# HOW NETWORK CONFIGURATIONS CONTRIBUTE TO ORGANISATIONAL RESILIENCE

A qualitative case study of how organisational resilience operates

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# Abstract

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| Essay/Thesis: | 30 hp |
| Program and/or course: | Master´s Programme in Strategic Human Resources Management and Labour Relations |
| Level: | Second Cycle |
| Semester/year: | ST2021 |
| Supervisor: | Stefan Tengblad |
| Examiner: | xx |
| Report No: | xx |
| Keyword: | Organisational Resilience, Social Network Theory, Social Network Analysis |

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Purpose: The purpose of this study is to investigate and identify what network configurations contribute to organisational resilience. Particular focus is directed to the HR-function's role and function in promoting organisational resilience.

Theory: This study relies on two theoretical frameworks. Firstly, the organisational resilience scale as presented by Kantur & Iseri-say (2015) has been used as a means to identify traits associated with organisational resilience. Secondly, social network analysis has been employed to discern how these traits are present and operated within the relational ties that together constitute the network configuration being studied. In regard to social network analysis, four overarching research traditions have been used: formal/informal ties, strong/weak ties, structural holes and social capital.

Method: A qualitative approach has been assumed in which semi-structured in-depth interviews have been utilised. Two sets of respondents have served as informants: co-workers and HR-professionals. The setting for the study is a multinational corporation.

Result: Whereas leaders and HR-professionals fulfil similar roles as effective sources of non-redundant knowledge, which proved valuable in the context of pursuing organisational resilience, team members had another primary purpose. Their contribution towards organisational resilience is discernible in their ability to produce social capital which in turn empower employees to enact practices associated with resilience. However, the findings also indicate that leaders and HR-professionals assist in the production of social capital. In doing so, this study extends the notion that the HR-function's value in establishing organisational resilience is expressed in its ability to establish a desirable human capital, by also highlighting the function's contributive role in securing a strong social capital. Further, this study also critiques and expands the organisational resilience scale (Kantur & Iseri-say, 2015) and question a fundamental research paradigm in social network theory relating to the distinction made between strong and weak ties.

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# 1. INTRODUCTION

## 1.1 Objective and research question

The havoc wreaked by COVID-19 and the subsequent detrimental damage inflicted upon corporations has highlighted the crucial need for organisations to be resilient towards uncertainties (Bryce et al., 2020; Meyer, Prescott & Sheng, 2021). More concretely, the concept of organisational resilience refers to an organisation's ability to anticipate, prepare for, respond and adapt to change. Organisations who are successful in their endeavour to be resilient may successfully survive and even thrive in spite of operating in a business environment characterised by high levels of uncertainty (Andersson et al., 2019). Scholarly work affirms that the level of resilience present in an organisation is directly correlated with organisational survival and that investment in resilience or lack thereof can ensure an organisation's survival or cause its downfall, especially in turbulent times (Herbane, 2020; Lengnick-Hall et al., 2011; Tengblad & Oudhuis, 2018). Although resilience is studied in a variety of disciplines, the concept of organisational resilience as understood from a social science perspective is the management and development of social resources (Anderson, 2019). Research confirms that a workforce with specific resilience-related employee-characteristics may face an uncertain business environment more successfully than others and that these skills and employee-characteristics can be strategically developed (Bouaziz & Hachicha, 2018; Lengnick-Hall et al., 2011; Mousa et al. 2020). In line with this, Linnenluecke (2017) posits that organisational resilience concerns itself with competencies, processes, learning and culture as it is theorised that the ability for generating resilience is inherent within these social dimensions of organisations.

Given that resilience is closely related to the social aspects of organisational life, the concept has been linked to the HR-department given that function's social role within organisations (Al-Ayed, 2019; Bouaziz & Hachicha, 2018; Mousa et al., 2020). Other studies expand on this by elaborating how the HR-department's value in the context of generating organisational resilience lies within its ability to develop a collectively strong human capital reflecting desirable employee-characteristics associated with resilience (Chadwick & Dabu, 2009; Mitsakis, 2020; Nijssen & Paauwe, 2012). This notion supports Ho et al. (2011) in their argument that the HR-function possess a uniquely suited toolbox that can be operated to develop a workforce capable of collectively enable their organisation to be resilient.

However, there are gaps in the existing body of knowledge pertaining to the role that social interaction has in establishing organisational resilience. For example, Bhamra, Burnad & Dani (2011) highlight that current research does not sufficiently cover how antecedents for high levels of resilience can be allowed to take root and flourish in social networks. In a similar fashion, Pereira, Temouri & Patel (2020) urge that researchers investigate the social mechanisms through which resilient capabilities can be fostered and developed. Conclusively, current research informs *what* specific employee-characteristics contribute to organisational resilience, but studies seeking to explain *how* those employee-characteristics are developed in the social relations between organisational actors are lacking. These knowledge gaps are relevant for the HR-function, because while research confirms that the HR-function has a central role in developing organisational resilience, current research does not explore the technicalities of how the HR-function may do this.

More specifically, the current study will explore how employee-characteristics associated with high levels of organisational resilience are present in the social ties that connect and divide actors that together constitute an organisational network. How the social configurations of the network in question encourage desired employee-characteristics will be discussed, which in turn may provide valuable insights into how the HR-function may operationalise social networks to increase levels of organisational resilience. More specifically, the following research question will guide the study:

*How network configurations contribute to organisational resilience*

## 1.2 Setting

In order to investigate the collegial bonds that connect and divide organisational actors, as well as exploring the content of those bonds and how that content may affect the development of organisational resilience, a case study has been conducted. The organisation serving as the case is a multinational corporation (MNC) within the car industry whose employees are currently facing the consequences of the ongoing COVID-19 pandemic. COVID-19 has negatively impacted the MNC in a number of ways; financial losses, national governmental restrictions resulting in workforce shortages and disturbances in the supply chain. Further, given the precarious state of the world economy, there is also great uncertainty surrounding the potential impact on the future demand of their products. However, despite these sources of

uncertainty, the MNC in question is doing extraordinarily well and thrives. This case may arguably contribute much to organisational resilience research, as it has not only survived but also managed to remain prosperous in the face of a crisis and high levels of uncertainty - a hallmark of organisational resilience.

## 1.3 Contributions

This study makes a number of contributions. Firstly, it fills knowledge gaps pertaining to the role that social mechanisms have in establishing an overall capacity for organisational resilience (Bhamra, Burnad & Dani, 2011; Peeira, Temouri & Patel, 2020). While existing studies have determined *what* employee-characteristics contribute to resilience, this study will begin to explore *how* these employee-characteristics can be developed in the social relations that connect and divide organisational actors. This might in turn render valuable insights into how the HR-function should be organised and enable HR-practitioners to develop a finer understanding of their own role in the context of establishing resilience (Ho et al., 2014; Chadwick & Dabum, 2009; Lengnick-Hall et al., 2011). Secondly, this study has combined the concept of organisational resilience with social network theory, which are two analytical frameworks that to the knowledge of this author have not been used in union before. This opens up the possibility of new and interesting findings and may generate new insights not only about the issue being studied but also about the nature of each individual framework (Cairney, 2013). Thirdly, this study will apply the traditionally quantitative social network analysis in a qualitative fashion, and thus answer the call of scholars who encourage researchers to extend and develop the burgeoning trend of conducting qualitative social network analysis (Heath, Fuller & Johnston, 2009; Jack, 2005). Fourthly, this study proposes to utilise the originally quantitative organisational resilience scale as presented by Kantur & Iseri-say (2015), and thus will provide an opportunity to qualitatively validate this scale. In doing so, this study will also build upon the relatively new research trend of using the organisational resilience scale in HR-oriented studies (Bouzaziz & Hachicha, 2018; Mousa et al., 2020).

## 1.4 Disposition

This study has a total of seven main sections. The first and current section has introduced the research aim of the study, the research question, a brief introduction of the setting in which the study will take place and the academic and practical contributions this study can offer. The second section will introduce current research on social network analysis and

organisational resilience, and how each concept relates to the HR-function. A clear definition of how organisational resilience will be interpreted within the frame of this study is introduced as well. Gaps in the current body of knowledge will be illuminated and presented, followed by propositions of how to begin to fill those gaps. Thereafter, the third section will introduce the organisational resilience scale as interpreted by Kantur & Iseri-say (2015) and four overarching traditions of social network theory, which will be the theoretical tools serving as the conceptual frameworks for the current study. The fourth section will go on to introduce the methodological approaches utilised, as well as their implications. This will include an overview of the research design, sample, access, data collection, data analysis and data quality concerns as well as ethical considerations. The fifth section will introduce the results of the study and subsequent analysis of those results, followed by the sixth section which will discuss the analysis and present a new conceptual framework known as the organisational resilience social network framework. The seventh and final section will summarise the findings in relation to the research aim and research question guiding the study.

## 2. LITERATURE REVIEW

### 2.1 Social Network Theory

Social network theory (SNT) is a scientific body of knowledge seeking to understand patterns of human behaviour within a specific setting through the application of social network analysis (SNA). The concept 'social network' is not limited to the study of organisations, on the contrary, it is a theoretical framework widely used across disciplines and for a variety of purposes. As such the term 'social network' can refer to anything from an individual family to an entire community. SNA can be applied in a variety of settings which reflects the versatility of the concept. For example, Wellman & Wortley (1990) utilises SNA to investigate how social support is mediated through community ties whereas Heath, Fuller & Johnston (2009) illustrate how SNA can be used to study how motivation and inspiration are channelled through relational ties. In other words, the level of investigation and unit of analysis varies depending on the discipline and the nature of the particular study in question (Wesserman & Faust, 1994). Networks lack natural boundaries and all of the actors present in a network are not necessarily connected, however actors that are detached from one another may become linked over time (Freeman, 2014; Hollenbeck & Jamieson, 2005; Jack, 2005; Whelan, 2015). This depiction of the nature of networks supports Borgatti & Halgin's (2011) claim that social networks are fluid and ever-changing. From an organisational point of view, SNA is usually applied to study the exchange of social resources by investigating the relational ties that connect and divide the actors that together constitute the network being studied. However, even with this demarcation in mind the organisational perspective within SNT is many-faceted and can be applied to understand a myriad of different forms of organisational life. For example, SNA has been used to study knowledge-sharing between government agencies (Carcamo et al. 2014) and to analyse supply chain contexts (Borgatti & Li, 2009). The concept has also been used in mapping out entrepreneurial activity (Jack, 2005) and to understand the role of networking in policy-making (Ahrens, 2018).

Although the unit of analysis and the setting in which SNA is applied might vary from study to study and across disciplines, the common nominator is that they all attempt to illuminate how individuals are entangled in a social setting greater than themselves and how the structure of that setting may have a considerable impact on the individuals who acts as constituents of the network in question. This is in line with what Granovetter (1973, p. 1337)

established in his pioneering work of SNT: *"The major implication by [SNT] is that the personal experience of individuals is closely bound up with larger-scale aspects of social structure, well beyond the purview or control of particular individuals"*.

### 2.1.2 Social Network Theory and HR

The wide application of SNT within the academic field of organisational research extends to HR-theory as well. While this line of research asserts that the individual focus doubtless is a crucial point to consider, it also argues that the interactionist perspective has been neglected in mainstream HR-research. In response to this disregard, SNT-oriented HR-research does not follow the dominating trend of focusing on individuals and their attributes but chooses instead to put emphasis on the relationships that exist between relevant organisational actors. The arguments for espousing the interactionist perspective is attributable to the belief that actors' positions in the social structure of an organisation play a critical role in determining the opportunities available as well as the constraints laid upon them. With this as a background, it is argued that focusing on the individual alone is inadequate and that such an approach will be insufficient in properly reflecting the complex social reality inherent in organisations (Hollenbeck & Jamieson, 2005; Oparaocha, 2006).

Brass (1981) argues that SNA has value for HR-practice as it enables the identification and subsequent transformation of ineffective social network structures. For example, employing SNA allows for a proper exploration of influences and outcomes within the network structure which can later be used to improve productivity in several HR-areas such as recruitment, selection, training, socialisation and performance appraisal. With a basis in this, he concludes (ibid) that the social network perspective enables a greater understanding of the complexities present in organisational life. In a similar vein, Ibarra & Andrews (1993) suggests that SNA can be used to assess the effectiveness of HR-interventions. In a later study, Hatala (2006) not only confirms this reasoning but also extends it by theorising that SNA is not limited to assessing the effectiveness of interventions but may also enable HR-practitioners to increase the odds of their proposed interventions being successful. The reason behind this is that using SNA allows HR-practitioners to pinpoint central figures within the network whose support may need to be solicited to ensure that the intervention in question is accepted by the organisation as a whole.

The value of SNA within HR is also discernable in the context of effectively developing human capital as well as addressing challenges related to that concept; scholars posits that it is insufficient for HR-practitioners to focus on the individualistic components alone when attempting to establishing a collective human capital, as focus must also be directed to the relationships inherent in an organisation. The reason behind this is that relationships directly impact the ability of individuals to operate as a unit (Ahuja, 2000; Burt, 1997; Coleman, 1988). Hollenbeck & Jamieson (2005) elaborate on this by suggesting that SNA has value for the HR-role as it enables practitioners to shed light on the impact that relationships between organisational actors have on HR-practitioners ability to successfully generate change. For example, by applying SNA, HR-practitioners can evaluate how the relational ties between different organisational actors influence the transfer of information, resources, knowledge and skills. This will in turn produce valuable knowledge which HR-practitioners, in turn, may operationalise to issue change more profoundly and time-effectively. Although the focus between studies might vary, their results echo the same contention that the value of SNT in HR-contexts expressed in how it enables researchers and practitioners to develop an understanding of the relevance that relational ties between organisational actors have.

## 2.2 Organisational resilience

Organisational resilience is a theoretical concept aimed at describing an organisation's ability to successfully respond to crises and thus ensure the survival of the organisation in question. It is theorised that an organisation's capacity for resilience is a vital strategic aspect, and an organisation's investment in resilience or lack thereof can support its survival or contribute to its downfall (Herbane, 2020; Lengnick-Hall et al. 2011; Tengblad & Oudhuis, 2018). Within organisational resilience research, the emphasis is put not just on what happens during or after a crisis but interest lies equally in the stage before the crisis has occurred (Linnenluecke, 2017). This notion supports Branicki, Stever & Sullivan-Taylor (2019) and Tengblad & Oudhuis' (2018) claim that organisational resilience should not be construed as something that can be operationalised as a crisis unfolds but should rather be seen as elements of a corporate culture that should be integrated holistically. The concept of resilience is being increasingly recognised as important. This increased attention can be explained by rapid changes and developments in the economy, society and technology which generate increasing uncertainties for businesses which in turn warrant the need for them to be resilient towards unpredictability (Ruiz-Martin, López-Paredes & Wainer, 2017). Organisational resilience as a concept has no clear point of origin. Braes & Brooks (2010) posits that it has emerged over

time and simultaneously from different fields of academic inquiry such as risk management, emergency management, physical security and business. It is a wide concept and being studied across a variety of disciplines which infer that the focus of the studies can vary. However, within the social sciences, organisational resilience research is predominantly focused on the management and development of social resources (Andersson, 2019). In line with this, Linnenluecke (2017) emphasises that within social science-oriented organisational resilience research, importance is placed on competencies, processes, learning and culture. It is theorised that a capacity for building organisational resilience is situated within these aspects of organisations.

The ensuing sections will firstly discuss how the concept of organisational resilience is construed differently in the literature and how the concept will be understood in this particular study, a prerequisite for producing coherent research results. Secondly, a discussion of how organisational resilience relates to the HR-function will be discussed.

### 2.2.1 Defining organisational resilience

The concept of organisational resilience has piqued the interest of a variety of different academic disciplines and is now a well-researched area in organisational learning, information technology, engineering, industrial relations, culture and supply chain management theories. The wide-spread prominence of organisational resilience across disciplines has generated ambiguity about what the term actually encompasses (Linnenluecke, 2017). Comfort et al. (2010), Somers (2009) and Sutcliffe (2003) proposes that an organisation qualifies as being resilient if it can successfully bounce back to a prior point of stability in the face of crises. Bhamra Burnard & Dani (2011) and Demmer et al. (2011) extend this notion by suggesting that organisations who do not succeed in returning to a prior point of stability but manage to achieve another state of equal stability should also be classified as being resilient. However, there is an increasing number of scholars who wish to broaden the definition even further by suggesting that resilience is manifested not only in survival but also in an organisation's ability to thrive during crises and even to draw benefits from it (Andersson et al., 2019; Lengnick-Hall et al., 2011; Sutcliffe & Vogus, 2007).

Conclusively the literature points to a discrepancy in how organisational resilience is defined and there are two major trends in how it is conceptualised. There is the first set of scholars who define it as an organisation's ability to survive crises and uncertainties (Comfort et al.,

2009; Somers, 2019; Sutcliffe & Vogus, 2003). Then there is the second set of scholars who advocates the broadening of the definition by suggesting that resilience, in addition to signifying an organisation's ability to bounce back from crises, should also include their ability to draw benefits from it and grow stronger (Andersson et al., 2019; Lengnick-Hall et al., 2011; Ruiz-Martin, López-Paredes & Wainer, 2017; Vogus & Sutcliffe, 2007).

