for coopetition, where	strategic intent both relate to the fundamental strategic reasons for establishing	Ø
6.3.3.	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in	strategic intent both relate to the fundamental strategic reasons for establishing	B
6.3.3.	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is	strategic intent both relate to the fundamental strategic reasons for establishing	More
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally.	strategic intent both relate to the fundamental strategic reasons for establishing alliances.	
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. Additional data may be	strategic intent both relate to the fundamental strategic reasons for establishing alliances. The strategic intent differs	More
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. Additional data may be needed to consider the	strategic intent both relate to the fundamental strategic reasons for establishing alliances. The strategic intent differs significantly between global	More data
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. Additional data may be needed to consider the impact of the power	strategic intent both relate to the fundamental strategic reasons for establishing alliances. The strategic intent differs significantly between global and local firms because of the	More data
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. Additional data may be needed to consider the impact of the power asymmetry resulting from	strategic intent both relate to the fundamental strategic reasons for establishing alliances. The strategic intent differs significantly between global and local firms because of the dominance of the former,	More data
	that strategic intent was a significant enabling antecedent for coopetition, where managers had a key role in facilitating how the intent is translated operationally. Additional data may be needed to consider the impact of the power asymmetry resulting from market dominance on either	strategic intent both relate to the fundamental strategic reasons for establishing alliances. The strategic intent differs significantly between global and local firms because of the dominance of the former, which makes strategic	More data

Table 30 – Sub-question 1 results

6.4. Discussion of the results for Sub-Question 2

Sub-Question 2 – What are the processes for managing coopetitive relationships between firms?

This sub-question had aimed to explore and understand the participants' views on the governance mechanisms for managing cooperation in interfirm relationships, possible dynamics and tensions that may arise from coopetition, and how these are managed. The discussion of the key findings is premised on the key themes interpreted from the data analysis.

6.4.1. Formal governance

The participant data yielded two main categories, contract agreement and terms of reference, as essential formal governance mechanisms for managing cooperation between firms. These categories will be discussed and analysed further, as they were dominant categories cited by participants.

Interfirm relationships are governed by formal agreements or contracts which should be comprehensive in their scope and terms of reference. The formal contract specifies the lead partner and the respective contractual obligations of each partner. The contract defines terms of reference related to roles and responsibilities, performance targets, resources and revenue allocation, as well as budget and pricing. The contract agreement process requires thorough analysis of the terms of reference. The process may lend itself to power asymmetry between partners because, in addition to stipulation of a lead partner, larger firms may also have more resources supporting the content and analysis of the contract. It is essential, therefore, for alliance partners to ensure the mutual undertaking of a mutual partnership relationship, where these asymmetries may not be exploited through opportunism.

These data underline the role of formal governance in managing cooperation between alliance partners, where complementary roles, responsibilities, objectives and targets are stipulated. Moreover, resource availability may introduce further asymmetries within this ecosystem, thereby highlighting the need for symmetric governance.

These findings are, in part, supportive of those by Czakon et al. (2020) in highlighting the conclusive role of formal governance in coopetition, where formal governance is designed to limit opportunistic behaviour when it comes to allocation of common alliance benefits. However, these findings differ when it comes to determining a preference for formal governance in the setting of radical innovation. Indeed, the current study does not reveal such a preference.

As discussed in the next section in 6.4.2, these findings are more similar to the description of the revised relational view by Dyer et al., (2018) of a complementary role between formal and relational governance, especially in the dynamic context of high interdependence between the alliance partners, as is the case in the current study.

6.4.2. Relational governance

The participant data revealed that parallel to formal governance, interfirm alliances are managed by relational governance mechanisms. While five categories were identified as important relational governance mechanisms for cooperation, including joint strategy and joint projects, only three categories, joint activities, partner alignment and partner interests will be discussed and analysed further, as these were the most dominant categories cited by participants. Furthermore, these mechanisms constitute joint actions which are established on trust.

Partners align on their goal, business objectives and subsequent strategy, which is driven through co-investment, joint decisions and joint actions, including organisational routines such as regular joint meetings. The cadence varies according to the type of meeting and its objectives, as well as the phase of the joint proposal or project. Other joint activities include joint workshops, events and campaigns. Partner commitment and alignment are further strengthened by complementary project teams dedicated to support the partnership on either side, depending on resource availability.

Participant data further revealed that joint actions are based on deliberate behaviours to build mutual trust. While four categories were identified as important to building mutual trust, including the impact of negative relationships, only three categories, building relationships, building trust and fostering predictability will be discussed and analysed further, as these were the most dominant categories cited by participants.

These behaviours enable informal interpersonal communication and open engagement through regular informal exchanges and build trust and predictability on the basis of open communication, honesty and transparency, to encourage information sharing and discourage opportunistic behaviour. Trust and predictability are further enhanced by proven success and effective management of expectations among all stakeholders. It is possible that the partners' specialised roles in the alliance can be leveraged uniquely to foster trust and predictability in the alliance relationship.

These data underline the role of relational governance in managing cooperation between alliance partners, where trust and relationships are built on the basis of aligned corporate objectives, joint actions and deliberate cooperative behaviour. While these data show high interdependence between alliance partners, they further highlight resource availability as a potential source of asymmetrical governance.

As already discussed in Section 6.4.1 above, these findings differ from those of Czakon et al. (2020) as the current study indicates a very prominent role for relational governance in a radical innovation setting, versus their findings of a preference for formal governance in the setting of radical innovation.

As aforementioned also in Section 6.4.1, these findings are more similar to the description of the revised relational view by Dyer et al., (2018) of a complementary role between formal and relational governance, given the dynamic context of high interdependence between the alliance partners. They further explain this dynamic perspective and highlight the increasing importance of relational governance for maturing alliance relationships over time. As expectations become clearer, and trust develops through established relational norms, this increases resource interdependence and the stability of the alliance.

