

The influence of heterogeneous team interaction patterns on team adaptation process in  
non-routine contexts

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## Abstract

In today's business environments, dynamic contexts are becoming more and more prevalent. Multinational corporations (MNC) are even more so affected as they depend on diverse teams in different environments on a global level for their survivability. It can be said that teams that are unable to adapt to non-routine contexts are most likely to fail. Teams are characterised as complex adaptive systems as they are interdependent on each other, and they have complex non-linear interaction patterns which mediate their success. The task contexts within which MNC teams operate with mediators may require varying adaptive responses, furthermore, organizational, team and individual level factors are all antecedents which influence the team adaptation process.

A qualitative research method based on an embedded case study was used to interview 17 individuals from 5 subsidiaries and the headquarters team to gain data on the influence of heterogeneous interaction patterns on team adaptation process within a non-routine context. The individuals were purposely chosen and represented different management levels within the MNC.

Seven key constructs were identified which included, team interaction patterns, non-routine contexts, uncertainties, team adaptation process, organization culture and climate, subsidiary autonomy, and headquarters-subsidary (HQ-subsidary) tensions. The constructs and conceptual model adapted from literature to suit the dynamics on an MNC was used to guide the study.

The key outcomes of the research were that heterogeneous interaction patterns did not have a positive effect on team adaptation process, and that teams requested more coordination and effective communication. It was found that organizational and team level antecedents had a high influence on the team adaptation process which was pivotal for success. The MNC had overlooked key antecedents to successful team adaptive outcomes and immersed itself into the actual team adaptation process. The research showed that there would be benefits to following the adaptation process starting with antecedents on an organizational level.

## Keywords

Complex adaptive systems, adaptation process, adaptability, team interaction patterns, non-routine contexts, uncertainty, organizational transformation

## 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 in International Business at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.*

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### List of Abbreviations

- CAS: Complex Adaptive Systems
- CEO: Chief Executive Officer

MNC: Multinational Corporation

MNE: Multinational Enterprise

HQ: Headquarters

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# Chapter 1 Introduction

## 1. Introduction

### 1.1 Background to the research

Multinational Corporations (MNC's) are constantly being confronted with the challenge of having to operate under unpredictable and non-routine circumstances. Whilst the business world has now become more awakened to unpredictability and uncertainty due to the global pandemic, facing constant change and uncertainty is not a new phenomenon to international business (Sniashko, 2019). Over two decades ago, Harvard Business Review showcased articles relating to uncertainty, one of which is still relevant today; strategy under uncertainty (Courtney et al., 1997). These authors discussed that, customary approaches to strategic planning and execution could in fact be dangerous to business survival, hence, urging companies to swift adaptation under uncertain times.

More recent and relevant non-academic business articles are focused on adaptation and resilience of businesses amidst the pandemic, with major organizational changes having to be implemented within weeks for small businesses and MNC's ("The Impact of COVID-19", 2020; Thorbecke, 2020).

Whilst these non-academic reviews and academic papers are focused on MNC firm or supply chain strategies in uncertain times, scant work exists on the people factor capabilities (Tasavori et al., 2021). Even if a well-articulated strategy is developed within an MNC, but the team is incapable of efficiently adapting to such a strategy, it may be rendered ineffective. In recent studies on the premise of uncertainties, researchers have stated that although there is a definite requirement to understand uncertainty in international business, no framework exists for different types of uncertainties and no framework exists for different coping strategies (Sharma et al., 2020). This lack of knowledge makes it challenging for businesses to develop and adapt to non-routine situations especially in the current times (Sharma et al., 2020).

In the international business realm, this study aims to understand the adaptation of MNC subsidiary teams underpinned by the Complex Adaptive Systems Theory (CAS). Complex adaptive systems theory provides a framework to further understand teams as a network of agents with non-linear interactions and behaviour (Srinivasen & Mukherjee, 2018). Team adaptations do not occur in a vacuum and should include complex interactions when adjusting to dynamic environments (Gevers et al., 2015). Teams are embedded within a context, and they form interaction patterns that are influenced by the context (Arrow et al., 2000).

Consequently, the scope within which the study extends to is understanding the influence of heterogeneous team interaction patterns on team adaptation process, within a single MNC, under non-routine task contexts which can be triggered by uncertainties.

## 1.2 The research problem

Change is ever-present in modern business landscapes with organizations having to increasingly depend on teams to adapt for their survival (Gevers et al., 2015).

The research problem lies in team adaptation being critical for teams within organizations to be successful in today's changing environments and requires teams to be flexible and dynamic otherwise they are bound to fail (Frick et al., 2018).

A common example that is often used is that of Kodak, where one of the key failures was the inability to demonstrate adaptable capabilities for change (Lucas & Mein Goh, 2009). Teams have become increasingly important to organizations especially when change becomes an ever-escalating phenomenon. "One mechanism by which organizations enhance their capacity to adapt, is through the operation of teams" (Burke et al., 2006, p. 1189). However, for teams to deal with ever-changing environments, they must be able to adapt (Barth et al., 2015). Team adaptability therefore becomes pivotal in unexpected and dynamic situations. Lei et al. (2016) affirmed that the ability of teams to adapt timeously and precisely to non-routine conditions is critical for organizations to be effective. Non-routine contexts are essentially situations that are uncertain, unpredictable, and governed by time pressure and ambiguity.

As much as this topic is pivotal, Zellmer-Bruhn and Gibson (2006), have stated that empirical work demonstrating how effective teams are in complex multinational corporations (MNC's) is scarce. The main competitive advantages of MNC's are reliant on the performance of its international subsidiaries (Birkinshaw et al., 2005). Considering that these international subsidiaries are central to the success of MNC's, and they function with their own local human capital and capabilities, it is critical that teams within subsidiaries are adaptable to change and uncertainty. However, research in understanding team adaptability within subsidiaries is scarce. Academic papers in the Journal of International Business Studies, as recent as last year, are focusing on subsidiaries, but more so in the management aspect as opposed to a more granular team level for effectiveness or adaptability. Two such papers are by Meyer et al. (2020) and by Gibson et al. (2020).

A study by Lee et al. (2021), based on Research & Development (R&D) team performance also highlighted the importance of team-based structures as opposed to individual-based

structures as a way for companies to deal with rapidly changing business environments. It can be deduced that MNC's are highly dependent subsidiary teams, and therefore gaining more knowledge on their adaptation perspectives and experiences is pertinent.

Research within the domain of understanding team interactions for adaptation, was conducted by Lei et al. (2016), where the effect of team interaction patterns and in-process planning on team adaptation were evaluated in both routine and non-routine contexts. However, this study was not conducted on an MNC, but on eleven pairs of flight crew teams in Germany. Further to this, the most recent literature on the subject was completed by Hoogeboom and Wilderom (2020), who followed a similar approach on evaluating different team interaction patterns on team effectiveness within complex adaptive systems theory, with two different task contexts with non-routine being one of the two. However, again, this was not conducted on an MNC but on a public sector company in the Netherlands. Both these papers referenced that of Kanki et al. (1991) whose research also focused on airline crew teams.

As a result, due to the lack of literature of understanding the influence of team interaction patterns on team adaptation process within subsidiaries in an MNC, it can be said that it is pertinent to extend a study under current ever-changing or non-routine contexts that MNC's face. To substantiate this, Hoogeboom and Wilderom (2020) have argued that although we have a general understanding and acceptance that team interaction patterns are important in understanding teams, we still have limited understanding thereof within CAS. Furthermore, they stated that interaction dynamics are a pivotal consideration when studying CAS theory.

In general, organizational scholars have long been researching a company's ability to adapt to unfavourable operational situations (Clément & Rivera, 2017). Whilst firms can cope with manageable levels of pressure from a dynamic environment, at some point their adaptive efforts may become unfeasible (Clément & Rivera, 2017), hence this may require more in-depth transformative changes to ensure longer term survivability (Kate et al., 2012).

Scholars have stated that "adaptation lies at the heart of team effectiveness" (Burke et al., 2006, p. 1189). This work will therefore contribute to further understanding team adaptability as part of complex adaptive systems theory within MNC subsidiaries, where teams are perceived as a network of agents with different interactions and therefore regarded as complex adaptive systems (Arrow et al., 2000).

The research purpose is therefore to contribute to CAS theory by further understanding and explaining how MNC teams adapt using heterogeneous team interaction patterns whilst being in a non-routine context. Non-routine contexts are becoming more of a reality due to the

changing of global competitive landscapes, under these pretexts, normal recurring interaction patterns may become ineffective. It is therefore critical to generate data from various subsidiaries to understand how these team interaction patterns affect team adaptability.

### 1.3 The research questions

Within CAS theory, a call from Hoogeboom and Wilderom (2020) was that “more research on the antecedents and content of team interaction patterns is recommended” (Hoogeboom & Wilderom, 2020, p. 33), and that qualitative studies could result in a more complete understanding of interaction patterns or mediators so to complement available quantitative studies.

3.1 Therefore, the main research question was:

How do team interaction patterns influence team adaptation process in a non-routine context with an MNC on subsidiary level?

Four sub-level questions were positioned more in line with the contexts of the study, being, the context of the MNC and different level factors viz. Organization, team and individual level factors.

- a) How do organization, team and individual level factors influence team adaptability in a non-routine context?
- b) How does HQ-subsidiary tensions affect subsidiary adaptability in a non-routine context?
- c) How does subsidiary autonomy affect team adaptability in a non-routine context?
- d) What are the experiences and perspectives regarding adjustments in team adaptation process to improve adaptability?

After having understood the different level factors and the non-routine context, the last sub-level question sought to understand what adjustments are required within the adaptation process itself to achieve the outcome of team adaptive performance. This question stemmed from Maynard et al. (2015) where it was stated that the process of adaptation are adjustments to team processes as dictated by the non-routine context trigger.

#### 1.4 The research aims

The research aimed to further understand team adaptation process with its antecedents, mediators, and outcomes through a conceptual team adaptation model. Through this framework set in a context an MNC, the study aimed to understand the influence that heterogenous interaction patterns had on team adaptation process within a non-routine context within the setting of CAS theory.

#### 1.5 The research contribution

The research builds on understanding the importance of antecedents, mediators, and outcomes for team adaptation process within an MNC setting with the dynamic of specific non-routine contexts. Furthermore, eight recommended factors from a published conceptual model (Maynard et al., 2015) were evaluated in this study with adding a construct of the non-routine context to the model, as well as adaptive stimuli. In addition, to contextualise the model to an MNC, subsidiary dynamics such as subsidiary autonomy and HQ-subsidiary tensions were added as antecedents to the adapted model. Therefore, the research makes a small contribution to team adaptation conceptual models specifically to MNC's and anchored in complex adaptive systems theory. In general, frameworks that do feature in literature for team adaptation processes are not anchored in complex adaptive systems theory. This research has blended frameworks for team adaptation process within complex adaptive systems theory.

#### 1.6 The research roadmap

The research report is structured into seven chapters. Chapter 1 serves as the introduction to create context and justify the business need of the research and to anchor the research in international business theory. Chapter 2 is structured into seven sections, starting with extant literature on complex adaptive systems theory and uncertainties and non-routine contexts.

The literature review then leads into understanding team adaptation frameworks and processes and ends with explaining the latter information in the context of MNCs. Chapter 3 highlights the research questions derived from the literature review. Chapter 4 encompasses the detail of the research methodology in providing understanding into the reasons for the design and other actions to be taken for collection of data. Chapter 5 represents the findings of the study and is divided into ten sections which follows the sequential order of the adapted conceptual model. Chapter 6 discusses the findings in a similar sequential order, however, based on the discussions some factors were combined based on the contribution to the adaptation process. Chapter 7 concludes the research study on a high level and includes future recommendations.

## Chapter 2 Literature Review

### 2. Literature Review

#### 2.1 Introduction

A literature review was conducted to understand the different dynamics associated with team interaction patterns on team adaptation process within non-routine contexts within the theory of complex adaptive systems theory. Based on the premise that team adaptation is critical of organization survivability, the literature focused on team adaptation process within an MNC context whilst understanding various sources of uncertainties that cause non-routine contexts. It is not only external or environmental uncertainties that act as triggers for non-routine contexts, but also contexts directly within the MNC itself that triggers non-routine contexts. For this reason, the literature review was extended to understanding how factors such as subsidiary management, subsidiary autonomy and HQ-subsidiary tensions affect team adaptability.

The literature review starts by defining complex adaptive systems and further understanding the impact of different team interaction patterns on team effectiveness and team adaptability within routine and non-routine contexts. Thereafter, non-routine contexts are further explored as low predictability situations within the domain of uncertainties. This discussion on uncertainties then lead to elaborating on team adaptability considering the requirement for efficient adaptability under uncertainties. Various team adaptability frameworks are explored and contrasted to form a conceptual framework for this study in the conclusion of the literature review. In understanding these dynamics of heterogeneous interaction patterns, non-routine contexts and team adaptation process, the review then moves into the setting of the study being the MNC. MNC's are discussed in the context of global advantages versus local advantages which paves the way for discussion on subsidiary performance and autonomy and how that affects team adaptability. The literature reviews tapers to an end with succinctly understanding HQ-subsidiary tensions and lastly, the conclusion which highlight a conceptual framework for this study.

Definitions for the concepts mentioned above are described within the text of each section.

Highlighted below in Table 1 is a literature review roadmap of this study.

**Table 1.** Roadmap of literature review

	KEY THEMES	SUB-THEMES	CONSTRUCTS
2.1	<b>Introduction</b>		
2.2	<b>Complex Adaptive Systems Theory</b>		Team interaction patterns
2.3	<b>Non-routine contexts and uncertainty</b>	2.3.1 Uncertainty categories	Non-routine contexts
2.4	<b>Team adaptability</b>	2.4.1 Team adaptation process and frameworks	Uncertainty Team adaptation process
2.5	<b>Multinational Corporations</b>	2.5.1 Global versus local contexts 2.5.2 Subsidiaries and performance 2.5.3 Subsidiary autonomy	Organizational climate and culture (MNC) Subsidiary autonomy
2.6	<b>Headquarter and subsidiary tensions</b>		HQ-subsidiary tensions
2.7	<b>Conclusions</b>		

## 2.2 Complex Adaptive Systems Theory

Complex Adaptive Systems is defined as hard to comprehend and a framework for researching and understanding a network of agents, who interact and respond to each other in a non-linear and non-deterministic manner (Srinivasen & Mukherjee, 2018; Carmichael & Hadžikadić, 2019; Turner et al., 2019). CAS differs from general team research in that it describes “teams as simple systems characterised by unidirectional cause–effect relationships, failing to take into account the context in which teams operate” (Ramos-Villagrasa et al., 2012, p. 780).

The control of a CAS is not one that is regulated or centralised and is widely distributed (Srinivasen, & Mukherjee, 2018). Complex Adaptive Systems involve numerous agents that learn, adapt, and interact with each other, and a key characteristic is that they produce a non-linear dynamic behavior, (Holland, 2006; Carmichael & Hadžikadić, 2019). Whilst complex adaptive systems theory has been used initially for biological systems, it was by year 2000 that Arrow et al. (2000) had depicted teams as complex adaptive systems. The ability of teams

to function under varying situations which are non-linear is critical for team effectiveness and may explain why some teams are more effective than others.

The Complex Adaptive Systems Theory “underpins the explicit incorporation of the dynamics of team interaction in a given task context” (Hoogeboom & Wilderom, 2020, p. 6). Based on this cited statement by these scholars, this study aims to evaluate a heterogeneous team interaction pattern on team adaptability in the non-routine contexts. Described by Kanki et al. (1991), heterogeneous team interaction patterns are more complex and have more variety, which may be more prevalent to changing work environments. Heterogeneous team interaction patterns have been previously related to lower team effectiveness by Kanki et al. (1991) and no correlation to team effectiveness by Hoogeboom and Wilderom (2020).

However, research by Lei et al. (2016) showed that effective teams participate in reactive adjusted behaviours by matching team interaction patterns to adapt to the changing situation and that teams were able to achieve swift adaptation from routine to non-routine contexts. This has contributed to emphasizing the importance of developing effective team interaction in dynamic settings which has become our norm. Zijlstra et al. (2012), stated that when teams are involved in more heterogeneous team interactions, they become more flexible and non-prescribed in their interactions, and therefore may lead to better performance.

With having these mixed reviews on heterogeneous team interactions, it would be valuable to add to the body of knowledge evaluating this phenomenon for its influence on team adaptability in subsidiaries in an MNC.

Frick et al. (2018, p 412), borrowed from previous published definitions and defined team adaptation as there “must be a stimulus instigating the necessity for adaptation”, with triggers as potentially emanating from either internal or external sources. For organizations to remain competitive in dynamic and uncertain environments, they must react timeously and effectively, and this is facilitated by using teams (Maynard et al., 2015; Zijlstra et al., 2012). Although there has been a progress on conceptualizing teams as CAS, and it is becoming more prevalent, empirical research is still lagging (Turner et al., 2019).

Holland (2006) has stated that even with using the most powerful mathematical tools available, it may still present limitations in studying teams. This is further substantiated by Knight et al. (2016) who argued that there are gaps in understanding group dynamics due to the analytical tools, and, whilst statistical methods are sound in nature, when studying group dynamics, they are generally predicated upon linear models which is not fit for CAS studies. This is true because teams may adapt and tailor their interaction patterns based on the nature of work

they are presented with or if critical non-routine patterns are encountered (Hoogeboom & Wilderom, 2020; Lei et al., 2016.). It is therefore apt to state that studies evaluating the effect of interaction patterns within a team with a non-linear approach is necessary.

The most related and recent qualitative research article within CAS that was found during this research study was that by Pype et al. (2018), evaluating team interaction patterns on an interview basis in the healthcare discipline. These scholars conducted interviews with health care professionals based on 7 principles of CAS, with three of them related to team interaction patterns or behaviours, viz. Principle 2) Team member's interactions are non-linear, Principle 4) Interactions between team members can produce unpredictable behaviour and Principle 5) Interactions between team members can generate new behaviour. Results from this study showed that principles 2 and 4 were least prevalent when the participants were more collaborative or participative. Principle 5 was substantiated by results showing that when team members were more collaborative, they acquired new skills and knowledge which was perceived as new behaviour (Pype et al., 2018).

Regarding team adaptability, Lei et al. (2016) researched the role of interaction patterns and in-process planning on team adaptability in routine and non-routine situations. The method entailed evaluating eleven pairs of pilots during flight simulation sessions where the THEME software algorithm was used to interpret coded behaviour. Routine tasks or situations are characterised by their predictable and repetitive nature, whereas non-routine contexts being characterised as dynamic, non-repetitive, knowledge intensive and therefore with varying complexities. The results from Lei et al. (2016) suggested that teams that engaged in more routine tasks leaned towards more in-process planning with initial team adaptability. However, a curvilinear pattern was observed with too much planning resulting in lower team adaptability and therefore diminished effectiveness (Lei et al., 2016). These scholars further iterated that future research is required on understanding this point of diminishing returns but under dynamic settings, as it could be qualitatively different to routine settings (Lei et al., 2016).

Hoogeboom and Wilderom (2020), used a research model comparing three types of interaction patterns, recurring, heterogeneous and participative team interaction patterns and their effect on information sharing under routine and non-routine circumstances and correlating that to team effectiveness. "To date, no prior empirical study has compared these three types of interaction patterns" on information sharing (Hoogeboom & Wilderom, 2020, p. 7). Information sharing was at the centre of Hoogeboom and Wilderom's (2020) CAS research model and had direct positive effects on team effectiveness. From the aforementioned interaction patterns, heterogeneous interaction patterns are of interest in this study considering that adaption may take non-traditional and multi-faceted approaches to overcome

uncertainties. These researchers also called on more qualitative research to further understand these interactions, which adds to the necessity of researching this topic using non-linear methods. For this study, this suggested that understanding team interaction patterns was to be understood by virtue of understanding experiences and perceptions from individuals within a non-routine context.

### 2.3 Non-Routine Contexts and Uncertainty

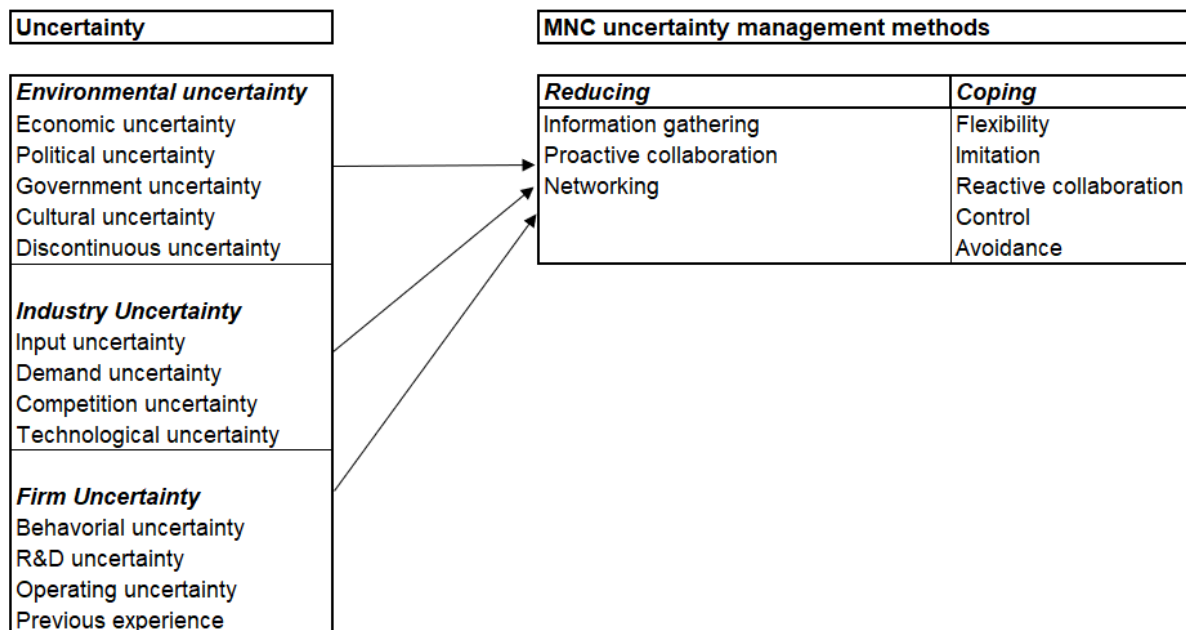
For purpose of this study the research questions have been formed around the construct of non-routine contexts which moderate the boundaries of the research scope a MNC setting, however, uncertainties can be considered as precursors to moving to non-routine contexts and is further explained. A routine context may be defined as situations which have lower levels of unpredictability and are steadier and more unchanging, whereas non-routine contexts are associated with higher levels of unpredictability, variation, complexity and are usually novel (Lei et al., 2016). Unpredictability is described as unable to predict future outcomes even if historical information exists and associated with uncertainty (Szymanski et al., 2019). It can therefore be deduced that non-routine contexts are associated with high levels of uncertainty considering that it has low levels of predictability. Sharma et al. (2020) stated that the nature of international business has always operated amid uncertainty due to lack of knowledge to accurately predict the future, however, it can now be said that this is even more so as we have faced the global pandemic in recent years. The pandemic has forced many companies and individuals in personal capacity to shift from routine to non-routine contexts and vice versa depending on the situation sometimes governed by law.

Inspired by the recent disruption and de-globalization of economies due to the pandemic, Sharma et al. (2019) published a paper predicated on the lack of a comprehensive framework for understanding the different types of uncertainties. These authors conducted a review to address the research gap in international business of classifying different uncertainties, antecedents, outcomes, and ways on how to cope with uncertainties. It is stated that whilst there is adequate information on risks associated with international business, there is a limitation on a comprehensive uncertainty framework and limited understanding of the effects on antecedents of uncertainty (Sharma et al., 2020). In the contextual understanding and definition of uncertainty in current times, Sharma et al. (2020) deduced that uncertainty can be considered as an overarching environmental variable widely impacting international businesses.

However, a further categorization of uncertainties has helped guide this study to further examine and explain the different non-routine contexts as one of the research constructs.

### 2.3.1 Uncertainty categories

A paper by Sniazhko (2019), defined uncertainty on a more elaborate level also referenced by Sharma et al. (2020). It was described by Sniazhko (2019) that uncertainty could constitute of three main categories, viz. Environmental Uncertainty, Industry Uncertainty and Firm Uncertainty. Environmental uncertainty which is relevant to our current business environments being summarised as economic, political, governmental, cultural, and discontinuous uncertainties. Industry uncertainties are explained as input, demand, competition, and technological uncertainties, whereas firm uncertainties are explained as behavioral, R&D, previous experience, and operating uncertainties. Sniazhko (2019) summarised and adapted research from Miller (1992) and Simangunsong (2012) to create an integrated conceptual framework which explains that organizations generally manage uncertainties by two main mechanisms, which is reducing uncertainty via risk management and coping with uncertainty via strategic management. The main differences are proactive collaboration and networking to reduce uncertainty versus reactive collaboration and control or avoidance when coping with uncertainty. Highlighted below is adapted illustration of the integrated conceptual framework from Sniazhko (2019) which is further elaborated upon. Categorizing and understanding these various contexts of uncertainties is important for this study considering the research setting of understanding interaction patterns for adaptability in a non-routine context spurred with uncertainty and unpredictability.



**Fig 1.** Integrated conceptual framework adapted from Sniazhko (2019) by the author.

To stay within context of this study and draw on recent and applicable data, this conceptual framework Figure 1 (Fig 1.), was adapted to illustrate the uncertainty dimensions and the

management methods to either cope with or reduce the uncertainty. Fig 1 depicts 13 different uncertainties of further descriptions which be provided for discontinuous, input, and previous experience uncertainties. Discontinuous uncertainty belonging to environmental uncertainties is described as uncertainties that are caused by technological disasters or acts of nature, such as the COVID-19 pandemic. Input uncertainties are related into inputs in production processes and previous experience uncertainties are related to a company's previous operational experience that has an influence on the host countries risk and management perceptions.

The pandemic has resulted in exposing these uncertainties on a global level where smaller businesses have dissolved due to the lack of demand of their products or services without being able to pivot into different and innovative ways to stay operational (Sharma et al., 2020). This discontinuous uncertainty is clear evidence that businesses need to be adaptable under uncertainties to pivot into non-routine contexts to stay operational and profitable, this is more so relevant to MNC's who depend on subsidiaries on a global level exposed to different dimensions and intensity of uncertainties.

Kovach et al. (2015), conducted a quantitative analysis evaluating firm performance in dynamic environments, based on the constructs of unpredictability and instability described as a changing environment. Their results showed that firm performance was negatively correlated to unstable and unpredictable market conditions, as firms were less efficient in forecasting or planning precisely but also, firms were unable to respond to changes based on the demand or the changing non-routine context. This further reiterates the importance of MNC's being able to adapt to non-routine contexts characterised by low predictability and high uncertainty. "Future work could consider these additional strategies that may provide managers with further guidance on how to better manage dynamic environments" (Kovach et al., 2015, p.11). Considering that subsidiary teams are at the core of MNC success, it is imperative to extend research within MNC's as part of Kovach et al. (2019) call for providing guidance to managers to be able to manage dynamic environments. It is important to note that "firms develop capabilities as their managers and employees learn by accumulating experiential knowledge" (Cuervo-Cazurra et al. 2018, p.5).

Firms that operate in highly dynamic environments are exposed to significant changes and therefore they need to adapt operating routines to remain competitive in a timeous manner (Wilhelm et al., 2015). A study was conducted by Wilhelm et al. (2015) on understanding how dynamic capabilities affect efficiency of operating routines under varying levels of environmental dynamism. These authors stated that dynamic capabilities are fitting for organizations that operate within highly dynamic environments and can be valuable to enhance adaptive efficiency in being flexible enough to respond to unexpected events and

adapt to short-term changes. Whilst the aforementioned research is appreciated and acknowledged, it is warranted to understand the impact of team interaction patterns on adaptive efficiency as well, considering that teams are considered as complex adaptive systems with a non-deterministic behaviour (Srinivasen & Mukherjee, 2018).

Uncertainty management capability is defined as “the capability of a firm to better deal with uncertainty in its interactions with the external environment” (Cuervo-Cazurra et al., 2018 p. 5), formed by the basis of strategy, processes and routines. Cuervo-Cazurra et al. (2018) argued that those firms that developed an uncertainty management capability are able to better withstand and respond to challenges if they are outside their home country such as emerging markets, as these firms undergo organizational learning and become resilient due to the inherent unstable nature. These learnings become experiential knowledge which allows the team to adapt and manoeuvre in uncertain situations. This is corroborated by Sniazhko (2019) in describing previous experience uncertainty as the lack of previous experience of managers or teams in decision-making which can result in a heightened level of uncertainty. Whilst Although Sniazhko (2019) presented modes to manage these uncertainties i.e. reducing or coping with uncertainties through various strategies, it can be deduced that whether a team adopts a reducing or coping mode when faced with uncertainties, it remains that a team must be adaptable to manage uncertainties (non-routine contexts), as well as adapt with subsequent heterogeneous interaction patterns.

#### 2.4 Team adaptability

Although not always a requirement, it is critical for teams to have the ability to adapt to ensure continuous flow of work, this is true for surgical teams or flight crews who have the ability to transition from a routine to a non-routine context due to unforeseen changes whilst remaining effective (LePine, 2005).

Although there has been previous work done on routine team performance, there is limited understanding on the characteristics and processes that affect effective team adaptation and to progress beyond the point of understanding routine team performance to understanding team adaptation within non-routine contexts (Christian et al., 2017). This statement warranted the need for this current study of understanding team adaptability under non-routine contexts.

Maynard et al. (2015) expressed concerns where unclear definitions other than team adaptability has hindered research focus on team adaptation, labels such as team adaptive outcomes or team role adaptation have been used in the past. Team adaptability has been defined as “the capacity of a team to make needed changes in response to a disruption or trigger” (Maynard et al., 2015, p. 655).

Team adaptability has also been defined as a “change in team performance, in response to a salient cue or cue stream, that leads to a functional outcome for the entire team. Team adaptation is manifested in the innovation of new or modification of existing structures, capacities, and/or behavioural or cognitive goal-directed actions” (Burke et al., 2006, p. 1190).