On a subject where there is consistency throughout the literature is that organisational resilience has a temporal aspect to it and therefore cannot be defined as something static. Rather organisational resilience is something that is evolved (Lengnick-Hall et al., 2011; Somers, 2019; Andersson et al., 2019; Ho et al., 2014). This assertion is consistent with Linnenluecke's (2017) claim that organisational resilience research concerns itself equally with what happens before, during and after a crisis. It also supports the notion that organisational resilience should not be construed as something that can be activated as a crisis unfolds but should instead be seen as elements of a corporate culture that should be integrated holistically. The idea that organisational resilience is not something static is extended by Ruiz-Martin-López-Paredes & Wainer (2017) who posit that resilience can be seen as evolving along with four levels: fragile, robust, resilient and antifragile. Each level is reached as the organisation's abilities, characteristics or capabilities to successfully meet disturbances improve. The final level of antifragile is when an organisation not only survives but also thrives during a crisis, which is the most complicated level to reach.

In light of the ambiguity surrounding the term, it will be necessary to formulate a clear definition of how organisational resilience will be interpreted in this particular study to produce results that are coherent. To this end, the current study draws inspiration from Lengnick-Hall et al. (2011) and defines organisational resilience as an organisation's ability to absorb, respond, and engage in transformation and lastly to draw benefit from surprise and that it is something that evolves over time.

### 2.2.2 Organisational resilience and HR

Although organisational resilience has been studied in a variety of academic disciplines as explained in the preceding section, the concept is relatively new in HR-studies, however scholarly work suggests that the role that HR has to play in establishing resilience may be significant. Within HR-oriented organisational resilience research, there is a widespread consensus that it is the HR-function's ability to manage human capital which renders its value

in the context of creating a capacity for organisational resilience (Chadwick & Dabu, 2009; Mitsakis, 2020; Nijssen & Paauwe, 2012). Haimes (2012) and Lengnick-Hall et al. (2011) contribute to this line of research by clarifying that one aspect of managing human capital is expressed in the HR-function's ability to influence the acquirement and development of colleagues' skill-sets. This has relevance for organisational resilience, as a workforce with a diverse and effective skill-set may enable the organisation to better respond to crises.

There is research supporting this line of reasoning. For example, Al-Ayed (2019) illustrate that the HR-function can directly increase levels of organisational resilience by strengthening human capital through investments in its cognitive, behavioural and contextual aspects. Branicki, Stever & Sullivan-Taylor (2019) contribute to the discussion of human capital by highlighting that the resilience capabilities found in the collective human capital of an organisation are greater than just the sum of individual resilience capabilities put together. This emphasises the importance of managing the collective human capital rather than just assuming an individual perspective.

Yet another way of framing the HR-role in organisational resilience contexts is expressed by Kantur & Iseri-Say (2015) who in their study determine that organisational resilience is expressed alongside three organisational dimensions; robustness, agility and integrity and speculates that these findings may relevance for the HR-function. This speculation has been confirmed in later studies, firstly by Bouaziz & Hachicha (2018) and later by Mousa et al. (2020) and their findings determine that HR-practices can directly impact robustness, agility and integrity and subsequently increase levels of organisational resilience. Another interesting perspective raised by Mousa et al. (2020) is that it is important to establish a multi-stakeholder network when establishing organisational resilience throughout the organisation. It can be theorised that this logic ascribes importance to the HR-department as it is a function often operating as the central connection point between different departments and is thus often in possession of a multi-stakeholder network (Ulrich, 1998).

Irregardless of different approaches to studying the relationship between organisational resilience and HR-practices, it can be established that there is consistent evidence throughout the literature confirming that the HR-function has an important role in generating a capacity for organisational resilience (Al-Ayed, 2019; Bouaziz & Hachicha, 2018; Mousa, 2020). There is also consistent evidence that this role is expressed in the HR-function's ability to

affect the collective human capital of organisations (Chadwick & Dabu, 2009; Mitsakis, 2020; Nijssen & Paauwe, 2012). This notion supports Ho et al. (2014) in their argument that the HR-function possess a uniquely suited toolbox that can be operated to develop the human capital that organisational actors require in order to collectively enable the organisation in question to become resilient.

## 2.3 Research gap

In this section, a short summary of the preceding literature review, and gaps in that body of knowledge, is presented. Arguments for combining social network theory with organisational resilience theory in order to answer these knowledge-gaps are presented as well.

As previous sections of this chapter have illustrated the concept of organisational resilience is recognised as an integral part of organisational strategy, and an organisation's investment in resilience or lack thereof can ensure its survival or cause downfall, especially in turbulent times (Comfort et al., 2019; Herbane, 2020; Linnenluecke, 2017; Lengnick-Hall et al. 2011; Somers, 2019; Sutcliffe & Vogus, 2003). This chapter has also shown that rather than being seen as a tool temporarily operated in times of crises, the concept of organisational resilience is better understood as elements of a corporate culture that should be ingrained into the organisation and permeate its everyday routines and processes (Linnenluecke, 2017; Tengblad & Oudhuis, 2018; Martin, López-Paredes & Wainer, 2017). The logic behind this is that it is within these daily activities that organisational actors are provided with opportunities to develop their human capital which is in turn required to collectively establish a capacity for organisational resilience (Chadwick & Dabu, 2009; Haimes, 2012; Nijssen & Paauwe, 2012). Further, there is an extensive body of research indicating that the HR-function has a critical role in generating organisational resilience given the HR-function's uniquely suited role and ability to affect and develop an organisation's workforce in desirable directions (Bouaziz & Hachicha, 2018; Ho et al., 2014; Kantur & Iseri-Say, 2015; Lengnick-Hall et al. 2011).

However, there are gaps in the amassed knowledge on organisational resilience that have been neglected in previous research that warrants exploration. For example, Linnenluecke (2017) encourages that future research looks into how resilience can be cultivated in social relations. In turn, Bhamra, Burnad & Dani (2011) request that future research explore how resilient characteristics can be developed through network collaboration. In a similar vein, Pereira, Temouri & Patel (2020) posit that even though the concept of organisational resilience is

increasingly recognised as important, relatively little is known about the social mechanism through which resilient capabilities can be fostered.

To summarise, current research has concluded two points. 1) Establishing organisational resilience is crucial in the context of organisational survival and 2) The HR-function is a valuable asset that can be utilised to increase organisational resilience due to its role and ability to affect and develop the workforce in a desirable direction. There are however gaps in knowledge pertaining to how social mechanisms can be operated to increase levels of organisational resilience (Pereira, Temouri & Patel, 2020) and how resilient characteristics may be harboured in social networks (Bhamra, Burnard & Dani, 2011).

This master thesis will attempt to shed light on these research gaps by applying SNA. To the knowledge of this author, social network analysis has not been used to explore the concept of organisational resilience before, which renders the combination of these two concepts an interesting prospect. The notion of analysing organisational resilience through a social network perspective is however not completely alien, as some resilience scholars have speculated in the potentiality of combining these theories. For example, Mousa et al. (2020) stress the need for assuming a multi-stakeholder network in investigating how organisational resilience is established throughout organisations. In turn, Brackini, Steyer & Sullivan-Taylor (2019) emphasises that research must look into how collective human capital can be fostered on a holistic level rather than solely focusing on the individual perspective. Similarly, Bhamra, Burnad & Dani (2011) specifically request that future research explore how resilient characteristics can be developed through networks. With a basis in this, this study has deemed it interesting and appropriate to combine SNA with organisational resilience theory to shed light on the aforementioned research gaps in order to answer the research question guiding the current study: *How network configurations contribute to organisational resilience*

# 3. THEORETICAL FRAMEWORK

## 3.1 Organisational resilience scale

As has been previously established a common theme found throughout the organisational resilience literature is that there is no consensus on how the concept is defined (Andersson, 2019; Bhamra, Burnard & Dani, 2011; Lengnick-Hall et al., 2011). Therefore it is unsurprising that there is no commonly accepted method of measuring organisational resilience either (Al-Ayed, 2019). Ruiz-Martin, López-Paredes & Wainer's (2019) literature review on this issue identified three main approaches in how scholars attempt to measure organisational resilience: 1) by assessing the features of the organisation, 2) by looking at organisational outcomes in terms of economic profit and 3) by investigating organisational capacity to recover from failure. Kantur & Iseri-Say (2015) seem to follow the first of these three approaches but chooses to focus on one particular aspect of organisational features: employee-characteristics and behaviour. With a basis in a mixed-method approach, they determine that organisational resilience is expressed alongside three organisational dimensions; robustness, agility and integrity and each of these dimensions have several items attached to it that are believed to directly correlate to levels of organisational resilience. These items together constitute the organisational resilience scale which is proposed as a viable method of evaluating organisational resilience. Kantur & Iseri-Say (2015) further speculate that these findings might have relevance for the HR-function and this is confirmed in later studies by Bouaziz & Hachicha (2018) and Mousa et al. (2020) who verify that HR-practices can directly affect organisational dimensions of robustness, agility and integrity. This scale will serve as one part of the theoretical frameworks utilised in this study. This section of the chapter will go on to firstly engage in a discussion about the organisational resilience scale and arguments will be made for its applicability to this particular study. Ensuing sub-sections introduce the three dimensions of robustness, agility and integrity present in the scale as well as the items attached to each dimension. The section will conclude with a small discussion about the limitations of the organisational resilience scale.

### 3.1.2 Suitability of the organisational resilience scale

Earlier on in this study the definition of organisational resilience, as proposed by Lengnick-Hall et al. (2011), was adopted. This definition identifies resilience as an organisation's ability to absorb, respond, and engage in transformation and lastly to draw benefit from surprise and

that resilience is something that evolves over time. The elements that together compose organisational resilience according to this definition are also present within the organisational resilience scale presented by Kanter & Iseri-Say (2015). In their study which builds extensively on this scale, Martinelli, Tagliazucchi & Marchi (2016, p. 17) determine that the scale can be translated into a definition of organisational resilience in the following manner: *"Therefore, resilience seems to consist of more than adaptation: it is about being solution-oriented, proactive in seizing new opportunities, and turning deeply adverse conditions into innovative opportunities for business renewal and change"*. By juxtaposing these two definitions of organisational resilience great similarities can be discerned. For example, both definitions conclude that organisational resilience is expressed as a capacity to effectively respond to uncertainties, to seize opportunities and to draw benefit from unfortunate circumstances (Lengnick-Hall et al., 2011; Martinelli, Tagliazucchi & Marchi, 2016). With a basis in this, it appears as if the organisational resilience scale as introduced by Kanter & Iseri-Say (2015) is compatible with the definition of organisational resilience adopted in the current study.

Further, the organisational resilience scale has been applied in a variety of studies which attests to its validity. For example, Onwughalu, Ngaage & Needorn (2018) has applied the scale to examine organisational resilience in telecommunication firms and Ingram & Bratnicka-Mysliwiec (2019) utilised the scale in their study of resilience within family businesses. In yet another study Edvik et al. (2020) made use of the scale in a study of churches organisational response to changes in the context of work engagement and job satisfaction. However, although the literature points to the resilience scale being a well-used tool and applied in diverse settings there is yet little research in which the scale has been utilised specifically in HR-oriented studies. Bouaziz and Hachicha (2018) and Mousa et al. (2020) have begun to fill this gap of knowledge and have determined that the organisational dimensions of robustness, agility and integrity can be directly affected by HR-practices. With basis in this, it is concluded that the HR-function can be effectively operationalised to increase the overall organisational capacity for resilience (Bouaziz & Hachicha, 2018; Mousa et al., 2020).

This sub-section actively demonstrates three points; firstly, the definition of organisational resilience inherent in the organisational resilience scale is aligned with the definition adopted in the current study, which means that the analytical focus of the scale and of this study are

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compatible with one another. Secondly, the scale has been used in a variety and diversified number of studies which attest to its usability and thirdly at least two studies confirms its applicability in HR-related research. Conclusively, the organisational resilience scale as presented by Kantur & Iseri-Say (2015) is a proven framework that is suitable to this particular study.

### 3.1.3 Dimensions of the organisational resilience scale

The organisational resilience scale is structured in a three-dimensional fashion and is composed of three constituent dimensions: robustness, agility and integrity. Robustness aims to describe an organisation's capacity to withstand and recover from disadvantageous conditions whereas agility refers to an organisation's capacity to react promptly to changes in the business environment and quickly take actions thereafter. Lastly, integrity refers to the social cohesion that has been fostered between colleagues and the value this has in the context of withstanding disadvantageous circumstances (Kanter & Iseri-Say, 2015).

Each dimension has a number of items relating to them and each item can be utilised as a means to measure organisational resilience. However, certain items that had been included in the initial analysis were removed from the final analysis in Kanter & Iseri-Say's (2015) study as the items Cronbach's Alpha score had been insufficient. However, some of these deleted items will be included in this study in order to enable a richer analysis. Below in table 1, the dimensions are introduced with their corresponding items. The items which were included despite being removed from Kanter & Iseri-Say's (2015) final analysis are marked with an asterisk.

It is worthwhile noting that the organisational resilience scale as a framework employed in this study will only focus on employee-characteristics and behaviour. The role of overarching HR-principles and HR-policies which also have been documented to affect an organisation's capacity for establishing resilience (Lengnick-Hall et al., 2011) is not be explored through the scale. However, given the research aim and demarcations made, the scale is still a justifiable framework appropriate for this particular study.

*Table 1: The organisational resilience scale*

| ORGANISATIONAL DIMENSION | ITEMS |
|---|---|
| **Robustness** | ·     Stands straight and preserves its position.<br>·     Is successful in generating diverse solutions.<br>·     Shows resistance to the end in order not to lose.<br>·     Does not give up and continues its path. |
| **Agility** | ·     Rapidly takes action.<br>·     Develops alternatives in order to benefit from negative circumstances.<br>·     Is agile in taking required action when needed.<br>·     Easily adopts to changing circumstances*<br>·     Is a place where how to take action is always clear* |
| **Integrity** | ·     Is a place where all the colleagues engaged to do what is required from them<br>·     Is successful in acting as a whole with all of its colleagues.<br>·     Is a place where team/department members share their responsibilities if needed.* |

## 3.2 Application of social network analysis

### 3.2.1 Formal and informal ties

A major trend in the SNT-literature is to make a distinction between formal and informal ties. Formal ties are contractual in nature and prime examples of formal ties are those established by formal members of an organisation. The relationships formed between supervisor and employee, between colleagues or between buyer-supplier are examples of formal ties. In contrast, informal ties are relationships built on interpersonal trust and commitment to one another. Examples of informal ties can be the relationships formed between friends or family members. For analytical purposes, Ahrens (2018) and Freeman (2014) suggest that SNA is an

effective method for unearthing the presence of informal ties in social settings as well as the meaning ascribed to them by members of that particular setting.

While the distinction between informal and formal ties is clear in theory, Wesserman & Faust (1994) posits that the concept is often blurred in practice. This is especially true in organisational settings where informal ties might be formed within a larger formal network structure which infer that a tie might be formal and informal simultaneously. For example, collegial relationships are classified as formal, however, colleagues may also over time establish an informal tie expressed as a genuine friendship. Whelan (2015) builds on this notion by investigating the formal- and informal elements present in the relational ties formed between colleagues. He determined that those colleagues who had informal elements in their formal ties to one another could solve organisational challenges more smoothly compared to those colleagues whose relational ties were strictly formal. Whelan's (2015) study therefore not only indicates that informal ties between colleagues enhance organisational performance but also points to informal ties being a crucial factor to include in the analysis of social networks.

There is an extensive body of research supporting Whelan's (2015) conclusion that informal ties within a network is a crucial point of analysis and their collective work further illustrate the varied nature of informal ties. For example, Pdonly & Baron (1997) present evidence indicating that informal ties are of paramount importance in explaining upward career mobility as it enables access to information in the form of competitive advantage. Hollenbeck & Jamieson (2005) claims that within organisational settings informal ties serve as conduits of tacit knowledge about work expectations which cannot be communicated through formal channels. In a similar vein, Nonaka & von Krogh (2009) indicate that it is through informal ties that new colleagues learn about work culture and norms and that failure to access these informal ties at an early stage might render new colleagues isolated and negatively affect their performance. These studies are interesting as they not only illustrate the function of informal ties but also highlight how social network analysis is relevant for HR-related issues.

Although these scholars have different opinions as to why informal ties are of crucial interest in the analysis of social networks, it is important to note that these opinions are not in contradiction with one another. The focus of their individual studies has simply cast a different light on the many-facetted nature of informal ties. However, regardless of what focus

of informal ties are being assumed, there is throughout the SNT-literature consistent evidence that the concept of informal ties is a crucial aspect to consider in the analysis of social networks. Informal ties may they serve as conduits of important knowledge and information not accessible through formal ties.