These findings could also be deemed as supportive of a recent systematic review by Lascaux (2020), which studied the impact of inter-organisational trust on relational outcomes of coopetitive relations. In contrast to the findings by Czakon et al. (2020), the development of trust through joint actions may foster greater alliance partner reliance on relational than formal governance (Lascaux, 2020).

These findings are also interestingly similar to the recent findings by Bicen et al. (2021), whose study explored what they defined as an alliance's market orientation or AMO as, "a set of alliance behaviors that emphasizes coordinated, joint actions in customer and competitor oriented interfirm activities that have the ultimate goal of creating unique customer value" (p. 24). Their findings confirm the effectiveness of relational governance through establishing social and cooperative norms in coopetitive alliances. They further suggest that other orientations, such as technology orientation, may further endorse the role of relational governance in coopetitive alliances and recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same.

6.4.3. Tensions

While the participant data had yielded four main categories as common sources of tensions experienced in interfirm alliances, including ethics and intellectual property, only two categories, competition and partner selection will be discussed and analysed further, as these were the most dominant categories cited by participants.

Opportunistic behaviour may ensue over competing products or service offerings and incumbent partners, depending on the respective organisational cultures and prevalent levels of trust within the alliance. Tensions also arise from partner selection processes due to the neutral advisory role of the system integrators, and possible knowledge leakage of a partner's or customer's proprietary information benefiting a competitor during the selection process.

All alliance partners experienced tensions when dealing with opportunistic behaviour and incumbent partners, while smaller firms also experienced tensions related to revenue allocation and customer ownership, which suggests another asymmetry related to common alliance benefits.

These data highlight the tensions that may emerge in coopetitive interfirm alliances, including incumbent partners and opportunistic behaviour between direct competitors. Possible partner selection conflict and proprietary knowledge leakage tensions may also ensue from the apparent intermediary role of the system integrator.

These findings support the proven description of opportunistic behaviour and knowledge leakage as prevalent and sometimes interrelated coopetition tensions (Bouncken et al., 2018; Bouncken et al., 2020; Hoffmann et al., 2018). The tension arises from the fear of knowledge leakage possibly benefiting the competitor (Hoffmann et al., 2018), as described in the current study as part of the tension arising from the partner selection process. The current study also suggests the role of trust through joint actions as a protection mechanism against opportunism, a finding similar to that of Bouncken et al. (2018).

These findings are, however, different from other coopetition studies which have explored considerations for alliance partner selection. It is noteworthy that additional coopetition literature may be needed to explore partner selection and integrated brokerage as possible sources of tension in ecosystem-based interfirm alliances.

6.4.4. Managing tensions

The participant data yielded four main categories, external conflict management, internal conflict management, mutuality and system integration. These categories will be discussed and analysed further, as they were dominant categories cited by participants.

Conflict in interfirm alliances can be managed two-fold; through an external perspective such as compliance to industry and regulatory standards, compliance frameworks, healthy competition and customer-centricity. Internally, relational governance tends to predominate more than formal governance as a complementary conflict management mechanism. Mutuality builds trust and minimises tension. Trust, which tends to limit opportunistic behaviour, is enhanced by mutuality in the partnership relationship through joint actions. However, such mutuality may be undermined by asymmetry within the alliance. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. Although partner selection is ultimately resolved by the customer, system integrators are recognised as trusted advisors and consultants to customers.

These data suggest a preference for relational governance over formal governance in managing coopetitive tensions. In addition to mutuality through trust and joint actions for conflict resolution, additional mechanisms are also implied, differentiation and integration as well as customer orientation.

The dominant categories cited in this study were strongly suggestive of contextual integration processes as described by Hoffmann et al. (2018), including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. They further suggested "mutual trust, commitment and conflict resolution," as mechanisms for nurturing complex coopetitive relationships (p. 3043). However, these findings differ as far as differentiation and integration external to the firm, when compared to the processes described Hoffmann et al. (2018).

These findings also supported assertions by Gnyawali & Charleton (2018) and Bouncken et al. (2018) regarding the positive relationship between trust and mutuality, and the role of relational governance as a safeguard against opportunism, as well as that of Bicen et al. (2021) considering trust and commitment as fundamental to managing coopetitive tensions. Moreover, these findings may affirm the suggestion by Jakobsen (2020) that trust diminishes opportunism as well as breaches of formal agreements. Similarly, they

further suggest that psychological dependence, which is nurtured through mutual trust, has potential to reduce tensions that arise from asymmetry within the alliance.

These findings are also different from those other coopetition studies which have explored considerations for alliance partner selection. It is noteworthy that additional coopetition literature may be needed to explore a possible role for customer orientation in managing coopetition tensions, such as those arising from partner selection in the current study. Furthermore, additional data may be needed to explore external differentiation and integration as possible mechanisms to manage coopetition tension.

6.4.5. Conclusive findings for Sub-Question 2

	Theory	Findings	Similarity
6.4.1.	Czakon et al. (2020)	Interfirm relationships are	Ø
	highlighted the conclusive role	governed by formal	
	of formal governance in	agreements or contracts	
	coopetition; to limit	which should be	
	opportunistic behaviour	comprehensive in their scope	
	related to allocation of	and terms of reference. The	
	common alliance benefits.	formal contract specifies the	
	They further assert the	lead partner and the	
	delineation of respective roles	respective contractual	
	and responsibilities and norms	obligations of each partner.	
	and sanctions as a means to	The contract defines terms of	
	manage coopetitive tension.	reference related to roles and	
		responsibilities, performance	
		targets, resources and	
		revenue allocation, as well as	
		budget and pricing.	
6.4.1.	Czakon et al. (2020) differed	No findings suggest a	×
	when it comes to determining	preference for formal	
	a preference for formal	governance in the current	
	governance in the setting of	study.	
	radical innovation. Indeed,		
	the current study does not		
	reveal such a preference.		