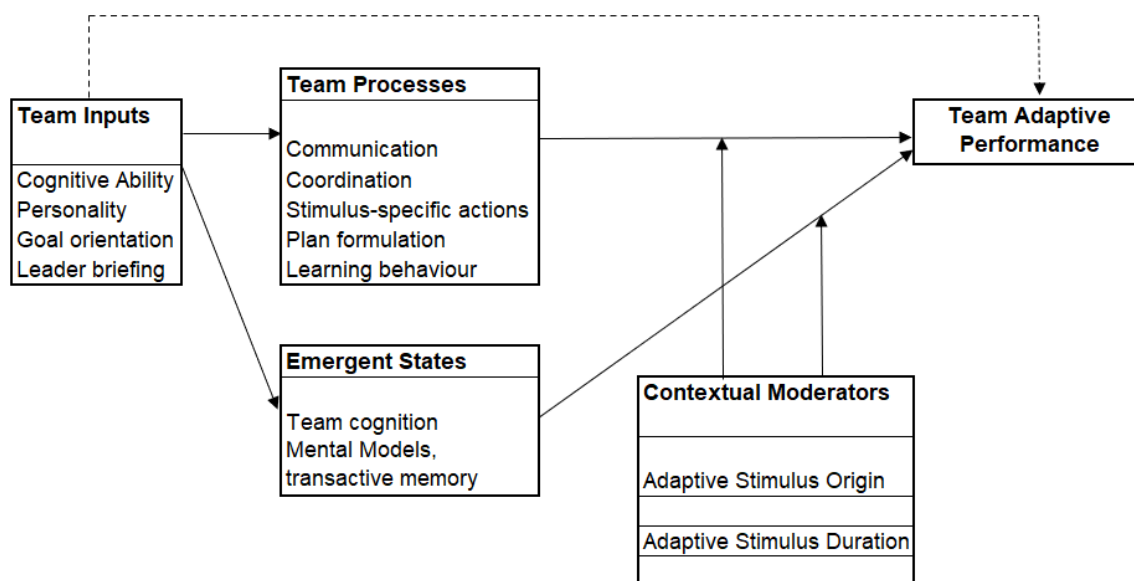
Teams are the fundamental building blocks of organizations tasked with making high-impact strategic decisions (Randall et al., 2011). As stated, our current norm has become dynamic and uncertain, hence, teams are faced with the added pressure of having to make high-impact decisions within uncertain environments with low predictability. As a result, to build highly effective teams is to build teams with high a high capacity to adapt to meet changing demands (Burke et al., 2006). Randall et al. (2011) summarised and evaluated central insights into team adaptability to better understand the factors that correlate to higher team adaptability to create highly adaptive teams. The constructs evaluated were i) cognitive states which allow teams to evaluate situations and adjust and behavioural mechanisms, eg, information sharing, ii) the impact of leadership in fostering better team adaptability, and the composition of teams with carrying abilities, values, and personality traits. The results from the study of Randall et al. (2011), showed that the effective transfer and sharing of knowledge enable teams to improve their adaptability in disruptive situations, in addition to this there was a positive correlation to a structured and collective strategy focused knowledge and team adaptability. For the team composition construct, they found that team composition was important for collective information processing to enhance team adaptability. Teams with high cognitive ability showed higher capability to process information and determine cause and effect patterns to create accurate views on the situation.

It is therefore evident that factors influencing team adaptability are diverse and multidimensional, however, it can be deduced that teams made up of individuals based on their personal traits or cognitive ability result in a collective outcome for enhanced team adaptability which is also influenced by leadership. For these reasons, this study was shaped around understanding individual interaction patterns within each subsidiary via experiences and perceptions shared, and then followed by understanding the influence of leadership on team adaptability via a headquarters view.

#### 2.4.1 Team adaptation process and frameworks

Team processes and emergent states are a result of team interactions that allow a team to evaluate a situation, learn adapt and respond with successful adaptation (Burke et al., 2006). Therefore, it can be said that emergent states and team interactions are dynamic and change over time to adapt to a non-routine context which influence team adaptive performance.

Christian et al. (2017) conducted a review within team adaptation to understand the various team processes and emergent states or adaptive mechanisms under varying contexts. These researchers made distinction between routine team performance which entails a combination of team members' skills to complete the same tasks, whereas team adaptive performance is related to a non-routine context, in that team adaptive performance emerges as the task context changes with different types and amounts of interactions during performance. Illustrated below in Fig 2 is a model of the team adaptive process in context by Christian et al. (2017) which provides a framework to understand that team inputs, such as cognitive ability, personality or leader briefing indirectly affects team adaptive performance, however the effects of team inputs or antecedents are facilitated by team processes and emergent states which has a direct influence on team adaptive performance. Team processes and emergent states are adaptive mechanisms impacting team adaptive performance.



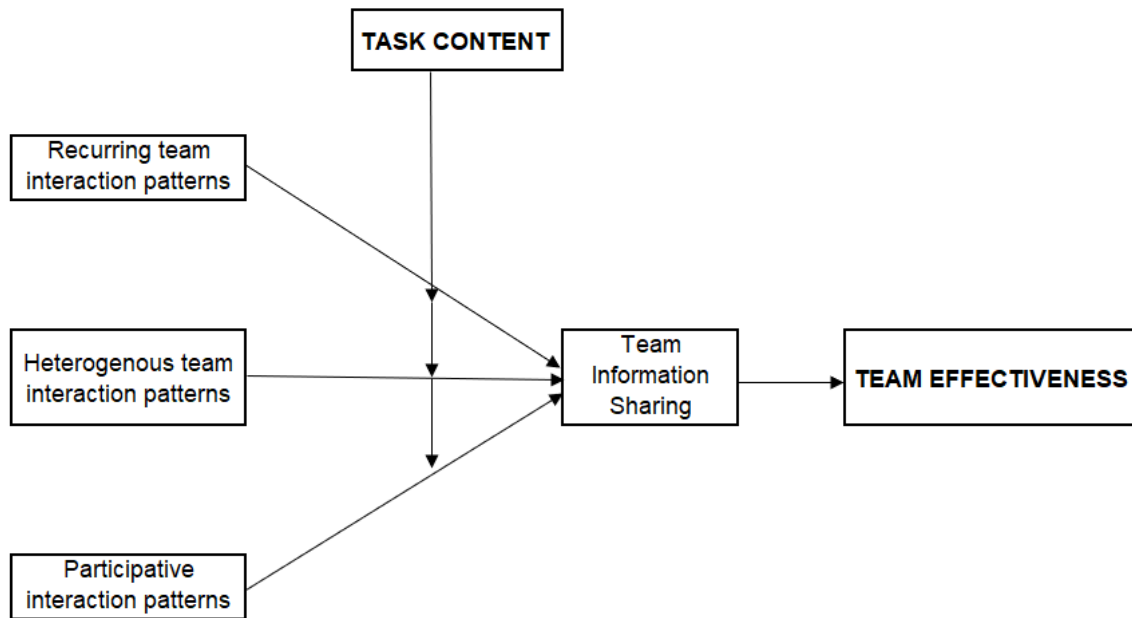
**Fig 2.** Model of team adaptive process in context (Christian et al., 2017).

The contextual moderators in Fig 2 are the origin and duration of adaptive stimulus. Maynard et al. (2015) has termed adaptive stimulus, adaptation triggers but holding the same definition. Internal stimuli include change in team structure or roles whereas external stimuli include a change in environment, a collective task situation or non-routine contexts. External stimuli allow the team to remain unchanged and comparatively stable where the same team can respond to a non-routine context arising externally. The duration of the stimuli is either short term or long term and persistent. The results from Christian et al. (2017), revealed that firms wanting to develop teams with high team adaptive performance should select on cognitive ability over personality. Literature has recently emphasized the importance of understanding

the impact of team cognition on team adaptation (Burke et al., 2015; Maynard et., 2015; Meneses et al., 2017). When teams have a congruent mental representation of tasks, or shared mental models and situation awareness they are able to better managed unexpected events (Meneses et al., 2017)

However, importantly the research results from Christian et al. (2017) suggest that the context, which is the type of stimuli, internal or external, moderates team processes and emergent with adaptive performance. It is interesting to add that the results also showed that team processes and emergent states essentially helped teams to cope with changes more so in their external environment as opposed to their internal environment.

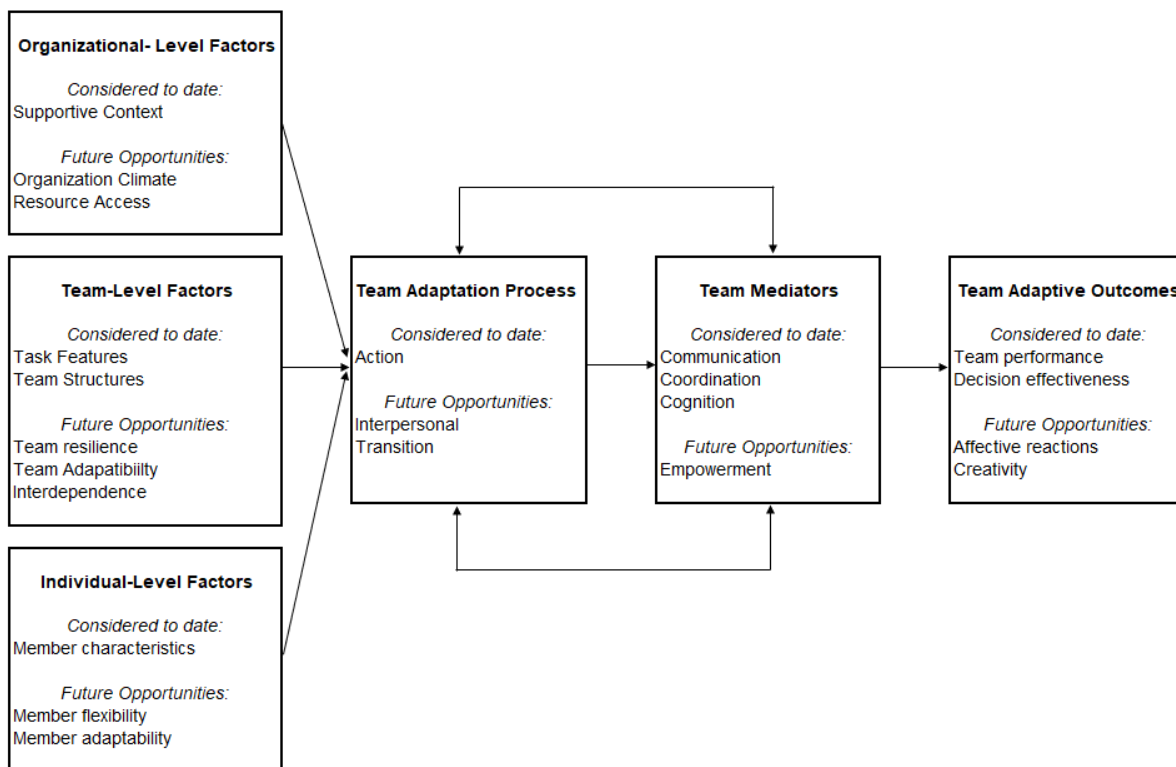
It is interesting to note that Hoogeboom and Wilderom's (2020) model also found a similar result of team effectiveness or performance but through the lens of information sharing via team interactions, either being recurring, heterogeneous or participative. This may be compared to what Christian et al. (2017) referred to as adaptive mechanisms which include team processes and emergent states where team cognition plays a role. Whilst Hoogeboom and Wilderom's (2020) model is anchored on complex adaptive systems theory, Christian et al. (2017) is based on the study of team adaptive performance although task context is taken into consideration in both papers. Results from both these studies have shown that the task context moderate team effectiveness, in addition, Burke et al. (2006) also argued that the adaptive process will vary based on the contextual changes, but the model proposed by Burke et al. (2006) did not display different task contexts, hence, the research premise on which the work of Christian et al. (2017) and Hoogeboom and Wilderom (2020) is based on is more relevant which was used to guide this research study. Fig 3 depicts Hoogeboom and Wilderom's (2020) research model where the different interaction patterns are influenced by either a routine or a non-routine task context which as stated is pivotal to team effectiveness.



**Fig 3.** Research model by Hoogeboom and Wilderom (2020) based on CAS theory

A conceptual model proposed by Maynard et al. (2015) based on the framework of team processes by Marks et al. (2001) is illustrated below in Fig 4. The team adaptation process component is focused on three team processes being a transition phase, which entails planning, and devising strategies, followed by action phases where actual tasks are achieved and subsequently interpersonal processes which are relevant throughout the team's lifecycle which entail activities such as motivation, conflict management and confidence building.

In Fig 4 below it is highlighted that more opportunities lie in understanding and exploiting the transition and interpersonal phases, this has been considered for this study. Fig 4 distinctly shows the differences between antecedents to team adaptability, team adaptation process and team adaptive outcomes. The team mediators are described as the mediating variables that explain variation in the team outcomes linked to performance of this process (Maynard et al., 2015).



**Fig 4.** Team adaptation nomological network (Maynard et al., 2015)

A team needs to have the ability to adapt to a changing environment however the effectiveness is dependent on the antecedents or inputs (Maynard et al., 2017, Christian et al., 2017). Maynard et al. (2015) describes these antecedents on three levels, viz. Organizational, team and individual levels. On an organizational level Maynard et al. (2015) highlights, that studies should look at future opportunities in understanding organizational climate and culture as key antecedents that affect the team adaptation process. It has been documented that lack of cultural fit has a negative impact on organizations which include conflicts and that incongruence between cultural values and managers practices can create frustration and distrust in teams which renders a team inadequate in being collaborative, innovative, and adaptive (Rao & Pearce, 2016). Culture is therefore an important antecedent to the team adaptation process.

For team level antecedents, it was proposed to further study team resilience, adaptability, and interdependence due to limited information. Maynard et al. (2015) argued that it would be valuable to understand whether teams are adaptable when are they interdependent or if these relationships are affected by types of interdependence. Lastly, for the antecedents described in Fig 4, individual level factors showed future opportunities lies in team member flexibility and adaptability.

Given that mediators influence the adaptation process, it is prudent to consider these variables in the adaptation process. Communication and information sharing is a common and critical theme amongst all three models presented including that by Christian et al. (2017) and Hoogeboom and Wilderom (2020). Quantitative research conducted by Hoogeboom and Wilderom (2020) had a significant and positive correlation between information sharing and team effectiveness. Coordination is the way teams coordinate and configure tasks and has been shown to impact team adaptability. Lei et al. (2016) showed that teams were more adaptive in taking time to coordinate however only to a certain extent, after which longer periods of planning resulted in being less adaptive in non-routine contexts. Cognition is also a factor which was highlighted here was also noted as critical for team adaptability by Christian et al. (2017). Future opportunity in mediators in Fig 4 was team psychological empowerment in line with team autonomy, purpose, and impact (Maynard et al., 2015).

Team adaptive outcome in Fig 4 being the ultimate result of the process and overarching objective of being adaptive. The outcomes encompass team performance and decision effectiveness, the process of decision making is viewed as an important component for team adaptive outcomes. Lei et al. (2016) demonstrated that teams that were able to share information deliberately and efficiently resulted in better decisions being which allowed for successful adaptation. Future opportunities for team adaptive outcomes were described as affective reactions and creativity. Creativity linked to innovation is becoming increasingly important and is a by-product of the team adaptation process in forming new solutions (Maynard et al., 2015). Burke et al. (2006) specified that team adaptation establishes itself in goal directed outcomes and innovation. The research by Maynard et al. (2017) concluded by calling for more research in understanding the nature of triggers which stimulates the need for team adaptation.

Whilst it has been demonstrated through this literature review that there are various models to better understand the impact of antecedents to team adaptability, team processes, mediators and adaptive stimulus on team performance, it is prudent that the call for future opportunities in such models are to be explored whilst being anchored in those constructs that are salient through the team adaptation process.

A customised conceptual framework, described in conclusions of this chapter (2), was created from all these frameworks discussed, heeding the call on future opportunities to shape this study in line with team adaptability. However, this conceptual model (Fig 5.) was framed within the context of an organization being a MNC which is further elaborated upon below. Maynard et al. (2015) stated that more work must be done on organizational level factors on team adaptability considering that the way in which organizations manage information, resources

or processes may trickle down to teams and individuals. The way in which individuals perceive the organization and its role can either enhance or hinder the way in which individuals are able to respond timeously or improvise (Vera & Crossan, 2004). This is a key point to take into consideration for this study, as individual level factors and interaction patterns are to be understood via perceived views on individuals. Duchek (2020), expressed in line with adaptability capabilities, that organizations must have change management capabilities to exploit newly developed solutions which are to be relayed to their individual parts.

Hence, this study was set in a single MNC as the organization to understand the impact of the organization on teams and individuals as inputs into the team adaptation process.

## 2.5 Multinational Corporations

Internationalization has had significant effects on the development of MNC's and the global economy alike (Hitt et al., 2016). Multinational Corporations are described as complex systems that interact with other organizations and individuals globally for inputs and outputs. Headquarters (HQ) within MNC's and its subsidiaries engage in an open exchange of products and services with entities around the world. (Venaik & Midgley, 2019). Grosse (2004) argued that by a simple definition a MNC is essentially any company that has international business operations, such as sales or production, in more than two countries. However, Grosse (2004) also stresses that apart from a MNC's own operations or production in international countries, it should rather be viewed as a coordinator of global business activities as strategic alliances are pivotal to a MNC's success given the limited resources a MNC might have and the dynamic environmental setting with fast changes in technological, competitive, and regulatory aspects.

Market globalization is owed to the deliberate actions of MNC's and occurs at varying paces based on the MNC's ability to divide activities under ideal locations whilst having wider control strategies such as full ownership or relationships in the market to orchestrate these activities (Buckley & Ghauri, 2004). MNC's have evolved significantly in line with the expanding and escalating globalised markets, they have capitalised on advancements in lower barriers to trade, more experienced managers, and personnel in line with higher efficiencies, innovation and improved information and communication technologies (Kostova et al., 2016). Multinational corporations are plagued with integrative challenges as employees who are spread across the globe engage in work based on an array of different contexts, ranging from cultural, political, societal and economic to political contexts (Gibson et al., 2019). Hence, MNC's have been managing these different contexts to remain competitive through localization. More information on this subject is highlighted below in 2.4.1.

### 2.5.1 Global versus local contexts

As far back as 1992, Kilduff (1992), reported on a MNC being a complex adaptive system that has interactions with its environment, and he reported on a major challenge being local-global tensions which incite significant coordination challenges. It was again reported on this construct 12 years later, expressing the tension in one explicit sentence of “the cost advantages of standardisation vs the revenue advantages of adaptation” (Buckley and Ghauri, 2004, p. 86). Buckley and Ghauri (2004) tabulated the advantages as per Table 2 below.

**Table 2.** Global and local operations (Buckley & Ghauri, 2004)

<i>Global</i>	<i>Local</i>
Cost	Revenue
Efficiency	Responsiveness
Centralisation	Decentralisation
Standardisation	Adaptation
<b>GLOCAL</b>	

The advantages of global actions tend to be on the premise of cost-based advantages where companies benefit from economies of scale, coordinated or centralised supply chains and standardization which also avoids duplication (Buckley & Ghauri, 2004). The word glocal in the table implies global localization. These initiatives point to overall efficiencies being improved. The focus on local operations is revenue based, where advantages are realised by achieving responsiveness where they benefit from spill over effect through local partnerships which serves as bridges to gain access into local resources and markets (Hitt et al., 2016). DeMartino (2006) explains that as a company grows in capacity, they may chase non-local strategies such as global capacities but may also continue to depend on the local environment for inputs or knowledge to remain competitive. In addition to these strategies, a pivotal way in which MNC’s gain and retain competitive advantage is through the management and overall performance of its subsidiaries (Birkinshaw et al., 2005). These international subsidiaries act as semi-autonomous units and are operated by their own resources and capabilities whilst responding in local contexts (Sarabi et al., 2020). Considering that subsidiaries are integral to overall MNC performance, 2.5.2 below adds more context to the function of subsidiaries within MNC’s and their performance thereof.

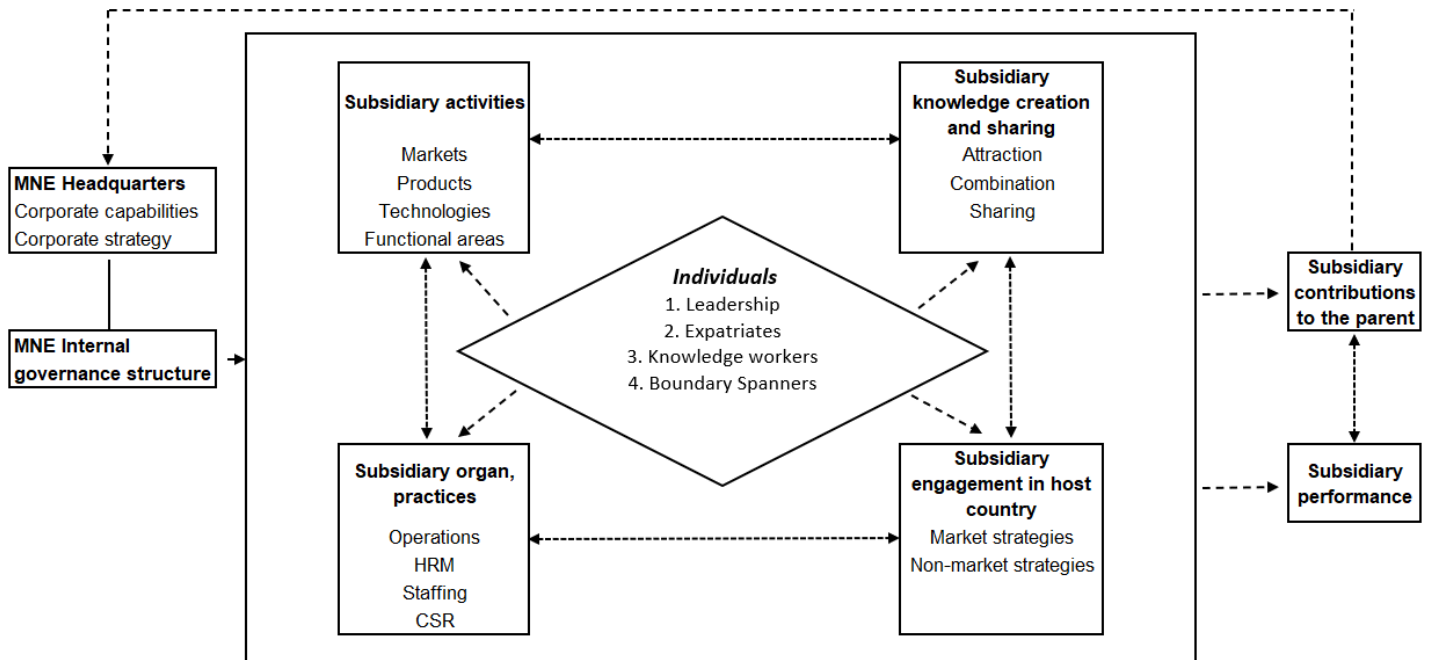
### 2.5.2 Subsidiaries and performance

A MNC subsidiary is defined as an organizational unit external to the MNC’s home country, these units use firm and country specific advantages to operate and manage portfolios of activities and resources (Buckley, 2016; Meyer et al., 2020). “Subsidiaries of multinational

enterprises (MNEs) are at the forefront of many international business challenges as they operate in complex international environments and control some of the firm specific advantages (FSAs) of the MNE” (Meyer et al., 2020, p. 538). Subsidiaries also interact externally with local organizations or other networks in their respective environments.

The network resources that a subsidiary has can influence the competitive advantage of an MNC by virtue of having access to these networks and moreover, these advantages can be transferred to other subsidiaries to enhance the competitive capabilities in its entirety for the MNC (Andersson et al., 2002). Tao et al. (2018) stated that MNC subsidiaries contend with increasing uncertainties especially when local institutions are weak, and therefore resource support from MNC headquarters can help reduce the external dependencies of these subsidiaries. This highlights an important point to consider in terms of MNC and subsidiary relations and places focus on further understanding on subsidiary contexts they deal with. This research scope extends to understanding the non-routine contexts subsidiaries manage in whilst also understanding their relations to headquarters under these circumstances.

The management of MNC subsidiaries focuses on managerial activities in line with development and execution of strategic initiatives that involve the formation of resources to enhance performance. Meyer et al. (2020) recently conducted work to create an integrative conceptual framework focusing on subsidiary management for optimal performance. The framework looks at the subsidiary as the focal unit of measurement, this is relevant to this research study as this study also focuses on the subsidiary as the unit of measurement. A further interesting point to note that Meyer et al. (2020) also considers the individual factor impact of subsidiary management, which is of further applicability as the individual is the unit of observation in this study, however, taking note that it is via experiences, opinion and or perceptions. Meyer et al. (2020) posited that this framework will assist future researchers to position their studies to include phenomena and relationships to answer research questions. The framework connects individuals, contexts, strategies, and operations to subsidiary actions. Fig 4 below depicts an adapted form of the conceptual framework presented by Meyer et al. (2020). In this framework the only elements not depicted are the antecedents to the framework being home country specific advantages, host countries specific advantages and home country specific advantages.



**Fig 5.** Conceptual framework for subsidiary management (adapted from Meyer et al., 2020)

This framework explains that the management of subsidiaries is an iterative process and is significantly influenced by decisions made by HQ and subsidiaries over resources and agreements. The process is based on HQ and subsidiary capabilities and activities. The framework shows a close interconnectedness between the subsidiary activities as influenced by HQ holistically. This provided an integral cue to this study in not only conducting interviews with HQ to understand their perspective on subsidiaries, but also on the subsidiaries themselves and vice versa. The four main categories in subsidiary management according to Fig 5 are subsidiary activities, subsidiary knowledge creation and sharing, subsidiary organizational practices, and subsidiary engagement in host country. All these facets work together for outcomes described as subsidiary contributions to the parent company and off course subsidiary performance.

Subsidiaries are represented by individuals as shown in Fig 5 being at the centre of all subsidiary activities. Individual managers play a critical role in knowledge management processes, strategy development and execution, and capabilities development (Meyer et al., 2020). Sarabi et al. (2020) were also able to prove that subsidiary CEO's played critical roles in subsidiary management and performance. This corroborates this current study in choosing leaders or managers in different parts of the subsidiary as units of observation.

It has been described under team adaptation process and frameworks (2.4.1) that individuals have a key role in determining outcomes such as team effectiveness and team adaptive outcomes. Characteristics such as cognitive ability, motivation and leadership briefing have

been explained to have an impact on team adaptive performance. The team adaptation framework presented as Fig 4. Maynard et al. (2020) also depicts individual level factors as important as organization level factors. It is therefore apt to state that this framework of understanding the process of subsidiary management dovetails with understanding team adaptation at subsidiary level.

Decision effectiveness has been highlighted in Fig 4 by Maynard et al. (2020) as a key outcome of team adaptation, this becomes especially important in non-routine contexts as explained by Let et al. (2016) who presented that individuals who were able to process information and make prompt decisions resulted in successful adaptation. Due to the subsidiaries operating in heterogeneous contexts, decision making is a key factor in subsidiaries being able to cope with complex multinational operations (Ambos & Birkinshaw, 2010). For this reason, we explore the impact of subsidiary autonomy on decision making and overall adaptability.

This framework published by Meyer et al. (2020) gave insight into how to position this study in aiming to understand the dynamics of the subsidiary. Considering that the individual factors are at the centre of subsidiary performance, it led to focusing on the individual as the unit of observation whilst the subsidiary remains the unit of measurement, whilst understanding the impact of HQ on this process.

### 2.5.3 Subsidiary autonomy

Ambos and Birkinshaw (2010) highlighted that due to the complex, non-linear or heterogeneous contexts that subsidiaries face, adapting to local contexts through strategic decisions may have to be within the control of subsidiaries. Even though this subject has been studied, it is being re-visited in different contexts due to calls for research, as proven by recent research by Geleilate et al. (2020).

Williams and Zhu (2017) acknowledged that the more turbulent a given environment gets, the more subjected the subsidiary is to uncertainty. These authors further argued that in situations of uncertainty the subsidiary becomes pressurised to be more locally responsive, and this requires quick adaptability of their activities to meet the local demand under the circumstances. This timely adaptation can create a better competitive advantage for the MNC in its entirety, making this study relevant in current times. However, for subsidiaries to be agile and respond effectively to dynamic local conditions, subsidiary autonomy becomes a mediator.

Subsidiary autonomy is explained as the degree of which a subsidiary has authority to make

strategic decisions in its local environment without interference from its MNC headquarters and is an important part of international business studies (Birkinshaw & Morrison, 1995). "From the subsidiary's point of view the ideal case seems to be maintaining a high level of connectedness to the parent without losing any local autonomy" (Ambos and Birkinshaw, 2010 p. 455). It is important to note that autonomy is not only assigned by headquarters but may develop outside the boundaries of being assigned into being assumed by the subsidiary (Cavanagh et al., 2017).

Geleilate et al. (2020) conducted a meta-analysis study evaluating 94 studies on over 23000 foreign subsidiaries to understand the mediators to performance outcomes of subsidiary autonomy. Their results revealed that subsidiary autonomy had an overall positive correlation to autonomy, however, this was moderated by the dynamics of the industry, institutional distance and knowledge exchange with the parent MNC. These findings complements and dovetails with the CAS theory study by Hoogeboom and Wilderom (2020) discussed earlier which showed that information sharing was critical and positively correlated to team effectiveness. Consequently, it was valuable to International Business Theory as well as practice to understand the influence of subsidiary autonomy on subsidiary adaptability within CAS theory.

Knowledge creation and transfer have become a prevalent theme of study between 2010 and 2015 in international business as shown by a meta-analysis of the Journal of World Business conducted by Kostova et al. (2016). It is important to note that in the team adaptation process presented by Maynard et al. (2015) in section 2.4.1, creativity was an outcome of the team adaptation process in line with innovation to form new solutions to gain competitive advantage, again, highlighting the interconnectedness of subsidiary autonomy and team adaptability.

Interestingly, Galeilate et al. (2020) also showed that subsidiary autonomy is not mutually exclusive to integration. The results shows that a subsidiary can be autonomous whilst still being integrated to HQ in pivotal ways. Further to this, they suggest that subsidiary autonomy may be costly in conditions that are predictable related to subsidiaries operating in stable environments. This may be linked to the maturity of the subsidiaries and or MNC, "The faster growing and more globally integrated the MNC, the less may be the autonomy granted to the subsidiary" (Taggart & Hood, 1999, p. 234). Knowledge exchange may be a way in which tension is resolved when considering how much autonomy a subsidiary should in fact have (Galeilate et al., 2020).

A meta-analysis study conducted by Kawai and Strange (2014), evaluated the impact of subsidiary autonomy on subsidiary performance under dynamic environmental certainties.