### 3.2.2 Strong and weak ties

Other than categorising ties as either formal or informal, it is within the SNT-literature commonplace to make a distinction between strong and weak ties. The concept was first introduced in Granovetter's (1973) pioneering work *The Strength of Weak ties* which has since produced an extensive body of secondary research building on his hypothesis that weak ties are influential as spreaders of valuable knowledge (Heath, Fuller & Johnston, 2009; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). Granovetter (1973) defines a strong tie as being formed between actors who are in regular contact with one another, whereas weak ties refer to actors that are less likely to be socially involved.

Granovotter (1973) ascribe importance to weak ties because it is through weak ties that individuals can access new knowledge. He makes this point by illustrating how an individual with several weak ties in her social network is more likely to access information about new job opportunities because these weak ties are more likely to provide information that is not already known by the individual in question or her close friends. In sum, weak ties function as bridges between different networks that are separated from one another, and thus presumably are more likely to act as sources of non-redundant knowledge. In contrast, an individual whose network is composed largely of strong ties and few weak ties is unlikely to access information that is not already known by herself or those with whom she has formed strong ties. In a later work, Granovetter (2005) clarifies that weak ties are more prevalent in social networks than strong ones and that most weak ties provide information of little significance. However, he also once more asserts that weak ties are more likely than strong ties to be the source of unique and non-redundant information as they function as connectors between otherwise distinctly separate networks that likely are privy to different information.

The concept of the strength of weak ties can be further exemplified by illustrating the exchange made between two networks. For example, if person A has a closed and dense network with strong ties, then the actors who know person A presumably know each other as

well. This infers that what person A knows, most other members within that particular network know as well, and subsequently, duplication of information is commonplace whereas new knowledge is rarer. Consequently, information within this network quickly becomes redundant, since the existing information spreads around quickly and access to new information is limited. If person A then meets person B who forms part of a different network with a similar constitution the two can share information and thus create value for one another since their respective network most likely is privy to different knowledge. However, the two will also function as a bridge between the two networks and in this fashion, person A and person B form a weak tie and enable information to flow in and out from their respective networks (Granovetter, 1973). Borgatti & Halgin (2011) confirms the strength of weak ties in their study, and adds to the theory by describing in greater detail how such an exchange between networks allow individuals to provide their individual network with new ideas, information and people and that such a connection between two previously distinctly separate networks generate value for each network in their entirety rather than just the two individual whom established the weak tie. With the aforementioned description of how weak ties bind together previously distinctly separate networks, Granovetter (1973, 1983) conclude that individuals who have few weak ties in their networks are socially disadvantaged. These individuals do not have access to novel information, knowledge and people that circulate outside their immediate network. In a later work, Granovetter (2005) describe that within organisational settings, individuals that lack weak ties might be ignorant about issues and challenges in need of solving, solutions available as well as opportunities. Supporting Granovetter's (1973) original claim about the strength of weak ties, Uhlik (2011) found in his study of partnerships that weak ties are crucial in establishing an effective network because of the access to novel and important information weak ties represent.

However, although strong ties are seen as being less beneficial than weak ties, as they generate redundant as opposed to novel knowledge, the strength of strong ties should not be disregarded. Strong ties offer a myriad of advantages not offered by weak ties; they are trustworthy, cheap, reliable and the exchange offered will be delivered detailed and accurately (Borgatti & Halgin, 2011; Burt, 1992; Wellman & Wortley, 1990). With a basis in this Granovetter (1973, 1985, 2005) conclude that an effective network should consist of strong as well as weak ties. Guan & Liu (2016), Ebers & Maurer (2014) and Rost (2011) extends the notion that strong and efficient networks are composed of strong as well as weak ties by

suggesting that weak ties have no value without strong ties, but strong ties have some value without weak ties. The logic behind this is that strong ties are a source of support and are instrumental in drawing benefit and realising the potential of the value added by weak ties. Weak tie on their own however lacks the social cohesion and trust to effectively manage the useful knowledge they enjoy.

Summarily, there is an extensive body of knowledge in the SNT-literature that suggests that both strong and weak ties are crucial to investigate in the study of networks because strong and weak ties affect the network being studied differently (Borgatti & Halgin, 2011; Granovetter, 1973; 1983; 2005; Guan & Liu, 2016; Ebers & Maurer, 2015; Rost, 2011; Wellman & Wortley, 1990). However, Jack (2005) questions this and present evidence suggesting, in contrast to Granovetter's conception, that strong ties can be sources of new and valuable knowledge as strong ties have the ability to invoke weak ties. With a basis in this Jack (2005) goes on to conclude that it is ill-advised to designate weak ties as the only source for novel and useful information as well as resources and label networks built largely on strong ties as redundant and ineffective. Instead, she proposes that research should look into the actual function of the tie in order to determine its contribution to the social network in question, regardless of it being strong or weak. However, there has been little research extending and elaborating on Jack's (2005) work which makes it difficult to confirm or disprove this criticism. Another useful contribution to the SNT-literature made by Jack (2005) is that she highlights the possible negative consequences of strong ties. Granovetter's (1973, 1983, 2005) describes strong ties as trustworthy, cheap, reliable and claims that the exchange offered will be delivered more detailed and accurately. While Jack's (2005) study of entrepreneurial activity confirms this, it also extends this idea by illustrating how strong ties functions as a double-edged blade, as they may instil social and moral tensions within the network that chokes business activity rather than allowing it to flourish.

Granovetter's (1973, 1983) measurement of the strength of ties has also been a point of criticism. In his work, a strong tie is defined as two actors being in regular contact with one another, at least twice a week and this method of measuring have been duplicated in other scholarly work (Lin & Dumin, 1982; Murray et al., 1981). However, Marsden & Campbell (1984) question this view and argues that using frequency as a measure of strength run the risk of ascribing too much strength to ties between individuals who find themselves in frequent contact with one another involuntarily, such as neighbours or colleagues. Similarly,

they posit that too little importance might be ascribed to individuals who are not in contact regularly but still have formed important bonds to one another, such as relatives living in different countries. Instead Marsden & Campbell (1984) propose that the parameter of closeness is a better measurement of the strength of ties. This would mean that it is the exchange of emotional intensity that constitutes the strength of a tie rather than the frequency of interaction. Jack (2005) found that strong ties within a network might lay dormant during long periods until re-activated and this supports Marsden & Campbell's (1984) notion that using frequency as a measure of determining the strength of ties is insufficient. A future area of inquiry, therefore, lies in confirming or challenging the criticism concerning how strong ties are should be defined directed towards Granovetter (1973) as presented by Marsden & Campbell (1984) as well as Jack (2005).

### 3.2.3 Structural holes

Another major contribution to the SNT-literature with widespread prominence is the concept of structural holes as presented by Burt (1992) who first developed the framework as an extension of Granovetter's (1973) hypothesis of the strength of weak ties. As such the concept of structural holes and strong/weak ties are very similar. For example, Burt (2004, p. 349-350) argues that "*opinion and behaviors are more homogenous within than between groups, so people connected across groups are more familiar with alternative ways of thinking and behaving*." This line of reasoning is very close to Granovetter's (1973, 1983, 2005) description of how weak ties are conduits of new and novel information that may be valuable to the individual. As such both the concept of the strength of weak ties and the concept of structural holes are what Borgatti & Halgin (2004) classify as "flow theories" because both concepts attempt to illuminate how a flow of information can be established between two networks previously separated. What differentiates these flow theories is that their analytical focus is on different levels. While Granovetter's (1973) theory examine the strength of the relationship between two actors, Burt (1992, 2004) assumes a holistic perspective and studies multiple networks in its entirety and attempt to describe the void between two or more networks that are not connected, and it is this void he dubs as structural holes. In other words, networks that are not connected are separated by structural holes.

Structural holes as a concept within network theory are elaborated in later studies as well. For example, Liu, Chiu & Chiu (2012) and Cowan & Jonard (2007) argues that an individual who is positioned at the brink rather than at the centre of a network is more susceptible to forming

bridges to other networks. The logic behind this is that these individuals may identify structural holes more easily compared to those who are positioned at the centre of the network, as these individuals usually are too deeply entangled in their own network to connect with others. Individuals who are on the brink of their networks and successfully bridges structural holes establish access to new ideas and perspectives which may benefit not only themselves but also the original network structure they formed a part of. In line with this, Burt (2004) also posits that achieving success for the individual as well as for entire networks relies on individuals' ability to bridge structural holes as this enables the transmission of valuable information which can be operationalised to achieve goals.

The concept of structural holes is valuable in the analysis of social networks. For example, a major contribution from an organisational point of view is that blockages in the flow of information and ideas can easily be identified through structural holes theory and subsequently remedied. If these structural holes are properly mitigated, individuals within the organisation in question will benefit from new non-redundant flows of information which in turn might generate ideas and inspiration which can be harnessed as increased productivity. (Ebbers, 2014; Martinez & Aldrich, 2011).

Conclusively, Burt's (1992, 2004) conclusions are similar to those found in Granovetter's (1973) original work and are best seen as an extension of that framework. The difference between the two concepts is that the former studies the void between two or more networks whereas the latter examines the strength or weakness of ties. Because these concepts are so closely related, they can be unified. For example, Borgatti & Halgin (2011) explain that the notion of individuals bridging structural holes as presented by Burt (1992) is achieved by individuals who form that which Granovetter's (1973) describes as weak ties. Combining these two theories may generate new insights on the nature of social networks, as it will allow for a more thorough analysis (Ahuja, 2002; Borgatti & Halgin, 2011).

### 3.2.4 Social capital

Preceding sections of this chapter have discussed how content is transferred within and between networks and this section will proceed with discussing what facilitates the transfer. For this purpose, the concept of social capital will be reviewed, followed by a discussion of how it relates to SNT.

The first step in introducing social capital is to inform that there is no clear definition of the term and that scholars construe the concept differently and therefore there is no consensus on what term should and should not include (Bjornskov & Sonderskov, 2012). According to Audretsch et al. (2011) it is more difficult to define social capital compared to other forms of capital because it is less tangible and exists solely in the social relations between actors. However, in his influential work Coleman (1988) attempts to define the elusive concept of social capital by differentiating it from other forms of capital. He writes that physical capital is the result of transforming raw material into tools and objects needed and that human capital is created by adapting a person through training and education in order to equip them with desirable skills. He goes on to define social capital as the content found in the relational ties between network members that empower them to act in new and innovative ways before concluding that social capital is valuable as it facilitates success. A more concrete contribution to this body of knowledge is made by Lin (2001) who posits that social capital can be reflected in a sense of belonging, increased social cohesion, support, trust, valuable information and knowledge of norms - components that are necessary for the individual as well as the group to succeed in their endeavours.

Lin (2001) further proposes that the level of social capital present in an organisation is reflected in the gains made by either an individual or by a group. The logic behind this is that social capital will empower individuals and groups to realise their potential and to draw benefit from the resources available to them. In line with this logic, she suggests that social capital can be converted into financial gain and that contributing to the growth of social capital thusly should be seen as an economic investment. In a similar vein, Adler (2002) reasons that social capital can be converted into human capital which is of benefit not only to the individuals themselves but also to the entire social network of which they form a part.

Thus far it can be summarised that although descriptions of social capital might vary, there appears to be consistent evidence in the literature indicating that social capital resides within the social relations between actors that share a social setting (Audretsch, 2011; Bjornskov & Sonderskov, 2012; Coleman, 1988). There is also consistencies in the literature pointing to how social capital can be converted into financial and human capital (Adler, 2002; Lin, 2001).

However, on a subject where there is disagreement is on what the most fruitful circumstances for fostering social capital are. Returning to Burt (1992), there is evidence suggesting that the

potential for increased social capital is found in the structural holes existing between networks because it is through bridging these structural holes that new information, as well as new relations, can be found. This is in contrast to Coleman (1988) who claims that social capital is best nurtured in closed networks where actors can develop a sense of trust and social cohesion which directly correlates with the actors' ability to realise the potentialities and opportunities available to the network in question. Adler (2002) have investigated the contrasting propositions and makes a distinction between 'bridging' and 'bonding' as a means to generate social capital. The former term refers to producing social capital through establishing contact with other networks and the latter signify how social capital is instead established within the internal network. It is concluded that both Burt's (1992) Coleman's (1988) assumptions are correct and that both means of producing social capital are effective, albeit in different ways (Adler, 2002). Rost (2011) extends the notion that both bridging and bonding are necessitous for establishing an effective production of social capital. She suggests that networks that are the most effective in producing social capital are those who have strong ties as well as having bridged structural holes by forming weak ties. In other words, she proposes that networks that are most succesful in generating social capital are those who practice both bridging and bonding. This conclusion is an echo and confirmation of Granovetter's (2005) claim that social networks consisting of strong and weak ties are the most effective. As a final note, Adler (2002) and Nidheesh & Abhishek (2020) that an environment in which people can contribute and are acknowledge also encourage the production of social capital.

Summarily, social capital is reflected in a sense of belonging, increased social cohesion, support, trust, valuable information and knowledge of norms. Social capital can be converted into human capital as well as financial capital, as it enables network members to realise the potentialities and resources available to them, which benefits the individual as well as the entire network (Adler, 2002; Lin 2001). These views on social capital are aligned with Coleman's (1988) view which proposes that social capital is an intangible social structure that empowers and facilitate the action of individuals or groups within a network. Further, this sub-section has also shown that social capital as a framework is unifiable with other concepts of SNT, such as structural holes theory and the strength of weak ties hypothesis (Adler, 2002; Rost, 2011).

# 4. METHODOLOGY

## 4.1 Qualitative approach

Given the nature of the research aim guiding this study, the qualitative approach has been deemed as a suitable approach. More specifically, the qualitative approach concerns itself with the acquirement of social knowledge with the goal of ascribing meaning to events and social environments and phenomena. As it is only through people this kind of in-depth and introspective data can be gathered, the unit of analysis within qualitative research is always people with knowledge on the issue at hand (Bryman, 2012). In a similar vein, Hakim (2000) explain that the qualitative approach is uniquely suited to develop an understanding of participants' behaviours, perceptions, attitudes, beliefs, views and feelings as well as to explore how respondents interpret specific events and phenomena. Acquiring this kind of data is not possible through traditional quantitative measurements which is another argument for assuming a qualitative approach given the research objective of this particular study.

Silverman (2013) notes that there are two main traditions to qualitative research in regard to theory building; there are those who establish theory from what emerges in the analysis of their data and then there are those who employ qualitative methods to test existing theories. The latter tradition is defined as inductive and the former as deductive. The current study will take inspiration from both of these traditions as the study is designed in a manner that will allow for consideration of existing theories and concepts as well as enabling new theory building based on how the findings relate to the existing body of knowledge. This infers that the study will combine the inductive and deductive approach and thus qualifies as an abductive study (Bryman, 2012).

### 4.1.2 Qualitative social network analysis

Within the SNT-research there is a widespread dominance of the quantitative approach. However, in more recent years qualitatively-oriented SNA has been applied in a variety of studies (Ahrens, 2018; Heath, Fuller & Johnston, 2012; Jack, 2005, Oancea et al., 2012; Whelan, 2015). Carpentier & Ducharme (2005) argue that certain topics investigated through SNA aiming to explore concepts such as culture, reciprocity and social regulation warrant a qualitative approach as these are topics that are difficult to quantify with traditional SNA which relies on statistical measurements. Easton (1995) extends this notion by suggesting that some aspects of networks that are fraught with emotion are therefore more suitably explored

through qualitative research designs. Jack (2005) concurs with this reasoning and argues that qualitative SNA is suitable when exploring the motivations, expectations, norms and desires that are inherent in the relational ties that connect and divide network actors. Further, whereas the quantitative approach allows for a snapshot of a social network which is suitable for describing a static situation at one specific point in time, the qualitative approach allows the researcher to study how social mechanisms and processes affect the functioning of a network. For these reasons, the qualitative approach to SNA has been deemed suitable given the research nature of this particular study.

## 4.2 Case study

During the course of this master thesis, a case study was conducted. Starman (2013) defines a case study as a form of qualitative research as opposed to a scientific methodology in its own right and suggests that case studies are apposite when the objective is to develop an in-depth understanding of a particular phenomenon set in natural and realistic settings. Yin (2012) posits that case studies are a suitable instrument to answer explanatory research questions, such as the one guiding the current study. Further, only one case study was carried out, as limiting the scope of the study makes it possible to develop a deeper understanding of the attitudes and perceptions being studied (Bryman, 2012). Yin (2012) elaborates this notion by explaining that developing an understanding of comprehensive and meaningful characteristics of real-life events is easier in a singular case study as opposed to carrying out several case studies. The arguments outlined above demonstrate that the chosen research design is apposite given the nature of the research aim guiding this study.

## 4.3 Sample

### 4.3.1 Description of sample

The company was chosen based on the fact that its colleagues are currently facing the COVID-19 crisis and the challenges associated with the pandemic. However, despite these challenges the corporation is doing extraordinarily well and thrives. This accomplishment renders the company interesting from a resilience point of view as the corporation in question has not only survived jolts in the exterior and interior environment but also simultaneously manages to thrive, a hallmark of organisational resilience.