6.4.2.	Dyer et al. (2018) proposed a complementary role between formal and relational governance, especially in the dynamic context of high interdependence between the alliance partners.	Parallel to formal governance, interfirm alliances are managed by relational governance mechanisms.	₹
	Theory	Findings	Similarity
6.4.2.	Lascaux (2020) found that the development of trust through joint actions may foster greater alliance partner reliance on relational than formal governance.	Partners align on their goal, business objectives and subsequent strategy, which driven through co-investment, joint decisions and joint actions, which include organisational routines such as regular joint meetings.	∑
6.4.2.	Bicen et al. (2021), explored what they defined as an alliance's market orientation or AMO as, "a set of alliance behaviors that emphasizes coordinated, joint actions in customer and competitor oriented interfirm activities that have the ultimate goal of creating unique customer value" (p. 24).	The cadence varies according to the type of meeting and its objectives, as well as the phase of the joint proposal or project. Other joint activities include joint workshops, events and campaigns. Partner commitment and alignment are further strengthened by complementary project teams dedicated to support the partnership on either side, depending on resource availability.	☑

6.4.2.	Bicen et al. (2021) confirmed	These behaviours enable	
	the effectiveness of relational	informal interpersonal	
	governance through	communication and open	
	establishing social and	engagement through regular	
	cooperative norms in	informal exchanges and build	
	coopetitive alliances.	trust and predictability on the	
	Dyer et al. (2018) highlight the	basis of open communication,	
	increasing importance of	honesty and transparency; to	
	relational governance for	encourage information sharing	
	maturing alliance relationships	and discourage opportunistic	
	over time. As expectations	behaviour.	
	become clearer, and trust		
	develops through established		
	relational norms, this		
	increases resource		
	interdependence and the		
	stability of the alliance.		
	Theory	Findings	Similarity
6.4.2.	Bicen et al. (2021) further	Parallel to formal governance,	Ø
	suggested that other	interfirm alliances are	
	orientations, such as	managed by relational	More data
	technology orientation, may	governance mechanisms.	suggested
	further endorse the role of	Participant data further	
	relational governance in	revealed that joint actions are	
		,	
1	coopetitive alliances, and	based on deliberate	
	coopetitive alliances, and recommend this as an	_	
	recommend this as an opportunity for future research.	based on deliberate	
	recommend this as an opportunity for future research. The findings of the current	based on deliberate behaviours to build mutual	
	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to	based on deliberate behaviours to build mutual	
	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same.	based on deliberate behaviours to build mutual trust.	
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be	based on deliberate behaviours to build mutual trust. Resource availability may	More data
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries	More data needed
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the impact of the relative size	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries within this ecosystem, thereby	
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the impact of the relative size asymmetry on governance;	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries within this ecosystem, thereby highlighting the need for	
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the impact of the relative size asymmetry on governance; based on resource	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries within this ecosystem, thereby highlighting the need for symmetric governance.	
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the impact of the relative size asymmetry on governance;	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries within this ecosystem, thereby highlighting the need for symmetric governance. While these data show high	
6.4.2.	recommend this as an opportunity for future research. The findings of the current study may indeed contribute to the same. Additional data may be needed to consider the impact of the relative size asymmetry on governance; based on resource	based on deliberate behaviours to build mutual trust. Resource availability may introduce further asymmetries within this ecosystem, thereby highlighting the need for symmetric governance.	

		highlight resource availability	
		as a potential source of	
		asymmetrical governance.	
6.4.3.	These findings support the	Opportunistic behaviour may	Ø
	proven description of	ensue over competing	_
	opportunistic behaviour and	products or service offerings	
	knowledge leakage as	and incumbent partners.	
	prevalent and sometimes	Tensions also arise from	
	interrelated coopetition	partner selection processes	
	tensions (Bouncken et al.,	due possible knowledge	
	2018; Bouncken et al., 2020;	leakage of a partner's or	
	Hoffmann et al., 2018).	customer's proprietary	
	1101111a1111 ct al., 2010).	information benefiting a	
		competitor during the	
		selection process.	
6.4.3.	Additional coopetition	These findings are, however,	More data
0.4.3.	literature may be needed to	different from other coopetition	needed
	explore partner selection	studies which have explored	Heeded
	and integrative brokerage as	considerations for alliance	
	naccible cources of tancian	nartner colection	
	possible sources of tension	partner selection.	
644	in interfirm alliances.		Moro data
6.4.4.	in interfirm alliances. Hoffmann et al. (2018),	Trust is enhanced by mutuality	More data
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual	Trust is enhanced by mutuality in the partnership relationship	More data
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to	Trust is enhanced by mutuality in the partnership relationship through joint actions. In	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition,	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However,	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration.	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted the delineation of respective	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted the delineation of respective roles and responsibilities,	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted the delineation of respective roles and responsibilities, norms and sanctions as a	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted the delineation of respective roles and responsibilities, norms and sanctions as a means to manage coopetitive	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	
6.4.4.	in interfirm alliances. Hoffmann et al. (2018), described contextual integration processes to manage tensions; including embracing coopetition, developing appropriate mechanisms and organisational routines for conflict resolution, as well as differentiation and integration. Czakon et al. (2020) asserted the delineation of respective roles and responsibilities, norms and sanctions as a	Trust is enhanced by mutuality in the partnership relationship through joint actions. In addition, system integrators play a key role in managing interfirm tensions related to partner selection. However, these findings differ as far as differentiation and integration external to the	