The findings suggested that during technological uncertainty, a non-hierarchical organizational structure approach results in a higher level of responsiveness and therefore translate into better subsidiary performance. High autonomy under environmental uncertainties will result in being agile enough to develop services, products, and strategies relevant to local demand (Kawai & Strange, 2014). The paper concluded by stating that the relationship between subsidiary autonomy and performance in depend on uncertainties and upon internal coordination dimensions of HQ and subsidiary relationships. Considering this finding it was prudent to understand the impact of subsidiary autonomy on adaptability but in the context of complex adaptive systems which has limited research on it.

## 2.6 Headquarter and subsidiary tensions

Subsidiaries are a means for MNC's to remain competitive in everchanging environments and therefore play a pivotal role. It is becoming increasingly common for MNC's to enter markets that are less explored and with more uncertain conditions and therefore this requires subsidiaries to adapt to unpredictable scenarios (Tasavori et al., 2021). However, the relationship between an MNC's headquarters (HQs) and its subsidiaries is often laden with complex interactions and tensions which may hinder performance and the adaptability process especially in uncertainties. Schotter and Beamish (2011), stated that conflict does not necessarily mean dysfunctionality, nor does it occur due inefficient global integration, it has become a normal consequence of complex interactions that HQ and subsidiaries engage in.

Conflict between HQ and subsidiaries can be triggered by several factors which may include characteristics of the different managers at subsidiaries and HQ, self-interests on management level, environmental and industry uncertainties and dynamics, strategic misalignments, difference in host and home country regulations, global and local competitor strategies, market, and customer arrangements etc. (Schotter & Beamish, 2011). This is further exacerbated by growing levels of subsidiary independence which also provoke organizational politicking (Schotter & Beamish, 2011).

Although it has been discussed in this research that subsidiaries and its adaptability are pivotal to MNC performance, it would have been naive not to consider HQ-subsidiary tensions considering the impact of headquarters on subsidiaries.

To further emphasize the relevance of the subject on HQ-subsidiary tension, Ambos et al. (2020), contributed to research of managing inter-related tensions between headquarters and subsidiaries in the context of an undisclosed Multinational Hybrid Organization. These scholars stressed that little is known about how other tensions which are core to MNC strategy

affect the role of subsidiaries especially since subsidiaries are faced with increasingly complex or uncertain environments. Their findings showed that the willingness of subsidiaries to engage and deal with tensions cannot be taken for granted as some subsidiaries retaliated to tensions by “dismissing, challenging and attacking” (Ambos et al., 2020, p. 927). These various approaches by subsidiaries will yield a holistic negative result as underscored by what Geleilate et al. (2020) found, on knowledge sharing and cooperation being positively correlated to performance.

Ambos (2020) acknowledged that all relationships between HQ and subsidiaries within a MNC’s are tension prone and every organizing model must be able to manage these tensions. The findings from this study encouraged research in understanding the root cause of tensions which either foster denial or embrace practices.

It can be appreciated that although a given subsidiary team as an entity may be adaptable to respond to local environment uncertainty, if headquarter tension exists and the autonomy for strategic decision making does not exist within the subsidiary, team adaptability may be deemed void of its advantage. To this end, it was prudent to include headquarters as part of this research study.

## 2.7 Conclusions

In the domain of international business, this literature review aimed to understand the adaptation of teams underpinned by the complex adaptive systems theory. Complex Adaptive Systems involve numerous agents that learn, adapt, and interact with each other (Holland, 2006; Carmichael & Hadžikadić, 2019) and they produce non-linear and non-deterministic behaviour. Teams are therefore considered complex adaptive systems because of these characteristics. The literature review presented data showing that interaction patterns within teams, are dependent on the task context, being either routine or non-routine contexts. This is important to understand in international business as the main competitive advantages of MNC’s are reliant on the performance of its international teams or subsidiaries (Birkinshaw et al., 2005).

Uncertainties have become common for MNC’s as the global business environment is dynamic and unpredictable. The literature review showed that uncertainties can be classified into three classes, being environmental, industry and firm uncertainties, all of which can trigger non-routine contexts. The uncertain business environment requires subsidiaries to be agile and adaptable to maintain or create competitive advantages to be sustainable.

As the literature review evolved and led to team adaptation process, many insights emerged which shaped the conceptual framework for this study.

Hoogeboom and Wilderom's (2020) paper was studied considering it was a recent study specifically on CAS theory and team effectiveness. The authors presented a straightforward conceptual model based on CAS theory, showing that 3 types of interactions patterns, recurring, participative and heterogeneous interaction patterns either had a positive, negative or no correlation to team information sharing which then translated into team effectiveness. The important moderating factor was the task context where interactions and therefore team effectiveness varied based on whether it was a routine or non-routine context. For these reasons, the construct of non-routine contexts emerged from this framework.

Further exploring into the team adaptability construct, the literature review resulted in different adaptability processes being presented. What was interesting is that the adaptability processes also overlapped with the CAS theory model from Hoogeboom and Wilderom (2020) on all components presented but with different nomenclature. To elaborate further, Christian et al. (2017) presented an adaptability process with emergent states as a factor that influences team adaptive performance, and Burket et al. (2006) described team processes or emergent states as a result of team interactions that allow a team to evaluate a situation, learn adapt and respond with successful adaptation (Burke et al., 2006). Christian et al. (2017) also made distinction between routine team performance which entails a combination of team members' skills to complete the same tasks, whereas team adaptive performance is related to a non-routine context. In the model by Christian et al. (2017), the task context was presented as adaptive stimulus, however, described similarly as Hoogeboom and Wilderom (2020). Further to this, Christian et al. (2017) also presented team interactions in the form of communication and coordination being important for team adaptive performance. The new different factor that was not previously considered was the influence of leadership in this case as an antecedent to the process.

The next framework presented from literature was that by Maynard et al. (2015). This was the most holistic of the three frameworks taking different level input factors into consideration being Organization, team, and individual level factors. This framework was most apt for this study considering the dimension of the organization (climate and culture) and team, relating to understanding the MNC headquarters and subsidiary. The core of the process entailed the actual team adaptive process and team mediators working in an iterative process. The commonality with Christian et al. (2017) and Hoogeboom and Wilderom (2020) was again the mediators being team interactions such as communication, coordination, and cognition. The inviting component of Maynard et al. (2015) framework was the suggestions on future factors

to be studied due to research gaps, such as empowerment of the team under mediators in the process. It was concluded that through all three frameworks the outcomes were similar in being able to adapt and perform under varying contexts with significant dependency on teams and how they reach based on input factors on different levels.

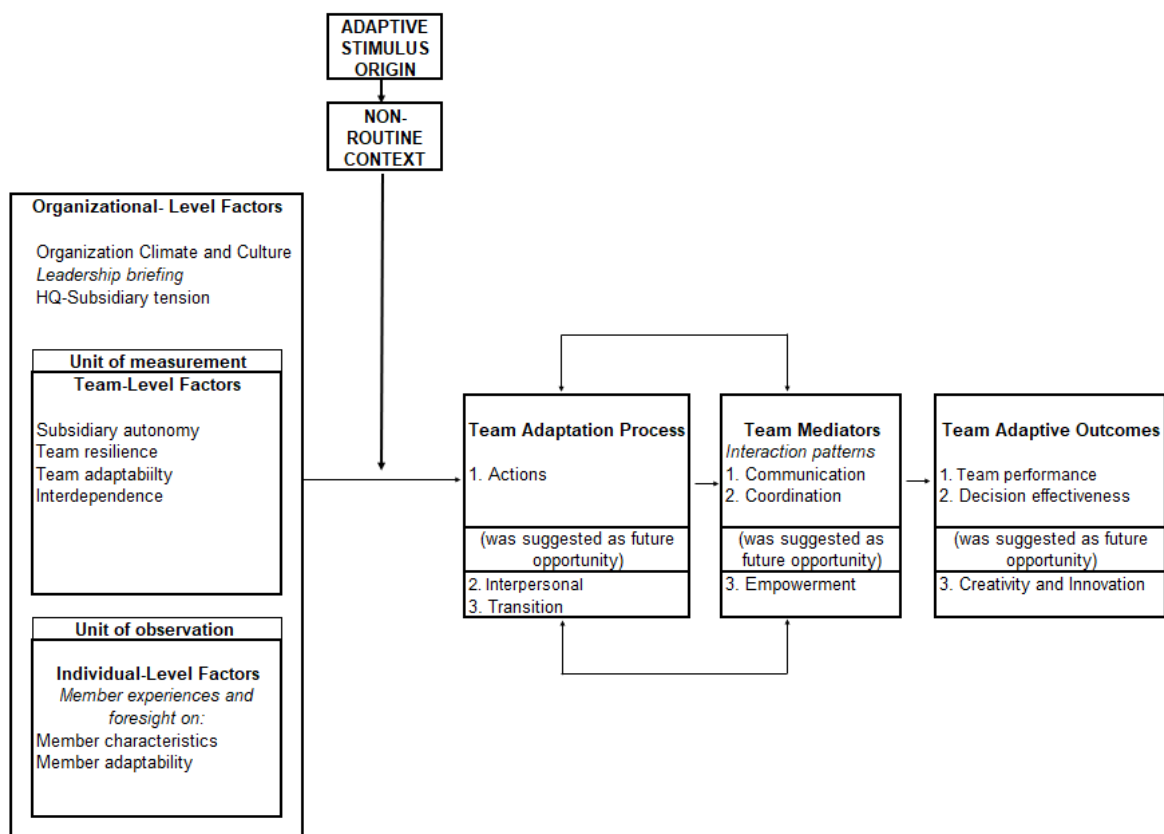
Considering that organization and team level factors were found to be so critical to team adaptive performance, the literature study evolved into understanding subsidiary performance and the factors that influence performance thereof considering that insight had already been gained on a team level outside the context of a subsidiary. To further understand what factors are important for subsidiary performance to align with team adaptive performance, a framework by Meyer et al. (2020), was presented. It was interesting to note that the individual element at the core of the model, with leadership also being a factor toward subsidiary performance. One of the key activities described was knowledge creation and sharing which was a common theme in the team adaptability models as well. Further to this, the organization or MNC antecedents were also similar to the team adaptability models.

Lastly, the literature review ended by understanding the nature of subsidiary autonomy and tensions and how that affects adaptability where most researchers correlated subsidiary autonomy to higher levels of adaptability, and it is envisaged that HQ-subsidiary tensions decrease adaptability.

Based on the literature review and the substantiated need to build on knowledge in non-routine contexts, it can be said that this study was anchored in the theory of Complex Adaptive Systems and has focused on the constructs of heterogeneous team interaction patterns within the team adaptation process through the experiences and perceptions of individuals. The study was set within the context of an MNC which includes subsidiaries and the headquarters. To re-emphasize, Meyer et al. (2020) highlighted that within International Business studies that only a few researchers have focused on the international subsidiary as a unit of analysis within a broader system, as most studies have focused on subsidiaries from the view of its headquarters as opposed to the subsidiary itself. Having this study focused on subsidiaries as units of measurement was important to add to the body of knowledge from a non-headquarters perspective. Through the research findings of this literature review, it is apt to state that there is a need to further understand team interactions patterns within CAS theory, however, it is also prudent to argue that this research was valuable within an MNC setting.

Based on these findings a conceptual framework was created for this study and is highlighted in Fig 6 below. The framework is congruent with the research aims and is based on the same level factors and theoretical categories as that of Maynard et al. (2015) within the overall

adaptability process, the difference is adding the non-routine task context to the process with the antecedent being a stimulus of uncertainty, this was adapted from Christian et al. (2017). Within each of the level factors and the process, mediators and outcomes, there were adjustments made to suit the context of the MNC context of subsidiary and headquarters. From the future opportunities suggested by Maynard et al. (2015), eight factors were taken into consideration to form the conceptual model to guide this research and to add to the knowledge base on team adaptive processes but with an MNC. These eight factors include organization climate (organization level factors), Team resilience and adaptability (team level factors), member adaptability (individual level factors), interpersonal and transition processes (team adaptation process), empowerment (team mediators), and creativity and innovation (team adaptive outcomes).



**Fig 6.** Conceptual model adapted by researcher from Maynard et al. (2015) and Christian et al. (2017)

## Chapter 3 Research Questions

### 3. Research questions

The research questions were derived from the reviewed literature in chapter 2 based on constructs outlined in Table 1 and anchored in complex adaptive systems theory and adaptability of teams. Within CAS theory, a call from Hoogeboom & Wilderom (2020) was that “more research on the antecedents and content of team interaction patterns is recommended” (Hoogeboom and Wilderom, 2020, p. 33), and that qualitative studies could result in a more complete understanding of interaction patterns or mediators so to complement available quantitative studies.

Therefore, the main research question was:

How do team interaction patterns influence team adaptation process in a non-routine context with an MNC on subsidiary level?

Four sub-level questions were positioned more in line with the contexts of the study, being, the context of the MNC and different level factors viz. Organization, team and individual level factors.

- e) How do organization, team and individual level factors influence team adaptability in a non-routine context?

This sub-level question sought to understand how headquarters and overall organization climate and culture affect the ability for subsidiaries to adapt but moreover, to gain this understanding in a specific non-routine context. In exploring this question, it also sought to understand the stimulus to a non-routine context which leads to the need to adapt.

- f) How does headquarters-subsidiary tensions affect subsidiary adaptability in a non-routine context?

Headquarters-subsidiary tensions are an important component to understand when studying the adaptation process. As stated by both Christian et al. (2017) and Maynard et al. (2015), organizational level factors, which climate, culture and leadership impact must be considered as an input level factor in the team adaptation process, for this reason, understanding how these tensions affect adaptability is warranted.

- g) How does subsidiary autonomy affect team adaptability in a non-routine context?

In order of teams to adapt to non-routine contexts, subsidiaries need agility and autonomy to be able to respond to local changes. It is therefore critical to understand how subsidiary autonomy affects team adaptability in a non-routine context, for this reason the above question has been defined.

- h) What are the experiences and perspectives regarding adjustments in team adaptation process to improve adaptability?

After having understood the different level factors and the non-routine context, sub-level question above sought to understand what adjustments are required within the adaptation process itself to achieve the outcome of team adaptive performance. This question stemmed from Maynard et al. (2015) where it was stated that the process of adaptation are adjustments to team processes as dictated by the non-routine context trigger.

## Chapter 4 Research Methodology

### 4. Research methodology

#### 4.1 Introduction

This chapter outlines the research design and research method in line with a qualitative research study based on an open-ended approach. The nature of the study was explorative to understand phenomena on the premise of gaining new and deep insights through interviews with participants.

#### 4.2 Research paradigm

The research assumption was ontological as the research question raises issues of the nature of reality or nature of people as described by Rashid et al. (2019). Ontology is also based on the premise that there are multiple views that co-exist as reality. The nature of this study was based on multiple views of individuals representing the various subsidiaries and headquarters within an MNC, these perspectives represented these team's reality in the form of themes. As described in the literature review, complex adaptive systems are non-linear and non-deterministic, and therefore cannot be studied with linear methods. Rashid et al. (2019), explains that with ontology an objective truth does not exist, all things are relative and created by social beings, such as teams. This is true for complex adaptive systems and their unpredictable nature.

The research philosophy was interpretivism, in line with the research assumption of understanding differences between humans in their roles as social actors. Further to this, seeing that this study was based on understanding team interactions within subsidiary teams, interpretivism has been described as the study of social phenomena in its natural setting. In addition, seeing that subsidiary and Headquarter teams interviewed had subjective interpretations of their experiences within the given contexts which was used to develop themes within the study. Interpretivism also aims to deliver contextually bound understanding of the social phenomena (Ragab & Arisha, 2018). This was fitting for this study in terms of keeping the study within a non-routine context.

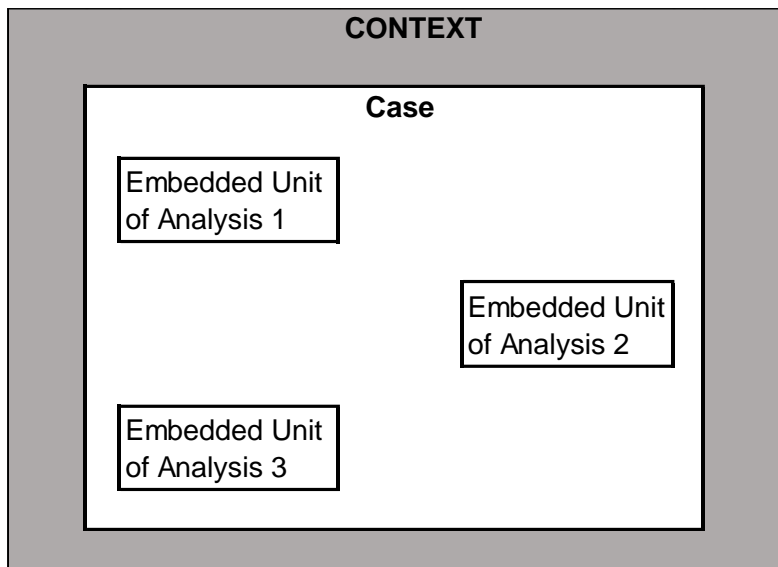
The approach to theory development was inductive, based on the study's aim to describe and understand a phenomenon, where there is existing theory, but the research is limited. This is applicable due to the lack of research understanding team interaction patterns on team adaptability within complex adaptive systems with non-linear methods. Induction was used to build on the current body of knowledge with interpreted patterns and or incidents derived from the interview process.

### 4.3 Research method and design

The mono-research method that was used in this study was of a qualitative nature considering that the research question was open-ended aimed to discover and further understand the influence of heterogeneous team interaction patterns on team adaptability within the theory of complex adaptive systems. Understanding these team interaction patterns on team adaptation process constitutes as social phenomena. Williams (2007) describes qualitative studies as holistic, involving discovery and as “social phenomena being investigated from the participants viewpoint” (Williams, 2007, p 67). A qualitative based research design allowed for the exploration of whole patterns (David, 2009). Qualitative research is also described as contextual, and the research question was based on the specific context on non-routine task contexts in subsidiaries of a single MNC.

This research constitutes as an embedded case study. Embedded case studies encompass more than one object as subunits of analysis for the understanding of the case in its entirety in its real-world context from different perspectives (Villard, 2003; Bass et al., 2018). Yin (2012) described an example of an embedded case study as being limited to a single organization on a holistic case, but data is collected about a group of employees within the organization. This is true for this study in the group of employees as each group representing a subsidiary. It was also discussed by Yin (2020) that an embedded case study only stands if the data collected from employees is used to corroborate the overall condition of the organization, and the data is not expressed about the individuals themselves. This substantiates that this is an embedded case study as data collected from the individuals pertained to teams and the organization in its entirety and not the participants characteristics.

Budiyanto et al. (2019) shared an example of an embedded case study which mirrored this research study design and explained it as “the design views the corporate group as one entity, while the parent and subsidiary entities represent the unique objects within the corporate group entity”. This explains this study in that the organization is one entity, while the headquarters and subsidiary entities represent the unique objects. Fig 7 below shares an illustration of the embedded case study adapted from Yin (2012).



**Fig 7.** Illustration of embedded case study adapted from Yin (2012)

Considering that there have been different views on team interaction patterns and their impact on team effectiveness or team adaptability in different task contexts, it was valuable to generate critical understanding of actual participant experiences through qualitative research. Part of the description of qualitative research by Williams (2007), was that it involves real-life experiences by the participants. Qualitative research has also been highlighted as being useful to understand people's personal experience of certain phenomena and is also useful in explaining complex phenomena (Ragab & Arisha, 2018). Constructs of this study within complex adaptive theory is in fact intricate and complex. This may be the reason why authors such as Hoogeboom and Wilderom (2020), have highlighted that the reason why some teams perform or adapt better than others could be due to their team interaction patterns. Therefore, it was apt to use a qualitative method in the form of interviewing purpose selected individuals who constitute subsidiary teams within an MNC to gain critical understanding and discovery of team interaction patterns and its influence on team adaptive process within a non-routine context.

Exploratory research has been described as obtaining understanding of phenomena through new insights (Ragab & Arisha, 2018). The purpose of the research design was exploratory in nature to gain further insights into the influence of interactions patterns on team adaptation process, the research is limited on interaction patterns with CAS as described in chapter 2, and therefore exploratory research suggests that there is still a need to gather more information. Exploration aimed to gain further in-sight of the various participants' thinking, to answer the open-ended research questions. Williams (2007), points out that the perceptions of the participants is the focal point of the contextual setting, and the study tried to find answers by means of their experience, these interviews were generally lengthy to collect enough data

to interpret these perceptions.

#### 4.4 Population

The sampling was at a meso-level involving a single MNC which consists of more than 15 subsidiaries and will be referred to as the MNC for sake of this study. The MNC is over 40 years old and has distribution networks into more than 60 countries. At the time of this study, the MNC happened to be going through a transformation process on instituting higher levels of centralization and increased alignment on a global strategy level, this transformation meets the requirements for non-routine contexts within an MNC other than universal non-routine contexts such as that triggered by the COVID-19 pandemic.

The population for this study was defined as managers working in each of the five subsidiaries and headquarters having personal interaction between subsidiaries and headquarters.

“A population is an entire group about which some information is required to be ascertained” (Banerjee & Chaudhury, 2010). Participants from five different subsidiaries and a headquarters team were interviewed who made up the population. The headquarters interviews comprised of five participants and the remaining 12 participants were from the five subsidiaries. As discussed, companies are constantly faced with dynamic situations placing them into non-routine contexts, such as that experienced due to the pandemic. Although it has been shown in the literature review that data does exist for teams, it did not include those within MNC's.

#### 4.5 Unit of analysis and observation

The unit of analysis was the subsidiary teams, based on five subsidiaries within the MNC and the headquarters team making up six teams in total. The unit of observation was the individual. Morin et al. (2021) defined unit of analysis as the component that serves as the basis of conducting or reporting analyses, it is the unit to which research findings apply or the research findings are generalised to a greater entity. In this case the greater entity applies to the organization. Morin et al. (2021) defined unit of observation also as the unit of data collection which in this case was the individual.

#### 4.6 Sampling method

Non-probability sampling was used hence the participants were not chosen randomly. The sampling technique was therefore purposive to select informative participants on a management level who have been exposed to non-routine contexts which required adaptation. Purpose sampling can capture similarities and difference, as well as centrality and dispersion to produce new knowledge via comparison and contrast (Palinkas et al., 2015).

#### 4.7 Sampling criteria

The requirement for participation was that each participant was to have active and regular engagement with Headquarters and other subsidiaries. This meant that all participants held positions within various levels of management including top management. The purposes of this research, the participants were selected based on the following criteria:

- a) The participants had to hold middle to senior management positions to have had adequate exposure to the various input levels on an organizational, team and individual level by means of experience and perspective
- b) The participants had to actively work with especially the headquarters team and then to have some level of interaction with other subsidiaries
- c) They had to have had experience in uncertain or non-routine contexts
- d) They had to be available during September and October, and willing to participate

#### 4.8 Sample size

A study conducted by Guest et al. (2006) on evaluating data saturation point on qualitative research showed that data saturation occurred by the twelfth interview that 92% of the codes were observed by this time. Furthermore, the remaining codes that were observed after 12 interviews were variations of the codes from already existing themes.

For the purposes of this study, the aim was to interview between two and five people per subsidiary and the same for headquarters. Although this was achieved for most subsidiaries, it was only subsidiary 4 which only had one participant as opposed to the minimum being two for representation, however, it was positive that participant from subsidiary 4 was on senior management level with deep insight into the MNC. The lack of one more interview was due to non-responses to the interview request within the given time frame. The sample size was therefore 17 individuals in total with the actual representation highlighted in Table 3 below. Each participant was given a reference number from 1 to 17 and subsidiaries were denoted as 1 to 5 and Headquarters was denoted as HQ.

**Table 3.** Sample size information and expertise of individuals

<b>Subsidiary number</b>	<b>Number of participants</b>	<b>Expertise</b> (No specification linked to individual for sake of anonymity)
<b>1</b>	3	Marketing, Commercial, Finance and Research and Development
<b>2</b>	2	Marketing, Commercial and Senior Management
<b>3</b>	2	Senior Management, Research and Development
<b>4</b>	1	Senior Management
<b>5</b>	4	Marketing, Research and Development, Senior Management
<b>HQ</b>	5	Marketing, Finance, Research and Development, Senior Management, Supply Chain
<b>TOTAL INTERVIEWS</b>	<b>17</b>	

#### 4.9 Research instrument

The measurement instrument that was used were semi-structured interviews which allowed for deep insight.

An interview guideline with an open-ended approach was prepared before the interview and was based on research constructs from the research questions. The interview guide was more to have guided conversations with probing questions where necessary as opposed to rigid questions and answers, which allowed for exploration. An example of the guide is outlined in Appendix B.

#### 4.10 Data collection and analysis approach

The interviews were conducted virtually on the Microsoft Teams video conference platform and occurred for 60 minutes each on average with 15 minutes of that being used as introduction. Each of the interviews were audio recorded using a cellular device. The interviews were conducted between end September and end October 2021.

The audio recordings of the interviews were transcribed using a software application called

Otter, it was then converted to word document formats. The data software tool ATLAS.ti designed to analyse qualitative data, was used analyse and code the interview data. The software tool allowed for simultaneous views of multiple transcriptions and therefore allowed for critical comparisons. The transcriptions were coded with letters and uploaded to ATLAS.ti, but as stated in 4.8, the final representation of the participants was in number format to create a more random and higher level of anonymity. The spreadsheet containing the information on the participant names, first order anonymity and second order anonymity is password protected and only accessible by the author. The password is only known by the author as it's important that the identities of participants remain confidential as the interviews express their perspectives and lived experiences.

For the actual transcripts that were uploaded, identity was difficult to remove completely before uploading to ATLAS.ti, as individuals discussed their teams and their subsidiaries in the context of the positions, they occupy within the MNC. Therefore, all transcripts were placed in a password protected folder, known only to the author, furthermore, excel spreadsheets of all ATLAS.ti analyses were downloaded and protected with no further access to ATLAS.ti. Direct quotes used in this study used anonymised descriptors to maintain confidentiality.

Rashid et al. (2015) stated that "Themes generation and coding is the most recognized data analysis method in qualitative empirical material" (Rashid et al., 2015, p. 7). Thematic synthesis is described as a process of identification, analysis and reporting patterns used for case study data (Bass et al., 2018). Therefore, the data analysis approach was based on the coding of data, categorizing the data and forming themes from the coded data.

Qualitative content is described by Flick (2014) as a systematic method of describing the meaning of the data in a qualitative study. Its starts with data preparation and followed by a critical step of the building a coding frame where successive data pieces are allocated to key categories (Flick, 2014). Coding entailed assigning a concise phrase or word to a piece of information which essentially has broader meaning to that item of data (Saldaña, 2015). This helped with reducing large pieces of material which is otherwise cumbersome. Following the inductive coding the data, the codes were then assigned into code categories, followed by extracting themes from these categories and which were translated into theoretical categories. This process of ending with themes and theoretical categories aligned with the exploration of findings to answer the research questions. A code book has been developed from the data and is presented in Appendix A. The qualitative content approach was considered by Flick (2014) to ensure that critical thinking was applied in coding and interpreting the data which also allowed for flexibility and ease of analysis for data sets. Using this qualitative content analysis ensured validity of the results considering the re-evaluation of data.

## 4.11 Data quality

According to Gibbs (2007), the rigor of the transcribed data is not in the presence of verbatim transcribed scripts, but rather in using the data as a resource, and that with digital recordings, one is able to signify the quality transcripts accordingly. Therefore, the aim was to ensure that the data was denoted according to relevance and aptness of the data. Flick (2014) highlights that it is important for the analysis of transcripts to be thorough and systematic and that a purposeful analysis can draw on more than what any transcript can provide, e.g., backgrounds such as culture or localities. Whilst it is thought that these components of the using the data as a resource and purposeful analysis, other quality factors for validity also had to be taken into consideration such as sample size.

### 4.11.1 Validity and reliability

Thick and rich data does not only apply to insightful information from one participant but rather from the data set in its entirety, which means that data quality is related to the sample size but also the sample appropriateness (Morse, 2015). It was also deliberated by Morse (2015) that what was previously called trustworthiness for a qualitative research study, is now referred to as validity and reliability.

#### 4.11.1.1 Sample size and appropriateness

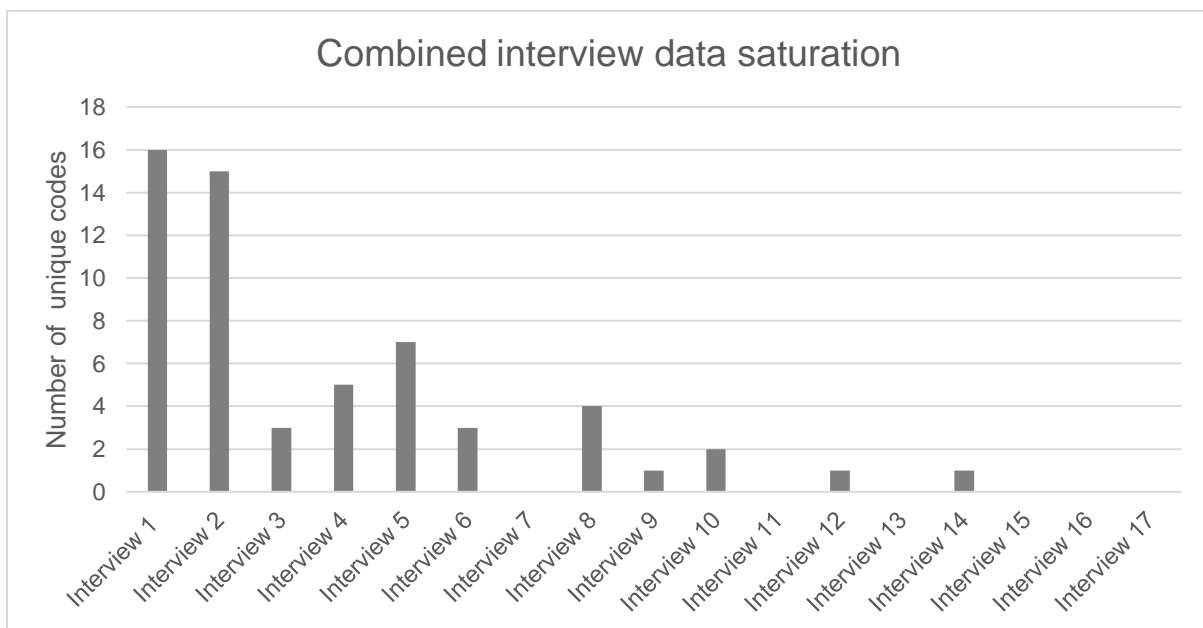
Morse (2015) argued that sample size is dependent on many factors, and therefore is challenging to determine to the correct sample size. Factors that determine whether a sample size is adequate or not include technique of the interviewer, nature of the constructs in question, type of research interview, research topic and the analytical skill of the researcher. However, whilst this is true, Morse (2015) also stated that too small a sample size results in superficial and obvious findings, limited variation, and easily predetermined results. Hence it is warranted to state that inadequate sample size is a validity factor, however, it is not the case in this study as further explained below.