Two sets of participants were chosen for this study. The first and largest set of participants were co-workers who were chosen the specific criteria that they had been with the corporation for at least five years as well as recently having formed new collegial relationships with other

organisational actors as a consequence of COVID-19. The logic behind this criterion is based on three arguments. Firstly, individuals fulfilling these expectations can be assumed to have worked long enough to have developed relational ties to their colleagues that are charged with interesting content and meaning. Having worked for at least five years also means that they have worked together with their colleagues during the COVID-19 pandemic, which indicates that their relationships have been subjected to uncertainty and have been strained and tested. This allows for an in-depth exploration of how the relational ties have changed and evolved during phases fraught with uncertainty. Secondly, the participants meeting this criterion have formed collegial relationships with new organisational actors during the reorganisation and/or the COVID-19 pandemic while simultaneously maintaining the working relationship with their older and established contacts. This enables interesting comparisons between how strong and weak ties change over time in the face of ongoing crises, which in turn can inform much about the nature of social networks. Thirdly, this sampling will also collectively make the participants a homogenous target population, a prerequisite for generating coherent results that are generalisable. The second and smallest set of participants were HR-practitioners who had been with the company for at least five years. Within this study, co-worker respondents will simply be known as the respondents, whereas the HR-practitioners will be referred to as HR-practitioners.

## 4.4 Data collection

The data for this study was gathered through semi-structured interviews. This interviewing method was chosen as it will enable the production of knowledge reflecting the perspective of the participants themselves which entails that the bulk of data will be composed of the participants' experiences, feelings and opinions (Kvale, 1996). This kind of knowledge is desirable given the nature of the research aim guiding this study, which intends to explore the content and meaning of social relations in the context of developing organisational resilience. It is the flexibility of semi-structured interviews which renders it a tool capable of generating data of the described kind as it allows the researcher to probe and expand the participants' answers through relevant follow-up questions and reflections (Hitchcock & Hughes, 1995).

Given that the COVID-19-pandemic is ongoing during the course of this study, interviews were strictly conducted through the video meeting service *Zoom*. Consequently, the benefits of face-to-face interviews, such as a more accurate registration of visual clues of emotions and feelings that are not communicated verbally, were lost. However, given the circumstances,

video meetings were deemed the most suitable alternative to face-to-face meetings as video cameras will allow for easier registration of this elusive and non-verbal communication (King & Horrocks, 2010).

According to Onwuegbuzie & Collins (2007), the sample size in qualitative research should not be too large nor too small. Too large a sample will result in difficulties to perform deep case-oriented analysis whereas too small samples will provide difficulties in generating saturation in the data. With a basis in this, a total of 20 interviews were planned, however, some respondents withdrew from the study, resulting in that the total number of interviews amounted up to 16. While 10 of these were co-workers, 6 of them were HR practitioners. Each interview ranged between 50-90 minutes and took place during March and April 2021. Participants gave consent to have the video meeting recorded for analytical purposes. A consent form was also signed, see appendix 1.

## 4.5 Data analysis

For the data analysis, the thematic analysis was deemed suitable as it is a flexible tool which enables the researcher to discern patterns in the data that relate to how the participants ascribe meaning to various aspects of their life (Cohen, Manion & Morrison, 2013). As it is this kind of knowledge that is relevant to the current study, the choice of thematic analysis is justifiable. Despite its widespread prominence, Bryman (2012) notes that there is no cluster of distinctive techniques pertaining to how thematic analysis should be operated. This renders the thematic analysis an unidentifiable approach. With this as a background, this section will go on to introduce how the thematic analysis has been used in this particular study.

Cohen, Manion & Morrison (2013) recommend that in the thematic analytical process, researchers should read and re-read the transcripts to familiarise themselves with the data. The next step is to label relevant phrases, words, sentences or sections that in some manner relating to the research question, and these labels will serve as the initial codes. In the next step, initial codes that in some way relate to another are abstracted into a suitable wider code and it is these wides that become a theme. In the final stages of the thematic analysis themes are labelled with an appropriate name. Codes can be abstracted several times, allowing for the generation of themes and sub-themes. It is only the codes that are relevant to the research that is grouped and abstracted into themes, and the relevance of codes is as aforementioned based on how they relate to the research question. This process can be arduous but once finished the

themes will explain large parts of the data as well as allowing the researcher to smoothly sift through a large amount of data. Further, this process will also enable the researcher to move beyond specific situations described in the individual interviews and instead study a generalisable version of the issues at hand. Hitchcock & Hughes (1995) extends the discussion of the usefulness of the thematic approach by explaining that the coding and subsequent exploration of themes allow the researcher to investigate interconnections within the data. Codes and subsequent themes and sub-themes were generated from the data in accordance with the thematic approach outlined above. This process was iterative, meaning that the researcher continuously went back and forth between theory and the empirical data in order to enable a thorough and nuanced analysis (Bergenholtz, 2011). The analysis itself was conducted with the support of the qualitative analytical software NVivo 12.

## 4.6 Ethical considerations

The ethical principles which have guided this study are centered on the willingness of participants to partake, trustworthiness and confidentiality which are according to Silverman (2013) central tenets in ethical research. With basis in this, participants were informed about the purpose and nature of the current study well in advance of the actual interviews. Verbal consent to participate in the study was given by each participant prior to the interviews, and participants were reassured that the information extracted from the interviews and the interview recordings and transcripts would be handled with the strictest of confidentiality. Participants were also informed of their right to decline to answer any or all questions, or indeed to withdraw their consent to participate. In the latter case, participants were informed that their contributions to the study would be deleted. Reassurance of participants anonymity was also stressed (Cohen, Manion & Morrison, 2013). These guidelines are in line with Vetenskapsrådets (2002) recommendations that in order to ensure that a study is handled ethically, the researcher must inform participants of the aim and purpose of the study, that participation is voluntary, and that participants may choose not to answer any or all questions.

Further, in accordance Vetenskapsrådet's (2002) urging, the recordings and transcripts of the interview were used solely for the purpose of completing the current study and were deleted after the study was finalised. Further, the corporation's name which has served as the case company as well as the participants were completely anonymised in the furthest extent possible. The only distinction made between respondents are those who are co-worker respondents, simply known as respondents, and the HR-respondents. When presenting the

result, the study will not introduce what specific role the respondents held, in order to protect their anonymity.

## 4.7 Trustworthiness

In qualitative research issues of reliability and validity is a frequent topic of discussion because the social reality that qualitative research aims to capture may be interpreted dramatically different by various actors. Linked to this, is also the concern that the researcher might enforce her or his own values and opinions onto the research result. Therefore demonstrating reliability and validity is crucial as it will contribute to the trustworthiness of the study (Cohen, Manion & Morrison, 2013). According to Bryman (2012), reliability and validity in this line of research have traditionally been assessed in a similar fashion as in quantitative research, but he goes on to assert that this might be inappropriate. Lincoln & Guba (1985) is of a similar opinion and questions the applicability of quantitatively inspired measures of trustworthiness in qualitative research as the two research approaches have very different nature. In light of this criticism, Bryman (2012) gathers on existing research on qualitative methodology and proposes four measures of trustworthiness in qualitative research: credibility, transferability, dependability and confirmability.

### 4.7.1 Credibility

Ensuring the credibility of the findings entails two components: firstly, the researcher adheres to good practice and follow established and proven research methodologies and secondly that the researcher confirms that he or she has understood the findings correctly as depicted by the participants. The current chapter aims to honour these criteria by presenting the acknowledged qualitative methodological practices that have been employed during the duration of the study. Concerning the second component, the techniques of respondent validation and triangulation have been used (Bryman, 2012).

### 4.7.2 Transferability

Qualitative studies presents difficulties when it comes to replicating the study. Lincoln & Guba (1985) proposes that this issue is best solved with the thick description technique. Thick description is a term referring to an extensive and detailed account of the context being studied, which thus allows for other researchers to properly assess the transferability of the findings developed in the study to other studies. The thick description was pursued in this

current study by providing an in-depth account and description of the case study as well as the criterion that have guided the selection of the participants.

### 4.7.3 Dependability

Dependability is accomplished when the researcher enables records, field notes and descriptions of the phases of the research process being easily accessible. This allows for other researchers to assume an 'auditing' approach by being able to critically review the research process. This allows for a discussion of how suitable the chosen research methodology and techniques have been. This openness and critical discussion contribute to the trustworthiness of the study (Bryman, 2012). The current study has strived to live up to the standards of dependability by thoroughly describing and motivating the methodological choices underpinning the research, as well as including a thorough description of the research phases.

### 4.7.4 Confirmability

While it is impossible to achieve complete objectivity, the confirmability criteria in qualitative research is indicative of the researcher having acted in good faith, and have strived to not allow personal values influence the research process or findings. Confirmability is achieved by allowing other researchers to investigate the research process and act as an 'auditor', the criteria of confirmability is thus closely related to the criteria of dependability, and the latter can be seen as enabling the former (Bryman, 2012). Confirmability was sought after in this study by allowing other students to thoroughly and probingly examine and question all aspects of the research.

## 4.8 Limitations

There are a number of limitations to the current study. For example, the qualitative approach renders difficulties in generalising the findings. Further, due to COVID-19 all the interviews were held online in video meetings, which may negatively have affected the researcher's ability to register non-verbal communication. The interviews were conducted in Swedish but the findings were presented in English, which might infer that the words and meanings originally expressed in Swedish have been twisted to an extent during the translation. In light of this risk, the translation was conducted carefully and inspected continuously throughout the process in the hopes of lessening the risk of mistranslation. Lastly, although the subject of this study in itself is not necessarily sensitive, there are aspects of it that may have been perceived

as such by the participants. For example, inquiries about the relational ties formed between different colleagues can be seen as probing into the private sphere of the participants' lifes and this may negatively influence the participant's willingness to give truthful answers. With these limitations in mind, the researcher has carefully considered the aforementioned methodological choices in the hopes of lessening the effect of these possible negative influences. Lastly, as explained in preceding sub-sections, two set of informants have been utilised: co-workers and HR-practitioners. Both of these sets of informants ascribed much importance to the function of leaders and discussed the role of leadership in the context of realising and enacting traits associated with organisational resilience. However, no leaders have been interviewed in this study, which means that the findings relating to leaders cannot be validated from leader's perspective. Connected to this, the possible nuances of the studied issues that leaders could have contributed with, are neglected.

# 5. EMPIRICAL FINDINGS AND ANALYSIS

In order to answer the overall research aim of how social networks contribute to organisational resilience, the data has been coded according to how the respondents' networks were associated with aspects of organisational resilience. More specifically, the data has been coded according to how the four over-arching traditions of SNT previously introduced (1. Formal and informal ties, 2. Strong and weak ties, 3. Structural holes and 4. Social capital) related to the items found in the three dimensions (agility, robustness and integrity) of the organisational resilience scale as presented by Kantur & Iseri-say (2015). See table 1 on page 16 for these items. The coding process generated three themes with a total of seven sub-themes as illustrated below in table 2. The items adhering to each dimension of organisational resilience scale (ibid) has inspired the sub-themes. In what follows, each sub-theme will be introduced after which a subsequent social network analysis on the theme in its entirety is presented. Within this study, the co-worker set of respondents will simply be known as the respondents, whereas smaller group of HR-practitioners will be referred to as HR-practitioners.

*Table 2: Themes and sub-themes*

| THEMES | SUB-THEMES |
|---|---|
| Agility | • Developing alternatives in order to benefit from negative circumstances<br><br>• Knowing how to take action |
| Integrity | • 'The Positive Spirit'<br><br>• Collaboration<br><br>• Social cohesion |
| Robustness | • Successfully generating diverse solutions<br><br>• Engagement levels remaining or growing stronger |

## 5.1 Agility

### 5.1.1 Developing alternatives in order to benefit from negative circumstances

The respondents highlighted that COVID-19 was followed by challenges related to adaptation, both in regard to changes in the business environment as well as to the COVID-

19-restrictions. However, the respondents also emphasised that these challenges illuminated flaws as well as opportunities in their method of working and that these realisations subsequently enabled the respondents to revise and improve current practices. One such example is given by a respondent who as a consequence of COVID-19 realised that consultants in certain areas of the operation were superfluous and unnecessary. *"When we laid off consultants, we noticed that we didn't really need them, so corona has shown that we have had too much consultants in certain areas of our company, which is bad because that makes us vulnerable."* A similar example can be seen in a respondent who had adapted a physical board into a digital one to accommodate those in his team that worked remotely, and as a consequence realised that this adaptation was not just a substitute of the physical board but actually an improvement.

> *"Before it took time to change the content the board, because we had to move the 'plups' around and continuously update the board manually. Now we don't have to do that, because the information is uploaded automatically through different connections in excel and other sources."*

In a similar vein, respondents also informed that they had realised the potential and benefits of working digitally after the COVID-19-restrictions had compelled them to work remotely, and informed that they would continue to work more digitally even after the restrictions were lifted.

Yet another example of how respondents tried to capitalise and draw benefit from negative circumstances is seen in how all of the respondents described COVID-19 as a learning opportunity. As one respondent exemplifies it: *"Corona has coincided with us launching a new Office 365 package, so it came at a very opportune time, it like became a practice round for our new programme."* In line with this, other respondents stressed that it was important to not let this learning opportunity go to waste. To this end, certain measures were taken to preserve the lessons that the pandemic had to offer. For example: *"[…] We have actually already done a couple of policy documents connected to redundancy and the situation on a general level. It is important that we do this continuously, and not just surf through the situation, and not seize the opportunity to learn for future events."*

When asked more concretely about how the chain of events leading up to these ideas of developing and revising practices in order to draw benefit from negative circumstances looked like, a two-phased process was described. In the first phase, the respondents discuss the idea with team members, and the idea is through these discussions developed and defined more clearly. In the second phase, in-put is requested from other organisational actors, mainly from leaders but also the HR-function. *"I usually talk things through with my team, we discuss and improve the idea and then ask for valuable in-put from relevant actors. I usually turn to my closest boss but also HR ."* Another respondent framed it like this:

> *"It's always good to get feedback from the boss, and sometimes you might need their approval to take your idea even further, so it comes very natural to talk things through with him […] and with HR, depending on the idea in question and the subject it can very valuable to talk to them as well because they can sit on very valuable information. They do that in question that concern behaviour, employees and so forth."*

When asked why leaders and HR-personnel were relevant actors to get feedback from, the respondents answered similarly that leaders and HR-personnel possessed, through their respective function, a bigger perspective that could be valuable for the idea in question.

> *"Well, the boss I report to, he has colleagues and contacts who are also bosses, and through them he can access very valuable information which in turn indirectly can benefit me… So yeah, my boss apart from being a good colleague to me, is also important because the information he can produce"*

> *"The HR-section can give important feedback on our ideas, because a lot of them have a sort of 'spider-in-the-web' role, so it's always valuable to run your ideas through them, because they can give good advice on what parts of the idea to stick with and what parts to ditch for example."*

This description of the HR-function's advisory capacity is interesting because it is congruent with how the HR-respondents describe their own role. *"We HR-people have knowledge of people and behaviour, and that knowledge can be very important to other functions and to the*

*organisational actors when they formulate their strategic plans, something that has been necessary now when we really have to focus on turning this [COVID-19 situation] around.”*

This two-faced process of discussing ideas and later requesting input from leaders and HR-personnel illuminate how respondents developed alternatives in order to benefit from negative circumstances when working with teammates. When asked if and how the process differed when working with distant colleagues, respondents reported that the process was similar, with the only differences being that team members also being utilised as relevant actors to get feedback form. *“In this case the first step is always to talk to the colleagues involved, and then if you feel like you need in-put from leaders, or HR if the issue relates to their field of expertise, you ask for it. So the process is similar, except that you use also might discuss the idea with your team mates to get their in-put.”*

### 5.1.2 Knowing how to take action

A common issue that nearly all of the respondents shared was that COVID-19 had released time in their calendar, but that they periodically had no means to use that time productively. The common answer to this issue was to prepare for the future by partaking in various educations. *“It’s not always easy to find productive ways to stay busy, but something that we have worked a lot with is doing educations online.”* In a similar vein, another respondent put it like this: *“A bunch of different E-educations were offered, so that we could use some of our new time productively.”*

Employees engaging in various educational services can be connected to the HR-function, as discernable in how the HR-respondents described how COVID-19 had affected their daily duties and activities. *“For example, when COVID started we planned ‘ah alright, we have educations the employees can do’ because people couldn’t be at the office, so we had to educate instead. So I have been working a lot more with providing education to our employees.”*

When presented with a hypothetical situation of being faced with a challenge, and being uncertain in how to proceed with it, respondents reported that they would turn to their team members:

> *“What usually happens is that… We meet, and talk about it. Either the whole team or parts of the team. For example, if something happens unexpectantly,*

*and I don't know exactly how to begin to meet this situation, then I usually turn*
*to my team-mates."*

In situations in which the respondents are working with colleagues outside of the immediate team, and being faced with uncertainties in regard to how to proceed with a certain challenge, team members were still reported as important actors in deciding which course of action to take.