	Theory	Findings	Similarity
6.4.4.	Gnyawali & Charleton (2018)	Internally, relational	Ø
	and Bouncken et al. (2018)	governance tends to	
	asserted a positive	predominate more than formal	
	relationship between trust and	governance as a	
	mutuality, and the role of	complementary conflict	
	relational governance as a	management mechanism.	
	safeguard against	Mutuality builds trust and	
	opportunism.	minimises tension. Trust,	
	Bicen et al. (2021) considered	which tends to limit	
	trust and commitment as	opportunistic behaviour, is	
	fundamental to managing	enhanced by mutuality in the	
	coopetitive tensions.	partnership relationship	
		through joint actions.	
6.4.4.	Jakobsen (2020) found that	Trust, which tends to limit	Ø
	trust diminishes opportunism	opportunistic behaviour, is	
	as well as breaches of formal	enhanced by mutuality in the	
	agreements. They further	partnership relationship	
	suggest that psychological	through joint actions.	
	dependence, which is nurtured	However, such mutuality may	
	through mutual trust, has	be undermined by asymmetry	
	potential to reduce tensions	within the alliance.	
	that arise from asymmetry		
	within the alliance.		
6.4.4.	Additional data may be	In addition, system integrators	More data
	needed to explore a possible	play a key role in managing	needed
	role for customer orientation	interfirm tensions related to	
	in managing coopetition	partner selection. Although	
	tensions.	partner selection is ultimately	
		resolved by the customer,	
		system integrators are	
		recognised as trusted advisors	
		and consultants to customers.	

Table 31 - Sub-Question 3 Results

6.5. Discussion of the results for Sub-Question 3

Sub-Question 3 – How do firms collaborate and compete to accomplish outcomes?

This sub-question had aimed to explore and understand the participants' views on how alliance partners define and measure outcomes of coopetition, including value creation. The researcher was able to evaluate how value is created and how outcomes are measured for alliance partners and for customers. The discussion of the key findings is premised on the key themes interpreted from the data analysis. As an area of focused interest, innovation outcomes were targeted for specific enquiry.

6.5.1. Value creation

While the participant data had yielded four main categories as value creation outcomes of coopetition, including customer product value and firm value, only two categories, customer business value and partner value will be discussed and analysed further, as these were the most dominant categories cited by participants.

Creating customer business value, based on customer needs, is the main objective of any alliance. Customer business value has been successfully created when the overall purpose of the alliance has been fulfilled and the outcomes achieved. Customer value is further created by means of new products and solutions which improve the customer experience and usage. Partner value is created through synergy, market expansion, growth and empowerment. Synergy is created by the respective partners leveraging their individual strengths, in order to create value for the customer and the partner. Combining these insights, including the lower prioritisation of firm value, it can be suggested that the technology industry shows greater orientation towards the customer and the alliance.

These data suggest a strong customer orientation with regards to value creation, where alliance success is measured through customer success, and mutual value is created when the overall purpose of the alliance has been fulfilled and the outcomes achieved. Customer value is created through customer-centric innovation, while partner value is created through synergy and mutual growth.

Pertaining to customer value, these findings are supportive of those of Bicen et al. (2021) as they suggest a strong alliance focus on creating customer value through employing synergy. These findings are also similar in the allocation of dedicated alliance resources, which suggests strong alliance competence. Furthermore, there are similarities between

these findings and those of Bouncken et al. (2020) who have also focused on the market domain for value creation. Their findings also indicate that coopetition can create value for all partners as well as the market.

It is noteworthy that additional coopetition literature with a strong emphasis on creating customer value, in addition to joint value for the alliance, may be warranted.

Pertaining to partner value, these findings are supportive of well-established literature on coopetition strategy and joint value creation. Recent similar findings include those by Santos (2021) which suggest greater joint value creation in the setting of balanced coopetition. These findings further suggest that partner value is created through synergy and empowerment, where synergy is created by the respective partners leveraging their individual strengths. This is supportive of the findings by Bouncken et al. (2018) which suggested that joint value is driven by leveraging knowledge and resources between partners. These findings further support notions of the revised relational view which emphasise the critical role of interdependent and complementary resources in sustaining alliance value creation over time (Dyer et al., 2018).

6.5.2. Common and private benefits

While the participant data had yielded four main categories as benefits and outcomes of coopetition, including partner measures, only three categories, revenue, alliance outcomes and customer outcomes will be discussed and analysed further, as these were the most dominant categories cited by participants.

Alliances pursue several private and common benefits as outcomes of coopetition, where success is defined as successful implementation of the alliance strategy, whereas the customer requires their need or business objective to be fulfilled. Revenue is measured as an indicator for financial performance for alliance partners and the alliance as a whole, and while partners may apply different targets, these targets are aligned to the primary role of each partner. The alliance derives interdependent common benefits when partners are orientated towards the customer and the alliance, by defining success through customer and alliance outcomes.

Once again, these data suggest a strong customer orientation because in addition to financial performance, common benefits are defined through the success of the customer-centric strategy. This strategy and these benefits are created jointly between the alliance partners.

These findings support those of Hoffmann et al. (2018) in their description of common benefits as those benefits which are interrelated and interdependent. Consistent with this description, the findings in this study point to be benefits which are created jointly between the alliance partners. Furthermore, these finding bear some similarity to those of Arslan (2018) regarding joint outcomes based on highly interdependent tasks between alliance partners. As the alliance partners in the current study define their mutual success by customer and alliance outcomes, this increases cooperative behaviour and joint activities and limits opportunistic focus on private benefits. These findings further support those by Bicen et al. (2021) which confirm a positive relationship between alliance performance and the alliance's market orientation.

6.5.3. Innovation

While the participant data had yielded three main categories for innovation as an outcome of coopetition, including disruptive innovation, only two categories, joint innovation and product innovation will be discussed and analysed further, as these were the most dominant categories cited by participants.