Regarding sample appropriateness, the participants were chosen with intent and therefore some subsidiaries had more participants than others, due to purposive reasons of interviewing participants with specific positions of interest in non-routine contexts to move understanding forward based on experiences and that may even go beyond to others' experiences (Morse, 2015). This intentional and purposive sampling ensured validity of the data gathered in this study.

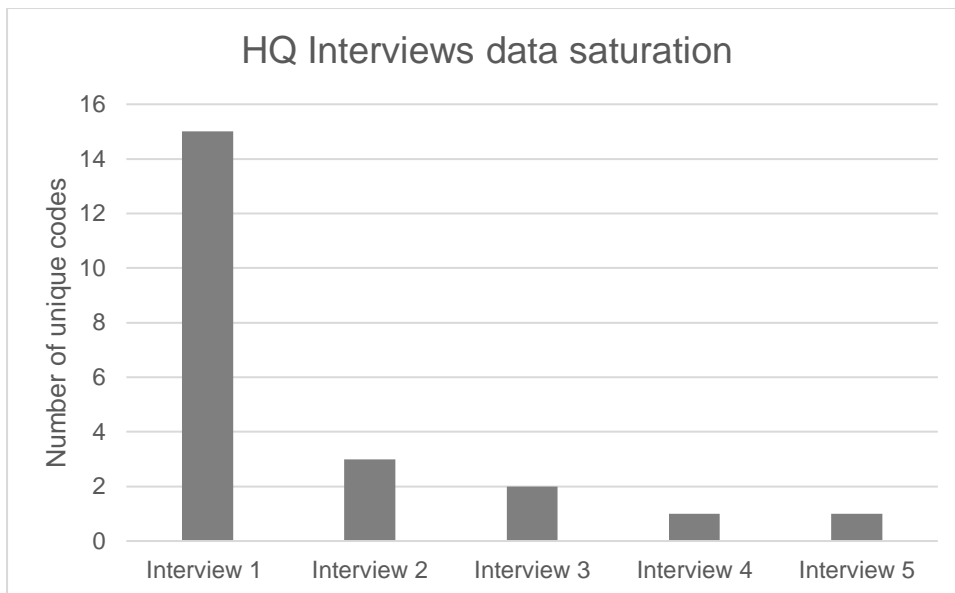
Bass et al. (2018) stated that theoretical saturation happens as the study progresses and the richness of the analysis is improved by increasing number of participants, in that over time

data from new participants becomes consistent with categories already identified.

Thick descriptions and therefore reliability was achieved in this study by evaluating data saturation in determining when lesser new codes were being assigned, and consistent categories started to form. Replication in this process assumes that circumstances experienced in the sample size can be reproduced (Bass et al., 2018). Fig 10 depicts a graph for number of unique codes achieved for the data through the interview process. It can be stated that data saturation was achieved by Interview 11, as the two codes generated for the interviews 12 and 14 were related to categories assigned prior. Fig 11 represents the unique codes observed for the HQ interviews, whilst these interviews were distributed randomly amongst the 17 interviews, when analysed on its own, the results also showed tendency for saturation in that specific sample size representing HQ.



**Fig 8.** Unique codes per interview: entire data set



**Fig 9.** Unique codes per interview: Headquarters data set

#### 4.11.1.2 Researcher bias

Researcher bias happens when personal biases is unable to be separated from the data or theoretical assumptions are anticipated (Onwuegbuzie & Leech, 2007; Morse, 2015). Researcher bias may not only contaminate data at the interview stage but also at the data analysis stage (Onwuegbuzie & Leech, 2007). The researcher’s prior knowledge of the participants may also influence the behaviour of the participants (Onwuegbuzie & Leech, 2007).

Morse (2015) also explained that bias can be created inherently in the method itself as samples are not randomly chosen but with purpose. These samples are generally small and excellent sample examples. Another type of bias described by Morse (2015) is unconscious bias in the question sheet, eg. “a comparative sample designed with non-equivalent samples” (Morse, 2015, p. 25).

To mitigate the risk associated with the first type of researcher bias explained, being the researcher’s prior knowledge of the participants, the researcher chose 13 of the 17 participants based on no prior knowledge of them to any degree. For the 13 participants it was the first level of interaction, for 3 participants, there was a prior meeting but within a group of people and no relation to this research context, and the researcher only had face to face personal interaction once with one of the participants. With the researcher having no prior knowledge of more than 75% of the sample, and minimal relations to the remaining sample, it can be said that prior knowledge researcher bias was managed.

The second type of risk explained regarding the intentional samples, complements the above point, in the researcher not knowing more than 75% of the sample, however, to mitigate the risk of having an excellent sample with less variation, participants were chosen from various subsidiaries within various departments to avoid group think.

Lastly, regarding unconscious bias, the researcher did have an inherent interest in the MNC and the subject matter itself. To mitigate this unconscious bias, a rigorous method of data analysis was undertaken as explained in 4.10, which also entailed a re-evaluation step. A detailed code book was developed as shown in Appendix A and records are available showing the process of analysis from the raw data to the end interpretation.

#### 4.11.1.3 Triangulation

Triangulation is not only achieved by different methodologies but also by data sources. By the triangulation of different data sources, the researcher can efficiently apply the same method to maximum theoretical advantage (Denzin, 1978), this would entail sampling dis-similar comparison sampling groups, which in this case also led to different settings within the non-routine contexts being explored.

Triangulation was achieved in this study by interviewing five different subsidiaries within the MNC, these subsidiaries were of various sizes, ages, cultures within the MNC. Included as part of the study was HQ which add to the triangulation in this data set. Triangulation was further achieved by having interviewed individuals across subsidiaries from different levels of management and different expertise, ranging from finance, R&D, marketing, commercial and to senior management which also includes management on an executive level. These individuals also had varying levels of service within the MNC.

#### 4.12 Data storage

Data collected was stored on Microsoft OneDrive and on a portable hard drive. Confidential information was password protected and coded.

#### 4.13 Limitations of research design and methods

Budiyanto et al. (2019) stated that a key consideration for a researcher doing case study work, is that the collection technique will influence the methods of data analysis that is subsequently applied. Highlighted below are limitations pertaining to the research methodology.

- a) Approximately 75% of the participants did not speak English as a first language and therefore due to the differences in accents, some words were inaccurately transcribed. The audio recordings in those cases were re-listened to and the correct words were included as best to the authors ability.
- b) The research was based on one organization only representing an MNC context, limiting the results to that specific MNC and seeing that interpretivism was used, the data is not generalisable (Rashid et al., 2019).
- c) The researcher is a learner in conducting qualitative analysis, and therefore researcher bias could have been a drawback to the dataset.

Although these limitations were described it does not take away the value of the findings from this research as the research design and method met the requirements to gain deep insight and to answer the research questions.

#### 4.14 Ethical considerations

- a) The MNC and subsidiary locations were not named in the report
- b) The confidentiality of the participants was protected all through and after the process
- c) The interview process was started with clarity of the reason for the interview, expectations and use of the data. Participants signed consent forms which gave permission to use their interviews as findings for this research.

## Chapter 5 Research Findings

### 5. Research Findings

#### 5.1 Introduction

Chapter 5 illustrates the findings from this research study as per research methodology highlighted in chapter 4. The interviews conducted were semi-structured which resulted in a total of 17 interviews out of a target set of 18. The responses to the interviews were based on the premise of the participants own experiences and perspectives. The sub-sections are based on the theoretical categories that aligned with literature and the analysis of the interview data.

#### 5.2 Participant Profiles and Analysis Groups

Participants were initially categorised into their respective subsidiaries and the headquarters group was analysed separately. The final analysis was then done by grouping subsidiaries together to compare insights to that of headquarters.

**Table 4.** Participant profiles and expertise

Participant Code	Area	Expertise
1	Subsidiary 1	Marketing, Commercial, Finance and Research and Development
2	Subsidiary 1	
3	Subsidiary 1	
4	Subsidiary 2	Marketing, Commercial and Senior Management
5	Subsidiary 2	
6	Subsidiary 3	Senior Management, Research and Development
7	Subsidiary 3	
8	Subsidiary 4	Senior Management
9	Subsidiary 5	Marketing, Research and Development, Senior Management
10	Subsidiary 5	
11	Subsidiary 5	
12	Subsidiary 5	
13	HQ	Marketing, Finance, Research and Development, Executive Management, Supply Chain
14	HQ	
15	HQ	
16	HQ	
17	HQ	

### 5.2.1 Insights from subsidiary 1

Participants from Subsidiary 1 were from the finance, marketing, commercial and R&D departments. The most prevalent insights that emerged from these participants were that communication was pivotal to manage a non-routine context. However, this insight emerged from different points of experience in different contexts.

Whilst participant 1 experienced the lack of communication during a firm uncertainty, participant 3 expressed satisfaction with the current level of communication from senior management and headquarters especially during an environment level of uncertainty. Participant 1's experience of lack of communication which has lasting effects in the current situation was experienced in the last 18-24 months. However, participant 1 also expressed lack of communication at the time of the research with having to read of changes on Instagram prior to internal communication. Highlighted below are quotations from the participants in line with the insights.

*Now this thing, they don't, they have not communicated, but when it comes to this change when to say, someone said I have known officially of this thing, because of Instagram of a customer saying of this change and I said, it's not possible (participant 1).*

*What he told me before my leave, and this is the situation we need someone to travel to the customers to go closer to them to do that, but he's not doing that yet, But I'm a little confused, because I don't know what is that and what is mine (participant 1)*

Participant 3 expresses in the below quotation that communication is adequate.

*I think it was nice, really nice because I remember when I was at home that I receive different reports in some different communication emails or whatever. And maybe, maybe I think during the last five months or something like the communication from headquarters is much more often, what is really interesting, in order to involve all the different employees in the project (Participant 3).*

Participant 2 elaborated of the importance of communication but for communication to be effective, participant 2 had repeatedly mentioned that the correct processes had to be in place to guide individuals to be able to adapt.

*So that makes us to adapt to change our routine, and our processes. But once again, it's important to change the processes (Participant 2).*

In addition to communication, other insights observed from subsidiary 1 was the need for and importance of collaboration, the importance of having the right people in a team and understanding them to ensure adaptive performance.

*but I have an really interesting collaboration from some different people, that is playing in the in the commercial area. So that sometimes I need the collaboration, in order to follow some different R&D trials everywhere (Participant 3).*

*One of the main issues you need to understand is, people. It's, I mean to manage people, for me it's the most difficult task in a company is to hire the right people to maintain them, and to work with them (Participant 2).*

*So monitoring people is about for me, it's about listening and coordinating and asking them, What do you need to reach our goals. I will tell you the goals, or we will call, we will discuss and we'll work, about the goals. And once we have the goals. As a manager, as a sales manager, whatever. Our job is to give them the tools to reach the goal. To listen to people and take their opinion in consideration. It's important (Participant 2).*

An additional key insight from subsidiary 1 was the acknowledgement that the company was moving more towards global alignment, and it was critical for the growth of the company.

*I think that this is the only way as well, reality from the different subsidiaries are completely different, but something that must be done a little bit as deep as possible in the end is focusing in the global strategy. Global product names, global approach, and what is really important as well for me (Participant 3).*

### 5.2.2 Insights from subsidiary 2

Participants from subsidiary 2 had many common insights even though the years of experience in the company varied greatly. The participants hold responsibilities in the marketing and commercial areas and senior management. The most prominent insights centred on culture, communication, transparency, and trust for adaptability in non-routine contexts. The element of trust linked to the critical nature of strong relationships internally and externally during times of uncertainty. Both participants mostly focused on firm uncertainties as non-routine contexts such as organizational structure changes and transformations such as the current customer focus transformation which the MNC is undergoing.

*So, he has no idea what kind of culture inside of the company, or outside with our customer we have. So he was, he was also in a cultural shock. Yes, because the other places that he*

*has worked, yes, totally different than our ones (Participant 4).*

*Yeah. In the headquarter there are no certain signals that this cultural behaviour is not correct, don't do it, something like that. So yeah, it's hard (Participant 4).*

*If they trust you, and if you trust them. You can do many things. More than your expectation and sharing information on time. If you don't, if you don't hide anything from them, of course the financial side, the little bits must be hidden, but if you share the true information through time, the real time, it could be much more effective to create a stronger relationship (Participant 5).*

*To be transparent to customers, everyone. It says I like transparency, and sure, sorry, another issue is, they must to know that if the company grows and the company is getting bigger and bigger (Participant 5).*

### 5.2.3 Insights from subsidiary 3

Participants from Subsidiary 3 held positions in senior management and R&D. Most frequent insights from subsidiary 3 was regarding the importance of global alignment occurring. Further to this, understanding the cultural and subsidiary context, understanding people and organizational structure is key during transformations and firm uncertainties. As with subsidiaries 1 and 2, key interaction patterns discussed were effective communication built on trust was pivotal for adaptation.

*Our leader aligns globally as much as possible. He likes to obviously get an eye, in essence of what's happening globally and implements it is as quick as possible. And again, that it was a combination of both. So, it was ultimately yes we took direct view, of, where he saw the vision, and that was always a reference for us at the temperature check so to speak. But also, let's push our boundaries locally as well. Truly towards the global concept as such (Participant 6).*

Participant 6 expressed the importance of the managing cultural change and transformations separately during firm uncertainties. These were expressed as lessons learned of the importance of understanding people and culture during transformational changes.

*Yeah, that was that those real tests, even locally to sort of see how I would go, and also did dealing with a huge cultural change, culture and transformational change (Participant 6)*

*I think the big thing is was a learning for me was to really, again, work on trust. Work on communication. And what I took from that initially was, we've got transformational change, and culture has to be measured separately (Participant 6).*

*Yes, it is a culture that we're creating but if you're not working on culture, then you can get lost in transformational change and forget about both the staff and and the attributes that they bring (Participant 6).*

*The big thing is a lot of people under estimate the impact human resources have on a business, and the power of human resources, especially going through organization. It's really organizational development (Participant 6).*

Participant 7 shared experiences of the positive and negative effects of current changes during environmental uncertainties and transformational changes.

*And so we were getting a little bit of mobility happening, that we were relying a lot on communicating (Participant 7).*

*Now we're a certain number people in the company, and sort of a mid range, corporate company so communication has has to be a bit more structured and more aligned with our sort of business display that a lot more formal than it was in those early stages so. (Participant 7).*

*But some of the older people in the company, it's a lot harder for them. They have thrown up arms to the company as they have to deal with it and there's a panic, being more involved with workshops, structure, this sort of thing has frustrated them a little bit (Participant 7).*

*I think we are, but we are going through a big transition at the moment, so you will notice that business plans, there's a lot more detail in business way. The R&D, a lot more accountable. There's a lot more meetings accountability because of the new structure.*

#### 5.2.4 Insights from subsidiary 4

For subsidiary 4 it was unfortunate that an interview was only secured with one participant, however, the results are rich considering the individual forms part of senior management with many years of experiences in the subsidiary. Most non-routine contexts were expressed in terms of environmental and industry uncertainties. The insights from Subsidiary 4 encompassed the importance of alignment in purpose and alignment in global strategy, leaderships responsibility in improving agility and adaptation, and the need for motivating people to form the right attitudes during non-routine contexts. In addition, whilst innovation came up as an insight as being central to adapt and remain relevant, it was most pronounced

in subsidiary 4.

*You have to increase the communication, to have everybody aligned, in the, in the same line, you know, because everybody's on the same page of the book, because if you have to take a decision, maybe they don't know why we're doing this, but at least they are moving with you. And this is essential (Participant 8).*

*The market is changing so we need to change with the market, and the directions I don't know but I know that we have to change, and we have to work in this change*

*We are facing a cultural change, and a strong change, you know, because as I told you that digitization is just around the corner, you know 80 or 70% of our processes are digital now, so I can stop this, and so I don't know what the market is going. But I know that it's moving and I need to move with them as they won't stop.*

Participant 8 relayed that his experience during an environmental uncertainty being COVID-19, lacked communication from headquarters.

*But we didn't have meetings, we didn't have, and this was a terrible mistake, because one of the things that you need to do, again, I don't know what you have to do but I know what you don't have to do.*

*Leaders telling you you have to go in this direction, take these options, so headquarters is important of course in some point but not in the middle in the crowd in the crisis, the leader that you have in your team need to take the control.*

### 5.2.5 Insights from subsidiary 5

Participants from subsidiary 5 included positions held in senior management, marketing, and the R&D department. In interviewing subsidiary 5, many common insights surfaced amongst the participants. Common insights included the need for alignment in purpose and global strategy, whilst it was acknowledged that global alignment is occurring as with the customer focus transformation, alignment in overall purpose was vague. It was stated that leadership is to take responsibility for the current transformation, this is strategy being lived out and realised by action. Industry uncertainties was highlighted as concern with the viewpoint that innovation was necessary to stay relevant in a dynamic market. Culture was also a prevalent theme in adapting to non-routine contexts, it was stated by all participants that the company generally had a conservative nature with a low-risk appetite. The participants had strong insights around the company's current centralization efforts, an increase in structure and processes and the

importance of organizational structure for optimum adaptation. The findings also showed that understanding the context and communication to people was pivotal to managing uncertain situations related to firm, environmental or industry.

Below are some key quotations taken from the interviews on the different aspects highlighting the key insights starting with purpose and global alignment.

*So I think the first change must be on the leadership. And something that I really miss. The same is in the company okay if the leadership is not behaving accordingly to customer focus, the collaborators will not have the chance to follow anyone (Participant 9).*

*If each individual had the clear understanding about how can each one contribute. For this purpose at by the end. Yes, it would be much much better. With all these changes that we are, we have done, it's the first area that we start this change it a little bit in the structure, yes. I learned that we need to provide changes in the structure, but what we really need to do is to give people their understanding and about their role in the organizations (Participant 9).*

*Globalization is good for our company, but we need to keep our velocity to take decisions and actions, and we know a clear process. (Participant 10).*

*When I they arrived here. we had more than 50 projects to develop. And I saw that its crazy, now we have a 10 or 11. Because we never had big projects, a lot of small projetcs, with no direction, no focus, not competitive with discussions (Patricipant 10).*

*We know that we have a lot of change to make this project work. But if you don't have passion, If you're not believing as you told them, again, it's not the belief, they don't know yet what it is, okay, how can how can we make this transformation if you're not believing that it's impossible (Participant 10).*

*Yeah, actually I think they are excited but I know these people, they need to see the results to be totally convinced, Yeah, I know people mainly for commercial area (Participant 12).*

*What I think is we are connecting our company from the past, is my point of view, yes, we are very conservative, but our leaders, realised that we need to take more risk. We need to open our minds, in terms of investments for example, for mergers and acquisitions, or acquire a company for raw materials. We have a lot of opportunities (Participant 10).*

*Everybody starts to adapt as an individual and then you have a big problem, to work as a team so I think the main idea of this cultural change was to have a stronger team prepared to this type of situation okay because we really believed this is not the future (Participant 11).*

*I'm saying everybody, everyone from the company needs to go to the same movement because culture you don't change from a day to another, from one year to another, it's a long process, but every day, every minute you need to go to that side, you know (Participant 12).*

All participants also mentioned the importance of communication, but also the need for a higher level of maturity to be able to communicate honestly in line with the required change.

*But I note that the communication is much better among the different areas, I see that the interaction of the people in the different areas in the R&D is getting better and better (Participant 9).*

*I believe that we were much better prepared, we react much. You know we were more mature as a team, to face this challenge, because when you say here, for example, to learn to interact and to adapt. If you don't have the, a good environment if you don't have a healthy relationship between the you know the collaborators, it's hard to learn together it's learn very hard to interact, and very hard to adapt as a team (Participant 11).*

Participant 9 mentioned a safe psychological space was lacking to have more objective and open conversations. Whilst other participants were not so direct, they alluded to the point of having a more mature outlook.

*Okay, I see that nobody has the courage to give suggestions. Yeah, I'm not saying to conflict. Yeah, I'm just saying to have a different opinions. It seems that having a different opinion here, is how can I say, something bad (Participant 9).*

#### 5.2.6 Insights from headquarters

Participants from headquarters equated to 5 and hold positions in senior management, Executive management level, marketing, technical and commercial departments. The non-routine contexts or uncertainties that were discussed were in order of environmental, firm and industry uncertainties. Many similar and prevalent insights emerged from the headquarters interviews complementing the subsidiary insights, especially in line with global alignment, the need for centralization whilst still allowing healthy subsidiary autonomy and the current customer centralization transformation. Insights that were expressed as critical for adaptation were communication, understanding the current culture and the evolving thereof, importance of the context and having people understand the need for change. Other insights that were predominant were the importance of organizational structure and processes as part of the transformation. Highlighted below are inserts from the interviews from the various participants.

*Yeah. Actually, we had changes all the time. If I compare the beginning of my career, it's completely different now, completely different. It's another company, just in not only in people, but also structure. Their strategic view is also different. The way to approach the market is different to have an idea when I start the company (Participant 13).*

*Because there is a lot of changes happening during the pandemic, you know, we were preparing to do a lot of changes, and the pandemic came, and we have to adapt all these changes during the pandemic, it's been amazing to work and cultural change vision. The vision changed during the pandemic (Participant 14).*

*If we're ever going to have a global alignment, I think there's going to have to be more oversight from a centralised location, right, if we're all going to be on the same page about something. The directive I think is going to have to come from HQ. So, if that means more guidelines and more, more input from the from the HQ, then that's what it's going to take, (Participant 15).*

Participant 16 explained that culture played a pivotal role in adaptive performance and even expressed that it should be covered more in this research.

*Yes, things change, every single day, economically, politically, or whatever. So, you have that, you never know if what your plan is going to happen or not. Right, and so that's the mindset, that's the culture that we have here as a population (Participant 16).*

*You know, so it took us years to where we could evolve in this situation so I believe that culture and environment with safety, is critical to allow people to bring ideas, and to adapt to non routine situations (Participant 16).*

*Purpose, definitely is another one that comes with passion as well. Yes. So if you have a real purpose in your life and why you were working here, while you're doing everything that you are doing is something different (Participant 16).*

Participant 17 generally had a positive outlook on the transformations related to centralization and global alignment.

*I think we're doing a pretty good job of communicating with the team, but I do believe that you can always do better and we can be doing more. So I think as we build more and more of a structure in better systems (Participant 17).*

*But the beauty of this company is the fact that we have so much, we have that, that speed,*

*the ability to make decisions at the local level very quickly. And that's something that, as you become bigger and bigger, you don't want to lose sight of that either you don't want to become a hugely bureaucratic company, because I've worked for those as well, that it just takes a long time for you to make decisions and then you're gonna lose (Participant 17).*

*You can't fit that same exact strategy for one country to another just because that's a completely different company, the maturity level is different. The infrastructure is different, culture is different, so you need to find where, where are the common things that we want to make sure no matter what company what size, what country we should all be doing. And then the rest, needs to be adaptable (Participant 17).*

The research findings described above in 5.2 are further elaborated upon and triangulated in 5.3.

### 5.3 Analysis of interview data

The analysis applied to the data encompassed developing meaningful themes and theoretical categories which was positioned to answer the research questions. In addition to this, there were key theoretical constructs that emerged from the literature review which form part of the research questions. These constructs include team interaction patterns, uncertainties, non-routine contexts, team adaptation process, organizational climate and culture, subsidiary autonomy, and HQ-subsidiary tensions. These were high-level constructs, and more will be described as the data is explored in the following sections.

In total, 58 unique codes were developed due to data saturation, however, 722 codes were denoted, 500 were allocated for subsidiary interviews and 222 were allocated for the HQ interviews. A detailed code book was developed starting from first order codes and classified into theoretical categories, the code book is attached in Appendix A.

With an aim to focus in on categories and not first order codes, Table 5 below presents the code categories, themes, and corresponding theoretical categories.

**Table 5.** Illustration of code categories, themes, and theoretical categories

Code categories	Themes	Theoretical categories
Internal organizational changes	Organizational transformation	Organizational level factors
More internal centralization		
Outward global mindset required		
Varying uncertainties: need to adapt through innovation	Adaptive stimulus	Non-routine contexts
Satisfaction with adaptability	Adaptability	Team adaptation process
Changes needed to adapt		
Importance of people in the process	People focus	Individual level factors
Lack of resources in departments		
Lack of prioritization and focal projects	Prioritize	Team adaptation process
Importance of team interactions	Subsidiary interactions and autonomy	Team level factors
Independence		
Communication to improve	Communication	Team mediators
Communicate the WHY		
People follow rules if legal requirement		
Importance of aligned purpose and values	Aligning purpose and values	Organizational level factors
Importance of culture		
Leadership awareness for adaptation	Leadership importance	Organizational level factors
HQ responsibility in collaboration		
Higher levels of decision making responsibility and adaptability from leadership	Expectations from leadership	HQ-subsidary tensions

Inconsistency is normal in change		
Culture a key factor to adaptation	Culture	Organizational culture
Environment of psychological safety	Psychological safety	
Factors influencing team interactions and ability to adapt	Requirements for change and adaptability	Team mediators/individual level factors
Need for agility and increased risk appetite	Requirements for action to adapt	Team adaptation process
Call to action to adapt		
Commonality of COVID-19	COVID-19 and adaptability	Non-routine contexts
Internal and external relationships	Team interactions dependent on relationships	Team mediators
Correct organizational structure required to handle adaptation	Importance of organizational structure	Organizational structure: Organizational level factors

The theoretical categories correspond to Fig 8 described as the conceptual model for this research based on literature. Most frequent theoretical categories highlighted in Table 5, is that related to organizational climate and culture and most non-routine contexts discussed stemmed from these internal organizational changes and industry uncertainties. However, in addition to the literature-based constructs, new theoretical categories emerged from the research results which is described in Table 5, which is a more detailed mapping of the results and based on a holistic approach to answer the overarching question of how the team adaptation process within a non-routine context is influenced by team interaction patterns in an MNC.

However, for one to understand the team interaction patterns and the team adaptation process, theoretical categories must be considered within the team adaptation process. Therefore, the sub-questions from research methodology relating to the theoretical categories are listed below.

- a) How do organization, team and individual level factors influence team adaptability in a non-routine context? Categories are listed on the left of the table which are input factors and further separated into theoretical sub-categories.
  
- b) What are the experiences and perspectives regarding adjustments in team adaptation process to improve adaptability? Team adaptation process is a theoretical category on the left of Table 6 with sub-categories and themes linked to it.
  
- c) How does subsidiary autonomy affect team adaptability in a non-routine context? The construct of subsidiary autonomy was introduced to the conceptual model by the researcher and is under the theoretical category of team level factors.
  
- d) How does headquarters-subsidiary tensions affect subsidiary adaptability in a non-routine context? Headquarters-subsidiary tensions was also a construct introduced by the researcher to gain further understanding of team adaptation process within an MNC context.

The grey-shaded blocks in Table 6, represents sub-categories or constructs either introduced as part of the research question or that emerged from the data outside of the theoretical categories from literature. Input factors exclude team adaptation, team mediators and team adaptive outcomes, hence, non-routine contexts are not described for these factors considering that they form part of the actual adaptation process.

**Table 6.** A map of theoretical categories, sub-categories and themes from research data linked to research questions

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Additional themes from research	Adaptive stimulus code (uncertainty)	Non-routine context from research
<b>Organizational level factors</b>	Organizational climate and culture	Organizational transformation	Organizational structure	Importance of organizational structure	Firm uncertainty	Current organizational transformation
		Aligning purpose and values				Organizational structure changes
		Culture				
	Leadership briefing	Psychological safety				
	HQ-subsidary tension	Leadership importance				
		Expectations from leadership in HQ				
<b>Team level factors</b>	Subsidiary autonomy	Subsidiary interactions and autonomy			Environmental and industry uncertainty	COVID-19 pandemic and changing market dynamics
	Team resilience	Requirements for change and adaptability				
	Team adaptability	Adaptability: changes needed				
		Adaptability: we are adaptable				
	Interdependence	HQ responsibility in collaboration	Internal and external relationships	Team interactions dependent on relationships		
<b>Individual level factors</b>	Member characteristics	Requirements for change and adaptability: Honesty, trust, motivated, attitude	People focus	Importance of people in the process	Environmental and industry uncertainty	COVID-19 pandemic and changing market dynamics
	Member adaptability	Requirements for change and adaptability: Mindset change, collaboration, transparency, practical		Lack of resources		
<b>Team Adaptation Process</b>	Actions	Need for agility and increased risk appetite	Prioritize	Lack of prioritization and focal projects		
	Interpersonal	Team interactions dependent on relationships				
	Transition	Call to action to adapt				
		Changes needed to adapt: measured approach to change				
<b>Team Mediators</b>	Communication	Communication: to improve				
		Communication: communicate the "why"				
	Coordination	Leadership responsibility: management				
		Collaboration				
	Empowerment	Communication: communicate the "why"				
		Alignment of purpose and values				
		Subsidiary interactions and autonomy				
<b>Team adaptive outcomes</b>	Team adaptability	Adaptability: We are adaptive				
	Decision effectiveness	Expectations from leadership: quicker decision making and more executives to make decisions				
	Creativity and Innovation	Varying uncertainties: need to adapt through innovation				

The data analysis was presented by means of a diagram for each theoretical category and explained in its corresponding non-routine context, followed by brief explanations of each theoretical category. Table y was used as a map to outline the research findings. The analysis was discussed for the subsidiaries and HQ and then contrasted or compared accordingly to gain triangulated findings as explained in data quality control in research methodology.

#### 5.4 Findings for theoretical category: organizational level factors

The analysis of organizational level factors yielded an intricate level of information especially due to the transformations occurring within the MNC.

##### 5.4.1 Organizational climate and culture

All participants engaged in conversation regarding organizational transformation on various points depicted as themes as described in the following sections (5.4.1).

**Table 7.** Organizational climate theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<b>Organizational level factors</b>	Organizational climate and culture	Organizational transformation	Organizational structure	Importance of organizational structure	Firm uncertainty	Current organizational transformation
		Aligning purpose and values				Organizational structure changes
		Culture				
		Psychological safety				
	Leadership briefing	Leadership importance				
HQ-subsiidiary tension	Expectations from leadership in HQ					

##### 5.4.1.1 Organizational transformation

The code book (Appendix A) revealed the following points that resulted in organizational transformation which acted as an adaptive stimulus or trigger to a non-routine context, seated in firm uncertainty. What is described by Maynard et al. (2015) as organizational climate, it is described as the MNC “environment” in this context by the participants and linked to the psychological safety theme.