*"Well, it all depends on the situation, but if I were in a new situation with new*
*colleagues and I felt unsure about something, I would of course talk to the*
*colleagues that were concerned. But I would also turn to my team-mates to get*
*their opinion or advise on what I should do. Either that or I would go to my*
*boss, because I know he would he be happy to help me even though the*
*particular task in question might not be connected to his duties."*

## 5.2 Agility from a social network perspective

The findings reveal that respondents perceive their closest leaders and team members as strong ties whereas they consider distant colleagues as well as HR-personnel as weak ties. Although acknowledging frequency of contact as a contributing factor, all of the respondents reported that frequency of contact was not a deciding factor in determining the strength or weakness of a relational tie. Instead, emotional intensity in the social exchange was reported as a better indicator. These findings confirm Marsden & Campbell's (1983) and more recently Jack's (2005) assertion that emotional intensity is a better measure of the strength of a relational tie as opposed to frequency of contact which was suggested by previous scholars (Granovetter, 1973, 1983, 2005; Lin & Dumin, 1982; Murray et al., 1981).

The findings further suggest that a capacity for agility can be fostered in the relationship between both strong ties and weak ties. Concerning strong ties, this was primarily distinguishable in the data in two ways; firstly, it was mainly through the interaction with team members that respondents devised strategies in order to draw benefit from negative circumstances. Secondly, respondents described that they deliberated with their team members when uncertain of how to proceed with a certain task or challenge, even when those team members were not directly involved in said task or challenge. Respondents reported that their incentive for utilising team members in the aforementioned scenarios was the pre-established relationship between them that had been cultivated and nurtured over an extended

period of time. This pre-established relationship was expressed as greater trust, reliability and confidence in each other. Respondents' motivation for using team members is congruent with how scholars describe the advantages of strong ties being trustworthiness and reliability (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Wellman & Wortley, 1990).

Although strong ties were a vital factor in the pursuit of agility, weak ties were also reported as instrumental. One example of this is discernible in how respondents described HR-personnel as important because of the information they could access as a consequence of their function within the organisation or because of the network spread throughout the organisation they had access to. This information in turn proved valuable in empowering respondents to more effectively pursue agility, as seen in how this information was utilised to revise and improve current practices in order to draw benefit from negative circumstances. Another indicator of HR-personnel's value in the context of agility is seen in how they offered guidance to the respondents in terms of which online educations were suitable based on the individual's needs as well as the need of the organisation. As HR-personnel were described as weak ties, their described function as conduits of valuable information supports research positing that weak ties are valuable because they operate as sources of non-redundant knowledge (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). However, leaders were likewise to HR-personnel valued for the information they could access which was similarly used to further revise and improve current practices in order to draw benefit from negative circumstances. This indicates that strong and weak ties were used for similar purposes and that they were equally effective as sources of non-redundant knowledge. This is interesting because this stands in contradiction to the strength of weak ties hypothesis, which suggests that weak ties are more capable sources of non-redundant knowledge compared to strong ties (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). Therefore, these findings appear to be in line with Jack's (2005) criticism of the strength of weak ties hypothesis. Her criticism relates to the distinction made between strong and weak ties in the context of generating non-redundant knowledge. More concretely, she suggests that strong ties can be equally efficient as weak ties in the production of non-redundant knowledge because strong ties have the power to invoke weak ties. Through invoking weak ties, strong ties can thus indirectly enable an information flow from an employee, even though the employee has no direct contact with the weak tie in question. With a basis in this, she proposes that research should look into the

actual function of the tie to determine its contribution to the network structure as opposed to being preoccupied with whether to designate the tie as strong or weak. The findings corroborate this criticism, as respondents valued leaders because of the network they had access to in the context of gaining valuable knowledge, indicating that leaders have invoked weak ties on the respondents' behalf. Summarily, it appears as if respondents have accessed non-redundant knowledge partly from weak ties in the form of HR-personnel but also from strong ties in the form of leaders.

There has been no further research that has disproved or confirmed the notion of strong ties invoking weak ties, which makes it interesting that the findings of the current study are more in line with Jack's (2005) point of view rather than the established SNT-research trends which support the strength of weak ties hypothesis (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). One possible explanation for this could be that Jack's (2005) study, as well as the present study, have employed a qualitative research method as opposed to relying on a quantitative approach which is the dominating trend in SNT. The notion that using qualitative methodologies in SNT could render new and interesting insights about the nature of social networks that are difficult to discern using quantitative measures is something that advocates of qualitative SNT argue (Ahrens, 2018; Carpentier & Ducharme, 2005; Heath, Fuller & Johnston, 2012; Oancea et al., 2012; Whelan, 2015). With a basis in this, it can be speculated that the chosen qualitative research methodology could explain why Jack's (2005) findings and the findings of the current study is incongruent with an established SNT-research paradigm.

Questioning the distinction made between strong and weak ties in terms of their ability to generate non-redundant information also makes it possible to question some fundamental aspects of structural holes theory. Burt (2004) attests that achieving success for the individual as well as for entire networks relies on individuals' abilities to bridge structural holes as this enables the transmission of valuable information which can be operationalised to achieve goals. Further, Cowan & Jonard (2007) and Liu, Chiu & Chiu (2012) argues that an individual who is positioned at the brink rather than at the centre of a network is more susceptible to forming bridges to other networks. However, these findings seem to suggest that employees themselves do not need to bridge structural holes or be positioned at the brink of a network to access the knowledge and skillsets present in other clusters within the wider network. Instead,

leaders or HR-personnel may through their organisational function serve as the bridge between several structural holes on behalf of the employees. Further, the respondents' stories also reveal that their contact with leaders and HR-personnel in the context of indirectly invoking weak ties was informal. This would indicate that the information flow from structural holes was transmitted through informal channels, and this is consistent with how the literature describes the nature of informal ties in two ways. Firstly it corroborates that formal ties may operate informally which may, in turn, directly impact organisational performance positively (Whelan, 2015). Secondly, it also supports the notion that informal ties can be sources of important knowledge not accessible through formal channels (Hollenbeck & Jamieson, 2005; Nonaka & von Krogh, 2009).

Lastly, the findings also indicate that respondents were capable of achieving agility with strong ties and with weak ties as seen in how the respondents describe working well with team members as well as with distant colleagues. Another indication of this can be discerned in how respondents reported working well with distant colleagues without the presence of team members or other strong ties. This is in contradiction to how Guan & Liu (2016), Ebers & Maurer (2014) and Rost (2011) claims that weak ties have no value without strong ties because strong ties are necessary to draw benefit and realising the potential offered by weak ties.

## 5.3 Integrity

### 5.3.1 'The Positive Spirit'

All of the respondents testified to how a spirit of positivity was present throughout the organisation which was credited with being a key facilitator in promoting effective work. Within the frame of this study, a spirit of positivity indicates positive emotions that are described as contributing to the respondents' ability to work effectively despite uncertainties, such as those generated by COVID-19. The spirit of positivity was described as saturating the entire operation and was amongst other ways expressed as a willingness to work hard to solve challenges. *"I think that we have a culture within [the company], that we want to solve challenges that arises in a pragmatic and good way. It has been very clear that we all have a situation which we must manage which is difficult and tough, but we all want to solve it in a good way."*

Other respondents witnessed feeling a sense of loyalty and/or proudness to work for the company, and suggested that those kinds of feelings also contributed an overall positive spirit within the company which had a positive impact on business activities. *"But that is my picture at least, that everyone is committed to the company, and that we all have to pull through and do what is best for our company, and that makes it easier to get through difficulties."*

Another factor the respondents believed facilitated the positive spirit they described was to have an understanding for each other. *"Having insight and understanding of each other's perspective is very important. It makes it easier to understand why an employee is acting a certain way and having that understanding makes it easier to function together as one organism."*

Other respondents went one step further by suggesting that the already present spirit of positivity had been reinforced as a consequence of COVID-19. *"I think that COVID has done that we trust each other more, because we are all in the same boat, and we want to achieve something positive together."*

### 5.3.2 Collaboration

When discussing collaborative processes, all of the respondents made a clear demarcation between collaborating with team members and distant colleagues. Working with close team members was unsurprisingly described as easier than working with distant colleagues. The reasons related to having a pre-established understanding and trust for team members that had been nurtured over an extended period of time. *"The ones I work closest and tightest with, there we have a better understanding for each other, which we have built up before [COVID-19]."*

Something further supporting the notion that team members share strong collegial bonds inhibiting an efficient capacity for collaboration is seen in how the respondents describe that COVID-19 has positively impacted their ability to work together as a unit. *"Well, being put through a trying crisis like this, somehow it has made us even closer and I believe that has also affected our teamwork. I experience it as if we work even better now actually."* Another notable aspect of collaborating with team members that was shared by the respondents is that sharing responsibilities were commonplace and a natural part of their daily activities.

Respondents describe it like: "*And you know, we check up on each other in the team, to see if anyone is stressed, and then we cover up for each other to make sure the workload is evenly distributed*".

However, even though the respondents asserted that working with team members was easier than working with distant colleagues, they still reported that collaborative processes with distant colleagues were usually smooth and appreciated. Further, the findings also reveal that the collaboration with distant colleagues worked well independent of the involvement of one's team members. "*I work well with almost everybody, and it's not like I feel that I work better by having a closer colleague with me. No, no, not at all… We manage completely fine on our own, me and the distant colleague, and can be very effective together*".

Just as with their team members, respondents suggested that COVID-19 had improved the collaborative processes with distant colleagues. "*If I were to summarise, a crisis comes and then you need to re-prioritize, re-structure and collaborate in a different way, and that has made that we have a unified perspective, even with those we don't work with that often, which contributes to greater cohesion, and that you work better with each other than before.*" However, unlike how collaboration with team members was described, the respondents' stories reveal that successful collaboration with distant colleagues is dependent on two caveats. The first condition for successful teamwork appear to be based on having the access to the same information: *"Having the same information is important, I think that is a prerequisite for being swift and flexible."* The second condition is rooted in relying on more structured agendas as illustrated by the following excerpts: *"I think establishing common ground rules of how the work is going to look is much more important than when working with closer colleagues, depending on the size of the project, I think that is a necessary requirement in most cases."*

Another interesting factor that was not considered a caveat for effective collaboration between distant colleagues but nonetheless an important assisting component was that the respective leaders of the distant colleagues in question worked well together. *"There I believe we have good teamwork between the bosses, and they have a good communication between each other, you can sense that they are well-coordinated and that is of course something that makes it easier for us all when we work together across teams."* Or as another respondent says: *"Our*

*bosses are getting better at supporting each other, and that makes team-work between cross-functional teams much easier.*" This can be connected to how the HR-respondents describe how they attempt to establish good relationships between leaders. "*Usually bosses can sort things out between themselves, but sometimes we have to step in and help to ensure smooth communication and collaboration between them.*" Another HR-respondent describes it like this: "*I have tried to improve [two bosses] communication under a long period of time […] they have common interests, and need to see things from a common perspective, even if they represent different perspectives, so that is something that I have worked with.*"

### 5.3.3 Social cohesion

All of the respondents reported that COVID-19 had brought with it challenges related to retaining social cohesion. These challenges were largely connected to a significant part of the working force having to work remotely. The following excerpts provide an example of this:

> "*We all have a hectic work-day, and when we are at site on the office together we can remind each other that 'oh now we need to take a coffee break' and then we drink som coffee and hang out, but that doesn't come natural when everyone is working remotely. It demands more planning so… Yeah that's a big challenge I've been struggling with.*"

However, despite acknowledging these challenges, the respondents reported that COVID-19 had fostered a greater sense of social cohesion, both within the team but also with more distant colleagues. Concerning social cohesion within the team, the respondents explained that being put through challenges generates an increased attachment to one another. "*If I am going to be completely honest, I experience it as though this COVID-situation has done that we trust each other more, and that we want and can to achieve something positive together and come out of this stronger.*"

When discussing social cohesion with distant colleagues outside of the team, the respondents described how being faced with a common enemy, manifested in COVID-19, had fostered a greater sense of belonging throughout the organisation and even to those they regularly did not have much interaction with. "*We are all in this together, and knowing that, somehow makes us closer, even with those we don't interact with that much.*" Another respondent

explained that COVID-19 has generated increased social cohesion with distant colleagues in the form of improved relationships:

> *"So, a lot of people have realised that their relationship with certain organisational actors, like with the relationship between bosses and safety representatives for example, are important and those relationships have improved during corona. Because they realise that 'Ahh, they are a help for me, to understand what my employees want'. So they begin to realise that safety representatives aren't just whiney people, but actually a really valuable asset'".*

Respondent also reported deriving social support from their team. This kind of support seemed exclusively to come from the team, who were described as having another capacity for generating social support compared to other organisational actors such as distant colleagues.

> *"Well, of course those in my immediate team, I mean they know me personally… So when corona started I was worried, because I'm not form Sweden I'm from [country] and my entire family and friends still live there, so naturally I was worried when corona started, I was wondering when I would be able to see them all again. And then my colleague called me and said 'hi I just wanted to check in, because I know you can't meet your family right now, I just wanted to look in and see how are you are and that…That personal support, I guess you can say, you don't get that from people who aren't in your closest team."*

Aside from their team members, respondents also reported getting support from their team leader. *"My closest boss regularly checks in, and asks how we are feeling and it's nice that someone asks of course. It shows that the company is caring for their staff, and I've really felt that they do that."* Another respondent puts it like this *"my boss often reminds us to actually take breaks, which is easy to forget when you work from home because breaks doesn't come that natural, and often asks us how we are doing, how we are holding up and a bit like that."*

The described interaction between leaders and employees is interesting because it can be connected to how the HR-respondents reported to having more interactions with leaders in

terms of offering guidance in how to generate social cohesion within their team and how to give social support. *"We have helped and prepared our bosses by talking about which reactions they will meet, how and what they should do to support their employees that are going through changes [related to COVID-19-restrictions]"* and *"This with bosses and colleagues… We sometimes have to remind our bosses to be percipient about picking up signals of how their subordinates are doing."*

The findings also point to a clear distinction between how close and more distant colleagues were identified. Leaders and team members were described as close colleagues whereas HR-personnel and colleagues working in other teams or in other parts of the operation were described as distant. The determining factor in how strong a collegial bond becomes appear to be the level of emotional intensity in the social exchange as opposed to the frequency of contact. *"Frequency is of course useful, but not necessary, I mean I have very… It is not that often that I speak with my colleague in Australia, for example, but when I do it is like we met yesterday, because we have a pre-established strong relationship because we have worked so much together before. And that just doesn't go away that easily."*

## 5.4 Integrity from a social network perspective

The empirical findings clearly indicate that the integrity dimension of organisational resilience is strongly associated with the concept of social capital. Evidence of this can be discerned in how the respondents describe the presence of a general spirit of positivity throughout the organisation. More concretely, this spirit of positivity is articulated by the respondents as a willingness to work hard together as well as greater understanding and trust for each other and different units. It is also expressed as a sense of pride and loyalty, which the respondents credit with enhancing a sense of social belonging and is consistent with how scholars characterise social capital (Audretsch, 2011; Bjornskov & Sonderskov, 2012; Coleman, 1988). Another interesting aspect related to this is that respondents suggested that COVID-19 had reinforced an already present spirit of positivity. This could possibly be explained by the respondents having been forced to find new ways to work together and change current methods of working; as Adler (2002) and more recently Nidheesh & Abhishek (2020) point out, an environment in which people can contribute and be creative together produces increasing levels of social capital.

Coleman (1988) argues that social capital is fostered by 'bonding' between strong ties in

closed networks, whereas Burt (1992) instead claims that social capital is best produced through 'bridging' structural holes by forming contact with weak ties in open networks. However, the findings of the current study are more in line with Adler (2002) and Rost's (2011) point of view which suggest that both 'bridging' and 'bonding' are effective means for establishing an efficient production of social capital. This is discernable in how the respondents reported increasing levels of social capital both with team members and distant colleagues as a consequence of COVID-19.

However, the findings seem to suggest that the social capital produced through 'bridging' with weak ties and the one produced through 'bonding' with strong ties are different. Although the social capital developed with both strong and weak ties culminated in increased social cohesion, social capital between strong ties could also be channelled into social support and sharing responsibilities and duties when needed, a function which weak ties could not fulfil. This description is also congruent with how SNT-scholars describe the nature and advantages of strong ties being that they are more trustworthy and reliable (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Wellman & Wortley, 1990). Just as with team members, team leaders were also reported to be capable of acting as conduits of social support which interesting when considering how the HR-respondents described that COVID-19 had affected their work. Their stories reveal that HR-personnel had more interaction with leaders and coached them in how to give social support to their team. With basis in this, it appears as if the HR-function may indirectly increase social capital within teams by offering guidance to leaders.

Another distinction between social capital achieved through 'bridging' and 'bonding' is distinguishable in how respondents describe collaborative processes with strong ties and weak ties. Although all collaboration were described as well-functioning, the collaborative processes with strong ties were reported to be more solid. This can be discerned in how respondents reported that effective collaboration with distant colleagues, unlike with team members, was dependent on two conditions. The first condition is rooted in having a clear agenda where common ground rules are assembled. The second condition is connected to having access to the same information, which was credited with having a facilitating role in ensuring smooth collaboration with distant colleagues. Here a congruence with the literature can be discerned as Lin (2001) describes valuable information as a form of social capital, and having access to the same information was seen as assisting cooperation between weak ties,

which confirms Audretsch (2011) and Coleman's (1988) argument that social capital acts as a facilitator.