Innovation is one of the outcomes of coopetition, whether this is incremental product innovation or radical innovation in a new niche solution, or indeed radical, and sometimes disruptive platform innovation. Incubation spaces are commonly used for joint innovation, with the outcome of joint IP, which could be jointly owned or jointly referenced according the alliance partners' differentiated roles. Alliance partners, in particular LSIs, may also engage in joint innovation through joint ventures and consortia.

These data outlined joint innovation and platform innovation as outcomes of downstream innovation to generate new or niche product offerings for market expansion.

In terms of innovation outcomes, these findings support those of Bouncken et al. (2020) related to how alliance firms to seek joint outcomes for technological innovation and value creation through the alliance to improve product offerings; thereby increasing their customer base and market share. These findings are also similar to what has been described by Cozzolino & Rothaermel (2018) as how incumbents with complementary assets can jointly build them on a proprietary platform.

These findings are also supportive of research has emphasised how coopetition can facilitate joint innovation (Fernandez et al., 2017; Ritala et al., 2017).

6.5.4. Conclusive findings for Sub-Question 3

	Theory	Findings	Similarity
6.5.1.	Bicen et al. (2021) suggested a	Creating customer business	Ø
	strong alliance focus on	value, based on customer	
	creating customer value	needs, is the main objective of	
	through employing synergy.	any alliance. Customer	
	These findings are also similar	business value has been	
	in the allocation of dedicated	successfully created when the	
	alliance resources, which	overall purpose of the alliance	
	suggests strong alliance	has been fulfilled and the	
	competence.	outcomes achieved.	
6.5.1.	These findings are also similar	Partner value is created	\square
	in the allocation of dedicated	through synergy, market	
	alliance resources, which	expansion, growth and	
	suggests strong alliance	empowerment. Synergy is	
	competence (Bicen et al.,	created by the respective	
	2021).	partners leveraging their	
		individual strengths, in order to	
		create value for the customer	
		and the partner.	
6.5.1.	There are similarities between	Customer value is further	
	these findings and those of	created through new products	
	Bouncken et al. (2020) who	and solutions which improve	
	also focused on the market	the customer experience and	
	domain for value creation.	usage. Partner value is	
	Their findings also indicated	created through synergy,	
	that coopetition could create	market expansion, growth and	
	value for all partners as well as	empowerment.	
	the market.		
	Santos (2021) further		
	suggested greater joint value		
	creation in the setting of		
	balanced coopetition.		

6.5.1.	It is noteworthy that	Combining these insights,	More data
	additional coopetition	including the lower	needed
	literature with a strong	prioritisation of firm value, it	
	emphasis on creating	can be suggested that the	
	customer value, in addition	technology industry shows	
	to joint value for the alliance,	greater orientation towards the	
	may be warranted.	customer and the alliance.	
	Theory	Findings	Similarity
6.5.1.	This is supportive of the	Partner value is created	
	findings by Bouncken et al.	through synergy, market	
	(2018) which suggest that joint	expansion, growth and	
	value is driven by leveraging	empowerment. Synergy is	
	knowledge and resources	created by the respective	
	between partners. These	partners leveraging their	
	findings further support notions	individual strengths, in order to	
	of the revised relational view	create value for the customer	
	which emphasis the critical role	and the partner.	
	of interdependent and		
	complementary resources in		
	sustaining alliance value		
	creation over time (Dyer et al.,		
	2018).		
6.5.2.	These findings support those	Alliances pursue several	abla
	of Hoffmann et al. (2018) in	private and common benefits	
	their description of common	as outcomes of coopetition,	
	benefits as those benefits	where success is defined as	
	which are interrelated and	successful implementation of	
	interdependent. Likewise,	the alliance strategy, whereas	
	Crick and Crick (2021) also	the customer requires their	
	found a positive relationship	need or business objective to	
	between coopetition and	be fulfilled. Consistent with this	
	financial performance.	description, the findings in this	
		study point to be benefits	
		which are created jointly	
		between the alliance partners.	

	Theory	Findings	Similarity
6.5.2.	Furthermore, these finding	As the alliance partners in the	
	bear some similarity to those of	current study define their	
	Arslan (2018) regarding joint	mutual success by customer	
	outcomes based on highly	and alliance outcomes, this	
	interdependent tasks between	increases cooperative	
	alliance partners.	behaviour and joint activities	
		and limits opportunistic focus	
		on private benefits.	
6.5.2.	Bicen et al. (2021) confirmed a	The alliance derives	$\overline{\mathbf{A}}$
	positive relationship between	interdependent common	
	alliance performance and the	benefits when partners are	
	alliance's market orientation.	orientated towards the	
		customer and the alliance, by	
		defining success through	
		customer and alliance	
		outcomes.	
6.5.3.	Bouncken et al. (2020)	Innovation is one of the	Ø
	described how alliance firms to	outcomes of coopetition,	
	seek joint outcomes for	whether this is incremental	
	technological innovation and	product innovation or radical	
	value creation through the	innovation in a new niche	
	alliance to improve product	solution, or indeed radical, and	
	offerings; thereby increasing	sometimes disruptive platform	
	their customer base and	innovation. Incubation spaces	
	market share. Cozzolino &	are commonly used for joint	
	Rothaermel (2018) as how	innovation, with the outcome	
	incumbents with	of joint IP, which could be	
	complementary assets can	jointly owned or jointly	
	jointly build them on a	referenced according the	
	proprietary platform. These	alliance partners'	
	findings are also supportive of	differentiated roles.	
	research has emphasised how		
	coopetition can facilitate joint		
	innovation (Fernandez et al.,		
	2017; Ritala et al., 2017).		