- a) A focus around alignment of subsidiaries with global strategy
- b) A recent global initiative as part of alignment efforts to adopt a customer focus strategy

- c) An increased level of centralization being practiced stemming from HQ
- d) More structure and processes are being put in place as a means for centralization and better management
- e) There is a critical need for global market understanding as the MNC was previously internally focussed
- f) The need for overall strategy is important from HQ level
- g) Transformational change has been a factor in the past and is now prevalent with the alignment and centralization efforts.

**Subsidiary perspectives and experiences:** All subsidiaries had the perspective that global alignment is necessary for the MNC to remain relevant in the market and they welcomed this new initiative. Comments from subsidiary 1 appreciated the initiatives especially within global R&D being more aligned. Subsidiary 2 stated that previous decentralized arrangements were no longer relevant to the company. Subsidiary 3 expressed that whilst previously the company was more focussed on internal products, there is a change towards being more focussed on global market needs which is necessary as pressure arises within industry uncertainties. Subsidiary 4 was slightly contrasted in that whilst the global alignment initiative was appreciated, it was felt that communication in this regard was limited on the directive. Subsidiary 5 was positive about the global alignment especially due to the size and structure of the company and saw benefits for the subsidiary.

**Headquarters perspectives and experiences:** HQ perspectives were in favour of the global alignment and took a standpoint of driving the change, also explaining the advantages for applied research and product registrations. It was also interesting to hear from one participant that the reason why subsidiaries followed their own strategies in the past is because there was little support from HQ.

**Table 8.** Quotations from interviews for global alignment

Subsidiary number	Subsidiary perspectives	HQ
<b>Global alignment</b>		
1	<i>If we don't coordinate that project with global R&amp;D, it has no sense at all. Because at least, at least, maybe you can start with one project. And now it's completely different we changed a lot.</i>	<i>So, the idea with these global solutions should really drive our applied research, as well as our registration globally because if this is what we're going to then be focusing on from a global standpoint, to make sure that we're all aligned.</i>
1	<i>If we don't coordinate that project with global R&amp;D, it has no sense at all. Because at least, at least, maybe you can start with one project. And now it's completely different we changed a lot.</i>	<i>Now that they have people to advise to question their decisions to world, where they are feeling much better.</i>
2	<i>I like to be global one. Okay, because I think the previous CEO's style was good as a start-up company, because his structure was not enough to hold the global company.</i>	
3	<i>But I do feel the challenges coming in, globally, because it's been more product focus. And, and we've just made this new product go and sell that type of thing. But where I'm a bit more confident, that change is actually happening.</i>	<i>I think we're just now really shifting to where we're looking at, we should be looking at things more objectively from the market point of view</i>
3	<i>It's more aligned, becoming more focused.</i>	
4	<i>In fact, we are discussing this, about, you know, about the situation with the rest of the managers, you know, there are different points of view. Yes, you know, some of them are waiting, again, are waiting to receive direction from HQ and consultants about what we have to do.</i>	
5	<i>I believe that's going to be great for the subsidiary. But we, we already had to make some decisions in a strategic level by ourselves. Because of the size of the structure and how the market was pushing us, for the group as a whole, I think that's gonna be a very important step. Aligned on what the strategy is with a company goal.</i>	

A senior executive from HQ relayed the following in terms of alignment and the way in which it will be done, cautioning that centralization efforts and global alignment will not be at the expense of innovation, but rather to capitalise on the current capabilities of the company.

*I don't like the word standardize but to bring everybody to the same page. So yes, I think that we have the answer, inside that company that we just need to standardize our best practices, and of course, it sounds conservative my approach but I'm not saying not to innovate, that's not this, but I think that the structure that works, we have it, we have product we have knowledge, we have good people. And we have a good strategy to be focused on the client, so we have everything to solve the problems of the client. Now we need to bring everybody to the same page and of course, keep innovating and bringing new things to our business model.*

It was interesting to note that with global alignment and strategy, subsidiaries were positive about the changes and even felt it was overdue, it was only subsidiary 4 mentioned that communication flow was poor from HQ on next steps. From a HQ perspective there was one participant that stated that the directives should in fact come from HQ. Overall, the consensus was that global alignment was critical for sustainability of the MNC, and even though it is process of adaptation, subsidiaries felt positive about the change.

#### 5.4.1.2 Aligning purpose and values

All subsidiaries felt strongly about the importance of having a common purpose and values to be adaptable as an organization under current dynamic market conditions. Whilst all entities emphasized the importance, the consensus between subsidiaries and HQ was that the MNC did not have an aligned sense of purpose or values. HQ, however, did acknowledge the misalignment and aimed to rectify it.

**Subsidiary Perspectives:** Below are extracts from a subsidiary participant highlighting the importance of purpose and values but the lack thereof.

*To have everybody aligned, in the same line, you know, because everybody's on the same page of the book, because if you have to take a decision, maybe they don't know why we're doing this, but at least they are moving with you.*

*Okay, as, as a company, what's our purpose, what's our objective. Okay, What do we want, and now it comes the customer focus, if each individual had the clear understanding about how can each one contributes. For this purpose, by the end, yes, it would be much much better.*

One subsidiary participant explained the sense of purpose as an organization should come from leadership, not necessarily HQ but from the leader “I think it needs to come from leadership but everybody every day, needs to be aware and going to the same place, and if not, it's, it's very difficult to change anything”.

**HQ Perspectives:** HQ perspective was that we needed to clearly define their identity as a company so that “if you have directions, values and purpose, you don’t need to be controlling people all the time”. One individual from HQ also stated that if we asked subsidiaries what their purpose was, “you would probably get 20 different answers.”

In summary this was a core topic for the participants with a frequency of codes equalling 19 on purpose and values. It was interesting to note that this is a gap for the MNC.

#### 5.4.1.3 Culture

Subsidiaries and HQ had strong perspectives on culture, with one subsidiary having focussed on the past culture as being hierarchal and not inclusive.

**Subsidiary Perspectives:** The participants from that subsidiary without having been prompted, explained that major efforts in the last few years have gone into creating a culture where people felt safe to share ideas and feel included and to create leadership characteristics at different levels of the teams. Due to this culture change, the subsidiary expressed that people were able to react better to uncertainty or non-routine contexts, “I just felt like I should explain that cultural change to you have to understand how we reacted, you know, there's no routine context because thanks to the changes we've done in our culture, I believe that we were much better prepared, we react better.”

The participant above made an important point based on the complexity of a team to adapt as an organism and the non-routine contexts the company operates in, “everybody starts to adapt as an individual and then you have a big problem to work as a team so I think the main idea of this cultural change was to have a stronger team prepared to this type of situation okay because we really believe that this is the, this is not the future this is already here”.

An individual from the same subsidiary above made an important point that when people are faced with change, they are tempted to look towards a process or structure from management, the participant stated that it takes a culture change to get people to understand the context of the change as opposed to have them look towards the structure required to change.

Another subsidiary stated that with previous changes to the subsidiary stemming from HQ, culture within that country was taken into consideration, and explained that people found it hard to adapt as their culture was not taken into consideration during these times of uncertainty. Directives were put in place, which were positive for the business, but there were some people who had left as culture clashes occurred, as “*local culture is part of who you*

are". To add to this, a participant from another subsidiary stated that a previous senior manager came into the business unit with his own external culture, this eroded away at the team with a high turnover rate in just one year, also attributing this to no guidelines from the MNC on culture and expectations.

One participant also stated that the MNC is facing a strong cultural change as the external circumstances change, example they are been forced into digitization due to market needs and evolution.

*I'm saying everybody, everyone from the company needs to go to the same movement because culture you don't change from a day to another, from one year to another, it's a long process, but every day, every minute you need to go to that side, you know.*

**HQ Perspectives:** Subsidiaries also expressed that leadership is critical in forming the culture of the company, to which one participant from HQ agreed "And the importance of the leadership is huge, absolutely huge. I started talking about culture and environment, and culture and environment is 100% dependent on leadership. There is no way to create a good environment, and to transform the culture without the leadership, everything starts with the leadership. So, if the leadership does not prepare, you can't do this this change".

Another HQ participant was confident in understanding culture in that, once culture, size and maturity level is taken into account in a subsidiary, they should be adaptable, "the culture is different, so you need to find where, where are the common things that we want to make sure no matter what company what size, what country we should all be doing, and then the rest, needs to be adaptable".

In conclusion, there was a frequency of 29 culture codes, and it is perceived by all subsidiary participants that conversed about culture, that HQ must take the culture into consideration for the adaptation process in a non-routine context. HQ understood the importance of this and focussed on culture significantly with the aim to create the correct culture, as in an "open environment" which is explained further in "psychological safety" which is an extension to culture.

#### 5.4.1.4 Psychological safety

More than one subsidiary described the HQ culture as hierarchal which was confirmed by a participant in HQ, however, this differs at subsidiary level.

**HQ Perspectives:** The participant, however, elaborated further on culture "you know, so it

took us years so we could evolve in this situation, so I believe that culture and environment as a safety, Paramount are critical to allow people to bring ideas, and to adapt to non-routine situations, you know, so it took us years to evolve in this situation so I believe that culture and environment as safe, it's critical to allow people to bring ideas, and to adapt to non-routine situations.”

Whilst this was stated by a HQ participant, more than one individual stated from the subsidiaries stated that the culture created is too “polite”, in that psychological safety does not exist, as people are afraid to speak boldly”. This can perhaps be linked to the hierarchal culture confirmed by subsidiaries and HQ about HQ.

A HQ participant confirmed that the hierarchal structure is negative for the company and disagreed with that structure. “I think that it's very bad, very bad. So, you know when I say, I believe that hierarchy is important, I believe that processes are important, I believe that systems are important, I really, really did. However, the amount that you concentrate on this is related to the maturity of the team interaction.”

A HQ participant described the polite culture as follows “because you don't want to be as strong or harder with people, and this kind of politeness, I think, reduces the input or the feedback from one side to the other, because nobody wants to offend the other”.

**Subsidiary Perspectives:** Subsidiaries felt strongly about the environment being created to be able to talk openly as “so you need to be strong enough to say what you think about, what is your point of view, without being aggressive but being transparent”.

An HQ senior executive corroborated the perceptions of the subsidiary participants, “It's not about comfort level is about your ability to talk to communicate and to accept different points of view”, Participant 13 from HQ stated, “the way we treat each other inside the company will be the same way we treat the customer”.

A participant from the subsidiary that had undergone culture changes as explained under the culture section (5.4.1.1) stated that the culture change resulted in the team being more mature and that has assisted them to interact and to adapt more effectively.

In conclusion, it can be deduced that the environment or climate of an organization is critical to having mature and healthy interactions, to have the freedom, courage, and safety to discuss new ideas or to challenge the status quo. If this isn't in place, it is unlikely that a team will have good adaptive performance as an outcome.

#### 5.4.2 Leadership briefing

The impact of leadership or leadership behaviour on the team adaptive process was taken into consideration as Christian et al. (2017) stated that limited results existed on this sub-category. Code groups emerged from the research that was directly linked to leadership. In this context, HQ is equated to leadership.

- a) HQ is aware of the need to provide guidance
- b) HQ is aware of the need to adapt
- c) Seeing is believing

Both subsidiaries and HQ agreed that leadership is fully aware of the need to adapt in this dynamic uncertain industry climate. A participant from subsidiary 5 stated that *“we are very we’re very conservative, but our leaders, realized that we need to take more risk”*. A participant from subsidiary 4 explained that senior management has been active in moving forward to adapt, *“He took the leadership group out for strategic planning and spoke a lot about the change, he was more present”*.

A HQ participant stated that they are aware of what is needed, however, transformation won’t happen at all subsidiaries at the same time due to maturity levels. An additional HQ participant stated that when these changes or transformations occur from leadership’s side, some things *“can be exaggerated, you can go too far left or too far right”*, but it was explained this was part of change, that inconsistency even from leadership is part of change.

The code that was used to denote phrases as *“seeing is believing”*, was a universal consensus, that leaders within subsidiaries or HQ for example had to live out the customer focus strategy for others to follow them. A participant from subsidiary 3 stated that the proof is being seen at HQ level during this transformation. The manager of the above participant stated that *“Living the experience, I have been trying for a long time to create this kind of exchange experience”*. It was refreshing to observe congruency in that respect.

A HQ participant added that the main factor in uncertainty is the responsibility of the leadership, and that if leaders were committed to the process, the rest of the organization will follow.

Overall, within the context of the leadership briefing, there was no significant contrast between HQ and subsidiary findings. However, explained in 5.4.2 are some leadership points which spill over into HQ-Subsidiary tensions.

### 5.4.3 Headquarters-subsiidiary tensions

In terms of leadership within the HQ context, participant 2 had the perspective that due to the vast cultural differences in the MNC, there are many different leadership styles which sometimes created problems. A participant from a different subsidiary stated that there was a level of competition on the senior leadership level which sometimes created unnecessary friction in the different areas.

In past years, tensions were not significant as subsidiaries ran independently, but due to more centralization is occurring, there were some tensions surfacing.

*And in the beginning we saw a lot of conflicts, we still see a number of conflicts, but I note that the communication is much better among the different areas, I see that the interaction of the people in the different areas in the R&D is getting better and better.*

Most tensions between HQ and subsidiaries were in the lack of communication and mostly lack of transparency. A participant from a subsidiary noted the following during an uncertain time being the pandemic, "but we didn't have meetings, we didn't have, and this was a terrible mistake".

Another participant noted quite succinctly, "We want a psychological safe place. We want a transparent place where people feel safe", this was stated in relation to HQ. One HQ participant had the same view as the subsidiaries in term of transparency, "transparency may be lacking, little more transparency, okay about what the what the succession plan was going to be."

In general, not many tensions were noted directly to this theme, but it has surfaced in other sub-categories as in organizational structure.

### 5.4.4 Organizational structure

The organizational structure category emerged from the research data and was initially not linked to the conceptual model. In general, subsidiaries have strong opinions about the organizational structure in that they felt the "new" structure with regional executives, played an important part role in the MNC, to better coordinate functions and capitalise on opportunities. Subsidiaries also commented on the new structure within the marketing and commercial areas being of significant value to MNC to be able to adapt to meet global demands. Participants from the subsidiary that had underwent a cultural change, expressed from experience that organizational structure was key to adaptability as it provides the support

needed for change in uncertainties.

A subsidiary participant stated that “If you want to be a visionary leader, then you need to create structure in the company”. “And I'm hopeful for the regional structure system. I hope the management is going to support, we learn a lot, and they will not forget that it's not the ego, pride, it's only for the caring the company and taking the responsibilities.”

A participant from another subsidiary positively stated “regional structure, that was a ground-breaking move forward. That CEO, let go of the reins and trusted the regional executives”.

A HQ participant expressed the following in favour of the regional structure ““And that's why I think we need to improve our regional organization, like a core team, working with the CEO, coordinating with the subsidiaries, these regional coordinators will coordinate with the headquarters, it will be easier because there were small teams working together”.

One subsidiary noted more opportunities being brought to the table with this new structure as opposed to relying only on CEO level.

On the contrasting side, one subsidiary participant still felt that the hierarchy structure was still too prevalent and that more support to be given to the collaborators.

In contrast from HQ, one participant stated that even though this structure is in place, it was still common to find managers going directly to the CEO as opposed to their regional executives, hence, these regional executives should be able to have more decision-making capabilities.

In summary most teams leaned toward a positive stance and appreciating organizational structure in its role for adaptation. In the same light, some participants states that the full value of the “new” structure was not fully realised to be agile and adaptive as the culture of hierarchy still existed at HQ.

#### 5.4.5 Non-routine contexts

The non-routine contexts explained under the theoretical category of organizational level factors, mostly related to being triggered by firm uncertainties with the transformation occurring in the company. This related to a higher level of centralization, alignment of a global strategy and changes in organizational structure. The lack of transparency from HQ results in uncertainty as well. The global strategy however was welcomed but not everyone agreed with the efforts of centralization, which will be further discussed below.

## 5.5 Findings for theoretical category: team level factors

**Table 9.** Team level theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<i>Team level factors</i>	Subsidiary autonomy	Subsidiary interactions and autonomy			Environmental and industry uncertainty	COVID-19 pandemic and changing market dynamics
	Team resilience	Requirements for change and adaptability				
	Team adaptability	Adaptability: changes needed				
		Adaptability: we are adaptable				
	Interdependence	HQ responsibility in collaboration	Internal and external relationships	Team interactions dependent on relationships		

### 5.5.1 Subsidiary autonomy

With aligning across subsidiaries for a common global strategy, centralization initiatives are apparent. At the time of this study, all subsidiaries interviewed stated that they have a healthy level of autonomy which allows them to be agile and respond locally, however, there were concerns surfacing about the future regarding autonomy as they had already seen changes being realised.

**Subsidiary perspective:** Subsidiary 5 was most vocal amongst subsidiaries about centralization occurring in the MNC and there were contrasting views but mostly having negative experiences about centralizations from HQ.

One participant felt that increased centralization is necessary but not in the way that it is being done, it was explained as new projects, such as IT systems are being implemented but in a traditional way with lack of agility for example. Outlined below is a quote expressing this.

*Yes, I have said that we were absorbing it. I need to organize it, let's organize it in a more modern way, yes, not following the traditional steps, let's think out of the box, let's be more agile, but that's the most difficult thing to do. Yeah. And you know because they are moving from decentralization, yes, and then from the disorganization, to stick the process and the hierarchal way of doing the things I don't think it's going to work. Yes, that's my opinion.*

Another participant from subsidiary 5 also cautioned the transition from decentralization to

centralization.

*I think we are; we are moving on that way, and I do believe it's something that we need to be very careful not to do it too fast or to unbalance the whole structure, the whole organism, but I believe that the best shape would be the high level of autonomy, as we already have, with some level of guidance of building together of mid long term, in our view of the things that would, That would be really great and very important for us for the you know the future.*

*But it has been very interesting because we see that people are, they struggle a little in the beginning to adapt to this model.*

**Headquarters perspectives:** Whilst subsidiaries were somewhat concerned about the centralization initiatives, HQ participants highlighted points to mitigate the uncertainties around centralization. Highlighted below is an extract from an HQ participant.

*For us to be to have sustainable growth from all aspects, we need to start having kind of rein, everybody in right in a way, have a good strategy that's really clear, be able to communicate that to the teams, have them implement then have that communication, both ways, back and forth to calibrate, how are we doing to get this you can't just have a strategy.*

HQ participant extract, “yeah, there is a lot of managers to look after and a lot of subsidiaries. So, this new structure really makes you know a lot more sense in terms of being a little bit more centralized but still subsidiaries having enough autonomy.”

A HQ participant disagreed with some elements, as an example, “I do not agree with, with some centralized stuff like all the protocols have to be done at the headquarter, not even like the German companies do that right yeah so I, we have to have an alignment.

A senior executive added that “we don't need to be too hierarchical we can be more flexible, we can give more autonomy, because now we have direction, so everybody knows where we are going”.

Whilst subsidiaries understand the need for higher levels of centralisation, they have cautioned HQ about becoming too centralized as decisions may take longer, slowing down the ability to adapt and respond on a local level. Subsidiaries expressed those relationships with other subsidiaries were excellent but called for HQ to connect subsidiaries on a more intimate level.

A senior executive from HQ stated the below which brings comfort to the subsidiary concerns.

*But the beauty of this company is the fact that we have so much, we have that, that speed, the ability to make decisions at the local level very quickly. And that's something that, as you become bigger and bigger, you don't want to lose sight of that either you don't want to become a hugely bureaucratic company, because I've worked for those as well, that it just takes a long time for you to make decisions and then you're gonna lose.*

### 5.5.2 Team resilience

During the interviews participants spoke of numerous characteristics of teams and what it took to be resilient. They spoke mostly from experience but also perspectives on what characteristics would be important for a team to operate efficiently in a non-routine context.

**Subsidiary perspectives:** A participant from subsidiary 5 stated that an open mind set free of bias was important for teams in non-routine contexts, and the participant from subsidiary 4 explained that having a positive attitude and being motivated was important for team resilience in a crisis. One more participant from subsidiary 5 stated that leaders were important for teams to be resilient and must be able to deal with conflict. Self-awareness also featured in the subsidiary analysis to know your weaknesses and strengths so that one could play to strengths.

**HQ perspectives:** A senior executive also specified that a positive attitude and passion were important for resilient teams.

Whilst this was not the most prevalent sub-category that emerged from the data, more focus was on team adaptability.

### 5.5.3 Team adaptability

**Subsidiary perspective:** For the theoretical category of team adaptability, participants had various viewpoints. Subsidiary 1 felt strongly that structure and processes first need to be in place to guide the process of team adaptation, “so that makes us to adapt to change our routine, and our processes, once again, it's important to change the processes”. Apart from process and structure, the need for a healthy environment which encourages adaptation emerged “so I believe much more in leadership for this actual challenge that is able to create a healthy environment where people who are more connected and closer to change that is happening all the time”. “Yeah, I would say so. Mostly, to create this healthy environment where people feel able to try, you know, where people want to be a protagonist of the change,

not waiting for someone to say they go there, it's always important". A participant from subsidiary 5 stated that teams needed to know the context of adaptation to be engaged.

Subsidiaries also were of the perspective that the time is now to adapt and highlighted concerns.

*If we don't change our ways, we could easily start becoming irrelevant, because we're gonna start having the players come in.*

*Adaptability, I think, as a smaller group, we are facing some problems in adaptation.*

*I said that the ability of the changing is a way to be survive. If you don't change your mind as dinosaurs, they can't last, if they do not adapt the new rules new environment they cannot survive.*

**HQ perspective:** A prevalent theme which emerged from the data from both subsidiaries and HQ was that that if people understood the "WHY" they are more likely to adapt.

A senior executive at HQ stated "but it's a lot different when somebody understands it, they feel part of it, they believe in it, they trust it. It's a very different result. So, I think, as to really hone in on that as we go through this journey is going to be very important."

Other factors that played important roles for HQ and subsidiaries for adaptation was the element of trust, honesty between team members, having the right people in the team with the right competence and attitude and collaboration which was explained as critical for adaptability but will be discussed in more detail under team interactions.

*And you must create a trust between the team and management team. If they trust you, and if you trust them. You can do many things.*

*And the capacity to work as a team member, or work as a team, as part of a team, right this collaborative mindset*

For team adaptability, the role of the leader was also highlighted as a key factor to provide guidance for the team irrespective of HQ guidance, "so headquarters is important of course you know in some point but not in the middle in the crowd in the crisis, the leader that you have in your team need to take the control".

Communication also emerged as a main theme for adaptation and will be discussed under

team interactions in the team adaptation process.

#### 5.5.4 Interdependence

Interdependence on factors and entities did not materialize from the data explicitly and as much as expected but subsidiaries did express interdependence on leadership, other subsidiaries and for HQ provide the platform for more interaction. Below are extracts from subsidiaries highlighting that interdependence is congruent with building relationships. these points have been highlighted in more detail through the various theoretical categories.

*I really appreciate the face-to-face meetings*

*I need to help my friends and say hey, are you doing, how's your family, well, I need to go for a beer with my colleagues, this is something that establishes a relationship and because of that, you can coordinate, much better because everyone knows you.*

#### 5.5.5 Internal and external relationships

Internal and external relationships emerged as one of the main factors and therefore was allocated as a new theoretical category under team level factors. It was expressed by subsidiaries and HQ that not only were internal MNC relationships important at team level factors but also relationships held externally.

*Ability to make relationships, long, not only among us, but also among dealers and end clients because we don't know, we don't know this scenario, we don't know what can happen, but I think we have to be close to the people and have no friction in the conversation.*

*Okay, to build reliable relationships, safe relationships.*

*In my opinion, we must create a good relationship between the departments, marketing departments, technical departments and sales departments and share our experiences and share our different experiences on the country, depends on the market. If we can create good relationship between the especially technical team, we can create a name, generate valued information or the technical information and we share it and we can grow and expand our businesses.*

Whilst the importance of forging good relationships features on the point of team level factors, it also emerged in the team adaptation process which is discussed below in 5.6.7.

### 5.5.6 Non-routine contexts

The non-routine contexts that participants discussed under team level factors specifically, were related to environmental uncertainties such as COVID-19 pandemic as well as global concerns with supply chains. In general, all subsidiary teams and HQ were of the perspective that the challenges of the COVID-19 pandemic were a non-routine context, but they felt that the teams coped especially well, and even alluded to the point that the pandemic made teams more adaptable, for this reason, minimal in-depth results exist that can contribute to theory. Industry uncertainties such as fast changing market dynamics, technological advancements, and digitization, also served as triggers to non-routine contexts which called for strategizing and global alignment by subsidiaries and HQ.

*The market is changing so we need to change with the market, and the directions I don't know but I know that we must change.*

*If we're ever going to have a global alignment, I think there's going to have to be more oversight from a centralised location, right, if we're all going to be on the same page about something.*

### 5.6 Findings from theoretical category: individual level factors

**Table 10.** Individual level theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<b>Individual level factors</b>	Member characteristics	Requirements for change and adaptability: Honesty, trust, motivated, attitude	People focus	Importance of people in the process	Environmental and industry uncertainty	COVID-19 pandemic and changing market dynamics
	Member adaptability	Requirements for change and adaptability: Mindset, collaboration, transparency, practical		Lack of resources		

#### 5.6.1 Member characteristics

Member characteristics were similar to that of team characteristics as described by participants from both HQ and subsidiaries. The one point to emphasize would be that management plays a pivotal role in the make-up of the team and needs to live by example.

Characteristics described for individual level factors being important for team adaptation process include, a collaborative mindset, honesty, having a practical outlook, gaining and demonstrating trust, patience, transparent and an open mindset.

*We need to open our minds, in terms of investments for example, for immersion acquisition for mobilization, or company for raw materials, virtualization. We have a lot of opportunities.*

*But I think that people have to trust each other and have to talk the same language, I think it's the, the best structure that we have to create.*

### 5.6.2 Member adaptability

Member adaptability characteristics were also similar to team adaptability characteristics described in 5.5.3. Characteristics that were defined as critical were, the ability to communicate, collaborate, element of honesty, trust, positive attitude, passion, an open mind, aligned values and purpose. This alignment is congruent with the feeling from one participant who stated that everyone first adapts as an individual and then as part of a team.

*Everybody starts to adapt as an individual and then you have a big problem, to work as a team so I think the main idea of this cultural change was to have a stronger team prepared to this type of situation okay because we really believed this is not the future.*

### 5.6.3 Importance of people

A new theoretical category that emerged from the research data was that people needed to be understood and communicated to, to get their buy-in and this was pivotal to the adaptation process. A participant from subsidiary 1 explained from experience that people felt the need to be a part of the process as opposed to be told what to do “so instead of to say no you must do that. No, you say, you know what, this is the goal, to discuss how to do it, then the project belongs to them, they feel part of it. It is not the project of my boss or the project of another, then it's a component of all of us”.

A participant from subsidiary 5 echoed the same sentiment by stating that, “and understanding how each one can contribute what each one has that is a differential to contribute to the team to get the job done”.

The subsidiaries and HQ also felt passionate about having to train people in the skills that they lacked, whilst they acknowledged that personalities perhaps were challenging to change, if at all possible, participants did feel that it was possible to change the behaviour of people to be

more adaptive.

Below is an extract from a HQ interview,

*You can accelerate this process, like I already suffered this, go this way because it is going to work, so you eliminate some steps for others. But it's part of the experience as well. So, first time, second time, third, fourth, fifth, start to be okay I already know how to deal with this kind of thing. So, yeah, I think that you can learn about details, you can learn from others and from your experience.*

The participant from HQ also stated that it is important to introduce new people to teams for adaptability, people from outside companies can add a different dynamic to a team with their own competencies.

It was also interesting to note that two participants from subsidiaries argued the point of adaptability during COVID-19, they felt that it was interesting that people found it easier to adapt to COVID-19 because they did not have a choice, and these are legal requirements. It was discussed that if people feel they have a choice, then perhaps they do not adapt as easily. The aspect of human resources (HR) during adaptation emerged from subsidiary and HQ interviews with one participant stating that the role of HR is underestimated in non-routine contexts.

### 5.7 Findings from theoretical category: team adaptation process

**Table 11.** Team adaptation process theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<b>Team Adaptation Process</b>	Actions	Need for agility and increased risk appetite	Prioritize	Lack of prioritization and focal projects		
	Interpersonal	Team interactions dependent on relationships				
	Transition	Call to action to adapt				
		Changes needed to adapt, measured approach to change				

### 5.7.1 Actions process

The actions theoretical category entails the process of a team adjusting its actions based on task work, to meet the demands of a challenging situation or in this case a non-routine situation. Considering the non-routine task contexts explained in prior sections relating to organizational and team level factors, the actions required will be to address the transformation process internally to centralize and globally align to meet the dynamic global market needs. In exploring the data from the interview process, both subsidiaries and HQ emphasized the critical need for team agility when a task context changes.

A participant from HQ felt confident in the progress of agility, “so we have to have the ability to be flexible to adapt to calibrate as needed, so I think we're getting there”, whilst another participant from HQ stated that they needed to be agile as the market won't wait for them.

Two participants from the same subsidiary were off different opinions in that leaders within HQ were not agile enough, one participant claimed, “The agile way of carrying out business is not on their mind as yet”, whilst the other participant stated that agility is on the minds of the HQ but not exercised.

The perspective of an individual from another subsidiary stated that because of the manageable size of the subsidiary in relation to competitors, agility and flexibility should be a natural strength. Another perspective was that centralization was going to slow down the agility that exists in the subsidiaries.

In terms of non-routine task context and industry dynamics, subsidiaries felt that the MNC generally had a low-risk appetite and a conservative nature. It was elaborated upon that the MNC needed to have all the data to make an informed decision, and this was not sustainable at the pace at which the market changes. Two participants from different subsidiaries spoke of the previous leadership of the company being visionaries with entrepreneur like characteristics and therefore took many risks with high rewards, which the current leadership is afraid to erode and therefore more cautious.

*And we are very slow to react to changes. So that's my opinion in general, I think, in general, leadership is very, how can I say, afraid to take risks.*

In line with the task context of actions in a dynamic market, the overall actions requested by subsidiaries were to invest in new opportunities, e.g., mergers and acquisitions.

*If we do not accept taking more risks, if we do not accept investing money before having the results, I don't think we will succeed as a company. I'm saying that yes, that's what I believe. So, because the way we arrived here, is not the way that will take us to the future, for sure it's not.*

Another participant echoed the above statement, “and not taking risks. If you don't have a team that feels secure, safe to take those risks, they will just do, you know, whatever they will, they will make them feel safe, because they are afraid making mistakes of failing”.