The findings also point to another condition for successful collaboration with distant colleagues, which was not described as a determining factor but nonetheless as a supporting facilitator. This supporting condition was that the respective leaders of the distant colleagues involved with one another worked well together, as this enabled a smoother cooperation between their subordinates. This can also be connected to how HR-respondents reported that the HR-function fulfilled the role of mediator between leaders to ensure smooth interaction between units. With basis in this, the evidence again points to the HR-function being capable of indirectly assisting the production of social capital.

## 5.5 Robustness

### 5.5.1 Successfully generating diverse solutions

All of the respondents without exception reported that COVID-19 had produced challenges that required them to devise solutions capable of bypassing those challenges. Further, COVID-19 was credited with encouraging respondents to think in new and creative ways, which was essential for the devising these solutions. As one respondent put it: *"This entire [COVID-19] situation has forced us to let go of this 'baby snuggie' of rules, and allowed us to think more on our own and more independently which has been really important."* A more concrete example of how respondents were prompted into thinking in new and creative ways was expressed by a respondent who had in the early stages of COVID-19 digitalised a physical board into an excel file to accommodate those in his team who worked remotely:

> *"We had an issue with people stamping out, because people didn't respect the social distancing requirements when they stamped out, and we tried different solutions but the same issue happened again… And then we asked ourselves 'do we really need this function?' and we came to the conclusion that we didn't."[…] I don't know if we're going to reintroduce the stamping in and stamping out once corona is over, but somehow I doubt it, because that would be a way of saying that we don't trust our employees, but we do trust them so this stamping in and stamping out is to me really an outdated practice."*

Another challenge was related to the desire of having physical meetings rather than virtual ones while at the same time respecting the COVID-19 restrictions and guidelines. In response to this challenge, respondents reported using 'walking meetings' in which meetings were held outside in combination with walks. "*We often having meetings outside now, and combine the meeting with some exercising.*"

Another difficulty issued forth by the COVID-19 restrictions related to the challenge of maintaining contact with one's colleagues when natural socialising opportunities such as lunches and coffee breaks were non-existent, either because one works remotely or because one's colleagues do. "*It is more difficult than it may sound to retain contact when working remotely. I mean… Yeah… When you work from home you may be more flexible with your own schedule, so it is difficult to find a time that fits both, because we might no longer have lunch together at the same time.*" Such challenges were met by booking in what was called 'social talks', where colleagues booked in meetings whose only purpose was to socialise and not talk about work. As one respondent put it:

> "*I believe it is important to prioritise these 'social talks', and by booking them into the calendar, it somehow… Well, it somehow makes it easier to actually take the time and socialise with colleagues even though it is more of a nuisance now that we aren't always, or ever, in the office together at the same time.*"

There were also those respondents who devised solutions to challenges by drawing inspiration from their team members' contacts. For example, one respondent discussed the difficulty of interpreting and communicating contradictory information about the COVID-19 restrictions issued by the authorities, and how she solved this using her team members' network.

> "*Yes well, when faced with this issue, the issue of contradictory information about the restrictions I mean, one of my colleagues reached out to one of her colleagues who had faced a similar issue, and I more or less copied how she had handled the situation since her solution was applicable to my challenge as well. So that was great.*"

In another scenario one respondent himself acting as the indirect link of inspiration. "*Well, when we transferred out work-board digitally into an excel file, and realised that we could*

*add functions to it which we couldn't possibly do with a physical board, I know that other teams followed our lead."* The respondent also reported that their leaders have been important in facilitating their ability to generate diverse solutions. The role of leaders in this context has been expressed similarly throughout the data and the findings suggest that leaders' value within the frame of devising solutions is closely connected to the information they have or the information they may access as a consequence of their organisational role.

> *"When discussing the idea of removing the stamping in and stamping out, it was crucial to get feedback from leaders. Like if they thought it was a good idea or not. And most of them did, because they trusted their employees, and the ones they didn't trust, well they already kept an eye on them. So their feedback was really important to us."*

Another reason leaders where cherished in the context of devising diverse solutions is because leaders could through their own network connect the respondents to the people, they needed to in order to realise or advance their ideas and plans further. *"Bosses can hook you up with the right people, so you can take your idea further."* Or as another respondent says *"The boss knows who you should talk to improve your idea, or to fulfill it."*

In a similar vein, the HR-function was cherished due to the information it had access to. *"Well, the HR-people have a 'helicopter perspective' because they move high and low in the organisation, so it can be very valuable to get their perspective on something, because through that feedback you can improve your ideas."* This is interesting because this is in line with how the HR-respondents described their own role. *"As HR-people our role is to give advice to others, so they can make more informed decisions and plans about the future."* Another HR-respondent put like this:

> *"I believe that maybe not the most important but at least a very important role for HR is to give advice to other organisational actors on our area of expertise… Which is humans, human behaviour and human feelings. Which is important because it might… well… help us guess how certain ideas or suggestions will be received by the employees and such."*

### 5.5.2 Engagement levels remaining or growing stronger

In spite of the challenges connected to COVID-19, and in particular those related to working remotely, respondents testified to their level of engagement persisting, even though acknowledging that it could be challenging. *"It is boring to sit at home, and not being able to see each other, and of course that makes it more difficult to be motivated than before, but I would say that we have managed very well under the circumstances."* Another respondent said "*the 'pulse' is still present at the office. We want to work, and we do a good job."*

When asked how one manages to remain motivated despite the identified challenges to do so, respondents credit their team. "*Each individual has a responsibility to do their best of the situation, but of course when working together, and giving each other support and motivation, then that benefits us all."*

Summarily it can be determined that engagement levels remained strong or in spite of, or grew even stronger, because of COVID-19, and that the source of this engagement is ascribed to the interpersonal relations within the respondents' teams. When asked how this retained or improved level of engagement was expressed in the daily activities, two notable activities were discussed. Firstly, respondents reported that their retained or improved level of engagement fueled their ability to take initiatives. *"It has been difficult to work during a pandemic, because at times everything is upside down, but you can't let that get to you, you have to continue to take initiatives and make the best of the situation. You can't wait around for someone else to do something for you."* Another respondent illustrates this with an anecdote:

> *"I was supposed to have a job-rotation, but that got cancelled because corona because they had too much to do, but now things settled down and I immediately took contact with [leader] and asked if they had an opportunity to take me in now, which they did. But if I hadn't suggested it myself I don't think it would've played out that way, so when things don't go your way, you have to wait for the right opportunity and then grab it."*

Secondly, respondents reported that their retained or improved level of engagement could be channelled into trying out new ideas, and in eventual failure adjust those ideas. "*You have to try and re-try your ideas, you can't be disheartened if it doesn't work exactly the way you*

*hoped for the first time around. You have to show more perseverance than that.*" Another respondent provides a more concrete example.

> "*We had a lot of dialogue of how we could use this data on a good way, and then we tried to develop a model in excel, and we got some feedback on it and we noticed that we had to do some changes and then we got more feedback and changed it even more.*"

## 5.3 Robustness from a social network perspective

Just as with the agility domain, the findings relating to the robustness domain reveal that both leaders and HR-personnel were valuable sources of inspiration when formulating ideas, as expressed in the robustness domain as generating diverse solutions. This again indicates that strong ties and weak ties are equally efficient as conduits of non-redundant knowledge and therefore further corroborate Jack's (2005) criticism against the strength of weak ties hypothesis, and give substance to the idea of strong ties being capable of invoking weak ties. In fact, these findings substantiate this criticism even further, as they discern another group of strong ties - team members - that were also capable of invoking weak ties. This indicates that leaders' capacity to invoke weak ties was not an exception to a general rule that weak ties are more capable sources of non-redundant knowledge than strong ties. With basis in this, the findings again disprove the notion that individuals need to be positioned at the brink of a network cluster rather than the centre in order to bridge structural holes and consequently access non-redundant knowledge present in other network clusters (Cowan & Jonard, 2007; Liu, Chiu & Chiu 2012). Instead of personally bridging structural holes, both weak ties as well as strong ties seem to have the power to do this on behalf of the respondents and may thus act as indirect and informal conduits of non-redundant knowledge which would not be accessible through formal channels (Hollenbeck & Jamieson, 2005; Nonaka & von Krogh, 2009).

Another aspect of the robustness domain related to strong ties is discernable in how respondents credit team members for retaining or improving their level of engagement in spite of COVID-19. This can be seen in how respondents reported that it was interaction with and encouragement from team members which motivated them to retain their power of initiative and their willingness to try and retry in the face of failure. The respondents further explained that the reason underpinning team members capacity to motivate them to retain or improve

their level of commitment could be explained by their pre-established relationship built on confidence and trust in each other. These testimonies once again confirm how SNT-scholars define the nature and advantages of strong ties being trustworthiness and reliability (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Wellman & Wortley, 1990). More concretely, the strength and advantages of strong ties are expressed in the data in how the content of strong ties represent positive emotions, and how those positive emotions empower respondents to retain their level of engagement. In other words, these positive emotions act as powerful facilitators of action, and can therefore be interpreted as efficient social capital. (Audretsch, 2011; Coleman, 1988; Lin, 2001). Following this line of reasoning, it would seem that the findings are congruent with how Coleman (1988) describes that social capital fostered through 'bonding' with strong ties is a potent facilitator of actions that empower individuals to realise their potential.

Conclusively, the findings point to the robustness dimension being pursued and realised through mainly two methods. Firstly through leaders, team members and HR-personnel who may act as structural holes and thus enable an informal information flow of non-redundant and valuable knowledge. In this aspect, the robustness domain and the agility domain are similar. Secondly, respondents could exclusively through strong ties retain their level of engagement despite the challenges brought on by COVID-19, as they through 'bonding' produced powerful social capital which acted as a facilitator which empowered respondents to enact robustness.

## 6. DISCUSSION

The preceding analysis reveal that both strong and weak ties can directly enhance or be enhanced by the domains associated with organisational resilience. In terms of robustness, this is discernable in how respondents could with both team members as well as with distant colleagues generate diverse solutions. However as an exception, it appears as if only strong ties can satisfy the aspect of robustness relating to retaining levels of engagement, as respondents reported that only team members fulfilled this function. In regard to agility, a similar pattern of both strong and weak ties directly contributing towards organisational resilience is distinguishable. For example, respondents could with both team members and with distant colleagues develop strategies aimed at drawing benefit from negative circumstances. Agility was also pursued directly by both strong and weak ties in the sense that both team members, as well as the HR-function, assisted respondents in determining the most appropriate course of action in the face of uncertainty. Further, both strong and weak ties appear to have been able to function as sources of valuable knowledge utilised by respondents to more effectively enact robustness and agility. This is seen in how leaders and HR-personnel alike were credited with having relevant knowledge as a consequence of their organisational role and function. Thus far, it can be established that strong and weak ties appear to have the capability to directly impact both robustness and agility in similar ways, and thereupon positively affect the cultivation of organisational resilience. The only differing factor is that strong ties can directly affect robustness through inspiring respondents to retain levels of engagement, something which weak ties could not.

In addition to directly affecting robustness and agility, it appears as if both strong and weak ties also have the ability to indirectly influence these dimensions. This can be seen in how leaders, as well as HR-personnel, could bridge structural holes on behalf of the respondents and informally establish an information flow of valuable non-redundant knowledge between otherwise separated employees. This in turn enabled the respondents to more effectively contribute to both agility and robustness. Besides leaders and HR-personnel, team members were also to a certain extent credited with bridging structural holes in the context of enacting robustness, but interestingly the findings do not indicate that team members could fulfil this function in the pursuit of agility. Nonetheless, these findings collectively indicate that both strong and weak ties are effective sources of non-redundant knowledge, as they both possess a capacity of invoking weak ties. This substantiates Jack's (2005) criticism of the strength of

weak ties hypothesis which posits that weak ties are more capable sources of non-redundant knowledge than strong ties (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). Summarily, the findings indicate that both strong and weak ties can directly as well as indirectly impact robustness and agility in similar ways. The only two exceptions to these similarities relate to the robustness domain; firstly, only strong ties can contribute to respondents' levels of engagement remaining, and secondly, in addition to leaders, team members were to a certain extent also a type of strong tie capable of bridging structural holes on behalf of the respondent. As a final note, actors capability to invoke weak ties and thus act as the connector between various actors within the organisation is interesting because it confirms Mousa's et al. (2020) claim that multi-stakeholder network is important in establishing organisational resilience.

The integrity dimension has an interesting purpose in this symbiosis of social mechanisms, as it appears as if integrity, operationalised as a form of social capital, empowered both strong and weak ties to develop and maintain agility and robustness. In this manner, the integrity dimension presupposes and facilitates the other two dimensions of the organisational resilience scale (Kantur & Iseri-say, 2015). Examples of this is discernible in how social capital, expressed as a general spirit of positivity, generated increased social cohesion and improved collaborative processes throughout the organisation. This consequently enabled respondents to more effectively pursue agility and robustness together with both strong ties and weak ties. However, a key difference between strong and weak ties where the integrity dimension is concerned, is that the social capital fostered through 'bonding' with strong ties was more solid in the sense that it also be channelled into social support and sharing duties and responsibilities when needed. This was something which social capital cultivated through 'bridging' with weak ties could not.

Further, the respondents also report that there was a high level of trust throughout the organisation, both between team members but also between distant colleagues and between employees and leader. The high level of trust appear to have been an important facilitator in empowering respondents to enact both agility and robustness. Further, the high level of trust could possibly explain why the findings of the current study refutes the notion that the presence of strong ties are essential in order for individuals to capitalise on the benefits of weak ties (Guan & Liu, 2016; Ebers & Maurer, 2014; Rost, 2011). This is discernible in how

respondents described being comfortable and working well with distant colleagues, even when their team members were not present. Therefore trust seem to have high relevance for organisational resilience, however, the item trust does not appear on the organisational resilience scale. Consequently, the data seem to indicate that the scale should be extended to also include trust as a new item. As trust had a facilitating effect which in turn enabled robustness and agility, these findings seem to further advise that the item trust should be incorporated into the integrity domain.

Another important aspect relating to integrity discernible in the data is that both leaders and HR-personnel could positively affect the integrity dimension which in turn increased the production of social capital. Leaders did this in two ways, firstly by acting as sources of social support to their team and secondly by working well with other leaders, thus ensuring a smooth working relationship between units, which in turn was reported as valuable for collaboration between weak ties. The HR-function had an assisting role in this process, as the findings indicate that HR-personnel supported leaders in their leadership by guiding them in how to be effective sources of social support to their team, and by acting as mediators between different unit leaders when needed. This indicates that while leaders can directly impact the integrity dimension and consequently the production of social capital, HR-personnel can indirectly do this through interaction with leaders.

As a final note, there are certain elements of the studied social network that are associated with resilience that were reported as being activated as a consequence of COVID-19. Jack (2005) speculates that strong ties may lay dormant until activated as a repercussion of a specific situation. These findings elaborate this notion in two ways; firstly, although ties themselves were not activated, certain aspects of those ties seemed to be dormant until activated by COVID-19, example of such aspects relate to stronger social cohesion and a general spirit of positivity. Secondly, this phenomena was not exclusive to strong ties, as it also happened with weak ties. Summarily, the findings point to existing and powerful network configurations that may be activated only after the network in question is faced with a precarious situation, which in turn can be harnessed and converted into organisational resilience.

Conclusively, the preceding discussion has revealed that the social mechanisms underpinning the organisational resilience domains, as presented by Kantur & Iseri-say (2015), do not

operate independently of each other but are rather entangled with each in a complex social process. This process is illustrated below in Figure 1.