6.6. Conclusive findings for the Research Question

The similarities and differences between the current study and extant literature are summarised in Table 33 as below:

Similarities

Environmental antecedents to coopetition include:

Technology convergence and shift to platforms and ecosystems

Organisational antecedents to coopetition include:

Firm asymmetries in size and assets

Access to knowledge and skills

Managerial antecedents to coopetition include:

Strategic rationale and strategic intent

Governance processes:

Complementary role between formal and relational governance in managing interfirm cooperation

Joint actions are a trust-building mechanism

Alliance's market orientation (AMO) to create customer value emphasises role of relational governance

Tensions include:

Opportunistic behaviour and knowledge leakage

Mechanisms to manage tensions include:

Internal differentiation and integration

Relational governance may predominate over formal governance as a mechanism to manage tensions

Mutuality and joint actions build trust to manage tensions and resolve conflict

Outcomes:

Strong alliance focus through synergy creates customer value

Alliance competence through leveraging knowledge and resources creates partner value

Market orientation creates market and partner value

Alliances create common and private benefits through highly interdependent tasks

Positive relationship between AMO and alliance performance

Coopetition can enhance the firm's performance through innovation and market expansion

Nuances of difference

Preference for formal governance in a radical innovation setting was not shown

Technology orientation may further endorse the role of relational governance in cooperative alliances

Differentiation and integration external to the firm may be mechanisms to manage tension

Technology industry may show greater orientation towards the customer and the alliance

In addition to being sources of tension, common and private benefits may be outcomes of coopetition

Apparent differences

Power asymmetry may impact the strategic rationale and strategic intent of smaller firms

Partner selection is a possible source of tension

Power asymmetry is a possible source of tension with respect to governance

Customer orientation is a possible mechanism to manage tensions

Table 33 – Conclusive findings for the Research Question

CHAPTER 7: CONCLUSION

7.1. Introduction

This final chapter synthesises the contributions possible with this research; starting with a discussion on its principal conclusions, followed by the contribution various areas of possible contribution, and the management implications. Finally, the limitations of the research are presented, followed by some recommendations for possible areas of future research.

7.2. Principal conclusions

This section presents the different constructs which contribute to the conceptual framework. The conclusions from each sub-question related to the research question are consolidated in a revised conceptual Coopetition Antecedents-Processes-Outcomes framework.

7.2.1. Antecedents

The research concluded similar environmental or contextual, organisational and managerial antecedents. While the environmental antecedents are specific to the technology industry, the organisational antecedents are similar to those common to strategic alliances and coopetition literature, such as resource access and learning as well as managerial antecedents such as strategic rationale and strategic intent. The research further concluded that partner complementarity and differentiation are drivers of interdependence between alliance partners. The research also concluded that power asymmetry may impact the strategic rationale and strategic intent of smaller firms.

Furthermore, the research concluded the following:

- When interdependence of knowledge assets, expertise and skills is very high, coopetition is not limited to dyadic interfirm alliances but follows at the ecosystem level (Hannah & Eisenhardt, 2018).
- Relative asymmetry in size and power has a direct impact on the strategic intent and strategic rationale of smaller firms.

7.2.2. Processes

Whereas the conceptual framework presented by Hoffmann et al., (2018) focused on coopetition tensions and processes to manage them, this research expanded the framework to include governance processes, and underscored the role of formal

governance in managing cooperation between alliance partners. The research further supported the complementary role of relational governance through mutual trust, aligned corporate objectives and joint actions underpinned by cooperative behaviour, which limits knowledge leakage and opportunistic behaviour. The research also concluded that a technology orientation may further endorse the role of relational governance in cooperative alliances, and that while partner selection is a source of tension, differentiation and integration external to the firm may be mechanisms to manage tension. In addition, the research also concluded that customer orientation is a possible mechanism to manage tensions.

The research further concluded the following:

- Resource availability drives symmetric governance (Jakobsen, 2020).
- Relational governance is preferred over formal governance as a process to manage tensions (Bicen et al, 2021)

7.2.3. Outcomes

Whereas the conceptual framework presented by Hoffmann et al., (2018) focused on coopetition tensions inclusive of value creation vs. appropriation, and common vs. private benefits, this research expanded to framework to include value creation and the subsequent benefits and outcomes of coopetition. This research supports high interdependence as a driver for common and private benefits. This research further supports joint innovation and platform innovation as outcomes of downstream product innovation for market expansion.

This research further concluded that:

- An alliance's market orientation creates value for the customer and the alliance (Jakobsen, 2020).
- A technology orientation endorses relational governance to manage coopetitive dynamics in interfirm alliances (Bicen et al, 2021).

7.2.4. Research contribution: Coopetition Antecedents-Processes-Outcomes framework

The revised framework contributes to the existing literature by incorporating governance processes as processes to manage interfirm relationships. This Coopetition Antecedents-Processes-Outcomes framework is depicted in Fig 23. It explains more comprehensive antecedents, processes and outcomes than initially visualised by

Hoffmann et al., (2018). It further outlines potential contributions from this research as depicted in pale blue, including:

- Power asymmetry may impact the strategic rationale and strategic intent of smaller firms
- Technology orientation may further endorse the role of relational governance in cooperative alliances
- Partner selection and asymmetric governance are possible sources of tension
- Customer orientation is a possible mechanism to manage tensions
- Differentiation and integration external to the firm may be mechanisms to manage tension
- Technology industry may show greater orientation towards the customer and the alliance
- In addition to being sources of tension, common and private benefits may be outcomes of coopetition

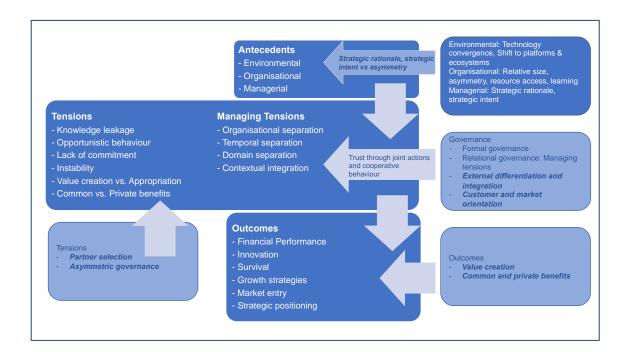


Fig 23 Coopetition Antecedents-Processes-Outcomes Framework

7.3. Research contribution

As shown in Fig X above, this research contributes to coopetition and strategic alliance literature by:

- Considering the role of asymmetry on the strategic rationale, strategic intent and symmetric governance of smaller firms
- Identifying additional tensions and mechanisms to manage them so as to

enhance value creation and common benefits

Although not shown in the framework, this research contributes to IOR literature and the relational view by endorsing the role of complementary resources and partner interdependence drive and sustain value creation.