HQ interviews did not result in findings being realised on low-risk appetite and improving that for new task contexts.

### 5.7.2 Interpersonal process

Whilst actions are task based, interpersonal processes are team based, these are interpersonal processes required for effective adaptation. In this case the results again focus on the needs of people to be adaptive, it was the core of most interviews as highlighted by a subsidiary participant below.

*Because people are very complex, each individual is a huge complexity, and a company is made of, people. It's not the building, is not the infrastructure, it is the people.*

It was explained that whilst collaboration is critical for the adaptation process, it was reiterated that the environment for adaptation must exist first.

*If you don't have the, you know, a good environment if you don't have a healthy relationship between the you know the collaborators, it's hard to learn together, it's very hard to interact, you know, and very hard to, to adapt as a team.*

A participant from subsidiary 5 also explained the importance of leadership to be able to give people confidence to adapt considering the constant facing of dynamic situations.

*More and more, it's becoming relevant compared to planning because it changes all the time the adaptation is on the table, right, so all the time we need to adapt. It's a changing environment. So, if you are not giving people the confidence that, that you are, you are there to make the change that whatever changes required or needed.*

Other factors that emerged was the importance of listening, effective communication, appreciating people and making sure people understood the goals at hand. Both HQ and

subsidiary participants had strong perspectives on the need for more personal interactions, to have a more emotive connection to people to be able to bond and adapt as a holistic team. Due to the pandemic participants felt like this has hindered some processes in the company.

*How can you say that personal touch. Right, we miss a lot. Nowadays, I have nine people in my company. I don't know, because I haven't had the chance to meet them at a company meeting, I never saw nine.*

*I think we need more frequent interaction, because historically, the interaction among people for example from different countries, the leadership from different countries are curious.*

### 5.7.3 Transition

Transition is part of the team adaptation process. The transition process entails teams moving between actions and interpersonal processes, and involves analysis, planning, and goal setting (Maynard et al., 2015).

#### 5.7.3.1 Prioritizing

Headquarters and subsidiaries relayed the importance of prioritizing projects and focus as key points for adaptation which complements the transition process.

A subsidiary participant expressed that when he first joined the company the lack of focus was concerning, “When I arrived here, we had more than 50 projects to develop, and I saw that its crazy, now we have a 10 or 11, because we never had big projects, a lot of small projects with no direction, no focus not competitive with discussions”. However, he did explain that in the last 3 years this has changed for the better.

It was interesting to note that the HQ interviews were more critical on this subject and spoke of themselves having to improve, below are extracts from three different HQ interviews.

*Prioritize, prioritize, prioritize we have a lot of different things that the company needs.*

*We need to say what is the priority, and what do we need to do to accomplish that.*

*First thing is to define the priorities that we have to control and to unify and those things that are not possible to unify*

#### 5.7.3.2 Strategy

In line with goals and strategy, the subsidiaries were highly vocal and felt strongly that the need for strategy, with a global outlook, was pivotal to adapting to non-routine contexts triggers by industry and environmental uncertainties.

*The problem is sometimes the biggest strategy is not clear, you don't know what is really wanting from our company. If company says that we want this from you, then it's easy.*

*We're doing strategic planning for three years, which we've never done before, and gave us a really strong roadmap as to where we needed to invest and what we needed to invest.*

*So I think to have a good strategy on not only what works for this company but what are other companies doing out there that we need to be considering.*

There was a call for a clear and simple strategy in line with industry requirements, as well as a strategy for technological advancements, whilst some participants acknowledged the movement in recent months to move to a clearly defined strategy.

## 5.8 Findings from theoretical category: team mediators

**Table 12.** Team mediators' theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<b>Team Mediators</b>	Communication	Communication: to improve				
		Communication: communicate the "why"				
	Coordination	Leadership responsibility: management				
		Collaboration				
	Empowerment	Communication: communicate the "why"				
		Alignment of purpose and values				
		Subsidiary interactions and autonomy				

### 5.8.1 Communication

Communication emerged as the most important of all the codes groups (Appendix A), with a

frequency of 42 times on the “importance of communication code” which included all participants. The codes used to explore the communication were as follows, importance of communication, lack of communication and quality of communication.

Participants from subsidiary 1, 2, 4 and a participant HQ criticised the level of communication in a non-routine context regarding change in management. Below is the extract from the HQ participant and subsidiary 2, respectively.

*So, that all kind of went out the window when he left, and so we've never really started that back up again, we're gonna have to at some point, because there was some real value there.*

*Then, I believe, the biggest problem is again the communication, we are giving no communication. Okay. We believe that sometimes when we have some email from headquarters, it's the communication, I don't think it's the communication sorry, even you and me can imagine that how many times we have a chance to talk as a business level with each other and sharing experience.*

One participant felt that during the pandemic, communication lacked to the subsidiaries and should have had more communication in line with the MNC outlook, whilst also considering that every country was different, it was expressed that perhaps subsidiaries could have learned from each other.

*Again, the only thing that I have, we can say, I demand from headquarters why they didn't increase the communication.*

A HQ participant went on to express that quality of communication was important, “it's not frequency of communication it is the quality”.

Regarding the importance of communication, HQ and subsidiaries were equally aware of the risks of lack of communication and communication was emphasised as being the most important mediator.

*A senior executive from HQ stated that, “communication has to be really perfected, we need to, we need to continue to evolve in that area”.*

The senior executive was however cognisant of the practicality of having effective communication in a personal way.

*“I think scalability is with something that's so hard with a big project like this, with the level of resources we have, how do we touch everyone in a way that's most effective, efficient, so you won't be able to talk to every single person but how do you teach them, how do you make them feel part of it”.*

Another HQ participant felt that communication has improved due to the pandemic as more meetings are held online than was ever held in person. Subsidiary participants went on to highlight the importance of communication in a non-routine context as per below extracts.

*Now we need to have communication, then creating a high level of trust level from each other, and then being so open to give the real strategies and the idea of to each other.*

*Communication was essential, during this crisis, basically what we did, it was to improve the communications among the areas.*

In summary every participant spoke of communication and the critical need for information sharing in routine contexts but more so non-routine contexts. Some subsidiaries felt that communication needed to be improved from HQ and to find more effective modes of communication.

### 5.8.2 Coordination

In terms of coordination efforts, subsidiaries and HQ explained the importance of leadership roles in providing guidance with structure and processes for proper coordination during a non-routine context.

Below are extracts from interview for the subsidiaries' participants.

*You know, because if you don't have a clear structure, sometimes people don't know how to get information*

*Communication has to be a bit more structured and more aligned with our sort of business display that a lot more formal than it was in those early stages*

*So monitoring people is about for me, it's about listening and coordinating and asking them, What do you need to reach our goals. I will tell you the goals, or we will call, we will discuss and we'll work, about the goals. And once we have the goals. As a manager, as a sales manager, whatever. Our job is to give them the tools to reach the goal. To listen to people and take their opinion in consideration. It's important.*

### 5.8.3 Empowerment

Empowering teams in this context complements the discussion in section 5.5.1 about subsidiary autonomy, where subsidiaries felt empowered due to their autonomy but were concerned about losing that autonomy with recent centralization efforts. Empowering people factors emerged from the code group highlighting that people will adapt if they know the purpose of change. Empowerment also dovetails with section 5.4.1.2 where participants stated that if teams were aligned in purpose and values then they were more likely to adapt. Empowerment was also expressed in section 5.4.2 on leadership briefing on the points of leaders having to lead people and empower them through communication, understanding and collaboration.

### 5.9 Findings from theoretical category: team adaptive outcomes

**Table 13.** Team adaptive outcomes theoretical categories and themes

Theoretical categories from researcher's adapted conceptual model	Theoretical sub-categories	Themes	Additional categories from research	Themes	Adaptive stimulus code (uncertainty)	Non-routine context from research
<i>Team adaptive outcomes</i>	Team adaptability	Adaptability: We are adaptive				
	Decision effectiveness	Expectations from leadership: quicker decision making and more executives to make decisions				
	Creativity and Innovation	Varying uncertainties: need to adapt through innovation				

#### 5.9.1 Team adaptability

Team adaptability in this context explains the outcomes of the adaptation process. One participant stated that people from subsidiaries may leave due to inability to adapt to current transformations, “people in the subsidiaries that have to leave the company because they never will adapt to the new system”. This was the experience in the past from at least 2 subsidiaries and one HQ participant interviewed, that people left the company if they could not adapt or did not agree with the transformations.

In general, subsidiaries explained that because of the pandemic, having been forced to become more adaptable, that people are now generally more open to change. However, to reiterate, some participants argued that this is so because people did not have a choice, and

for non-routine contexts that are specific to the MNC, people will resist as they have a choice.

The overall perspective of the subsidiaries is that HQ is aware that we need to adapt but there is still a vast amount of work to be done to take more risks and to become more agile and adaptive.

*That's why, and the director levels, everybody's open to the changes, as always, but in general terms, most people are ready to do changes, and many changes are coming, the subsidiaries are changing*

### 5.9.2 Decision effectiveness

The consensus from subsidiaries was that they were able to make timely decisions at subsidiary level, however, felt that HQ took too long to make decisions to be able to remain agile. It was also stated that regional executives should be able to make more higher-level decisions to increase agility and harness lucrative business opportunities as participants have already seen the value of the regional executives as explained in section 5.4.4 in organizational structure.

*I think they should be allowed to make some decisions*

*I see it as beneficial; I don't know if it's agile or at least now.*

One participant emphasised that other management levels needed to assist the regional executives in strategic contexts.

*We cannot only put the responsibility on deliverables or their shoulders. Okay, let's help them to see the other possibilities that we have. And I think the ones that are feeling, the ones that are seeing, the ones that are having this strategical view, we need to continuously express ourselves.*

### 5.9.3 Creativity and innovation

The metanalysis by Maynard et al. (2020) showed that teams that were able to create novel products or concepts had a higher capacity to adapt. Creativity and innovation were highlighted by all participants in both subsidiaries and HQ to remain competitive in the market especially under industry and environmental uncertainties. The perspective was that the MNC has great people and great products which is the reason for their success, but also felt that it was time to become a lot more innovative to stay relevant.

Participants spoke of the acquisition of services to complement products, which is something the MNC has already done and applauded leadership for the strategic move. Opportunities were also mentioned in leadership having to look backward integrating into supply chains.

*And for me, this merger and acquisition, going with this inorganic growth company, combining our product with services, and taking our distribution chain is key a point to continue being innovative, generating new solutions that are very different from what is in the market is the other key point.*

*We need to build a real differentiation, and I see an opportunity here to, to make this change the mains ones. We need to do to make step by step.*

One participant from HQ stated that innovation need the right people and the MNC did not have the right people in that area.

#### 5.10 Conclusion of results

The results initially described high level insights from the individual subsidiaries and HQ which showed overlapping topics of interest to some degree. The results then took the pattern of aligning with the table depicting theoretical categories, sub-categories, and new theoretical categories that emerged from the data.

The non-routine contexts highlighted by the participants were mostly related to firm and industry uncertainties which served as triggers to non-routine contexts. This was either related to the centralization and global alignment transformation drive from HQ or related to the dynamics in the market which requires the MNC to adapt soon. Although COVID-19 as a non-routine context was discussed in detail during interviews, there were no significant negative findings from it as a non-routine context on team adaptation.

In outlining the results related to the various theoretical categories, it was apparent that the interviews could be linked to the conceptual model as participants spoke of the inputs, mediators, and outcomes of the adaptation process. A key topic of discussion was the organizational climate, culture, and organizational structure and how it influenced the adaptability of teams. Team level and individual level factors overlapped with characteristics, however, on team level factors, the importance of leadership was emphasized for teams' adaptability.

The subjects with the most insight was on the people factor and communication, both subsidiaries and HQ highlighted the importance of effective communication, however, some

subsidiaries expressed that there was lack of communication from HQ and had concerns in line with adaptability.

New theoretical categories that emerged from the research was, organizational structure, internal and external relationships, people focus, prioritization and the constructs added to the conceptual model were subsidiary autonomy and HQ-subsiary tensions. Findings on the latter two constructs showed that current subsidiary autonomy was healthy, and subsidiaries were agile, however, with the new centralization efforts, subsidiaries cautioned against increased centralization. Whilst the HQ-subsiary tensions were not exhaustive, some issues that emerged was the lack of communication and a safe psychological space to be able to express opinions and opposing thoughts.

The constructs highlighted in the literature review were explained as part of the table 6 in this chapter. The constructs were, team interaction patterns (5.7), non-routine contexts (5.4 and 5.5), uncertainty (5.4 and 5.5), team adaptation process (5.7), organization climate (5.4), subsidiary autonomy (5.5.1) and HQ-subsiary tensions (5.4.3).

The discussion of the results in relation to literature are further outlined in chapter 6.

## Chapter 6 Discussion

### 6. Discussion

This chapter discusses the four high level theoretical categories, three new theoretical categories and the corresponding sub-categories in the same pattern as chapter 5. These include, organizational level factors, team level factors, individual level factors, team adaptation process, team mediators and team adaptation outcomes. The core findings are discussed as per researcher's adapted conceptual model that was explained in the literature review (chapter 2) and other review points. A discussion of these various points leads to addressing the research questions in each section.

#### 6.1 Discussion of results on organizational level factors

An organization has been described "as a complex adaptive system that interacts with its environment, storing the cumulative results of its interactions in routines" (Kilduff, 1992, p. 133). It was therefore a necessity to examine organizational level factors as part of complex adaptive systems theory.

For organizations to adapt to dynamic contexts they must respond timeously, however, organizational factors, such as structure can be a constraint to creativity and innovation if rigid structures exist (Levinthal & March, 1993). Apart from understanding the resilience of teams or their ability to adapt, it is critical that the impact of the organizational climate (environment), culture and structure are understood. As, it could be that teams are in fact adaptable, but if the environment is not conducive to adaptation, then it can be a constraint to teams.

##### 6.1.1 Organizational transformation

Organizational transformation may include structural changes, change in strategy, development of new products, capabilities and even interaction patterns (Kate et al., 2012; Clément & Rivera, 2017). From this embedded case study of the MNC, it can be said based on the above references that the MNC was undergoing organizational transformation at the time of the research.

From the interviews, it was determined that the organization had undergone structural changes at HQ level in the recent years, and at the time of the research, was undergoing a new global strategic orientation on customer focus approach, increased centralization and to have global alignment in aspects such as R&D. These initiatives can be defined as organizational transformation. However, considering that this transformation creates uncertainty, and it is out of the normal routine of the operation of the company, it triggers a non-routine context for teams. It was positive to note that all transformation efforts were

welcomed with ease, except for centralization efforts which sparked noticeable resistance from selected subsidiaries. This however links to subsidiary autonomy which will be discussed in the sections that follow. Subsidiary participants and HQ were equally positive about transformation, except one subsidiary made mention that more communication and directives were needed, not to a detailed level but guidelines for subsidiaries.

Clément & Rivera (2017), called for future research on understanding if transformation is primarily a reactive approach after adaptability limit was reached or can it also be a proactive, anticipatory approach before reaching the adaptability limit and which one is more likely to occur. It can be said that from the data that emerged from this study, it is a proactive approach from the MNC.

The results from this study on organizational transformation concludes that even though non-routine contexts are created through transformation, subsidiaries supported the initiative if they do not see direct threats to the subsidiary and see the benefits thereof. There was hesitation around centralization however, as centralization may reduce local responsiveness of subsidiaries. In general, literature implies that subsidiaries require autonomy for national responsiveness, in line with market preferences, legislative factors and general host country demands (Young & Tavares, 2004). Whilst it is understood that this transformation needs to occur, it is questionable if blanket approaches should be applied across the subsidiaries, as within organizational level factors, many factors vary across the subsidiaries, eg, culture and different leaders which is further discussed below in 6.2.1.

### 6.1.2 Aligning purpose and values

In terms of purpose and values, in speaking to the participants, the MNC's values are non-negotiable within the MNC and having an overall purpose as an MNC is important to take a strong global position in the market with a unified voice. A shared vision is synonymous with having an aligned purpose. A shared vision and common values are described as a way of bonding that helps various components of the greater company to integrate and share resources, and it develops trusting relationships (Expósito-Langa, 2015). This was an important theme that emerged from the data which all participants felt that a shared vision and common values lacked in the MNC, and subsidiaries urged HQ to take responsibility in this regard to which HQ was in alignment with.

In a study conducted by Yu et al. (2019), it was shown that the stronger the aligned and shared vision between subsidiaries and HQ, the better the performance of the subsidiary, based on the positive impact of HQ attention on the subsidiary. When subsidiaries do not have a shared

vision, they lack the solid obligation to performance expectations from HQ. It was stated that due to HQ attention being top-down, it allows HQ to retain authority, influence and will be able to motivate subsidiaries (Yu et al., 2019). Considering this recent published data, it will be valuable for HQ to invest in creating alignment in purpose and values, as the results showed from both HQ and subsidiaries that this was a void in the MNC.

A HQ participant stated that “if you have directions, values and purpose, you don’t need to be controlling people all the time”, this ties in with Yu et al. (2019) of having influence and authority through shared vision enabling subsidiaries to want to perform better.

### 6.1.3 Culture and psychological safety

Culture is a pivotal resource that can be used by organizations to swiftly adapt to dynamic environments for long term survivability (Costanza, 2016). This statement is interesting to note considering transformation with various tangible facets were described as resources to adapt. Culture has been defined as a set of beliefs, interaction patterns, shared values, that acts integrative mechanism and guides the behaviour of an organization (Giberson et al., 2009; Constanza, 2016).

Three subsidiaries shared their in-depth experiences on culture within a subsidiary context, out of the three, only one was positive. The one subsidiary embarked on creating a non-hierarchical culture in recent years, by creating a more inclusive climate, aiming to establish leadership qualities at different levels of the organization. The outcome of that initiative initially had some negative repercussions in that some team members had left, however, at the time of this research, the participant stated that they have been seeing the rewards of this change in that teams are now more flexible, agile, and adaptive. Costanza (2016) explained that a culture that guides behaviours in line with supporting responses and having processes in place allows organizations to be more adaptable, and that an adaptable culture trait may explain why some organizations survive and some not in dynamic environments.

The remaining two subsidiaries explained that not taking the culture factor into consideration resulted in significantly negative outcomes like distrust and increased turnover rate. However, the contexts were different, the one was related to a culture misfit of a senior manager, and the other was related to transformative processes being instilled from HQ without understanding local culture. Research by Giberson et al. (2009) corroborated this finding in providing evidence that a leader’s personality and values affected the culture of the organizations they lead and affects retention of people, behaviours, and interaction patterns.

It was confirmed by a HQ participant that the culture within HQ is a hierarchical culture, and the

participant agreed with the subsidiary participants in that it had a negative effect on the outcomes of business initiatives and ability to adapt. It was however expressed that HQ is working at creating a culture people can share ideas, feel safe cultivate an adaptive culture as opposed to hierarchal culture. Psychological safety was a theme that emerged from the results and is critical for people to overcome learning and change in dynamic environments on an interpersonal level (Edmondson et al., 2016) and it becomes especially important in situations with high complexities like non-routine situations explained in chapter 5. It was expressed from the subsidiaries that there was a need for a more “mature” environment to be able to express views and challenge the status quo without being afraid of the outcome thereof. This is a key cue for HQ to take into consideration when forging an adaptive culture for non-routine contexts. Lei et al. (2016), who studied team interactions on adaptive performance, reported that there was a perceived level of higher psychological safety, teams tend to have more participative interactions and share information. Hoogeboom & Wilderom (2020), in a similar study, showed that when teams had higher levels of information sharing with participative interaction patterns, they were more effective. It is informative to observe how the organization climate of an organization has a profound effect on team effectiveness and adaptive performance.

In summary, these findings have added understanding of the future opportunity factors being organization climate, called for by Maynard et al. (2015).

#### 6.1.4 Leadership briefing

Leadership briefing stems from the conceptual model presented by Christian et al. (2017), which is based on the leader providing information and knowledge which helps a team to adapt. Whilst Christian et al. (2017) envisaged that leader briefing can result in more effective adaptation, their quantitative results showed moderate correlation to team processes and team adaptive performance. However, the subsidiaries were of the perspective that leadership, not only at HQ were responsible for taking the lead in transformation such as culture changes. There was also a consensus of “seeing is believing” on a leadership level and called for leaders to first improve their adaptation behaviour.

*“So, I think the first change must be on the leadership, and that is something that I really miss in this organization”.*

#### 6.1.5 HQ-subsidiary tensions

The results from a paper by Schotter & Beamish (2011) explicitly corroborated the findings

from this research in 6.1.5. These authors observed that conflict between HQ and subsidiaries occurred because of perception gaps and misalignment of information sharing. The lack of involvement from subsidiaries in strategy development as an example can create conflict, whilst this is stated, too much of involvement may be counterproductive as goals are sometimes incompatible between HQ and subsidiaries (Schotter & Beamish, 2011).

Results from this research revealed that tensions were only recently surfacing due to centralization efforts from HQ. In the past, subsidiaries had full autonomy as confirmed by participants, however, this is starting to change to be more centralized. Schotter & Beamish (2011) confirmed this in their paper stating that “conflict was most prevalent when “HQ-initiative threatened to increase a subsidiary’s dependency on headquarters”. The local-global relationship is of a dynamic nature and has inherent tensions and conflict related to it (Kilduff, 1992; Buckley and Ghauri, 2004; Schotter & Beamish, 2017). Schotter & Beamish highlight this relationship is of benefit to the MNC where resources are exploited from a global viewpoint and local responsiveness from a subsidiary perspective. These aforementioned researcher’s finding showed that boundary spanners, which are individuals in this context who facilitate relationships between HQ and subsidiaries, are the most effective tools in managing dynamics of the local-global context and arising conflict. This finding explains the reason why the recent organizational structure with regional executives, who act as boundary spanners, has been working well for the MNC as described in chapter 5, 5.5.4. by some participants as quoted below.

#### 6.1.6 Organizational structure

The results from this study showed that organizational structure was important for team adaptation and subsidiary participants explained that it was an antecedent to becoming adaptive. As explained above in 6.1.5, with the regional executives acting as boundary spanners, teams felt that they have become more agile with a higher level of alignment to HQ.

“Strategy-structure” fit is an internal fit where an organization aligns its structure to support strategy, an external fit is the alignment of strategy and the environment of the organization (Aleksić & Jelavić, 2017).

*“I’ve seen most of them are happy with this new structure and we need this new connection between headquarters and subsidiaries and this kind of transformation in a multinational company”.*

Many subsidiary participants were confident with the strategy-structure fit for internal fit. However, external fit between strategy and external environment was described as nascent.

Some subsidiary participants were hopeful for the future of the approach taken to hire new people and create a global marketing team. *Okay, I think now “new person” and team will reach the customer focus transformation. They will do a good job here, they're preparing company.*

Xu et al. (2006) explained that a global marketing strategy in line with standardization must be aligned with a matching structure. This standardization generally occurs at HQ and is implemented at subsidiary level. The findings from Xu et al. (2006) showed that there is a positive correlation between strategy, structure, processes and a MNC's performance and that implementing strategy without structure does not realise any benefits.

HQ participants echoed the importance of structure for meeting dynamic market needs, they explained that the HQ leadership team were working with consultants over the last two-year period and core teams comprising of directors to ensure internal and external fit.

A quantitative study conducted by Aleksić and Jelavić (2017), proved that organizations that had either partial or complete fit, resulted in statistically higher levels of performance, whilst organizations with no fit showed poor performance. It was interesting to note that there were no statistical differences between performance in partial or complete fit, which can translate into better performance for the MNC considering they are currently achieving partial fit being internal strategy-structure.

The results from the study regarding organizational structure is congruent to that of literature in terms of importance for adaptive performance.

#### 6.1.7 Non-routine contexts

Research on team adaptive performance posits that an adaptation process is initiated when the task context changes, this new or unforeseen context is seen as a non-routine context, (Santos et al., 2021). The nature of non-routine contexts is not discussed in detail in this chapter as it has been discussed in the literature review. The non-routine context serves as the task context in this study which has been discussed from results onwards. For this research regarding the MNC, the triggers were firm and industry uncertainties which created the non-routine contexts. The first being the internal transformation process and second being the need to adapt to changing market dynamics as described previously.

## 6.2 Discussion of results on team level factors

### 6.2.1 Subsidiary autonomy

As discussed in the literature review, the most recent paper by Galeilate et al. (2020) conducting meta-analysis on subsidiary autonomy showed that in general research has shown that subsidiary autonomy is positively correlated to performance, however, they also showed that a subsidiary can still be autonomous whilst being integrated with HQ initiatives.

The results showed that up until recently, subsidiaries in the MNC had full autonomy due to being assigned by the previous leadership in context of the MNC size in those years. However, as the MNC grew, autonomy was assumed in developing subsidiaries. According to the research findings, this has resulted in a lack of standardization and global alignment.

Now that dependency of the subsidiaries on HQ is increasing, there a feeling of uneasiness amongst subsidiaries on how far this centralization will extend to.

*We are structuring our global portfolios, working with global products and we can share experiences I think, but today autonomy, is a little bit less, yeah.*

Whilst HQ has expressed that they are cognisant of this balance of independency required it would be critical for them to take the following into consideration for their centralization efforts.

- a) During uncertainties, it is best to have a non-hierarchical structure as it results in a higher level of responsiveness for subsidiaries to innovate to create competitive advantage (Kawai & Strange, 2014).
- b) Increased autonomy in stable and predictable environments is a costly and inefficient arrangement as it is there are lesser coordination costs associated with HQ and the benefits of increased autonomy are not fully applicable in stable environments (Galeilate et al., 2020).
- c) Increased autonomy is beneficial more so in unstable, unpredictable markets, (Galeilate et al., 2020), such as emerging markets, allowing subsidiaries to respond quicker.
- d) The management of an MNC through system-wide standardized routines is laden with uncertainty (Killduff, 1992).
- e) It is important to define what levels of autonomy are associated with the different roles (Young & Tavares, 2004).

- f) Knowledge exchange or information sharing is a mitigating mechanism for HQ to use to integrate subsidiaries into HQ ways whilst still having the subsidiary remain autonomous in key initiatives (Galeilate et al., 2020).
- g) Subsidiaries that exercise high levels of autonomy and concurrently receive high levels of attention result in high performance (Ambos & Birkenshaw, 2010).

Whilst the above points are for related to HQ to deliberate upon, subsidiaries must also be cognisant of the objectives of the subsidiary. The subsidiary objectives are not only to impact host country economy, and managers do not necessarily focus on host country interests when making decisions (Young & Taveres, 2004). Autonomy needs to be defined in terms of value adding initiatives, such as, production or R&D, and autonomy is different to authority, in that whilst a subsidiary may be autonomous, it's authority may have defined limits to what it can do in a host country (Young and Taveres, 2004). Subsidiaries must also note that autonomy in itself is insufficient, it requires many other facets to create competitive advantage such as capabilities, resources, effective communication and subsidiary managers with an entrepreneurial mindset, amongst a few (Young & Taveres, 2004). These points address in this section can inspire both HQ and subsidiaries to have transparent conversations about the reducing level of autonomy, with defined limits and reasons thereof. Whilst this study reveals that subsidiaries do feel that they are losing some level of autonomy, the uncertainty is not healthy and should be mitigated by communication.

### 6.2.2 Team resilience and adaptability

Maynard et al. (2015) explained that understanding of team resilience is limited in team adaptation studies and is important for teams to be able to withstand circumstances caused by unforeseen triggers. In this study, this sub-category could only be understood by participants perspectives through a qualitative study in the context of their subsidiaries and HQ.

Research suggests that teams that are resilient are more likely to have higher levels of agility and productivity and are also more innovative during disruptive situations (Heilmann et al., 2018). Heilmann et al. (2018) stated that resilience can be gained through education, work experience, knowledge pertaining to the company or task and personality traits.

The findings of this research point to an agreement from participants that people can develop traits to become more resilient. However, there were two participants who felt that you cannot "train" people into more resilient personalities.

*In business, in professional factors, you can train the team, you can train everybody, but you cannot train personality.*

In line with team adaptability complementing team resilience, Santos et al. (2021) suggested that training be coupled with team development exercises to improve team adaptive performance.

It is interesting to note all subsidiaries and HQ reported high levels of team resilience in the context of COVID-19 but did not speak with such high confidence in the teams when referring to industry or firm uncertainties. As discussed in the findings chapter, when asked as to why this was so, participants alluded to people being resilient and adaptive when there is no other choice. Whilst reasons for team adaptability during COVID-19 was not discussed by the participants in detail, the results provided perspective that it did not have a major impact on the teams from a performance perspective.

Although all participants reported good levels of adaptability to COVID-19, when interviewed about team adaptability, results varied when the task context was changed to internal MNC tasks such as adapting to the transformation initiative or externally, to dynamic markets. In this case, subsidiary participants stated that HQ needed to improve team adaptability, whilst HQ argued that they are aware they the MNC needs to adapt holistically especially to disruptions occurring in the market.

In the conceptual model by Maynard et al. (2015), team adaptability in this context is described as an input at team level factors and not an outcome. Team adaptability is linked to individual level factors where the abilities, experiences, personality to name a view are factors considered.

One subsidiary reported that team adaptability was poor in past years as a transformation took place in that subsidiary, the participant attributed it to HQ not fully understanding the context of the subsidiary, not understanding culture, and not having a measured approach to change.

Another subsidiary recently went through change in leadership and a high employee turnover rate, however, the subsidiary reported good adaptive performance and financial performance despite the disruptive changes. The successful adaptability was attributed to the business being built on internal and external relationships, trust, and effective communication, as well as replacing a weak leader. A participant from this study explained it by stating that relationships whether internal or external cannot be transactional, it cannot be based on the exchange of product for money, or knowledge from employees for money. The Participant

explained that relationships should be based on what was referred to as “different, shapes and configurations”, relationships had to be built on trust for example. These emotional bonds with the remaining employees and clients resulted in even better performance after the uncertainty.

*Let me explain to you, this organization has a business customer, you have product, and they have the money. If your relationship is based only on this, it's very easy to break but if you can create different shapes of the relationship, then let's say you have a disagreement on an order, you still have that good relationship in your favour.*

The same analogy above was used to describe internal relationships.

The feeling of uncertainty and fear prior to finding a new leader was however relayed by another participant from that subsidiary, as uncomfortable and laden with uncertainties as the team needed a leader for direction, “*Yeah, I was really under psychological pressure, 100%. Yeah, then the problem is, so many people are looking to you and you have no power, it was terrible*”.