*Figure 1: The organisational resilience social network framework*
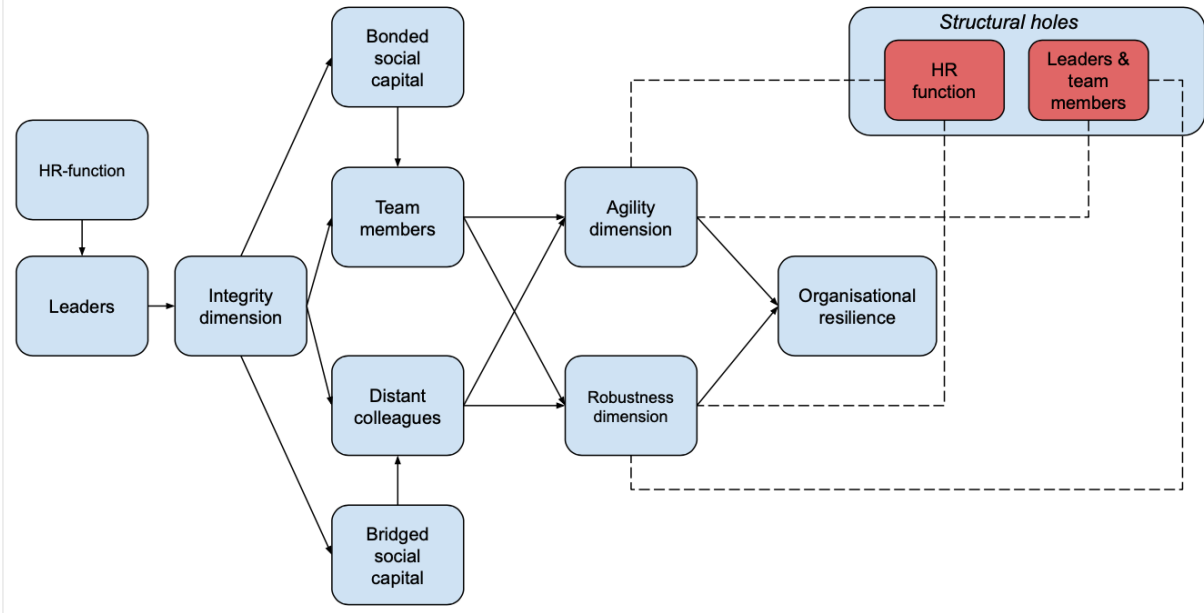
# 7. CONCLUSION

## 7.1 Summary of findings

The findings reveal that both strong and weak ties are important network components utilised by respondents in the pursuit of organisational resilience in a manner that is both congruent as well as discrepant with the literature. In regard to the consistencies, the findings are in line with how the literature describes the advantages of strong ties being trustworthiness, support and reliability (Borgatti & Halgin, 2011; Burt, 1992; Wellman & Wortley, 1990). This is discernible in how ties of this kind are described as sources of social support that could be channelled into sharing duties and responsibilities as well as retaining levels of engagement, a function which weak ties could not fulfil. However, contrary to the literature, the findings suggest that strong ties are equally capable sources of non-redundant knowledge as weak ties because strong ties have the power to invoke weak ties on behalf of others. Access to non-redundant knowledge proved important as it empowered respondents to enact practices associated with resilience and this consequently illustrates the vital role both strong and weak ties fulfilled in the pursuit of organisational resilience. The notion of strong ties being equally solid sources of non-redundant knowledge through invoking weak ties substantiates Jack's (2005) criticism against the strength of weak ties hypothesis (Borgatti & Halgin, 2011; Granovetter, 1973, 1983, 2005; Hollenbeck & Jamieson, 2015; Pdonly & Baron, 1997; Wellman & Wortley, 1990). It is interesting that the current study corroborates this criticism when the bulk of research done on the subject supports the established research paradigm of weak ties being more capable sources of non-redundant knowledge. However, a possible explanation for this might be that Jack's (2005) study as well as the current one has in contrast to SNT-research tradition employed a qualitative approach as opposed to a quantitative one. More concretely, Jack's (2005) criticism is rooted in the belief that the distinction between strong and weak ties should be de-emphasised. While her research supports the notion of strong ties often being sources of trustworthiness, support and reliability in a manner that weak ties cannot her findings also question the necessity of differentiating between weak and strong ties. Instead, she advised that each tie's contribution to a network should be evaluated based on its function, and that the strength or weakness of a tie is a poor indicator of that function. Adhering to Jack's (2005) recommendation, this chapter will proceed with discussing how different actors contribute to organisational resilience, regardless of these actors' categorisation as either a strong or weak tie.

The research question that has guided this study has been "how network configurations contribute to organisational resilience" and the findings indicate that there are three major organisational actors that together constitute a network configuration promoting resilience. These organisational actors are leaders, HR-personnel and team members. Leaders and HR-personnel seem to fulfil comparable roles, for instance, both of these actors can, directly and indirectly, influence organisational resilience in similar ways. Regarding their direct influence, both sets of actors may directly function as sources of valuable knowledge that is derived from their role and function within the organisation. Concerning the indirect influence, both sets of actors may establish an informal information flow of non-redundant knowledge between otherwise separated employees by bridging structural holes on their behalf. This non-redundant knowledge, either accessed directly or indirectly from leaders and/or HR-personnel, is valuable as it may in turn enable employees to more effectively enact practices associated with resilience. Further, the findings also reveal that both leaders and HR-personnel contribute to organisational resilience by improving the production of social capital, albeit in slightly different ways. Whereas the former directly generate social capital through interaction with employees, the latter indirectly contribute to the generation of social capital through guiding and supporting leaders in their leadership and by acting as a mediator between leaders of different units when needed. Social capital was important in the pursuit of organisational resilience as it facilitated a smooth interaction and collaboration with team members as well as with distant colleagues, and thus ensured that respondents could pursue resilience effectively. Following this line of reasoning, it appears as if leaders and HR-personnel fulfil important network components that contribute to organisational resilience in two ways distinct ways. Firstly, both sets of actors independently from each other function as sources of direct and/or indirect valuable non-redundant knowledge and, secondly, both sets of actors complement each other in the production of social capital. Moving on to the last category of network actors supporting organisational resilience, team members were to a certain extent credited with being sources of non-redundant knowledge in a similar manner as HR-personnel and leaders. However, their main contribution appears to be their embodiment of trust and reliability. This in turn provided employees with a strong bonded social capital which provided them with social support and enabled them to share duties and responsibilities when needed as well as to retain levels of engagement. As a final note, it appears as if aspects of the relationship constituting the described network configurations were activated as a consequence of COVID-19. This indicates that certain predicaments facing an organisation can evoke powerful relational elements of that can be harnessed into pursuing organisational

resilience.

From these conclusions, some practical recommendations for HR-practitioners can be discerned. The HR-functions direct influence in ensuring a strong human capital has been documented in previous studies and the findings of the current one substantiate this notion, as HR-professionals with basis in their knowledge guided employees in selecting suitable online educations (Chadwick & Dabu, 2009; Ho et al., 2014; Mitsakis, 2020; Nijssen & Paauwe, 2012). Therefore, these conclusions recommend that HR-practitioners should continue to guide employees by capitalising on the knowledge derived from their organisational role. However, in addition to corroborating the notion of HR-practitioners direct influence on organisational resilience (ibid), these findings also highlight HR-practitioners indirect influence. With this in mind, this study offers two additional recommendations. Firstly, HR-practitioners should utilise and widen their network of contacts and act as the 'connector' between otherwise separate actors. Secondly, HR-practitioners should through interaction with leaders pursue and ensure high levels of social capital. By adhering to these recommendations HR-practitioners would directly as well as indirectly enhance an organisation's capacity for organisational resilience.

Further, while this research has qualitatively verified the organisational resilience scale as presented by Kantur & Iseri-say (2015), the findings also extend this framework in three additional ways; firstly, it adds a holistic aspect by highlighting the determining influence of behind-the-scenes factors which are not included in the scale in its current state. One example of such an underlying but important factor found in this study relates to how leaders and HR-personnel could directly and respectively indirectly empower the integrity dimension through the production of social capital. Secondly, while this study corroborates Bouaziz & Hachicha's (2018) and Mousa's et al. (2020) position that HR-practices may directly impact the three dimensions of the organisational resilience scale through influencing the development of human capital, this line of reasoning is also extended. The findings suggest that in addition to directly contributing to the establishment of a human capital reflecting traits associated with resilience, the HR-function indirectly strengthens the three dimensions through positively influencing the production of social capital. Thirdly, this study suggests that the integrity dimension should be extended to include trust as a new item, as it proved to be an important facilitator in enabling the other two dimensions.

The aspect of trust is interesting because it can be connected to the choice of frameworks. By utilising SNT the indirect influence and facilitating effect of trust was distinguishable. In turn, using organisational resilience theory enabled an understanding of how the presence of trust could possibly explain how the current findings are incongruent with SNT-research in regard to the distinction made between strong and weak ties. This is discernible in how a high level of trust contributed to a smooth collaboration and interaction with distant colleagues, which refutes the notion that the presence of strong ties is a caveat in order to capitalise on the potential benefits of working with weak ties (Guan & Liu, 2016; Ebers & Maurer, 2014; Rost, 2011). Further, Mousa et al. (2020) suggest that a multi-stakeholder perspective is important when establishing organisational resilience. By applying SNA this notion has not only been confirmed, but also shed light onto the practicalities of how the HR-functions utilisation of their network function and how it benefits organisational resilience. These examples indicate that combining SNA with organisational resilience theory was a relevant and justifiable choice as their joint usage has generated insights of the issue at hand, as well as about the nature of each framework.

## 7.2 Contribution

This study has made a number of contributions, in an academic sense as well as in a practitioner sense. Academically, this study has answered the call of researchers requesting knowledge on *how* organisational resilience is produced and operated, as opposed to clarifying *what* traits are associated with organisational resilience (Bhamra, Burnad & Dani, 2011; Peeira, Temouri & Patel, 2020). It has also contributed to the relatively new body of knowledge seeking to capture the HR-function's role in establishing organisational resilience (Bouaziz & Hachicha's, 2918; Ho et al., 2014; Mousa's et al. 2020). Further, this study has also expanded the growing trend of applying qualitative methods in SNA, and thus heeded the request of those scholars wishing to expand that line of research (Heath, Fuller & Johnston, 2009; Jack, 2005). In doing this, this study has also generated knowledge about the nature of social networks, in particular by corroborating Jack's (2005) criticism of the strength of weak ties hypothesis, by questioning the distinction made between strong and weak ties as sources. Further, this study has critiqued and expanded the organisational resilience scale (Kantur & Iseri-say, 2015) and in the process qualitatively validated it.

These findings also have relevance for HR-practitioners, as it enables practitioners to gain a finer understanding of how social patterns contribute to organisational resilience, and how they may directly as well as indirectly impact these social configurations. Consequently, this study may also assist HR-practitioners to develop a deeper understanding of their own role within the context of developing an overall capacity for organisational resilience.

## 7.3 Future research

Interesting research has connected HR-policies and HR-principles as influencing the development of desirable employee-characteristics associated with high levels of organisational resilience (Lengnick-Hall et al., 2011). Future research could therefore expand the findings of the current study by investigating how the social mechanisms underpinning the organisational resilience domains are affected by HR-policies and HR-principles through social network analysis. Consequently, this will enable an evaluation of the effectiveness of these HR-policies and HR-principles in the context of realising organisational resilience.

An interesting finding was that team members were reported to function as structural holes in the pursuit of the dimension of robustness, discernible in how team members were valued for their ability to establish an indirect information flow of non-redundant knowledge, which was important for respondents' generation of diverse solutions. However, team members were not reported as operating as structural holes in developing alternatives in order to benefit from negative circumstances which in turn was connected to the agility domain. This is puzzling because the notion of generating diverse solutions and the concept of developing alternatives to benefit from negative circumstances appear to be very similar in nature. Future research could therefore look into if this finding to either substantiate it or disprove it, and in the case of the former, begin to divulge an explanation for this seemingly illogical finding.

# REFERENCES

Adler, P. S. (2002). Social Capital: Prospects for a New Concept. *The Academy of Management Review*, *27*(1), 17–40. https://doi.org/10.2307/4134367

Ahrens, P. (2018). Qualitative network analysis: A useful tool for investigating policy networks in transnational settings? *Methodological Innovations*, *11*(1), 205979911876981. https://doi.org/10.1177/2059799118769816

Ahuja, G. (2000). Collaboration Networks, Structural Holes, and Innovation: A Longitudinal Study. *Administrative Science Quarterly*, *45*(3), 425–455. https://doi.org/10.2307/2667105

Al-Ayed, S. I. (2019). The impact of strategic human resource management on organizational resilience: An empirical study on hospitals. *Business: Theory and Practice*, *20*, 179–186. https://doi.org/10.3846/btp.2019.17

Andersson, T. (2018) Followership: An Important Social Resource for Organizational Resilience. In Tengblad, S., & Oudhuis, M. (Eds.). *The Resilience Framework: Organizing for Sustained Viability*. Springer Singapore. https://doi.org/10.1007/978-981-10-5314-6

Audretsch, D. B., Aldridge, T. T., & Sanders, M. (2011). Social capital building and new business formation: A case study in Silicon Valley. *International Small Business Journal*, *29*(2), 152–169. https://doi.org/10.1177/0266242610391939

Bergenholtz, C. (2011). Knowledge brokering: Spanning technological and network boundaries. *European Journal of Innovation Management*, *14*(1), 74–92. https://doi.org/10.1108/14601061111104706

Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, *49*(18), 5375–5393. https://doi.org/10.1080/00207543.2011.563826

Bjørnskov, C., & Sønderskov, K. (2013). Is Social Capital a Good Concept? *Social Indicators Research*, *114*(3), 1225–1242. https://doi.org/10.1007/s11205-012-0199-1

Borgatti, S. P., & Li, X. (2009). ON SOCIAL NETWORK ANALYSIS IN A SUPPLY CHAIN CONTEXT *. *Journal of Supply Chain Management*, *45*(2), 5–22. https://doi.org/10.1111/j.1745-493X.2009.03166.x

Bouaziz, F., & Smaoui Hachicha, Z. (2018). Strategic human resource management practices and organizational resilience. *Journal of Management Development*, *37*(7), 537–551. https://doi.org/10.1108/JMD-11-2017-0358

Braes, B., Brooks, D. (2010). Organisational resilience: a propositional study to understand and identify the essential concepts. *Proceedings 3rd Australian Security and Intelligence Conference*, (November), 14–22. https://doi.org/10.4225/75/579ec432099ca

Branicki, L., Steyer, V., & Sullivan-Taylor, B. (2019). Why resilience managers aren't resilient, and what human resource management can do about it. *The International Journal of Human Resource Management*, *30*(8), 1261–1286. https://doi.org/10.1080/09585192.2016.1244104

Brass, D. J. (1981). Structural Relationships, Job Characteristics, and Worker Satisfaction and Performance. *Administrative Science Quarterly*, *26*(3), 331–348. https://doi.org/10.2307/2392511

Bryce, C., Ring, P., Ashby, S., & Wardman, J. K. (2020). Resilience in the face of uncertainty: Early lessons from the COVID-19 pandemic. *Journal of Risk Research*, *23*(7–8), 880–887. https://doi.org/10.1080/13669877.2020.1756379

Bryman, A. (2012). *Social research methods* (4th ed). Oxford University Press.

Burt, R. S. (1992). *Structural Holes*. Cambridge, MA: Harvard University Press.

Burt, Ronald. (1997). The Contingent Value of Social Capital. *Administrative Science Quarterly*, *42*(2), 339–339. https://doi.org/10.2307/2393923

Burt, Ronalds. (2004). Structural Holes and Good Ideas 1. *American Journal of Sociology*, *110*(2), 349–399. https://doi.org/10.1086/421787

Cairney, P. (2013). Standing on the Shoulders of Giants: How Do We Combine the Insights of Multiple Theories in Public Policy Studies? *Policy Studies Journal*, *41*(1), 1–21. https://doi.org/10.1111/psj.12000

Cäker, M., Tengblad, S., Wickelgren, M., & Andersson, Thomas. (2019). Building traits for organizational resilience through balancing organizational structures. *Scandinavian Journal of Management*, *35*(1), 36–45. https://doi.org/10.1016/j.scaman.2019.01.001

Cárcamo, P. F., Garay-Flühmann, R., & Gaymer, C. F. (2014). Collaboration and knowledge networks in coastal resources management: How critical stakeholders interact for multiple-use marine protected area implementation. *Ocean & Coastal Management*, *91*(C), 5–16. https://doi.org/10.1016/j.ocecoaman.2014.01.007

Chadwick, C., & Dabu, A. (2009). Human Resources, Human Resource Management, and the Competitive Advantage of Firms: Toward a More Comprehensive Model of Causal Linkages. *Organization Science*, *20*(1), 253–273. https://doi.org/10.1287/orsc.1080.0375

Cohen, L., Manion, L. and Morrison, K. (2013). *Research methods in education*. Routledge

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, *94*, S95–S120.

Comfort, L & Boin, A & Demchak, C (2010). The rise of resilience. In L. K. Comfort, A. Boin, & C. C. Demchak (Eds.), *Designing resilience-preparing for extreme events.* Pittsburgh: University of Pittsburgh Press.

Cowan, R., & Jonard, N. (2007). Structural holes, innovation and the distribution of ideas. *Journal of Economic Interaction and Coordination*, *2*(2), 93–110. https://doi.org/10.1007/s11403-007-0024-0

Demmer, W. A., Vickery, S. K., & Calantone, R. (2011). Engendering resilience in small- and medium-sized enterprises (SMEs): A case study of Demmer Corporation. *International Journal of Production Research*, *49*(18), 5395–5413. https://doi.org/10.1080/00207543.2011.563903

Ebbers, J. J. (2014). Networking Behavior and Contracting Relationships Among Entrepreneurs in Business Incubators. *Entrepreneurship Theory and Practice*, *38*(5), 1159–1181. https://doi.org/10.1111/etap.12032

Ebers, M., & Maurer, I. (2014). Connections count: How relational embeddedness and relational empowerment foster absorptive capacity. *Research Policy*, *43*(2), 318–332. https://doi.org/10.1016/j.respol.2013.10.017

Edvik, A., Geisler, M., Muhonen, T., Witmer, H., & Björk, J. (2020). Credence in the Organization's Ability to Respond to Change—Implications on Work Engagement and Job Satisfaction in the Church of Sweden. *Frontiers in Psychology*, *11*, 995. https://doi.org/10.3389/fpsyg.2020.00995

Freeman, A. L., & Dodson, L. (2014). Social Network Development among Low-Income Single Mothers: Potential for Bridging, Bonding, and Building. *Family Relations*, *63*(5), 589–601.