Finally, this research contributes to the emerging concept of AMO from Bicen et al., (2021) which pivots the role of market and customer orientation of coopetition.

7.4. Implications for management

The outcomes of this research can help managers to better manage their coopetition strategies by:

- Monitoring, anticipating and planning for evolving market trends within their respective industry, to facilitate strategic fit and rationale with suitable partners
- Uncovering which governance mechanisms need to be optimised in their setting,
 to manage coopetitive relationships which drive value and favourable outcomes
- Better aligning strategic alliances to drive customer and mutual value
- Anticipating, identifying and managing their own sources of tensions

7.5. Limitations of the research

The limitation of the design and methodology of this research have already been discussed in Section 4.10. Other limitations have been identified as below:

- The research was largely exploratory in nature, meaning that the interrelation between the concepts was not explored in detail
- The research only focused on one sector and only on one setting within that sector
- The research did not consider disruptive or non-traditional players within the same sector
- The research did not explore the properties of the ecosystem beyond function within the alliance

7.6. Recommendations for future research

Based on the conclusions of this research, several areas have been identified for future research:

- Future research should explore the specific role and impact of asymmetries on SMEs engaged in coopetition with larger global firms
- There remains a need for a deeper understanding of the role of and preference

- for governance as innovation continues to evolve
- More research is needed to focus on the impact of market orientation on coopetitive relationships
- Parallel to the above is the need for more downstream coopetition research which includes a direct focus on customer outcomes
- Future research should also explore how integrative brokerage can mediate complex alliances and ecosystems
- More research is needed in coopetition in other sectors

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APPENDICES

Appendix A - Discussion guide

Introduction

Please tell me more about what you do.

Body

- 1) Think broadly about some of the alliances you are involved in. Based on your experience and knowledge, what led to the establishment of these alliances?
- 2) What is the overall purpose of these alliances?
- What are the alliances trying to achieve as an outcome? And for whom?
- Please tell me more about the outcomes related to innovation.
- 3) What processes have been used to manage cooperation within the alliances?
- Please share some examples of what has worked well and what has not.
- 4) What tensions do you experience when working with alliance partners?
- What processes have been put in place to manage competing tensions within the alliance?
- Please share some examples of what has worked well and what has not.
- 5) Based on your experience and knowledge, how is value created by the alliance? And for whom?
- Please share examples of what works well and what does not.
- 6) How do you measure that the outcome has been achieved? And for whom?

Conclusion

What would you propose in the alliance processes that could lead to improved outcomes in the future?

Appendix B - Consent letter

Informed Consent Letter

I am conducting research on strategic alliances between firms and am trying to find out more about the processes to manage relations between the firms so that outcomes can be achieved.

Our interview is expected to last for no longer than one hour. Interviews will be recorded; however, names of companies and individuals will not be reported. All data will be stored and reported without identifiers. Your participation is voluntary, and you can withdraw at any time without penalty.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name:	Research Supervisor:
Email:	Email:
Phone:	
Signature of participant:	
Date:	
Signature of researcher.	
Date:	

Appendix C - Non-disclosure Agreement

Name of witness

Non-disclosure Agreement for transcription services

Service provider	Name:		
Service provider	Contact details:		
Service provider	Address:		
services t of service	to the Gordon Institute of Bu provider here]-as part of th doing so, the service provid	contracted to provide transcription siness Science (GIBS) and-[include name e Social Impact and Technology case er will receive confidential information to be	
		tes not to use the confidential information	
3. The servi	urpose other than transcribing ce provider undertakes to ke o disclose it to, or share it w	eep the confidential information secure,	
 The unde disclosed 	rtakings in clauses 2 and 3	above apply to all of the information ct, regardless of the way or form in which	
The servi until all co	ce provider undertakes to k	eep the confidential information secure fidential information has been successfully	
	ce provider will not retain ar	ny copies or records of the confidential	
7. Neither th	7. Neither this agreement nor the supply of any information grants the service provider any license, interest or right in respect of any intellectual property		
•	ertakings in clauses 2 and 3	will continue in force indefinitely.	
Signature		 Date	
Signature			
Signature of	witness	Date	

Appendix D – List of Codes

ATLAS.ti Report

Final Research Project

Codes

Report created by Babalwa Maholwana on 31 Jan 2021

- o 4IR
- Building relationship
- Building trust
- o Business model
- Change management
- o Channel business units
- Channel partners
- o Coaching and mentoring
- o Collaborative leadership
- Commodity business
- o Competing offering
- o Competitive behaviour
- Competitive bidding
- Compliance training
- o Conflict discussion
- Conflict resolution
- Contract analysis
- Contract compliance
- Contract enforcement
- Contract management
- Coopetition concept
- o Credentials and references
- Customer adoption
- o Customer choice
- Customer education
- Customer measures cost-effective implementation
- o Customer measures customer adoption
- o Customer measures customer satisfaction
- o Customer measures customer success
- o Customer measures quality assessment
- Customer needs
- o Customer ownership
- o Customer value business value