Maynard et al. (2015) reported as mentioned prior, that for team adaptability, certain characteristics are important such as social capital, previous work experiences and cognitive ability, however, in the two embedded units of analyses, it is evident that organizational input factors such as culture, psychological safety and leadership briefing had a pronounced effect on team adaptability in the first embedded unit of analysis as opposed to team characteristics. With Maynard et al. (2015) calling for future research on organizational level factors on team adaptability, this finding is valuable. Frick et al. (2018), explained that if a team is unable to act as needed when the trigger or cue is recognized then and flex their cognitive processes then adaptation will be unsuccessful.

Furthermore, the second embedded unit of analysis, referring to the subsidiary with a positive adaptive outcome was due to team level factors, being relationships, and other interpersonal attributes from the actual team adaptation process, eg. Communication.

In summary, these findings have added understanding of the future opportunity factors being team resilience and team adaptability, called for by Maynard et al. (2015).

### 6.2.3 Interdependence and relationships

Burke et al. (2006) explained that individuals were interdependent on each other for team

performance and engage in similar behaviour for a collective outcome from individual efforts. Furthermore, these researchers described team adaptive performance as members engaging in various types and amounts of team interactions and tasks for an adaptive performance. Therefore, it is noted that heterogeneous interaction patterns are related by default to team adaptation process.

Whilst limited explicit in-depth data emerged from the interviews regarding interdependence, the construct of interdependence within complex systems is important. The interdependence requirement for teams to remain effective is important as teams compensate by depending on their team members as part of adaptive behaviour (Burke et al., 2006). However, subsidiaries did speak more so about HQ from an interdependence point of view.

From an interdependence perspective, most subsidiaries reported good interactions with each other and requested that HQ create opportunities to further engage on a personal level. However, one subsidiary reported as per below quotation.

*It's a friendly interaction, and we want the best for each other, but we do not do things together, you know, a bigger sense it's more each one taking care of their own. In all challenges and we only meet to report. So, I believe we can do better on that.*

Two subsidiaries relayed that the subsidiary that provides the most support to them was in fact the subsidiary that the above-mentioned participant belongs to. In addition, most subsidiaries stated that due to COVID-19 they missed interactions with their colleagues and called for HQ to arrange personal meetings.

### 6.3 Discussion of results on individual level factors

Whilst this study is framed in the context of teams, it is most likely that a team's adaptability is drawn from individual level factors (Maynard et al., 2015), hence, outlined below is a discussion on members characteristics and adaptability according to participants experiences and interpretations of what traits are required for adaptability.

Subsidiaries and HQ shared similar views on individual characteristics required for team adaptability. These characteristics included a collaborative mindset, which ties in with literature proving that teams made up of individuals engaging in participative interaction patterns translated into increased team effectiveness and adaptiveness (Lei et al., 2016; Hoogeboom & Wilderom, 2020). Amongst other traits were transparency and trust. Edmondson et al. (2003) stated that trust is a critical input to interpersonal climate and that there is a growing interest on understanding the impact of trust on performance. Other

characteristics highlighted from the interviews were honest, having a practical outlook, patience, and an open mindset. Maynard et al. (2015) reported that characteristics aligned with the ability to maintain calmness and composure, an enthusiastic attitude, flexibility and, including open-mindedness. It was stated that these characteristics translated into teams being more adaptable. It is refreshing to note that experiences and perspectives of individuals in a MNC align with that of literature.

In summary, these findings have added understanding of the future opportunity factors being member adaptability, called for by Maynard et al. (2015).

### 6.3.1 Importance of people

Subsidiaries and HQ were increasingly vocal about the MNC having to pay more attention on the people or HR factor for team adaptive performance. One participant who spoke of experience in having undergone a turbulent adaptive process as explained 6.2.2 openly stated that “a lot of people underestimate human resources in a business, and the power of human resources, especially going through transformation, It's really organizational development”

Participants felt strongly about understanding people first, communicate the reason for change and include them as part of the journey as opposed to give out directives. Edmondson et al. (2003) explained that psychological safety does not necessarily mean that an environment is easy and cosy, nor does it imply you have friends that you have interdependencies with, but rather it allows for a productive interaction that allows people to adapt early on without focussing on self-protection and decreases anxiety. This was an interesting point which complements the points on subsidiary autonomy and some subsidiaries feeling anxious around the centralization efforts.

### 6.4 Discussion of results on team adaptation process

Maynard et al. (2015) explains that the actual team adaptation process entails actions which is where task-based adaptations occur, such as focus on accomplishing a task, the monitoring of progress and coordination with team members. Interpersonal processes encompass is salient and related to conflict management and motivational factors. The transitional process is essentially preparing for the task, it includes analysis, strategizing and setting goals, and is an iterative process. Rico et al. (2020) stated that there is a research gap in understating the role of transition and interpersonal process within the team adaptation process. Maynard et al. (2015) suggested that this gap could be addressed by the identification of factors indicating which process should be adjusted and the type and severity of the adaptive stimulus which

caused the need for adaptation. Based on the type of trigger, the team will have to either focus on the actions process (task-based and executing the task) or on the interpersonal process (team-based) which is related to conflict management and motivation.

The results from this study have highlighted there were two types of triggers related to firm uncertainty and industry uncertainty. All participants discussed non-routine contexts within the MNC in the context of internal transformation at the time of the research. However, participants also discussed an industry level uncertainty causing a non-routine context. Whilst these were discussed separately especially by subsidiaries, they are in fact very much intertwined considering the HQ results.

Firstly, the centralization efforts by HQ as well as the global alignment initiatives are to address the uncertainties described by the subsidiaries relating to changing market dynamics. As discussed in the results, HQ aims to consolidate efforts and adapt to these market dynamics, but unfortunately it may be at the expense of subsidiaries losing some level of independence. Hence, the firm uncertainty trigger relating to conflict management and industry uncertainty trigger are addressed separately as each one relates to the interpersonal process and actions process, respectively.

However, before addressing the action and interpersonal process, it can be appreciated that the results serve as evidence to state that the “preparing for the task” or transition phase has been addressed to an appreciable extent. Prioritization of projects and business initiatives, however, was a key point underscored by HQ and subsidiaries, emphasizing the need for strategizing which forms part of the transition process.

As discussed, HQ has addressed the need for improved organizational structure and has thus created boundary spanners being the regional executives to better coordinate efforts between subsidiaries and HQ. There has been sensing from HQ to determine that adaptation needs to occur, subsidiaries have acknowledged this accordingly. Evidence exists in first order codes outlined in Appendix A. These codes were denoted as, “Alignment in global strategy”, “customer focus transformation”, “HQ is aware of the need to adapt”, “HQ is aware of the need to provide guidance” and “transformational change”.

Whilst subsidiaries have agreed and some even commended HQ for these initiatives, there was some discomfort with centralization specifically, first order codes (Appendix A) denoting this were “more centralization” and “more structure and processes”.

Whilst transition has been addressed as in, the MNC is preparing for the task at hand, the

MNC should be cautioned that this is an iterative process according to Maynard et al. (2015) and should therefore be revisited. Furthermore, the MNC should be cautioned on the finding of Lei et al. (2016), where it was evident that too much planning resulted in a lower team adaptability with diminishing effectiveness after a certain point, resulting in a curvilinear pattern. It is also interesting to note that this pattern was observed in routine contexts, it would be valuable to further understand if this pattern changes dynamic situations, more work on this was called for by Lei et al. (2016).

Christian et al. (2017) stated that first understanding the trigger or adaptive stimulus is critical to understanding and approaching the type of adaptation. This was the reason why the adaptive stimulus component was added to the conceptual model (Fig 6) was adapted by the author of this research. Understanding this allows for the correct guidance as to whether more focus must be placed on actions or interpersonal processes.

Therefore, according to the suggestion above from Maynard et al. (2015), for the firm uncertainty relating to centralization, more focus should be placed by HQ on the interpersonal process in the team adaptation process. Whilst the subsidiaries are only starting to feel the centralization effects with uneasiness, this could result in serious conflict or tension if not managed properly. HQ should also take note of the discussion points in 6.2.1 regarding subsidiary autonomy when focusing on interpersonal processes.

For the industry uncertainty and global alignment and transformational efforts into customer focus, HQ should focus more on the task-based process being actions process. Subsidiaries were clear in what was lacking from HQ regarding actions, regarding coordination with team members, monitoring and accomplishing this objective. First order codes (Appendix A) denoting the calls from subsidiaries and even some members of HQ were, "Collaboration, "HQ to connect subsidiaries and frequent interactions", "leadership to take responsibility", "more personal interactions", "we need to adapt and become more agile" and "regional executives to make more decisions".

The findings suggest that more focus should be placed on the actions process as conversations led to actional points in line with the above codes, and mostly emphasizing the need for being agile in executing strategy. Direct quotes are not included in this section as participants spoke of specifics on strategy hence for sake of confidentiality of strategies and not divulging the MNC, not detail is provided, however, it can be stated that distinctions between local strategy and global strategy were highlighted, and many participants spoke of strategy communication and alignment on a product and technical level.

It is valuable to discover that selecting subsidiary autonomy as part of the construct within the MNC context has fitted into the team adaptation process so aptly and will be of benefit to MNC studies and team adaptation which is currently limited as explained in the introduction and literature review.

Maynard et al. (2015) also listed transition and interpersonal processes as future opportunities, meaning that future research opportunities lie in these processes. Hence, these findings have added more understanding on these processes through a real-life embedded case study.

Having discussed the need for focus on the interpersonal and actions process, the way in which the adaptation process is applied is based on team mediators (Rico et al., 2020), hence it is discussed in the next section.

### 6.5 Discussion of results on team mediators

Team mediators that were chosen as part of this study were communication, coordination and empowerment which was identified as a future opportunity by Maynard et al. (2015).

Empowerment of people was an interesting theme in this study, where all participants communicated on empowering people with knowledge regarding the reasons for adaptation and the adaptation process, alluding to this was not being fully realised in the MNC. Subsidiary participants also highlighted that people can and should be upskilled to better cope with adaptation processes. Results in this mediator is however limited and Maynard et al. (2015) stated they were only aware of one study that related empowerment to adaptiveness, hence, called for more research. Apart from the two examples mentioned from the interview, other participants did not focus on the topic significantly.

As emphasized in the research findings chapter, communication was the theme which had the highest number of codes attached to it and was elaborated on by all participants through all processes. Codes related to communication were related to the information sharing, transparency, importance of communication and lack of communication.

Zijlstra et al. (2012) conveyed that effective communication is related to the frequency, length and complexity of communication patterns. Hoogeboom and Wilderom (2020) based their main construct on information sharing in complex adaptive systems theory. The results showed that participative team interaction patterns resulted in higher levels of information sharing which translated into higher team effectiveness. Therefore, information sharing, or effective communication is a critical mediator for team adaptive outcomes. It is therefore critical for HQ to take into consideration the quality, frequency, length, and complexity of

communication when addressing the interpersonal processes.

Results from Zijlstra et al. (2012) revealed that effective teams established patterns of communication early in their interactions and patterns were more stable than ineffective teams. It was also interesting to note from the aforementioned study that effective teams showed qualitatively different interactions to ineffective teams, whilst quantitatively the results did not differ. These results may be a reflection as to Hooigeboom and Wilderom (2020), calling for qualitative studies considering that interactions in a complex adaptive system is non-linear.

With subsidiary participants having highlighted the lack of communication from HQ during non-routine contexts, this is an important point to take forward for HQ with published literature showing a negative correlation between lack of communication and team effectiveness and adaptability.

*Then, I believe, the biggest problem is again the communication, we are giving no communication. Okay. We believe that sometimes when we have some email from headquarters, it's the communication, I don't think it's the communication sorry, even you and me can imagine that how many times we have a chance to talk as a business level with each other and sharing experience.*

Research by Barth et al. (2015) showed that teams tended to have higher levels of discussion in complex settings as opposed to non-complex settings and that decentralized communication was more effective as interactions must be flexible and mutual, this finding suggests that in a non-routine context as highlighted in this MNC study, communication frequency and quality of communication must be addressed. This points to calls from the subsidiaries for HQ to coordinate opportunities for subsidiaries more frequently and that personal interactions were critical as explained in findings.

Burke et al. (2006), explained that the requirement for a task context change, or a new plan, such as centralization efforts, communication and coordination is critical for success. One of the dependencies that was stated by Burke et al. (2006) that dictates the extent of success is communication.

All these factors explained lead to the team adaptive outcomes phase which is explained below.

## 6.6 Discussion of results on team adaptive outcomes

Team adaptive outcomes are the consequences of the team adaptive process (Maynard et al., 2015). Team adaptive outcomes is also referred to as team performance or team effectiveness in it being the desired outcome. Hoogeboom and Wilderom (2020) described their outcome as team effectiveness whilst Lei et al. (2016) described their outcome as team adaptiveness, essentially the outcomes are to have improved team adaptive performance to be able to meet the requirements of dynamic situations.

The points discussed under the team adaptive outcomes are team performance, decision effectiveness and creativity or innovation. Whilst the MNC in its entirety amid an adaption process during the time of the study, it will be challenging to predict the practical outcomes, however, it can be discussed based on theory and the findings of the results. Furthermore, there were two embedded unit of analyses discussed in section 6.2.2, where one subsidiary reported poor team performance and decision effectiveness due to the lack of understanding culture, not understanding the environment context within which the subsidiary operates, and not having a measured approach to change. The measured approach to change could have been addressed through an iterative process of the transition process explained above in section 6.4, and the actions process for executing goals in a measured approach instead of a full transformational haul over, and interpersonal processes could be a tool to manage conflict in culture between HQ and the subsidiary. Team mediators would also play a key role in having had a positive team performance outcome, this is envisaged based on the results of Lei et al. (2016). Lei et al. (2020) showed that patterned interaction patterns (team mediators) and in-process planning (transition process in team adaptive process), had positive effects on team adaptiveness, however, too much planning also affected the actions process after too much of in-process planning. Frick et al. (2018) also stated that other mediators such as coordination and effective planning from the transition phase will result in enhanced team performance.

Hoogeboom and Wilderom (2020) showed that effective communication as a mediator increased team effectiveness as an outcome.

Innovation was a key theme that emerged from the data with a consensus from subsidiaries that the organization needed to innovate more products at a faster pace to meet the demand on the dynamic market. The reason for creativity being a part of the conceptual model was due to Maynard et al. (2015) stating that organizations with originality and novel products were more likely to be adaptive to its context. This was explained in section 5.9.3.

## 6.7 Summary

The theoretical categories servings as inputs into the team adaptation process was key in understanding its impact on overall team adaptive outcomes. The discussion on organizational inputs appeared to be congruent with published literature in that the antecedents being aligned purpose and values, culture, creating psychological safety and leadership briefing were all validated against literature as being important for team adaptive performance.

Organizational level factors seemed to have the biggest impact on the team adaptation process as an adaptive stimulus was derived from the MNC. One stimulus being external to the MNC of triggering a non-routine context to adapt to dynamic markets, and the other being internal organizational transformation. The MNC was being proactive in organizational transformation according to meeting the question of Clément & Rivera (2017), do organizations adopt transformation as a reactive or proactive approach? The changes in organizational structure in the MNC appeared to be a proactive approach. The two non-routine contexts were somewhat intertwined as some organizational transformation efforts that denoted as a firm uncertainty, were put in place to adequately meet the dynamic markets which is denoted as the industry uncertainty. Identifying and understanding the triggers of the non-routine contexts and understanding the non-routine contexts thereof allows for improvement in the process (Maynard et al. 2020) and therefore of value to the MNC. It was only HQ-subsidary tensions that were less pronounced in this study, as due to previous full autonomy of subsidiaries, little dependence on HQ occurred, hence little to no tension existed.

However, due to recent changes of increasing centralization and reducing subsidiary autonomy, it has created uncertainty amongst subsidiaries which is starting to surface and may escalate HQ-subsidary tension. In this light, the discussion has resulted in highlighting considerations to mitigate the risks associated with decreased autonomy. For subsidiaries to react locally to unpredictable and dynamic markets they will require some autonomy, hence HQ will have to navigate this change in a prudent way not at the expense of innovation and local responsiveness.

Communication and participative interaction patterns were the main theme that emerged from the interviews, and subsidiaries have emphasized the importance of communication and urged HQ to effectively communicate in non-routine contexts. Research has shown that communication is pivotal to team adaptive performance, this is corroborated from meta-analyses conducted by Maynard et al. (2015) and Christian et al. (2017), however, most recent, and applicable data in line with complex adaptive systems theory was that of Lei et al. (2016) and Hoogeboom and Wilderom (2020). These authors showed that effective

communication, patterned interactions, and the transition phase in team adaptive process where key reasons why teams were either successful or unsuccessful in adaptation.

Results corroborated from this study corroborated a statement from Rico et al. (2020), in that transition phases and interpersonal phases were understated. It was found that with the two non-routine contexts being based in a task context and the other in a team context, mostly lacked attention in the transition phase and interpersonal phases in the team adaptive process. With following a lead from Maynard et al. (2015), on identifying gaps in the process and adjusting accordingly, the discussion resulted in highlighting processes that needed to be adjusted based on the findings for improved adaptable performance within the MNC.

## Chapter 7 Conclusion

### 7. Conclusion

There was a call for qualitative studies on understanding team adaptive performance within complex adaptive systems theory due to its non-linear dynamics, in addition, scant work exists on organizations' ability to adapt under unpredictable and dynamic settings (Hoogeboom & Wilderom, 2020; Let et al., 2016; Sharma et al., 2020). An MNC formed part of this qualitative study with organizations having been classified as Complex Adaptive Systems due to its nature of interaction with its environment and storing cumulative results of its interactions in routines (Kilduff, 1992).

Therefore, this study was anchored in complex adaptive systems theory in understanding the influence of heterogeneous interactions patterns on team adaptation process within a non-routine context in an MNC. To further understand this main research question, the team adaptive nomological framework from Maynard et al. (2020) was adapted with leader briefing and adaptive stimulus components from Christian et al. (2017) and task context by Hoogeboom and Wilderom (2020) to create a conceptual model to guide this research in the context of an MNC.

In framing the influence of organizational, team and individual theoretical categories on team adaptation process, this study showed that antecedents or input factors to the adaptation process have a high level of influence on the adaptation process and therefore the outcomes. This is a valuable finding, as to the researcher's knowledge and extent of the literature review process, such a model with these theoretical categories has not been tested on an MNC on a practical real embedded case study. The embedded case study provided rich data per subsidiary and has elaborated and explained the case a whole. It is worthwhile to note, that it was challenging to present the conclusion in a methodical approach as antecedents to the team adaptive process, mediators and outcomes are all inter-related which signifies a typical complex adaptive system. Complex adaptive systems are difficult to comprehend and is a network of agents which interact with each other in a non-linear, non-deterministic manner (Srinivasen & Mukherjee, 2018; Carmichael & Hadžikadić, 2019; Turner et al., 2019).

A key insight from organizational level factors was that the MNC was in the process of a significant organizational transformation at the time of the study. Based on the premise of the findings and supporting literature from chapter 6, the organization had overlooked key antecedents to successful adaptation outcomes whilst already being immersed in the team adaptation process.

These antecedents form a core part of organizations which is organization climate and culture and has limited studies available on its impact on adaptability (Maynard et al., 2015). All subsidiaries as well as HQ, agreed that the MNC purpose on a global outlook was vague and inconsistent amongst subsidiaries around the globe. Having a shared purpose as an organization is the corner stone to having different components within an organization bond, integrate, share resources, and create strong and trusting relationships which has been proven to enhance subsidiary performance (Expósito-Langa, 2015; Yu et al., 2019).

One of the main objectives of the MNC in their transformation is to be globally aligned and efficiently execute their strategies based on customer focus worldwide. However, considering the call for a shared purpose from subsidiaries and acknowledgement of the lack thereof from HQ, it is most critical for the MNC to first address its purpose. As described by Expósito-Langa (2015), trusting relationships and bonding in teams is the result of having a shared purpose, an interesting finding from this research and supported by literature is that the key mediators of the team adaptive process are based on team collaboration and participative interaction patterns but with coordination and a patterned approach (Hoogeboom & Wilderom, 2020; Lei et al., 2016; Pype et al., 2018). Therefore, in attempting to address components of the main research question based on the findings and support of literature, it was found heterogeneous team interaction patterns do not have a positive effect on team adaptive outcomes, but instead participative and collaborative interaction patterns do.

The non-routine contexts of the MNC were shown be task based and team based, translating to organizational transformation, and responding to external dynamic markets. Non-routine contexts which require team adaptive processes are ladened with various types and amounts of interactions making the interactions within the MNC at the time of study heterogeneous (Burke et al., 2006).

With having discussed that heterogenous interaction patterns within non-routine contexts are prone to unsuccessful adaptive processes, it is pivotal that the MNC ensures that antecedents and mediators are addressed to mitigate the risks of reduced or no adaptability. An additional mediator that dovetails with shared purpose is the culture of the MNC at HQ level which also came into critique. The overall culture at HQ was explained as being historically hierarchal and this culture did not form a safe psychological space for individuals to openly express their views or challenge the status quo. was the perspective of having a hierarchal culture without psychological safety. With culture being regarded as a key resource for organizations it is also critical to have culture addressed on an HQ level (Costanza, 2016). In addition, culture is denoted as a defined set of interaction patterns and shared values

(Costanza, 2016), it is therefore even more critical as it has been stated in this section that participative interaction patterns as a key mediator to the team adaptive process.

Psychological safety allows for self-protection, participative and productive interaction patterns, which has been shown to enhance team adaptability by overcoming change in dynamic situations (Lei et al., 2016; Edmondson et al., 2016). However, if psychological safety does not exist within the organization, then team adaptive performance will not be optimal, and it is possible for the organizational transformation to be rendered ineffective. With the findings calling for a more mature culture of productive interactions, it can be concluded that this antecedent must also be addressed for successful team adaptation outcomes. As stated in previously, an adaptable culture trait may be the reasons why some companies can withstand dynamic environments and why some cannot (Costanza, 2016).

It is however noteworthy to state that HQ has acknowledged that this establishment of a psychologically safe and interactive culture is a leadership responsibility. It has also been found that leader's personalities and values affected culture of organizations which affect people behaviour, interaction patterns and even retention of people. Another complex interrelation in this context relates to the antecedent individual level factors being member characteristics and adaptability. One subsidiary reported a culture misfit between the leadership and employees which resulted in employees leaving the company, it was also found that there was a lack of culture guideline that the middle management team could have used to communicate to that specific individual in leadership. A leadership factor was also an antecedent under organizational climate and culture, and again reiterates how these antecedents are dependent on each other, as in this case, leader culture and team adaptiveness.

Organizational structure was a new theme that emerged out of the research data and was closely linked to leadership. This link between organizational structure and leadership implied that more boundary spanners for facilitation between HQ and subsidiaries would be off benefit based on the relatively new regional executives' structure having had its rewards. External leadership to the team in an adaptive process, has a key role in sense-making and sense-giving to ensure proper actions are in place under dynamic situations (Rico et al., 2020). This is important for the MNC as leaders will choose team power as a unit to address external change which is one of the non-routine contexts in this study (Christian et al., 2017). Therefore, it can be concluded that the important antecedents which influence team adaptive process are aligned purpose, an adaptive and psychological safe culture and organizational structure.

For team level factors, subsidiary autonomy was not a construct within any published team adaptation frameworks but proved to be of great value in this study in highlighting what is assumed to be the most sensitive construct for the MNC. Whilst subsidiaries fully supported global alignment, they did not fully support centralization as intentions of the extent of centralization lacked clarity. Subsidiary autonomy is by virtue linked to agility and enhanced levels of creativity and innovation which emulates an adaptive culture (Kawai & Strange, 2014). However, part of the organizational transformation includes increasing centralization of the subsidiaries which creates what may be assumed a dichotomy. To create an adaptive and agile culture as stated by HQ, but to increase centralization and dependency on HQ sounds counterproductive. Innovation was highlighted as a key theme in the findings as a means to adapt which was also identified by Maynard et al. (2019) as a team adaptive outcome. To not aggravate HQ-subsidiary tensions and to mitigate the uncertainty of the subsidiaries, chapter 6 resulted in providing HQ and subsidiaries with mitigating approaches. One main mechanism was concluded as knowledge exchange and information sharing to integrate subsidiaries to HQ ways without taking away autonomy (Galeilate et al. 2020).

It is again interesting to note that information sharing, and knowledge exchange was a key factor linked to the team adaptive process with communication and interaction patterns being a mediator to team adaptive outcomes. Communication emerged as the most critical mediator both in literature and this study, not only for direct team adaptive processes but also for constructs such as HQ-subsidiary tension and subsidiary autonomy.

Through this research it was found that the MNC was in a midst of a team adaptation process, with transition processes having started more than a year ago, some actions were already executed as evidenced by the regional executive structure, global alignment initiatives and centralization of subsidiaries. Having understood the importance of antecedents to the team adaptation process, there is an inherent drawback in the MNC's approach, and therefore it is not prudent to move forward without concurrently addressing the antecedents as it may result in unsuccessful team adaptive outcomes.

The findings from both subsidiaries and HQ called for more attention to the transition process which entails analysis on a global market level, prioritizing, strategizing, and setting defined goals. However, to do this effectively, the MNC first needs to understand the trigger to the non-routine context which is both task based, and team based as explained in chapter 6 (Maynard et al., 2017; Rico et al., 2020). Hence, the deduction is that the MNC approach the team adaptation process as an iterative process especially for the transition process. In addition, to address the centralization and global alignment initiatives, the MNC is to address the interpersonal process to reduce conflict and improve motivation and the actions process

to ensure alignment in execution of objectives.

Having stated what is needed for optimal team adaptive outcomes for the MNC, in contrast it would be informative to also define what defines maladaptation. Maladaptation is as a result of; the lack of identifying the signals and the need to adapt, failing in the transition process of not strategizing to adapt, inability on the action process as in not being able to execute the plan, and lastly not being able to debrief the team adaptation process and apply learnings (Frick et al., 2018).

It can be concluded that the MNC had successfully identified the signals to adapt, however, there are gaps in being able to prioritize and plan, which must be addressed. The adaptation process is still nascent enough that plans can be precisely executed, and the holistic team adaptation process can be debriefed as of current as well as through its development. However, it is most valuable that the MNC address the antecedents emphatically on the organizational and team level factors and one critical mediator being communication which governs interaction patterns for optimal team adaptation. This study showed that antecedents, mediators and outcomes are all interrelated and interdependent within the team adaptation process making the MNC a complex adaptive system, where agents learn and adapt together.

### 7.1 Research contribution

It was firstly informative to overlay a theoretical concept with practical insights from a MNC perspective. The conceptual model (Fig 6) presented in chapter 2 included factors that were not previously focussed on but was proposed by Maynard et al. (2015). These eight factors include organization climate (organization level factors), Team resilience and adaptability (team level factors), member adaptability (individual level factors), interpersonal and transition processes (team adaptation process), empowerment (team mediators), and creativity and innovation (team adaptive outcomes). This study provided insight through chapters 5 and 6 within a real-case embedded study. In addition, task context was included in the model, which is a complex adaptive systems theory construct, also a key contribution to the studies of adaptability of MNCs as an organism. Another contribution was that shared purpose emerged as a critical antecedent to team adaptability which otherwise lacked in focus for MNCs.

It was valuable to discover that selecting subsidiary autonomy as part of the constructs within the MNC context fitted into the team adaptation process so aptly and will be of benefit to MNC team adaptation studies, which is limited. Maynard et al. (2015) encouraged cross-level studies in line with the conceptual model which was achieved by carrying out this study and understanding the interdependencies through the process.

## 7.2 Recommendation for the business

Knowledge exchange and information sharing has featured in most of the theoretical categories and from the results, it was therefore apparent that it could be improved. Consequently, it is recommended to the MNC to not only address this element of communication as a mediator but also as an antecedent to the adaptation process. It has been stated through literature that training with team development exercises improve team adaptive outcomes. Equipping the teams with tools and empowering the team is of benefit as discussed from the findings in 6.5.

Whilst the adaptation process in the MNC is still in nascent stages, it is recommended that the antecedents of organizational culture and climate (psychological safety), creating a shared purpose and organizational structure (Aleksić & Jelavić, 2017) for external fit be addressed. Whilst strategy-structure internal fit is being addressed, there is still attention needed on aligned strategy with external environments, in this case subsidiary context and autonomy is to be addressed.

Furthermore, as discussed in chapter 6 (6.2.1), it is recommended to the MNC that levels of autonomy and levels of authority be clearly defined and effectively communicated in a collaborative way between HQ and subsidiaries. In addition, subsidiary autonomy should not be a blanket approach when assigned, as the dynamics explained in 6.2.1 such as age of the subsidiary play an important role. Hence, if a young subsidiary in dynamic markets is too centralized, it may result in reduced innovation and agility (Kawai & Strange, 2014; Galeilate et al., 2020).

Caution should be exercised by the two subsidiaries that shared adaptation experiences, as past experiences in adaptation can entice teams to solidify patterns of adaptation and this may be ineffective in new dynamic situations, whilst it is important to learn from the experiences, patterns should not be solidified (Rico et al., 2020).

Finally, whilst the MNC is in the transition process, it is recommended to concurrently address the antecedents highlighted, and to approach the team adaptation process with an iterative approach, focussing on interpersonal and actions process.

### 7.3 Limitations of the research

This study was conducted over a limited period of time and was in the context of a single MNC. Subsidiaries were specific to their geographic, sub-cultural and cultural settings. It was decided to choose only six subsidiaries as part of this scope due to the short time span of this study, hence, the view of only five subsidiaries and HQ provided information on the MNC in its entirety. Cognitive ability was not addressed in this study based on the qualitative nature of the study but is a critical aspect of team adaptation as explained by Maynard et al. (2015) and Christian et al. (2017). It has been shown that teams with high cognitive ability show higher levels of adaptability (Randall et al., 2011).

### 7.4 Suggestions for future research

It is suggested that future work include cognitive ability when studying team adaptation process within MNCs. In addition, characteristics of triggers or adaptive stimuli should be studied in-depth as literature has shown that it has pronounced effects on team adaptation process. Characteristics include frequency, length, type, and magnitude (Maynard et al., 2015). Considering that literature on complex adaptive systems theory is limited within MNCs, it is suggested that team contexts be evaluated in MNC's and not only flight crews or surgical teams where most CAS studies exist.