Granovetter, M. (1983). The Strength of Weak Ties: A Network Theory Revisited. *Sociological Theory*, *1*, 201–233. https://doi.org/10.2307/202051

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, *91*(3), 481–510. https://doi.org/10.1086/228311

Granovetter, M. (2005). The Impact of Social Structure on Economic Outcomes. *Journal of Economic Perspectives*, *19*(1), 33–50. https://doi.org/10.1257/0895330053147958

Granovetter, M. S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, *78*(6), 1360–1380. https://doi.org/10.1086/225469

Guan, J., & Liu, N. (2016). Exploitative and exploratory innovations in knowledge network and collaboration network: A patent analysis in the technological field of nano-energy. *Research Policy*, *45*(1), 97–112. https://doi.org/10.1016/j.respol.2015.08.002

Haimes, Y. Y. (2012). Systems-Based Approach to Preparedness for, Response to, and Recovery from Natural and Human-Made Disasters. *Leadership and Management in Engineering*, *12*(4), 288–298. https://doi.org/10.1061/(ASCE)LM.1943-5630.0000183

Hakim, C (2000). *Research design: Successful designs for social and economic research*. .Psychology Press.

Halgin, D. S., Borgatti, S. P., Mehra, A., & Soltis, S. (2020). Audience perceptions of high-status ties and network advantage: The market for coaching jobs in the National Collegiate Athletic Association (2000–2011). *Journal of Organizational Behavior*, *41*(4), 332–347. https://doi.org/10.1002/job.2426

Hatala, J.-P. (2006). Social Network Analysis in Human Resource Development: A New Methodology. *Human Resource Development Review*, *5*(1), 45–71. https://doi.org/10.1177/1534484305284318

Heath, S., Fuller, A., & Johnston, B. (2009). Chasing shadows: Defining network boundaries in qualitative social network analysis. *Qualitative Research*, *9*(5), 645–661. https://doi.org/10.1177/1468794109343631

Herbane, B. (2020). Locational Contiguity and Business Continuity: Perceived Organizational Resilience of Small- and Medium-Sized Enterprises in U.K. Business Parks. *SAGE Open*, *10*(2). https://doi.org/10.1177/2158244020927417

Hitchcock, G & Hughes, D (1995). *Research and the teacher: A qualitative introduction to school-based research*. Psychology Press.

Ho, M., Verreyne, M.-L., T.T. Teo, S., Bentley, T., & Galvin, P. (2014, July 21). Organizational resilience and the challenge for human resource management: Conceptualizations and frameworks for theory and practice. *4th Annual International Conference on Human Resource Management and Professional Development for the Digital Age (HRM&PD 2014)*. Annual International Conference on Human Resource Management and Professional Development for the Digital Age. https://doi.org/10.5176/2251-2349_HRMPD14.09

Hollenbeck, J. R., & Jamieson, B. B. (2015). Human Capital, Social Capital, and Social Network Analysis: Implications for Strategic Human Resource Management. *Academy of Management Perspectives*, *29*(3), 370–385. https://doi.org/10.5465/amp.2014.0140

Ibarra, H., & Andrews, S. B. (1993). Power, social influence, and sense making: Effects of network centrality and proximity on employee perceptions. (includes appendix). *Administrative Science Quarterly*, *38*(2), 277–303. https://doi.org/10.2307/2393414

Jack, S. L. (2005). The Role, Use and Activation of Strong and Weak Network Ties: A Qualitative Analysis*. *Journal of Management Studies*, *42*(6), 1233–1259. https://doi.org/10.1111/j.1467-6486.2005.00540.x

Joseph, N., & Totawar, A. (2020). How to increase social capital of organizations: Identifying the role of informal learning behaviors. *Development and Learning in Organizations: An International Journal*, *35*(3), 1–3. https://doi.org/10.1108/DLO-02-2020-0041

Kantur, D. (2015). Measuring Organizational Resilience: A Scale Development. *Pressacademia*, *4*(3), 456–456. https://doi.org/10.17261/Pressacademia.2015313066

King, N. and Horrocks, C. (2010) *Interviews in qualitative research.* Sage, London.

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, *21*(3), 243–255. https://doi.org/10.1016/j.hrmr.2010.07.001

Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge University Press.

Lin, N., & Dumin, M. (1986). Access to occupations through social ties. *Social Networks*, *8*(4), 365–385. https://doi.org/10.1016/0378-8733(86)90003-1

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. SAGE.

Linnenluecke, M. K. (2017). Resilience in Business and Management Research: A Review of Influential Publications and a Research Agenda. *International Journal of Management Reviews*, *19*(1), 4–30. https://doi.org/10.1111/ijmr.12076

Liu, C.-H., Chiu, S.-C., & Chiu, C.-L. (2010). Intranetwork relationships, creativity, knowledge diversification, and network position.(Report). *Social Behavior and Personality: An International Journal*, *38*(9), 1173–1190. https://doi.org/10.2224/sbp.2010.38.9.1173

Marsden, P. V., & Campbell, K. E. (2012). Reflections on Conceptualizing and Measuring Tie Strength. *Social Forces*, *91*(1), 17–23. https://doi.org/10.1093/sf/sos112

Martinelli, E., Tagliazucchi, G., & Marchi, G. (2018). The resilient retail entrepreneur: Dynamic capabilities for facing natural disasters. *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1222–1243. https://doi.org/10.1108/IJEBR-11-2016-0386

Martinez, M. A., & Aldrich, H. E. (2011). Networking strategies for entrepreneurs: Balancing cohesion and diversity. *International Journal of Entrepreneurial Behaviour & Research*, *17*(1), 7–38. https://doi.org/10.1108/13552551111107499

Meyer, B. H., Prescott, B., & Sheng, X. S. (2021). The impact of the COVID-19 pandemic on business expectations. *International Journal of Forecasting*, S0169207021000509. https://doi.org/10.1016/j.ijforecast.2021.02.009

Miceli, A., Hagen, B., Riccardi, M. P., Sotti, F., & Settembre-Blundo, D. (2021). Thriving, Not Just Surviving in Changing Times: How Sustainability, Agility and Digitalization Intertwine with Organizational Resilience. *Sustainability*, *13*(4), 2052. https://doi.org/10.3390/su13042052

Mitsakis, F. V. (2020). Human resource development (HRD) resilience: A new 'success element' of organizational resilience? *Human Resource Development International*, *23*(3), 321–328. https://doi.org/10.1080/13678868.2019.1669385

Mousa, M., Abdelgaffar, H. A., Chaouali, W., & Aboramadan, M. (2020). Organizational learning, organizational resilience and the mediating role of multi-stakeholder networks: A study of

Egyptian academics. *Journal of Workplace Learning*, *32*(3), 161–181. https://doi.org/10.1108/JWL-05-2019-0057

Murray, S. O., Rankin, J. H., & Magill, D. W. (1981). Strong Ties and Job Information. *Sociology of Work and Occupations*, *8*(1), 119–136. https://doi.org/10.1177/073088848100800107

Nijssen, M., & Paauwe, J. (2012). HRM in turbulent times: How to achieve organizational agility? *The International Journal of Human Resource Management*, *23*(16), 3315–3335. https://doi.org/10.1080/09585192.2012.689160

Nonaka, I., & von Krogh, G. (2009). Perspective—Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in Organizational Knowledge Creation Theory. *Organization Science*, *20*(3), 635–652. https://doi.org/10.1287/orsc.1080.0412

Onwuegbuzie, A., & Collins, K. (2015). A Typology of Mixed Methods Sampling Designs in Social Science Research. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2007.1638

Onwughalu, O. O., Ngaage, K. T., & Needorn, R. S. (n.d.). *STAKEHOLDER RELATIONSHIP MANAGEMENT AND CORPORATE RESILIENCE OF TELECOMMUNICATION FIRMS IN PORT HARCOURT RIVERS STATE*. 14.

Oparaocha, G. O. (2016). Towards building internal social network architecture that drives innovation: A social exchange theory perspective. *Journal of Knowledge Management*, *20*(3), 534–556. https://doi.org/10.1108/JKM-06-2015-0212

Podolny, J. M., & Baron, J. N. (1997). Resources and Relationships: Social Networks and Mobility in the Workplace. *American Sociological Review*, *62*(5), 673. https://doi.org/10.2307/2657354

Reichertz, J. (2010). Abduction: The logic of discovery of grounded theory. *Forum Qualitative Social Research*, *11*(1), n/a.

Rost, K. (2011). The strength of strong ties in the creation of innovation. *Research Policy*, *40*(4), 588–604. https://doi.org/10.1016/j.respol.2010.12.001

Ruiz-Martin, C., López-Paredes, A., & Wainer, G. (2018). What we know and do not know about organizational resilience. *International Journal of Production Management and Engineering*, *6*(1), 11–28. https://doi.org/10.4995/ijpme.2018.7898

Silverman, D (2013). *Doing qualitative research: A practical handbook*. SAGE Publications Limited.

Somers, S. (2009). Measuring Resilience Potential: An Adaptive Strategy for Organizational Crisis Planning. *Journal of Contingencies and Crisis Management*, *17*(1), 12–23. https://doi.org/10.1111/j.1468-5973.2009.00558.x

Starman, A.B (2013). *The case study as a type of qualitative research*. Journal of Contemporary Educational Studies/Sodobna Pedagogika (64)1.

Sutcliffe, K. M., Vogus, T. J. (2003). Organizing for resilience. In K. Cameron, J. E. Dutton, R. E. Quinn (Eds.), Positive Organizational Scholarship, 94–110. San Francisco.

Tengblad, S., Oudhuis, M., & Springer Malaysia Representative Office. (2018). *The Resilience Framework Organizing for Sustained Viability*. https://doi.org/10.1007/978-981-10-5314-6

The University of Economics in Katowice, Ingram, T., Bratnicka-Myśliwiec, K., & The University of Economics in Katowice. (2019). Organizational Resilience of Family Businesses. *Problemy Zarzadzania*, *2/2019*(82), 186–204. https://doi.org/10.7172/1644-9584.82.10

Uhlik, K. (2011). Revisiting the strength of weak ties: Lessons learned from social network leisure research. *Leisure/Loisir*, *35*(4), 453–470. https://doi.org/10.1080/14927713.2011.650855

Ulrich, D. (1998). *A new mandate for human resources*. Harvard Business Review. 76(1) 124-135

Vetenskapsrådet (2002). *Forskningsetiska principer inom humanistisk-samhällsvetenskaplig forskning*. (n.d.). [Text]. Retrieved 24 February 2021, from https://www.vr.se/analys/rapporter/vara-rapporter/2002-01-08-forskningsetiska-principer-inom-humanistisk-samhallsvetenskaplig-forskning.html

Vogus, T. J., Sutcliffe, K. M. (2007). Organizational resilience: Towards a theory and research agenda. *Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics*, 3418–3422. https://doi.org/10.1109/ICSMC.2007.4414160

Wasserman, S., Faust, K., & Scott, J. (1996). Social network analysis: Methods and applications. *British Journal of Sociology*, *47*(2), 375–376. https://doi.org/10.2307/591741

Wellman, B., & Wortley, S. (1990). Different Strokes from Different Folks: Community Ties and Social Support. *American Journal of Sociology*, *96*(3), 558–588. https://doi.org/10.1086/229572

Whelan, C. (2016). Informal social networks within and between organisations: On the properties of interpersonal ties and trust. *Policing: An International Journal of Police Strategies & Management*, *39*(1), 145–158. https://doi.org/10.1108/PIJPSM-07-2015-0087

Yin, R. K. (2012). *Applications of Case Study Research*. SAGE.

# APPENDIXES

**Appendix 1**
**Consent form**

**Information to participants about the student Master project** *How can the HR-function operationalise social networks to increase levels of organizational resilience*

The aim of the project *How can the HR-function operationalise social networks to increase levels of organisational resilience* is to explore the social relations that connect and divide co-workers. The subject is interesting because the concept of organisational resilience is closely connected to organisational, a topic which has been revitalized during the on-going COVID-19-p anedmic.

The study is a student project that will result in a Master thesis within the Master Program in *Strategic human resource management and labour relations* at the University of Gothenburg. The study is conducted independently by the student Aron Falkenberg and the responsible supervisor is Professor Stefan Tengblad at the Department of Business Administration (see further contact info below). The project adheres to the ethical principles of the Swedish Research Council for research in the humanities and social science research. Information about research ethical information for participants see below.

**Data Collection**
The data collection consists of qualitative interviews that will be recorded with permission of the participant].

**Voluntary participation and non-disclosure**
Participation is voluntary and anonymous. All participants involved in the project are covered by professional secrecy. Personal names are not registered or will be exchanged for fake names when fieldnotes/interviews are transcribed/questionnaires are encoded. This also applies to organisations etc. Participation takes place on the research participants' terms. The participant can choose to cancel the participation at any time.

**Handling of collected material**
Material such as recordings and notes are kept locked away and are only available to authorized researchers. Some material will be transcribed to computer. The transcribed documents are named and sorted by fake names in order to ensure the participants anonymity. In the final thesis, shorter anonymous extracts from interviews may be cited. The collected material and interview transcriptions will not be used for

any purpose other than scientific research and for teaching purposes than under the conditions described herein. The results may be presented in  scientific article or report.

**Results and publication**

The results of the study will be published in the form of a Master thesis that is to be completed on 2020-05-30. Participants will then be able to download the essay from GUPEA. Participants are also welcome to attend the presentation of the project which, the date will be announced at a later stage.

**For questions and further information, please contact:**

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**Consent to participate**

I have read and fully understood the scope and implications of participating in this student MA project. Any questions I had were answered satisfactorily.

I agree that the interview can be digitally recorded and agree to participate in this project.

☐    I agree to participate

☐    I agree to my personal details being handled as described above.

| Date and place | Name and Signature (participant) |
|---|---|
|  |  |
| Date and place | Name and Signature (student) |
|  |  |

**Appendix 2**

**Co-worker respondent interview guide**

- Tell us about your tasks and work role.

     - Has it changed during COVID-19?

     - Has anything else happened in the business that has changed your work role?


- How do you work with your work colleagues?

     - Have your common tasks / work roles and expectations changed as a result of
      COVID-19 / other business change?

     - Has your working relationship with each other changed?

        - How, why, in what context?

        - Permanent changes?


- Are there any colleagues that you feel you have more or less confidence in?

     - What determines trust?

     - How, why, in what context?

     - Has this changed during COVID-19 / other business change?

        Eg. : Colleagues you have gained more / less confidence in?

          - How, why, in what context?


- Do you only work with the same people you worked with before COVID-19 / other business change, or have
  you come into contact with new colleagues and worked in new teams?

     - How has this worked?

        - Trust, cooperation?

     - Do you notice any difference in working with these new contacts versus your old ones?

        - E.g. do you have different norms / approaches?

     - How, why, in what contexts?

     - Do you think you will keep these new contacts even if you would not formally belong to the
same       work team anymore?


- What do you see as advantages in having to establish contact with new colleagues?

     - Access to a new perspective? New knowledge?

     - Do you think that you have been able to contribute something new and valuable to the
colleagues you   have not worked with as often?

- How has your contact with the HR department been through these turbulent times in general?

     - Did you get all the support you felt you needed?

        - Is there any more support you feel you needed but did not receive?

     - Has the HR department been valuable in other contexts?

- What has been the biggest challenge that you and your colleagues have had to solve?

      - How did you solve it?

-Are there any situations where you have been able to turn something negative into something positive?

      - More examples?


- Would say that there was a difference in working with colleagues you worked with before COVID-19 / other business change?

      - How, why, in what context?

      - Opportunity to be creative?

      - Opportunity to be flexible?

      - The opportunity to quickly adapt as a team to unexpected changes?


- Would you say that you and your co-workers are well-coordinated?

      - Can you act quickly if something unexpected happens?

      - Does everyone know what is expected of one?

      - Do you know how to use the resources you have?


- Anything else that the respondent wants to add?

## Appendix 3

**HR respondent interview guide**

- Tell us about your tasks and work role.

   - Has it changed during COVID-19?

   - Has anything else happened in the business that has changed your work role?

- How has the HR-department in general had to adapt as a consequence of COVID-19/other business changes?

   - More examples?

- How has your interaction with employees changed as a consequence of COVID-19/other business changes?

   - More examples?

- How has your interaction with employees changed as a consequence of COVID-19/other business changes?

   - More examples?

- Has the HR-function been valuable for how the organisation has handled COVID-19?/other business changes?

   - In which circumstances?

- Has COVID-19/other business changes? illuminated flaws and/or strengths in the HR-practices currently practiced at the organisation?

   - How, why, in what contexts?

   - Will the HR function been revised?

- In which way has the HR-function been important during COVID-19/other business changes changes?

   -  Can the HR-function be connected to

    - Creativity?

    - Flexibility?

    - Team cohesion?

     - How and in what circumstances?

- Anything else that the respondent wants to add?