- o Customer value cost effectiveness
- o Customer value cost incentive
- o Customer value customer experience
- o Customer value customer needs
- o Customer value efficiency and optimisation
- Customer value environmental sustainability
- o Customer value innovation
- Customer value maximising existing technology
- o Customer value pricing
- o Customer value product offering
- Customer value product usage
- o Customer value revenue
- o Customer value speedy outcomes
- o Customer value transformation
- o Customer-centric orientation
- Customer-centric service
- Customer-centric values
- Data centres
- Deal registration
- Definitions
- Documentation and records
- Ecosystem partners
- Empowerment
- Entrepreneurial spirit
- o Ethical conflict
- Ethical considerations
- Existing technology
- Expert knowledge
- o Formal agreement
- o Future value
- Global strategy localisation
- Governance structures
- o Healthy competition
- Honesty and transparency
- Inclination towards collaboration
- Incumbent partner
- o Industry measures industry impact
- o Industry-specific requirements

- Informal agreement
- Innovation co-creation
- Innovation concept
- o Innovation customer experience
- o Innovation disruptive innovation
- Innovation innovation unit
- o Innovation joint innovation
- Innovation open source
- o Innovation product innovation
- Integrated brokerage
- Intellectual property
- o Internal project performance
- Internal role differentiation
- o Internal value customer data
- o Internal value customer reach
- o Internal value margin
- o Internal value market expansion
- o Internal value product offering
- o Internal value revenue
- o Internal value sales incentives
- Job opportunities
- Joint formal meetings
- o Joint informal meetings
- Joint marketing
- Joint planning
- Joint project performance
- Joint project team
- Joint proposal
- o Joint sales
- Joint targets
- o Joint venture
- Knowledge gap
- Knowledge sharing
- Leadership support
- Learnings
- Legislative framework
- o Level of adoption
- Level of experience

- Leveraging brand reputation
- o Leveraging company size
- Leveraging relationships
- Leveraging scale
- Managed service offering
- Managing escalations
- Managing expectations
- Market analysis and segmentation
- Market factors
- Medium to long term view
- Milestone approval
- Mutual benefit
- Mutual partnership
- o Mutual value
- Negative cost impact
- Negative relationship impact
- New business development
- o Open communication
- o Open systems
- o Opportunity management
- Opportunity-based relationships
- Organisational agility
- Organisational constraints
- Organisational culture
- Organisational disparity
- Organisational maturity
- Organisational values
- Organisational working methodology
- o Outcomes agile decision-making
- Outcomes cloud migration
- o Outcomes customer solution
- Outcomes digital assets
- o Outcomes digital transformation
- o Outcomes empowerment and skills
- o Outcomes innovative culture
- o Outcomes market share
- o Outcomes platform integration
- o Outcomes product launch

- o Outcomes successful implementation
- Outsourced partner
- o Paired roles
- o Partner alignment current opportunities
- o Partner alignment dedicated support
- o Partner alignment goal
- o Partner alignment implementation
- o Partner alignment pipeline
- o Partner alignment strategy
- o Partner alignment value creation
- Partner certifications
- o Partner choice
- o Partner co-investment
- Partner disputes
- Partner exclusivity
- o Partner measures cost of sales
- o Partner measures marketing leads
- o Partner measures partner activities
- Partner measures partner positioning
- o Partner measures performance
- o Partner needs
- Partner portal
- o Partner project performance
- o Partner role differerentiation
- Partner termination
- Partner tiering
- o Partner value complementary services
- o Partner value cost
- o Partner value customer base
- o Partner value efficiency
- Partner value employee experience
- o Partner value empowerment and skills
- o Partner value geographical expansion
- o Partner value incentives
- o Partner value margin
- o Partner value market awareness
- o Partner value pricing
- o Partner value profitability

- o Partner value revenue
- o Partner value social capital
- o Partner value synergy
- Partnering experience
- o Partnership commitment
- o Partnership failure
- o Partnership risk
- Personal networks
- Personality traits
- Platform economy
- Predictability of outcome
- Product positioning
- o Project failure
- o Purpose business model transformation
- o Purpose channel
- Purpose complementary technologies
- o Purpose cost reduction
- o Purpose customer reach
- o Purpose customer solution
- o Purpose digital transformation
- o Purpose ecosystem
- Purpose enterprise development
- o Purpose innovation
- o Purpose joint programmes
- o Purpose learning and training
- o Purpose market expansion
- Purpose network effect
- o Purpose platform intergration
- Purpose product offering
- o Purpose revenue growth
- Purpose shared risk
- o Purpose skills gap
- o Purpose strategic business integration
- Purpose survival
- Purpose technical capability
- o Purpose value creation
- o Quality assurance
- Quality management system

- Reporting responsibility
- Reputational risk
- o Revenue measures cloud
- o Revenue measures direct sales
- Revenue measures implementation
- o Revenue measures influence revenue
- o Revenue measures joint partner
- Revenue measures partner sales
- o Revenue measures profitable returns
- o Revenue measures services
- Risk assessment compliance
- o Risk management assets
- o Risk management credit rating
- o Risk management ethics
- o Risk management minimising risk
- o Risk management process
- Rules of engagement
- Scope of work
- Shared resources
- o Shareholder value
- Skills training
- Specialised skills
- Speed to market
- o Stakeholder management
- Strategic intent
- System integration advisory and consulting
- o System integration implementation
- o System integration inclusivity
- o System integration neutrality
- System integration product agnostic
- Technical capability
- Technology as enabler
- o Terms of reference breach
- o Terms of reference budget
- o Terms of reference control
- o Terms of reference exit
- o Terms of reference general
- o Terms of reference resources

- \circ Terms of reference targets
- o Unqualified partner choice
- o Vendor management
- $\circ \ \text{Vetting process}$