## 8. References

- Aleksić, A., & Jelavić, S. R. (2017). Testing for strategy-structure fit and its importance for performance. *Journal of Contemporary Management Issues*, 22(1), 85-102. <https://doi.org/10.30924/mjcmi/2017.22.1.85>
- Ambos, T. C., & Birkinshaw, J. (2010). Headquarters' attention and its effect on subsidiary performance. *Management International Review*, 50(4), 449-469. <https://doi.org/10.1007/s11575-010-0041-4>
- Ambos, T. C., Fuchs, S. H., & Zimmermann, A. (2020). Managing interrelated tensions in headquarters-subsidary relationships: The case of a multinational hybrid organization. *Journal of International Business Studies*, 51(6), 906-932. <https://doi.org/10.1057/s41267-020-00307-z>
- Andersson, U., Forsgren, M., & Holm, U. (2002). The strategic impact of external networks: Subsidiary performance and competence development in the multinational corporation. *Strategic Management Journal*, 23(11), 979-996. <https://doi.org/10.1002/smj.267>
- Arrow, H., McGrath, J. E., & Berdahl, J. L. (2000). *Small groups as complex systems: Formation, coordination, development, and adaptation*. Sage Publications Inc. <https://www.doi.org/10.4135/9781452204666>
- Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60-65. <https://doi.org/10.4103/0972-6748.77642>
- Barth, S., Schraagen, J.M., & Schmettow, M. (2015). Network measures for characterizing team adaptation processes. *Ergonomics*, 58(8), 1287-1302. <https://doi.org/10.1080/00140139.2015.1009951>
- Bass, J. M., Lero, S. B., & Noll, J. (2018). Experience of industry case studies: A comparison of multi-case and embedded case study methods. *Proceedings - International Conference on Software Engineering*, 13-20. <https://doi.org/10.1145/3193965.3193967>
- Birkinshaw, J. M., & Morrison, A. J. (1995). Configurations of strategy and structure in subsidiaries of multinational corporations. *Journal of International Business Studies*, 26(4), 729-753. <https://doi.org/10.1057/palgrave.jibs.8490818>
- Birkinshaw, J., Hood, N., & Young, S. (2005). Subsidiary entrepreneurship, internal and

external competitive forces, and subsidiary performance. *International Business Review*, 14(2), 227-248. <https://doi.org/10.1016/j.ibusrev.2004.04.010>

Buckley, P. J., & Ghauri, P. N. (2004). Globalisation, economic geography and the strategy of multinational enterprises. *Journal of International Business Studies*, 35(2), 81–98. <https://doi.org/10.1057/palgrave.jibs.8400076>

Budiyanto, C., Prananto, A., & Tan., F.T. (2019). Designing embedded case study research approach in educational research. *International Journal of Pedagogy and Teacher Education*, 3(1), 1-18. <https://doi.org/10.20961/ijpte.v3i1.15002>

Burke, C. S., Stagl, K. C., Salas, E., Pierce, L., & Kendall, D. (2006). Understanding team adaptation: A conceptual analysis and model. *Journal of Applied Psychology*, 91(6), 1189–1207. <https://doi.org/10.1037/0021-9010.91.6.1189>

Carmichael, T. & Hadžikadić M. (2019). The fundamentals of Complex Adaptive Systems. In: Carmichael T., Collins A., Hadžikadić M. (eds) *Complex Adaptive Systems. Understanding Complex Systems*. Springer, Cham. [https://doi.org/10.1007/978-3-030-20309-2\\_1](https://doi.org/10.1007/978-3-030-20309-2_1)

Cavanagh, A., Freeman, S., Kalfadellis, P., & Herbert, K. (2017). Assigned versus assumed: Towards a contemporary, detailed understanding of subsidiary autonomy. *International Business Review*, 26(6), 1168–1183. <https://doi.org/10.1016/j.ibusrev.2017.04.007>

Christian, J. S., Christian, M. S., Pearsall, M. J., & Long, E. C. (2017). Team adaptation in context: An integrated conceptual model and meta-analytic review. *Organizational Behavior and Human Decision Processes*, 140, 62–89. <https://doi.org/10.1016/j.obhdp.2017.01.003>

Clément, V., & Rivera, J. (2017). From adaptation to transformation: An extended research agenda for organizational resilience to adversity in the natural environment. *Organization and Environment*, 30(4), 346–365. <https://doi.org/10.1177/1086026616658333>

Costanza, D. P., Blacksmith, N., Coats, M. R., Severt, J. B., & DeCostanza, A. H. (2016). The Effect of Adaptive Organizational Culture on Long-Term Survival. *Journal of Business and Psychology*, 31(3), 361–381. <https://doi.org/10.1007/s10869-015-9420-y>

Courtney, H., Kirkland, J., & Viguerie, P (1997, November- December). Strategy Under Uncertainty. *Harvard Business Review*. <https://hbr.org/1997/11/strategy-under-uncertainty>

Cuervo-Cazurra, A., Ciravegna, L., Melgarejo, M., & Lopez, L. (2018). Home country uncertainty and the internationalization-performance relationship: Building an uncertainty management capability. *Journal of World Business*, 53(2), 209–221. <https://doi.org/10.1016/j.jwb.2017.11.002>

Da, A., Meneses, C., Abrantes, M., Passos, A. M., & Pina E Cunha, M. (2017). *Team improvised adaptation Team performance in contexts of uncertainty and time scarcity Management with specialization in Human Resources and Organizational Behaviour*. Instituto Universitário de Lisboa (Doctoral dissertation) [https://repositorio.iscte-iul.pt/bitstream/10071/16046/1/antonio\\_martins\\_abrantes\\_tese\\_doutoramento.pdf](https://repositorio.iscte-iul.pt/bitstream/10071/16046/1/antonio_martins_abrantes_tese_doutoramento.pdf)

David, M. (2009). Case Study Research, Overview. In *Case Study Research*. SAGE Publication Ltd.

DeMartino, R., McHardy Reid, D., & Zyglidopoulos, S. C. (2006). Balancing localization and globalization: Exploring the impact of firm internationalization on a regional cluster. *Entrepreneurship and Regional Development*, 18(1), 1–24. <https://doi.org/10.1080/08985620500397648>

Denzin, N.K. (1978). *The Research Act: A Theoretical Introduction to Sociological Methods*. McGraw-Hill.

Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>

Edmondson, A. C. (2011). *Trust and distrust in organizations. In Psychological Safety, Trust, and Learning in Organizations: A group-level lens. Russel Sage Foundation*. <https://www.researchgate.net/publication/268328210>

Edmondson, A. C., Higgins, M., Singer, S., & Weiner, J. (2016). Understanding Psychological Safety in Health Care and Education Organizations: A Comparative Perspective. *Research in Human Development*, 13(1), 65–83. <https://doi.org/10.1080/15427609.2016.1141280>

Expósito-Langa, M., Molina-Morales, F. X., & Tomás-Miquel, J. V. (2015). How shared vision moderates the effects of absorptive capacity and networking on clustered firms' innovation. *Scandinavian Journal of Management*, 31(3), 293–302. <https://doi.org/10.1016/j.scaman.2015.06.001>

Flick, U. (2014). *The SAGE Handbook of Qualitative Data Analysis*. Sage Publications limited.

<https://doi.org/10:9781446282243>

Frick, S.E., Fletcher, K.A., Ramsay, P.S., & Bedwell, W.L. (2018). Understanding team maladaptation through the lens of the four R's of adaptation. *Human Resource Management Review*, 28(4), 411-422. <https://doi.org/10.1016/j.hrmr.2017.08.005>

Geleilate, J.M.G., Andrews, D.S., & Fainshmidt, S. (2020). Subsidiary autonomy and subsidiary performance: A meta-analysis. *Journal of World Business*, 55(4), 1-14. <https://doi.org/10.1016/j.jwb.2019.101049>

Gevers, J. M. P., Uitdewilligen, S., & Passos, A. M. (2015). Dynamics of team cognition and team adaptation: Introduction to the special issue. *European Journal of Work and Organizational Psychology*, 24(5), 645–651. <https://doi.org/10.1080/1359432X.2015.1065251>

Gibbs, G.R. (2007). *Analysing Qualitative Data*. London: Sage Publications Ltd. <https://dx.doi.org/10.4135/9781849208574>

Giberson, T. R., Resick, C. J., Dickson, M. W., Mitchelson, J. K., Randall, K. R., & Clark, M. A. (2009). Leadership and Organizational Culture: Linking CEO Characteristics to Cultural Values. *Source. Journal of Business and Psychology*, 24(2), 123–137. <https://doi.org/10.1007/s10869-009-9109-1>

Gibson, C. B., Dunlop, P. D., & Cordery, J. L. (2019). Managing formalization to increase global team effectiveness and meaningfulness of work in multinational organizations. *Journal of International Business Studies*, 50(6), 1021–1052. <https://doi.org/10.1057/s41267-019-00226-8>

Gibson, C.B., Dunlop, P.D., & Cordery, J.L. (2019). Managing formalization to increase global team effectiveness and meaningfulness of work in multinational organizations. *Journal of International Business Studies*, 50, 1021-1052. <https://doi.org/10.1057/s41267-019-00226-8>

Grosse, R. (2004). The theory of the multinational firm. *Advances in International Management*, 16, 83–9. [https://doi.org/10.1016/S0747-7929\(04\)16006-X](https://doi.org/10.1016/S0747-7929(04)16006-X)

Guest, G., Bunce, A., & Johnson, L. (2006). How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. *Field Methods*, 18(1), 59–82. <https://doi.org/10.1177/1525822X05279903>

Heilmann, P., Forsten-Astikainen, R., & Kultalahti, S. (2018). Agile HRM practices of SMEs. *Journal of Small Business Management*, 58(6), 1291–1306. <https://doi.org/10.1111/jsbm.12483>

Hitt, M. A., Li, D., & Xu, K. (2016). International strategy: From local to global and beyond. *Journal of World Business*, 51(1), 58–73. <https://doi.org/10.1016/j.jwb.2015.08.016>

Holland, J.H. (2006). Studying complex adaptive systems. *Journal of system science and complexity*, 19, 1–8. <https://doi.org/10.1007/s11424-006-0001-z>

Hoogeboom, M. A. M. G., & Wilderom, C. P. M. (2020). A Complex Adaptive Systems Approach to Real-Life Team Interaction Patterns, Task Context, Information Sharing, and Effectiveness. *Group and Organization Management*, 45(1), 3–42. <https://doi.org/10.1177/1059601119854927>

Kanki, B. G., Folk, V. G., & Irwin, C. M. (1991). Communication variations and aircrew effectiveness. *The International Journal of Aviation Psychology*, 1(2), 149-162. [https://doi.org/10.1207/s15327108ijap0102\\_5](https://doi.org/10.1207/s15327108ijap0102_5)

Kates, R. W., Travis, W. R., & Wilbanks, T. J. (2012). Transformational adaptation when incremental adaptations to climate change are insufficient. *Proceedings of the National Academy of Sciences of the United States of America*, 109, 7156-7161.

Kawai, N., & Strange, R. (2014). Subsidiary autonomy and performance in Japanese multinationals in Europe. *International Business Review*, 23(3), 504–515. <https://doi.org/10.1016/j.ibusrev.2013.08.012>

Kilduff, M. (1992). Performance and Interaction Routines in Multinational Corporation. *Journal of International Business Studies*, 23(1), 133–145. <https://doi.org/10.1057/palgrave.jibs.8490262>

Knight, A. P., Kennedy, D. M., & McComb, S. A. (2016). Using recurrence analysis to examine group dynamics. *Group Dynamics*, 20(3), 223-241. <https://doi.org/10.1037/gdn0000046>

Kostova, T., Marano, V., & Tallman, S. (2016). Headquarters-subsidary relationships in MNCs: Fifty years of evolving research. *Journal of World Business*, 51(1), 176–184. <https://doi.org/10.1016/j.jwb.2015.09.003>

Kovach, J. J., Hora, M., Manikas, A., & Patel, P. C. (2015). Firm performance in dynamic environments: The role of operational slack and operational scope. *Journal of Operations Management*, 37, 1–12. <https://doi.org/10.1016/j.jom.2015.04.002>

Lei, Z., Waller, M. J., Hagen, J., & Kaplan, S. (2016). Team adaptiveness in dynamic contexts: contextualizing the roles of interaction patterns and in-process planning. *Group and Organization Management*, 41(4), 491–525. <https://doi.org/10.1177/1059601115615246>

LePine, J. A. (2005). Adaptation of teams in response to unforeseen change: Effects of goal difficulty and team composition in terms of cognitive ability and goal orientation. *Journal of Applied Psychology*, 90(6), 1153–1167. <https://doi.org/10.1037/0021-9010.90.6.1153>

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95–112. doi:10.1002/smj.4250141009

Lucas, H.C., & Mein Goh, J. (2009). Disruptive technology: How Kodak missed the digital photography revolution. *The Journal of Strategic Information Systems*, 18(10), 46-55. <https://doi.org/10.1016/j.jsis.2009.01.002>

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review*, 26, 356–376. <https://doi.org/10.5465/amr.2001.4845785>.

Maynard, M. T., Kennedy, D. M., & Sommer, S. A. (2015). Team adaptation: A fifteen-year synthesis (1998–2013) and framework for how this literature needs to “adapt” going forward. *European Journal of Work and Organizational Psychology*, 24(5), 652–677. <https://doi.org/10.1080/1359432X.2014.1001376>

Meyer, K. E., Li, C., & Schotter, A. P. J. (2020). Managing the MNE subsidiary: Advancing a multi-level and dynamic research agenda. *Journal of International Business Studies*, 51(4), 538–576. <https://doi.org/10.1057/s41267-020-00318-w>

Miller, K. D. (1992). A framework for integrated risk management in international business. *Journal of International Business Studies*, 23(2), 311–331. <https://doi.org/10.1057/palgrave.jibs.8490270>

Morin, J., Olsson, C., & Atikcan, O. E. (2021). *Research methods in the social sciences, An A-Z of key concepts*. Oxford University Press.

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research, 25*(9), 1212-1222. <https://doi.org/10.1177/1049732315588501>

Onwuegbuzie, A. J., & Leech, N. L. (2007). Validity and qualitative research: An oxymoron? *Quality and Quantity, 41*(2), 233–249. <https://doi.org/10.1007/s11135-006-9000-3>

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(5), 533–544. <https://doi.org/10.1007/s10488-013-0528-y>

Pype, P., Mertens, F., Helewaut, F., & Krystallidou, D. (2018). Healthcare teams as complex adaptive systems: understanding team behaviour through team members' perception of interpersonal interaction. *BMC Health Services Research, 18*, 570. <https://doi.org/10.1186/s12913-018-3392->

Ragab, M.A.F., & Arisha, A. (2018). Research methodology in business: A starter's guide. *Management and Organisational Studies, 5*(1), 1-23. <https://doi.org/10.5430/mos.v5n1p1>

Ramos-Villagrasa, P., Navarro, J., & García-Izquierdo, A. (2012). Chaotic dynamics and team effectiveness: Evidence from professional basketball. *European Journal of Work & Organizational Psychology, 21*(5), 778-802. <https://doi.org/10.1080/1359432X.2012.669525>

Randall, K. R., Resick, C. J., & DeChurch, L. A. (2011). Building team adaptive capacity: The roles of sense giving and team composition. *Journal of Applied Psychology, 96*(3), 525–540. <https://doi.org/10.1037/a0022622>

Rao, A. N., & Pearce, J. L. (2016). Should management practice adapt to cultural values? the evidence against power distance adaptation. *Cross Cultural and Strategic Management, 23*(2), 257–286. <https://doi.org/10.1108/CCSM-03-2014-0035>

Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case Study Method: A Step-by-Step Guide for Business Researchers. *International Journal of Qualitative Methods, 18*, 1-13. <https://doi.org/10.1177/1609406919862424>

Rico, R., Gibson, C., Sanchez-Manzanares, M., & Clark, M. A. (2020). Team adaptation and the changing nature of work: Lessons from practice, evidence from research, and challenges

for the road ahead. *Australian Journal of Management*, 45(3), 507–526.  
<https://doi.org/10.1177/0312896220918908>

Saldaña, J. (2015). *The Coding Manual for Qualitative Researchers*. Sage Publications Ltd.  
<https://us.sagepub.com/en-us/nam/the-coding-manual-for-qualitative-researchers/book243616>

Santos, C. M., Uitdewilligen, S., Passos, A. M., Marques-Quinteiro, P., & Maynard, M. T. (2021). The effect of a concept mapping intervention on shared cognition and adaptive team performance over time. *Group and Organization Management*. 0(0), 1-43.  
<https://doi.org/10.1177/1059601120981623>

Sarabi, A., Froese, F. J., Chng, D. H. M., & Meyer, K. E. (2020). Entrepreneurial leadership and MNE subsidiary performance: The moderating role of subsidiary context. *International Business Review*, 29(3), 1-12. <https://doi.org/10.1016/j.ibusrev.2020.101672>

Schotter, A., & Beamish, P. W. (2011). Performance effects of MNC headquarters-subsidary conflict and the role of boundary spanners: The case of headquarter initiative rejection. *Journal of International Management*, 17(3), 243–259. <https://doi.org/10.1016/j.intman.2011.05.006>

Sharma, P., Leung, T. Y., Kingshott, R. P. J., Davcik, N. S., & Cardinali, S. (2020). Managing uncertainty during a global pandemic: An international business perspective. *Journal of Business Research*, 116, 188–192. <https://doi.org/10.1016/j.jbusres.2020.05.026>

Simangunsong, E., Hendry, L. C., & Stevenson, M. (2012). Supply-chain uncertainty: A review and theoretical foundation for future research. *International Journal of Production Research*, 50(16), 4493–4523. <https://doi.org/10.1080/00207543.2011.613864>

Sniazhko, S. (2019). Uncertainty in decision-making: A review of the international business literature. *Cogent Business and Management*, 6(1).  
<https://doi.org/10.1080/23311975.2019.1650692>

Srinivasan, B.N., & Mukherjee D. (2018). Agile teams as complex adaptive systems (CAS). *International journal for information technology*, 10(3), 367–378.  
<https://doi.org/10.1007/s41870-018-0122-3>.

Szymanski, M., Fitzsimmons, S. R., & Danis, W. M. (2019). Multicultural managers and competitive advantage: Evidence from elite football teams. *International Business Review*, 28(2), 305–315. <https://doi.org/10.1016/j.ibusrev.2018.10.003>

Tao, F., Liu, X., Gao, L., & Xia, E. (2018). Expatriates, subsidiary autonomy and the overseas subsidiary performance of MNEs from an emerging economy. *International Journal of Human Resource Management*, 29(11), 1799-1826. <https://doi.org/10.1080/09585192.2017.1284883>

Tasavori, M., Eftekhar, N., Elsayi, G.M., & Zaefarian, R. (2021). Human resource capabilities in uncertain environments. *The International Journal of Human Resource Management*, 32(17), 3721-3747. <https://doi.org/10.1080/09585192.2020.1845776>

The Impact of COVID-19 on Multinational Companies MNCs - Long Term, Companies Will Need to Investigate Their Supply Chains to Improve Their Resilience to Shocks. (2020, March 18). Research and Markets. <https://www.prnewswire.com/news-releases/the-impact-of-covid-19-on-multinational-companies-mncs---long-term-companies-will-need-to-investigate-their-supply-chains-to-improve-their-resilience-to-shocks-301026249.html>

Thorbecke, C. (2020, March 29). How businesses are adapting to a coronavirus pandemic economy. Small acts of resilience as businesses navigate new pressures during a pandemic. <https://abcnews.go.com/Business/businesses-adapting-coronavirus-pandemic-economy/story?id=69748107>

Turner, J.R., Baker, R.M., & Romine, K. (2019). *Complex Adaptive Teams Systems (CATS): Scaling of a Team Leadership Development Model*. Digital Leadership. <https://doi:10.5772/intechopen.8874>

Venaik, S., & Midgley, D. F. (2019). Archetypes of marketing mix standardization-adaptation in MNC subsidiaries: Fit and equifinality as complementary explanations of performance. *European Journal of Marketing*, 53(2), 366–399. <https://doi.org/10.1108/EJM-11-2017-0861>

Vera, D., & Crossan, M. (2004). Theatrical improvisation: Lessons for organizations. *Organization Studies*, 25(5), 727–749. <https://doi.org/10.1177/0170840604042412>

Villard, B. (2003). Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge. In *Management Learning*, 34(3), 398-404. <https://www.proquest.com/docview/209871383?pq-origsite=gscholar&fromopenview=true>

Wilhelm, H., Schlömer, M., & Maurer, I. (2015). How dynamic capabilities affect the effectiveness and efficiency of operating routines under high and low levels of environmental dynamism. *British Journal of Management*, 26(2), 327–345. <https://doi.org/10.1111/1467-8551.12085>

Williams, C. (2007). Research Methods. *Journal of Business & Economic Research*, 5(3), 65-72. <https://doi.org/10.19030/jber.v5i3.2532>

Xu, S., Cavusgil, S. T., & White, J. C. (2006). The Impact of Strategic Fit among Strategy, Structure, and Processes on Multinational Corporation Performance: A Multimethod Assessment. *Journal of International Marketing*, 14(2), 81-109. <https://doi.org/10.1509/jimk.14.2.1>

Yin, R. (2012). *Applications of case study research* (3<sup>rd</sup> ed). SAGE Publications, Inc.

Young, S., & Tavares, A. T. (2004). Centralization and autonomy: Back to the future. *International Business Review*, 13(2), 215–237. <https://doi.org/10.1016/j.ibusrev.2003.06.002>

Yu, Y., Liu, Y., & Bai, T. (2019). Does attention from headquarters influence subsidiary behavior? A social psychological perspective. *Long Range Planning*, 52(4). <https://doi.org/10.1016/j.lrp.2019.03.003>

Zellmer-Bruhn., M., & Gibson, C. (2006). Multinational organization context: Implications for the team learning and performance. *Academy of Management Journal*, 49(3), 501-518. <https://doi.org/10.5465/amj.2006.21794668>

Zijlstra, F.R.H., Waller, M.J., & Phillips, S.I. (2021). Setting the tone: Early interaction patterns in swift-starting teams as a predictor of effectiveness. *European Journal of Work and Organizational Psychology*, 21(5), 749-777. <https://doi.org/10.1080/1359432X.2012.690399>

Appendix A

Table of codes

**Table 14.** Code book

Codes	Categories	Themes	Theoretical categories	
Alignment with global strategy	Internal organizational changes	Organizational transformation	Organizational level factors	
Customer focus transformation				
Transformational change				
More structure and processes				More internal centralization
Need for strategy				
Need for global market understanding				Outward global mindset required
Environmental uncertainty	Varying uncertainties: need to adapt through innovation	Adaptive stimulus	Non-routine contexts	
Firm Uncertainty				
Industry Uncertainties				
We are adaptive	Satisfaction with adaptability	Adaptability	Team adaptation process	
Measured approach to change to adapt	Changes needed to adapt			
We need to adapt and become agile				
Importance of the right people	Importance of people in the process	People focus	Individual level factors	
People can develop skills they lack				
Understanding people is key				
Lack of resources	Lack of resources in departments			
Need for prioritizing and focus	Lack of prioritization and focal projects	Prioritize	Team adaptation process	

Good relationship between Subsidiaries	Importance of team interactions	Subsidiary interactions and autonomy	Team level factors
HQ to connect Subsidiaries			
More personal interactions			
Subsidiary autonomy	Independence		
Importance of communication	Communication to improve	Communication	Team mediators
Lack of communication			
Quality of communication	Communicate the WHY		
People will adapt if they know the WHY and see value			
People adapt when they don't have a choice eg. COVID			
Alignment in purpose	Importance of aligned purpose and values	Aligning purpose and values	Organizational level factors
Importance of aligned values			
Importance of culture	Importance of culture		
HQ or leadership is aware of need for providing guidance	Leadership awareness for adaptation	Leadership importance	Organizational level factors
HQ or leadership is aware of the need to adapt			
HQ to connect Subs			
Lack of confidence in leaderships adaptability	Higher levels of decision making, responsibility and adaptability from leadership	Expectations from leadership	HQ-subsiary tensions
Leadership to take responsibility			
Regional executives to make more decisions			
Inconsistency is part of change			

Importance of culture	Culture a key factor to adaptation	Culture	Organizational culture
Healthy environment for change needs to be created	Environment of psychological safety	Psychological safety	
The need for maturity			
Collaboration	Factors influencing team interactions and ability to adapt	Requirements for change and adaptability	Team mediators/individual level factors
Importance of honesty			
Importance of practical outlook			
Importance of the right people			
Importance of trust			
Mindset change required			
Need for transparency			
Agility	Need for agility and increased risk appetite	Requirements for action to adapt	Team adaptation process
Conservative and low risk appetite			
Need for faster decision making			
Need for effectiveness and efficiency to compete			
Seeing is believing	Call to action to adapt		
Coped well under COVID circumstances	Commonality of COVID-19	COVID-19 and adaptability	Non-routine contexts
COVID made us adaptive			
Importance of relationships	Internal and external relationships	Team interactions dependent on relationships	Team mediators
Organizational structure is key	Correct organizational structure required to handle adaptation	Importance of organizational structure	Organizational structure: Organizational level factors

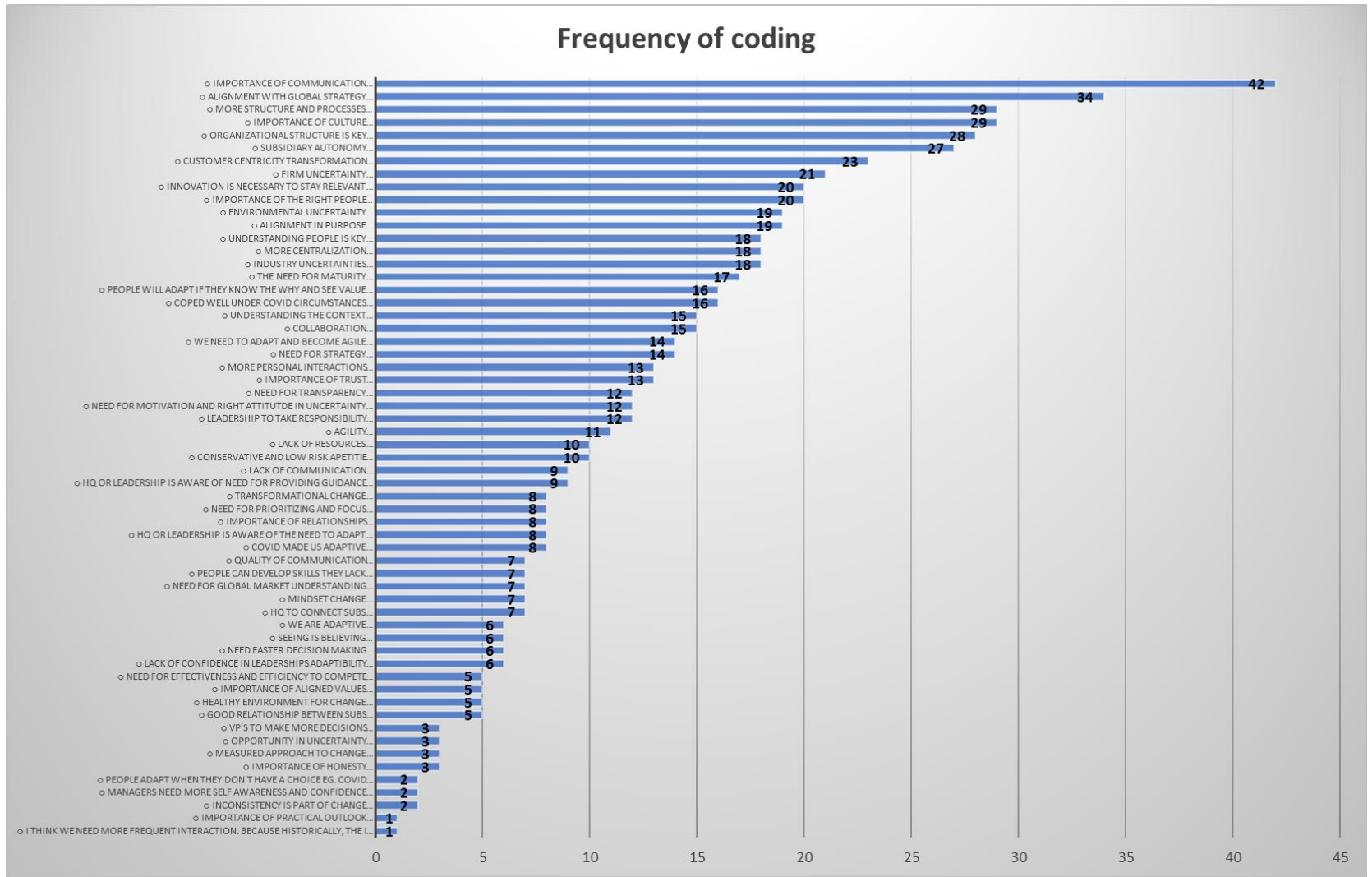


Fig 10. Frequency of coding

## Appendix B

### Interview Guide

Topic:

The influence of heterogeneous team interaction patterns on team adaptability process in a non-routine task context

1. Do you understand the constructs in the research regarding team interaction patterns, team adaptiveness and non-routine contexts?
2. Describe the structure of your team and the general interaction patterns?
3. Explain experiences of collaboration and adaptiveness during non-routine contexts or times of uncertainty?
4. How would you describe your subsidiary's level of independence from Headquarters with providing examples for your answer?
5. Describe headquarters' influence on your subsidiary during a routine context and during a non-routine context
6. Describe headquarters' communication to your subsidiary during non-routine contexts

## Appendix C

### **Informed consent letter**

I am currently in the process of completing my Master of Philosophy in International Business, through University of Pretoria's Gordon Institute of Business School. One of the course prerequisites is a research project in partial fulfilment of the requirements for the above-mentioned degree.

After careful consideration, I have decided to conduct research on the influence of heterogeneous team interaction pattern on team adaptiveness in a non-routine task context within a Multinational Corporation. This study is anchored in complex adaptive systems theory and aims to add value in understanding why and how some teams are more adaptive than others in non-routine contexts and how does subsidiary-headquarter dynamics further influence this.

Participants will partake in semi-structured interviews to determine your understanding of the team interaction pattern within your team and between your respective subsidiary and headquarters. The duration of these interviews will be around 45 minutes and your participation will contribute to the further understanding of the complex adaptive systems theory within multinational corporations which is currently limited.

**Please be assured that your participation is voluntary, and you can withdraw at any time without penalty.** All data will be reported without identifiers and is anonymous. If you have any concerns, please do not hesitate to contact my supervisor or me on the details provided below:

#### **Researcher**

#### **Research Supervisor**

Signature of participant: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of researcher: \_\_\_\_\_

Date: \_\_\_\_\_